

I D E N T I F I C A T I O N

PRODUCT CODE: MAINDEC-11-DJFPB-R-D
PRODUCT NAME: PDP-11/0X - FP11-E FLOATING POINT UNIT
 ADVANCED INSTRUCTION TESTS
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1. ABSTRACT

THIS PROGRAM EXTENDS THE TESTING OF INSTRUCTION FUNCTIONALITY TO THE REMAINDER OF THE PDP-11/6X FLOATING POINT INSTRUCTION SET NOT COVERED IN THE BASIC INSTRUCTION TESTS. FULL TESTING IN ALL PDP-11/6X FPU MODES OF ALL THE MULTIPLE OPERAND ARITHMETIC, COMPARISON, AND INTEGER TO FLOAT CONVERSION INSTRUCTIONS IS PERFORMED. BOTH "HOT" (FP11-E OPTION) AND "WARM" (PDP-11/6X MICROCODE) FLOATING POINT UNITS CAN BE SELECTED FOR TESTING.

2. REQUIREMENTS

2.1 EQUIPMENT

PDP-11/6X STANDARD COMPUTER WITH MINIMUM 16K OF MEMORY. OPTIONAL FP11-E FLOATING POINT UNIT, IF SELECTED.

2.2 STORAGE

THE PROGRAM USES MEMORY 0-40346(8). THE UPPER 2.0K WORDS ARE RESERVED FOR THE IXDP MONITOR, IF EMPLOYED.

2.3 PRELIMINARY PROGRAMS

THE CPU, CACHE, AND MEMORY TEST PROGRAMS MUST BE RUN FIRST TO VERIFY THE CORRECT OPERATION OF THE BASE MACHINE.

THE PDP-11/6X - FP11-E FLOATING POINT PROCESSOR INSTRUCTION SET TESTS SHOULD THEN BE RUN IN THE FOLLOWING ORDER:

- (1) DQFPA FPU BASIC INSTRUCTION TESTS
- (2) DQFPB FPU ADVANCED INSTRUCTION TESTS
- (3) DQFPC FPU INSTRUCTION EXERCISER
- (4) DQFPD FPU ADD/SUB/MUL/DIV RANDOM EXERCISER

3. LOADING PROCEDURE

USE THE STANDARD PROCEDURE FOR ABSOLUTE TAPES, OR LOAD VIA IXDP MEDIA.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS

SEE SECTION 5.1
SWITCH REGISTER (000000) IS WORST CASE TEST.

4.2 STARTING ADDRESS

THE PROGRAM MUST ALWAYS BE STARTED AT LOCATION 200(8).

4.3 PROGRAM/OPERATOR ACTION

LOADING VIA ABSOLUTE PAPERTAPE:

- (1) LOAD PROGRAM INTO MEMORY USING ABS LOADER.
- (2) LOAD ADDRESS 200 (8).
- (3) SET SWITCHES (SEE SECTION 5.1)
SR=200000 IS WORST CASE TEST.
- (4) PRESS CONTROL/START TO BEGIN.
- (5) PROGRAM TYPES IDENTIFICATION HEADER (VERIFY THAT THE CORRECT PROGRAM HAS BEEN LOADED), AND EXECUTION BEGINS.

5. OPERATING PROCEDURE

5.1 OPERATIONAL SWITCH SETTINGS

THE DEFINITION OF THE SPECIFIC BITS IN THE SWITCH REGISTER (EITHER HARDWARE OR SOFTWARE) ARE AS FOLLOWS:

- SW15=1 100000 HALT ON ERROR
- SW14=1 040000 LOOP ON CURRENTLY EXECUTING TEST
- SW13=1 020000 INHIBIT ERROR TIMEOUTS (WHICH IS AN "ERROR MESSAGE" RESULTING FROM AN ERROR DETECTED IN THE HARDWARE)
- SW12=1 010000 INHIBIT STATUS TIMEOUTS (WHICH IS A NON-ERROR RELATED INFORMATIVE MESSAGE, SUCH AS "END PASS #XXX")
- SW11=1 004000 INHIBIT ITERATIONS PER TEST
- SW10 002000 SET=BELL ON ERROR/CLEAR=BELL ON PASS END
- SW09=1 001000 LOOP ON ERROR
- SW08=1 000400 LOOP ON TEST NUMBER IN "LPTST" IF SET, THEN THE TEST SPECIFIED BY THE TEST NUMBER CONTAINED IN THE MEMORY WORD "LPTST" (SEE PROGRAM LISTING) WILL SPECIFY THE DESIRED TEST ON WHICH TO LOOP.
- SW01 000002 CLEAR=TEST HOT=FP/WARM=FP ALTERNATELY EACH PASS (IE, PASS#1 HFP, PASS#1 WFP, PASS#2 HFP, PASS#2 WFP, ETC)
SET=TEST ONLY UNIT SPECIFIED IN SW00
- SW00 000001 SET=SELECT WARM FP, IF SW01=1
CLEAR=SELECT HOT FP, IF SW01=1

NOTE FOR SW01, SW00 - IF NO HOT FP (FP11-E) IS PRESENT, THEN WARM FP (PDP-11/6X MICROCODE) IS AUTOMATICALLY SELECTED.

5.2 PROGRAM/OPERATOR ACTION

ONCE EXECUTION HAS BEGUN, MINIMAL OPERATOR INTERVENTION IS REQUIRED, UNLESS THE PROGRAM DETECTS AN ERROR IN THE HARDWARE.

IF ALL IS WELL, THE PROGRAM TYPES ITS NAME UPON BEGINNING AND AT THE START OF EACH PASS, THE CURRENT PASS NUMBER (IN OCTAL) IS ECHOED, NOTE THAT SETTING SW<12>*1 WILL INHIBIT THE TYPEOUT OF THE BEGIN AND END PASS MESSAGES.

IF SW<10>*0, THE CONSOLE BELL WILL BE RUNG AT THE END OF EACH PASS, NOTE THAT ONLY SW<10> AFFECTS THE BELL RINGING AT END OF PASS - SW<12> HAS NO EFFECT ON THIS FUNCTION.

IF AN ERROR OCCURS DURING EXECUTION, MANY VARIATIONS IN ACTION ARE POSSIBLE DEPENDING UPON THE SWITCH SETTINGS.

SW<15>*1 WILL CAUSE THE CPU TO HALT AFTER AN ERROR.

SW<13>*1 WILL ALSO INHIBIT ANY ERROR MESSAGE TYPEOUT THAT WOULD OCCUR AT THIS TIME.

SW<10>*1 WILL CAUSE THE CONSOLE BELL TO BE RUNG ONLY WHEN AN ERROR IS DETECTED (AND NOT AT THE END OF A PASS).

SW<9>*1 CAUSES THE PROGRAM TO LOOP ON THE MOST RECENT ERROR, AS LONG AS IT CONTINUES TO OCCUR.

THERE ARE ALSO SEVERAL OTHER GENERAL USE FUNCTIONS DEFINED BY THE SWITCHES:

SW<11>*1 WILL INHIBIT THE ITERATIONS (*2000(10)) PERFORMED OF EACH TEST ON PASSES 2,3,4, ... THRU THE PROGRAM.

SW<14>*1 CAUSES THE PROGRAM TO LOOP INDEFINATELY ON THE CURRENTLY EXECUTING TEST.

SW<8>*1 CAUSES THE PROGRAM TO CONTINUE EXECUTION AS NORMAL, EXCEPT WHEN THE CONTENTS OF MEMORY WORD "SLPTST" MATCHES THE NUMBER OF THE TEST CURRENTLY EXECUTING, AT THIS POINT, THE TEST IS LOOPED ON INDEFINATELY, UNTIL EITHER SW<8>*0 OR "SLPTST" IS CHANGED, NOTE THAT IF "SLPTST" DOES NOT MATCH THE TEST NUMBER OF ANY TEST, THE CONTENTS OF "SLPTST" ARE EFFECTIVELY IGNORED, AND EXECUTION PROCEEDS NORMALLY.

5.3 HOT (FP11-E) / WARM (POP-11/6X) SELECTION

WHEN THE PROGRAM IS STARTED (AT 200(W)), A MESSAGE IS OPTIONALLY PRINTED INDICATING THE PRESENCE/ABSENCE OF AN FP11-E HOT FLOATING POINT UNIT OPTION (BASED UPON WHETHER "MHAMI" BIT<04> IS 1/0 RESPECTIVELY).

IF NO FP11-E HOT FP OPTION IS PRESENT, THE MESSAGE IS TYPED, AND ANY ATTEMPTS TO SELECT IT FOR TESTING VIA SW01 AND SW00 ARE IGNORED, ONLY WARM FP (POP-11/6X MICROCODE) FLOATING POINT CAN BE TESTED/SELECTED.

IF THE FP11-E IS PRESENT, TEST SELECTION IS AS FOLLOWS:

WHEN SW01*0, THE HOT AND WARM FLOATING POINT UNITS ARE TESTED

ALTERNATELY EACH PASS - IN THE ORDER (1) HOT, THEN (2) WARM.
 NOTE THAT EACH "PASS" NOW CONSISTS OF TWO SEPARATE SUB-PASSES.

WHEN SW01=1, THEN DEDICATED SELECTION OF A PARTICULAR UNIT IS
 SPECIFIED IN SW01:

- SW00=0 --> TEST HFP FP11-E OPTION ONLY
- SW00=1 --> TEST WFP PDP-11/6X MICROCODE ONLY

6. ERRORS

6.1 FORMAT OF MESSAGES

6.1.1 ALL ERROR MESSAGES CONSIST OF THREE LINES OF DATA:

THE FIRST LINE IS A BRIEF MESSAGE WHICH EXPLAINS WHAT ERROR
 WAS DETECTED (EG, THE RESULT OF THE "ABSF" INSTRUCTION WAS
 BAD).

THE PREFIX "HOT:" OR "WARM:" IS ALSO ATTACHED TO THE MESSAGE
 TO INDICATE THE SOURCE OF THE ERROR; THE FP11-E UNIT OR THE
 PDP-11/6X RESPECTIVELY.

THE SECOND LINE CONSISTS OF DATA HEADERS TO IDENTIFY THE
 VALUES TYPED OUT ON LINE THREE; THESE HEADERS WILL EITHER BE
 OF THE FORM "EXPECTED" AND "RECEIVED" DATA, OR WILL BE A
 MNEMONIC NAME OF A WORD LOCATION IN MEMORY OR REGISTERS.

THE THIRD LINE DISPLAYS THE CONTENTS OF THE LOCATIONS
 SPECIFIED BY LINE TWO AS SIX DIGIT OCTAL NUMBERS. NOTE THAT
 ALL DATA DISPLAYED IN ANY MESSAGES ARE OCTAL NUMBERS.

AS EXPLAINED IN SECTION 3.2, SETTING SW<13>=1 WILL SUPPRESS
 THE TYPING OF THESE MESSAGES.

6.1.2 FLOATING POINT UNIT DATA FORMATS:

FLOATING POINT STATUS WORD (FPS):

BIT#	OCTAL	FUNCTION
15	100000	FER = FLOATING ERROR FLAG SET WHEN EITHER FIUV, FIU, FIV, FIC ENABLED AND APPROPRIATE EXCEPTION OCCURRED.
14	040000	FID = FLOATING DISABLE INTERRUPTS NO FP INTERRUPTS TO VECTOR 240(8) IF SET, NOT USED
13, 12		
11	004000	FIUV = FLOATING UNDEFINED VARIABLE INTERRUPT IF SET, (=0) MEMORY DATA IS ERROR
10	002000	FIU = FLOATING INTX UNDERFLOW IF SET AND UNDERFLOW, SET FER, STORE ANSWER, EXPONENT WRONG BY +400(8) IF CLEAR AND UNDERFLOW, ANSWER <= ZERO
9	001000	FIV = FLOATING OVERFLOW INTERRUPT IF SET AND OVERFLOW, SET FER, STORE ANSWER, EXPONENT WRONG BY -400(8) IF CLEAR AND OVERFLOW, ANSWER <= ZERO
8	000400	FIC = FLOATING INTEGER CONVERSION INTERRUPT IF SET AND "STC" I" ERROR, ANSWER <= ZERO, SET ERROR IF CLEAR AND "STC" I" ERROR, ANSWER <= ZERO
7	000200	FD = FLOATING MODE 1=DOUBLE, 64 BIT OPERANDS (4W) 0=SINGLE, 32 BIT OPERANDS (2W)
6	000100	FL = INTEGER MODE 1=LONG, 32 BIT INTEGERS (2W) 0=SHORT, 16 BIT INTEGERS (1W)
5	000040	FT = ROUND/TRUNCATE MODE 1=TRUNCATE RESULTS 0=ROUND RESULTS
4	040020	FNM = PUT FP11-2 ONLY IN MAINTENANCE MODE
3:0	000017	FN-FZ-FV-FC = FLOATING CONDITION CODES

FLOATING EXCEPTION CODES (FEC):

OCTAL	ENABLE	
00	(NONE)	(NOT USED)
02	(NONE)	FP OPCODE ERROR
04	(NONE)	FP DIVIDE-BY-ZERO ERROR
06	W/FIC	FP INTEGER CONVERSION ERROR
10	W/FIV	FP OVERFLOW ERROR
12	W/FIU	FP UNDERFLOW ERROR
14	W/FIUV	FP UNDEFINED-VARIABLE/(=0) ERROR
16	W/FNM	FP MAINTENANCE TRAP

NOTE - IN "FEC" CODE TYPEOUTS IN ERROR MESSAGES ONLY THE LOW ORDER BYTE IS USED - IGNORE THE PROGRAM FLAG BIT IN THE UPPER BYTE.

FLOATING POINT DATA:

IN FLOAT MODE (FD=0), IS 2-16, BIT WORDS, 32, BITS
 IN DOUBLE MODE (FD=1), IS 4-16, BIT WORDS, 64, BITS

FIRST WORD: (BOTH F, D MODES)
 B15=SIGN OF NUMBER (1/-, 0/+)
 B14:B7=EXPONENT, 8, BITS, FROM -128,+127,
 B06:00=FACTION, 7, BITS

SECOND WORD: (BOTH F, D MODES)

B15:00=FACTION, 16, BITS

THIRD, FOURTH WORDS: (ONLY D MODE)

B15:00, B15:00=FACTION, 32, BITS

IN F MODE, THE COMPOSITE 24, BIT FRACTION
 IS FORMED BY:

.1#(WORD1-BIT<06:00>)#(WORD2-BIT<15:00>)

IN D MODE, THE COMPOSITE 56, BIT FRACTION
 IS FORMED BY:

.1#(WORD1-BIT<06:00>)#(WORD2-BIT<15:00>)
 #[(WORD3-BIT<15:00>)#(WORD4-BIT<15:00>)]

FOR A MORE DETAILED OPERATION/EXPLANATION OF FLOATING POINT
 DATA FORMATS AND OPERATIONS, SEE THE PDP-11/6X PROCESSOR
 HANDBOOK SECTION ON THE FLOATING POINT INSTRUCTION SET.

6.2 RECOVERY

RECOVERY FROM ERRORS HAS BEEN ATTEMPTED TO BE MADE AS
 AUTOMATIC AND EFFORTLESS AS POSSIBLE. HOWEVER, IN MANY CASES,
 DUE TO THE NATURE OF THE ERROR, THE PROGRAM MAY NOT EVEN BE
 ABLE TO BE RUN (EG, IF THE FLOATING POINT MODULE IS IN A HUNG
 STATE, AND CAN NEVER ENTER THE READY STATE TO ACCEPT A NEW FPP
 INSTRUCTION). AT THIS POINT, SOLVING THE PROBLEM IS A DIRECT
 FUNCTION OF THE OPERATORS INGENUITY. THIS TEST SERIES HAS
 BEEN DESIGNED TO TEST THE FLOATING POINT PROCESSOR SO THAT
 THESE TYPES OF FAILURES TO RUN WILL BE MINIMAL. THE TESTS
 HAVE BEEN PLACED IN A SPECIFICALLY STRUCTURED SEQUENCE IN THE
 PROGRAM TO IMPLEMENT THIS STRATEGY; TESTING THE MOST BASIC
 ELEMENTS FIRST, PROCEEDING UPWARD IN COMPLEXITY AFTER
 ESTABLISHING THEIR CORRECT OPERATION. THIS IS WHY IT IS
 EXTREMELY IMPORTANT THAT THE FLOATING POINT TEST PROGRAMS BE
 (1) RUN IN THE PRESCRIBED ORDER, AND (2) ONLY BE STARTED AT
 THEIR BEGINNING ADDRESS (USUALLY 200(B)). THE PROGRAM WILL
 DISPLAY, AT AN ERROR, THE MOST PERTINENT INFORMATION RELATING
 TO THE ERROR, AND A BRIEF EXPLANATION OF THE FAILING FUNCTION.

6.3 CAUSES

THESE TEST PROGRAMS ARE NOT HARDWARE ORIENTED, AND AS SUCH IT IS NOT POSSIBLE TO CALL OUT PARTICULAR HARDWARE AREAS AND MODULES RELATING TO A GIVEN FUNCTIONAL FAILURE. HARDWARE DIAGNOSIS FOR A PARTICULAR MACHINE MUST BE DONE USING THE APPROPRIATE ENGINEERING ROM FLOWS AND PRINTS, ALONG WITH THE KNOWN FUNCTIONAL ERRORS (AS DETECTED BY THE PROGRAMS). THIS IS THE INTENT UNDER WHICH THESE INSTRUCTION TESTS WERE DESIGNED AND CODED.

7. RESTRICTIONS

7.1 STARTING

THE PROGRAM MUST BE STARTED AT LOCATION 200(0) ALWAYS.

7.2 OPERATIONAL

THERE ARE NO OPERATIONAL RESTRICTIONS.

8. MISCELLANEOUS

8.1 EXECUTION TIME

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MODEL	AVERAGE EXECUTION TIME PER PASS	
	SHORTEST PASS	LONGEST PASS
PDP-11/6X MICROCODE	0101	3115
PDP-11/6X W/FP11-E	0101	2130

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TIMES SPECIFIED AS (MINUTES):(SECONDS)

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SHORTEST PASS ::= PASS#1, NO ITERATIONS, USING:
 SWR=(004003) FOR PDP-11/6X MICROCODE
 SWR=(004002) FOR PDP-11/6X W/FP11-E

LONGEST PASS ::= PASS#2, 2000 ITERATIONS/TEST, USING:
 SWR=(000003) FOR PDP-11/6X MICROCODE
 SWR=(000002) FOR PDP-11/6X W/FP11-E

8.2 STACK POINTER

THE STACK POINTER IS SET TO 1100(0) AT THE START OF EACH PASS. IF ALL IS OPERATING CORRECTLY, IT SHOULD ALSO BE THIS VALUE AT

THE START OF EACH TEST, AND AT THE END OF A PASS.

8.3 POWER FAIL

THE TESTS MAY BE POWER FAILED AT ANY TIME. SPURIOUS ERROR MESSAGES MAY OCCUR IF THE FAILURE OCCURRED WHILE THE F.P.U. WAS EXECUTING A FUNCTION, AS NONE OF ITS REGISTERS (FPS, FEC, FEA, ACCUMULATORS) ARE SAVED IN THE EVENT OF A POWER FAILURE. HOWEVER, THESE MESSAGES SHOULD ONLY OCCUR ONCE (IF AT ALL) IMMEDIATELY AFTER POWER IS RESTORED. WHEN POWER IS RESTORED, "POWER" IS TYPED ON THE CONSOLE AND EXECUTION CONTINUES WHERE IT WAS INTERRUPTED.

NOTE THAT THE "VOLATILE" SWITCH REGISTER CONTENTS ARE SAVED AND RESTORED FROM THE STACK IN A POWER FAIL SEQUENCE; THEREFORE THE SWITCH REGISTER SETTINGS SHOULD NOT BE LOST OVER A POWER FAIL.

9. PROGRAM DESCRIPTION

9.1 ORGANIZATION

THESE PROGRAMS ARE ORGANIZED AS MUCH AS POSSIBLE IN A STRAIGHTFORWARD, LINEAR MANNER. THE MAIN BODY OF CODE IS STRUCTURED AS FOLLOWS:

- (1) INITIALIZATION ROUTINE
 - SETS UP VECTORS, TYPES HEADER, ETC.
- (2) MAIN BODY OF TESTS
 - INLINE TEST CODE, INLINE TEST CALLS
- (3) END OF PASS ROUTINE
 - END OF PASS PROCESSING
- (4) TEST SUBROUTINES
 - SUBROUTINES CONTAINING COMMON TEST CODE
- (5) OVERHEAD ROUTINES
 - SERVICE SUBROUTINES (TYPEOUT, ETC.)

WHEREVER FEASIBLE, COMMON SECTIONS OF CODE FOR WIDELY USED FUNCTIONS ARE CONDENSED INTO SUBROUTINES TO CONSERVE MEMORY. THIS INCLUDES NOT ONLY STANDARD SERVICE ROUTINES (SUCH AS SCOPE, ERROR, AND ASCII TYPEOUT), BUT ALSO TESTING ROUTINES WHICH PERFORM VERY SIMILAR FUNCTIONS. THUS IN MANY CASES (THE "ADDF" INSTRUCTION TESTING, FOR EXAMPLE) A SINGLE BODY OF CODE (A SUBROUTINE) IS USED TO PERFORM ALL THE FUNCTIONAL TESTS, WITH A VARIABLE PARAMETER LIST PASSED AT EACH CALL CONTAINING THE DATA OPERANDS AND EXPECTED RESULT FOR EACH INDIVIDUAL TEST. THIS CONSTRUCTION FACILITATES THE ADDITION/DELETION OF TESTS (SHOULD THAT EVER BE NECESSARY), AND ALSO GREATLY CONSERVES MEMORY SPACE REQUIREMENTS WHEN A LARGE NUMBER OF CALLS TO A GIVEN BODY OF CODE ARE REQUIRED.

THE INDIVIDUAL TESTS WITHIN EACH PROGRAM HAVE ALSO BEEN SEQUENCED IN A PARTICULAR ORDER TO FACILITATE THE DETECTION AND RESOLUTION OF ERRORS AS QUICKLY AS POSSIBLE. EACH OF THE TESTS BEGINS AS SIMPLY AS POSSIBLE, FIRST TESTING THE MOST BASIC ELEMENTS. MORE COMPLEX ELEMENTS ARE TESTED AFTERWARDS, EMPLOYING A PHILOSOPHY THAT THE SIMPLER THE TEST, THE BETTER THE RESOLUTION. ALL FUNCTIONS ARE EVENTUALLY TESTED, BUT HOPEFULLY MOST ERRORS WILL BE CAUGHT AND CORRECTED EARLY. A MUCH MORE DETAILED ANALYSIS OF THE SEQUENCE OF TESTS PERFORMED IS PRESENTED IN SECTION 9.2.

9.2 TEST DESCRIPTION

THIS DIAGNOSTIC IS STRUCTURED TO SEQUENTIALLY PERFORM THE FOLLOWING SERIES OF TESTS ON THE FUNCTIONALITY OF THE FLOATING POINT DUAL OPERAND INSTRUCTIONS:

- (1) *CMP=* COMPARE, F/D MODES
- (2) *ADD=* ADD, F/D MODES
- (3) *SUB=* SUBTRACT, F/D MODES
- (4) *MUL=* MULTIPLY, F/D MODES
- (5) *DIV=* DIVIDE, F/D MODES
- (6) *MOD=* MODULO, F/D MODES, 2 ACCUMULATORS
- (7) *MOD=* MODULO, F/D MODES, 1 ACCUMULATOR
- (8) *LDC=* LOAD-CONVERT, F <-> D MODES
- (9) *STC=* STORE-CONVERT, F <-> D MODES
- (10) *LDC=* LOAD-CONVERT, I-F/I-D/L-F/L-D MODES
- (11) *STC=* STORE-CONVERT, F-I/D-I/F-L/D-L MODES
- (12) *LDEXP* LOAD EXPONENT, F/D MODES
- (13) *STEXP* STORE EXPONENT, F/D MODES

EACH OF THE ABOVE TESTS IS PERFORMED BY A SUBROUTINE SPECIFIC TO THE INSTRUCTION; AN ARGUMENT LIST IS PASSED CONTAINING THE INITIAL DATA, EXPECTED RESULTS/STATUS/EXCEPTIONS.

EACH OF THE ABOVE INSTRUCTIONS IS TESTED IN (WHEN APPLICABLE) THE FOLLOWING INSTANCES:

- (A) FLOATING(F)/DOUBLE(D) MODES
- (B) INTEGER(I)/LONG(L) MODES
- (C) ROUND(R)/TRUNCATE(T) MODES
- (D) EXCEPTION CONDITIONS:
OVERFLOW, UNDERFLOW, =0, DIVIDE/0, INTEGER-CONVERT
(ENABLED AND DISABLED MODES)

9.3 SUBROUTINE ABSTRACTS

9.3.1 TRAPCATCHER

THE TRAPCATCHER IS A SERIES OF INSTRUCTIONS OCCUPYING THE INTERRUPT VECTOR AREA OF MEMORY. IT CONSISTS OF THE SEQUENCE:

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        ,WORD    ,+2    ;PC AFTER TRAP
        ,WORD    0      ;PS AFTER TRAP
    
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PLACED AT EACH VECTOR ADDRESS IN LOCATIONS 4-176(H) OF MEMORY. THE FIRST WORD OF EACH PAIR ("PC AFTER TRAP") POINTS TO THE SECOND WORD, WHICH SERVES A DUAL PURPOSE AS
 (1) THE NEW LOADED PS (ALL ZEROS), AND (2) THE NEXT INSTRUCTION TO EXECUTE (0*HALT).

WHEN THE PROGRAM IS EXECUTING, ANY REQUIRED VECTORS ARE SET UP IN THE VECTOR AREA WITH APPROPRIATE VALUES; THE OTHERS BEING LEFT IN THE "TRAPCATCHER" STATE; THUS, IF AN UNEXPECTED TRAP EVER OCCURS IN THE MACHINE, IT WILL BE CAUGHT, AND THE MACHINE SUBSEQUENTLY HALTED, DISPLAYING THE VECTOR ADDRESS + PLUS FOUR * IN THE ADDRESS LIGHTS.

9.3.2 SCOPE ROUTINE - \$SCOPE

THE SCOPE ROUTINE IS ENTERED FROM THE FIRST INSTRUCTION OF EACH TEST IN THE PROGRAM. (NOTE THAT BY DEFINITION, A "TEST" WILL BE DESIGNATED AS THE SECTION OF CODE BETWEEN TWO "SCOPE" STATEMENTS.) THIS ROUTINE PROVIDES THE OVERHEAD CODE NECESSARY TO IMPLEMENT SEVERAL OF THE SWITCH REGISTER CONTROL OPTIONS. UPON ENTRANCE TO A TEST, THE SCOPE STATEMENT AT THE BEGINNING SETS UP CERTAIN LOCATIONS (SEE BELOW) TO SPECIFY THE CURRENT TEST NUMBER AND LOOPING ADDRESS (FOR ITERATIONS). CONTROL IS THEN PASSED TO THE ACTUAL TEST CODE, PERFORMING THE DESIRED TEST. UPON EXIT, THE SCOPE STATEMENT OF THE NEXT TEST IS ENTERED, WHICH DETERMINES WHETHER TO (1) LOOP BACK TO THE PREVIOUS TEST (EG, FOR ITERATIONS) OR (2) INITIALIZE FOR THE NEXT TEST (AS DESCRIBED EARLIER, ABOVE).

ENTRANCE TO THE SCOPE ROUTINE IS VIA AN "IOT" TRAP CALL THROUGH LOCATION 28(8). (FROM THE SCOPE=IOT EQUATE). DEPENDING UPON THE SWITCH SETTINGS (SEE 9.2), CODE IS PRESENT TO: LOAD THE FP11 MICRO BREAK REGISTER, LOOP ON THE CURRENTLY EXECUTING TEST, LOOP ON A SPECIFIC TEST, PERFORM ITERATIONS OF EACH TEST, AND SET UP ADDRESSES FOR POSSIBLE LOOPING ON ERRORS. IMPORTANT VALUES USED IN THIS ROUTINE ARE:

- \$MXCNT - MAXIMUM NUMBER OF ITERATIONS PER TEST (GENERALLY WILL BE 2000(10))
- \$STINM - A COUNTER INDICATING THE NUMBER (1-377(8)) OF THE TEST CURRENTLY BEING EXECUTED
- \$LPADR - CONTAINS THE ADDRESS TO WHICH THE SCOPE ROUTINE 10200 WILL LOOP, IF THE CURRENT TEST IS BEING LOOPEL UPON
- \$LPERR - CONTAINS THE ADDRESS TO WHICH THE ERROR ROUTINE (SEE 9.3.3) WILL LOOP, IF AN ERROR OCCURS AND THE LOOPING ON AN ERROR OPTION IS SPECIFIED IN THE SWITCHES. SET UP BY SCOPE, GENERALLY WILL BE THE SAME AS \$LPADR, ABOVE.

9.3.3 ERROR ROUTINE - \$ERROR

THE ERROR ROUTINE IS ENTERED WHEN THE TEST CODE HAS DETERMINED THAT AN ERROR HAS OCCURRED AS PART OF A TEST. THROUGH USE OF THIS ROUTINE, THE TEST HAS A MEANS OF SIGNALING AN ERROR TO THE 10300 OPERATOR/MONITOR, AND IMPLEMENTING THE CONTROL FUNCTIONS FOR HALTING ON ERROR, BELL ON ERROR, AND LOOPING ON ERROR. IN ADDITION, THE ERROR ROUTINE HAS THE PROVISION TO TYPE OUT ON THE OPERATOR'S CONSOLE A MESSAGE BRIEFLY EXPLAINING THE ERROR, AND SOME OF THE MOST PERTINENT DATA VALUES TO HELP DIAGNOSE THE CAUSE (SEE SECTION 6.2).

THE CALLING MECHANISM IS SIMILAR TO THAT EMPLOYED FOR THE SCOPE ROUTINE (VIA A TRAP), EXCEPT IN THIS INSTANCE, THE "EMT" INSTRUCTION IS USED, TRAPPING THROUGH LOCATION 30(0). (NOTE THE EQUATE ERROR #=EMT N). THE LOWER BYTE OF THE EMT INSTRUCTION IS CAPABLE OF TRANSMITTING A NUMBER FROM 0-377(0), WHICH WILL BE TERMED THE "ERROR ITEM NUMBER." THIS NUMBER DETERMINES WHICH ERROR MESSAGE, AND ASSOCIATED DATA VALUES WILL BE TYPED OUT WHEN A PARTICULAR ERROR IS SIGNALLED. IF THIS NUMBER IS ZERO, JUST THE PC OF THE CALLING "ERROR" INSTRUCTION WILL BE TYPED, OTHERWISE, THE NUMBER IS USED AS AN INDEX THROUGH THE ERROR TABLE (\$ERRTB) TO FIND THE APPROPRIATE VALUES TO TYPE (SEE PROGRAM LISTING FOR FURTHER DETAILS).

IMPORTANT VALUES USED IN THIS ROUTINE ARE:

EREG0 THRU EREG7 - CONTENTS OF GENERAL REGISTERS R0 THRU R7 JUST BEFORE ERROR CALL
 \$ERRTL - CUMULATIVE NUMBER OF ERRORS ENCOUNTERED TO DATE
 \$ERRPC - CONTAINS THE PC OF THE "ERROR" INSTRUCTION JUST EXECUTED
 \$LPERR - CONTAINS THE ADDRESS WHICH WILL BE LOOPED UPON FOR THE ERROR LOOPING FACILITY

9.3.4 ERROR MESSAGE TYPEOUT ROUTINE - \$TYPEPK

THIS ROUTINE (\$TYPEPK ENTRY POINT) IS CALLED BY THE ERROR PROCESSING ROUTINE DESCRIBED IN 9.3.3 ABOVE. ITS PURPOSE IS TO IMPLEMENT THE ERROR MESSAGE/DATA VALUE ERROR TYPEOUT FACILITY. THE SUBROUTINE WILL, GIVEN THE INDEXING BYTE FROM THE ERROR CALL INSTRUCTION, PICK UP THE CORRECT ERROR MESSAGE VECTOR FROM \$ERRTB (ERROR TABLE), AND TYPE OUT THE ERROR MESSAGE, DATA HEADER, AND DATA VALUES ON THE CONSOLE.

9.3.5 TYPE ROUTINE - \$TYPE

THIS ROUTINE IS THE STANDARD SYSTEM TYPEOUT ROUTINE FOR ASCII SINGLE-CHARACTER-PER-BYTE STRINGS. IT IS CALLED THROUGH A TRAP INSTRUCTION WITH THE NEXT WORD CONTAINING THE ADDRESS OF THE FIRST CHARACTER IN THE STRING. TYPING TERMINATES WHEN AN ALL-ZERO BYTE IS FOUND. HORIZONTAL TAB STOPS ARE ALSO

AUTOMATICALLY PLACED.

9.3.6 OCTAL NUMBER TYPE ROUTINE = \$TIPOC

THIS ROUTINE CONVERTS THE TOP NUMBER ON THE STACK TO A 6-DIGIT OCTAL REPRESENTATION, AND TYPES IT ON THE CONSOLE USING THE TYPE ROUTINE \$TYPE. SEE LISTING FOR OPTIONS AND FURTHER DETAILS.

9.3.7 POWER UP AND DOWN ROUTINES = \$PWRUP AND \$PWRDN

THESE TWO ROUTINES ARE ENTERED FOR THE POWER UP AND DOWN CONDITIONS, RESPECTIVELY. THE POWER DOWN ROUTINE (\$PWRDN) SAVES THE GENERAL REGISTERS AND STACK POINTER. THE POWER UP ROUTINE (\$PWRUP) CORRESPONDINGLY RESTORES THE REGISTERS, STACK POINTER, AND TYPES THE MESSAGE "POWER" WHEN POWER IS RESTORED. THE VOLATILE INTERNAL SWITCH REGISTER IS ALSO SAVED/RESTORED BY THIS ROUTINE.

9.3.8 END OF PASS ROUTINE = \$EOP

THE END OF PASS ROUTINE COUNTS THE NUMBER OF PASSES PERFORMED, DINGS THE BELL/TYPES A MESSAGE (IF ENABLED), SETS/CLEARs THE T-BIT (IF ENABLED), AND ALSO INTERFACES TO THE MONITOR, IF PRESENT. IT ALSO OPTIONALLY COOPS FOR A NUMBER OF SUBPASSES BEFORE SIGNALLING AN END OF PASS CONDITION.

10. ACT/APT/XXDP

10.1 ACT COMPATIBILITY

THIS PROGRAM WILL RUN UNDER THE ACT SYSTEM.

10.2 APT COMPATIBILITY

THIS PROGRAM WILL RUN UNDER THE APT SYSTEM MONITOR. ALL NECESSARY SOFTWARE COMMUNICATION HOOKS ARE PRESENT.

10.3 XXDP COMPATIBILITY

FOR XXDP MEDIA COMPATIBILITY, THE TOP 2K WORDS OF THE 16K WORD MINIMUM MEMORY AREA ARE NOT DISTURBED DURING EXECUTION.

14	OPERATIONAL SWITCH SETTINGS		
32	BASIC DEFINITIONS		
103	TRAP CATCHER		
202	STARTING ADDRESS(ES)		
205	ACT11 MOOKS		
216	APT PARAMETER BLOCK		
239	COMMON TAGS		
320	APT MAILBOX=TABLE		
385	ENRON POINTER TABLE		
426	PROGRAM DEFINED COMMON TAGS		
467	START OF PASS ROUTINE		
475	INITIALIZE THE COMMON TAGS		
001	T1	TEST OF CMPP INSTR, DATA SET	CMPP-1
020	T2	TEST OF CMPP INSTR, DATA SET	CMPP-2
039	T3	TEST OF CMPP INSTR, DATA SET	CMPP-3
058	T4	TEST OF CMPP INSTR, DATA SET	CMPP-4
077	T5	TEST OF CMPP INSTR, DATA SET	CMPP-5
096	T6	TEST OF CMPP INSTR, DATA SET	CMPP-6
115	T7	TEST OF CMPP INSTR, DATA SET	CMPP-7
134	T10	TEST OF CMPP INSTR, DATA SET	CMPP-10
153	T11	TEST OF CMPP INSTR, DATA SET	CMPP-11
172	T12	TEST OF CMPP INSTR, DATA SET	CMPP-12
191	T13	TEST OF CMPP INSTR, DATA SET	CMPP-13
210	T14	TEST OF CMPP INSTR, DATA SET	CMPP-14
230	T15	TEST OF CMPP INSTR, DATA SET	CMPP-15
251	T16	TEST OF CMPP INSTR, DATA SET	CMPP-16
272	T17	TEST OF CMPP INSTR, DATA SET	CMPP-17
293	T18	TEST OF CMPP INSTR, DATA SET	CMPP-18
314	T21	TEST OF CMPP INSTR, DATA SET	CMPP-21
335	T22	TEST OF CMPP INSTR, DATA SET	CMPP-22
356	T23	TEST OF CMPP INSTR, DATA SET	CMPP-23
377	T24	TEST OF CMPP INSTR, DATA SET	CMPP-24
398	T25	TEST OF CMPP INSTR, DATA SET	CMPP-25
419	T26	TEST OF CMPP INSTR, DATA SET	CMPP-26
440	T27	TEST OF CMPP INSTR, DATA SET	CMPP-27
461	T28	TEST OF CMPP INSTR, DATA SET	CMPP-28
482	T29	TEST OF CMPP INSTR, DATA SET	CMPP-29
503	T31	TEST OF CMPP INSTR, DATA SET	CMPP-31
524	T32	TEST OF CMPP INSTR, DATA SET	CMPP-32
545	T33	TEST OF CMPP INSTR, DATA SET	CMPP-33
566	T34	TEST OF CMPP INSTR, DATA SET	CMPP-34
587	T35	TEST OF CMPP INSTR, DATA SET	CMPP-35
608	T36	TEST OF CMPP INSTR, DATA SET	CMPP-36
629	T37	TEST OF CMPP INSTR, DATA SET	CMPP-37
650	T38	TEST OF CMPP INSTR, DATA SET	CMPP-38
671	T39	TEST OF CMPP INSTR, DATA SET	CMPP-39
692	T40	TEST OF CMPP INSTR, DATA SET	CMPP-40
713	T41	TEST OF CMPP INSTR, DATA SET	CMPP-41
734	T42	TEST OF CMPP INSTR, DATA SET	CMPP-42
755	T43	TEST OF CMPP INSTR, DATA SET	CMPP-43
776	T44	TEST OF CMPP INSTR, DATA SET	CMPP-44
797	T45	TEST OF CMPP INSTR, DATA SET	CMPP-45
818	T46	TEST OF CMPP INSTR, DATA SET	CMPP-46
839	T47	TEST OF CMPP INSTR, DATA SET	CMPP-47
860	T48	TEST OF CMPP INSTR, DATA SET	CMPP-48
881	T49	TEST OF CMPP INSTR, DATA SET	CMPP-49
902	T50	TEST OF CMPP INSTR, DATA SET	CMPP-50
923	T51	TEST OF CMPP INSTR, DATA SET	CMPP-51
944	T52	TEST OF CMPP INSTR, DATA SET	CMPP-52
965	T53	TEST OF CMPP INSTR, DATA SET	CMPP-53
986	T54	TEST OF CMPP INSTR, DATA SET	CMPP-54

1486	T55	TEST OF ADDU INSTR, DATA SET	ADDU-2
1509	T56	TEST OF ADDU INSTR, DATA SET	ADDU-3
1532	T57	TEST OF ADDU INSTR, DATA SET	ADDU-4
1555	T58	TEST OF ADDU INSTR, DATA SET	ADDU-5
1578	T59	TEST OF ADDU INSTR, DATA SET	ADDU-6
1601	T62	TEST OF ADDU INSTR, DATA SET	ADDU-7
1624	T63	TEST OF ADDU INSTR, DATA SET	ADDU-8
1647	T64	TEST OF ADDU INSTR, DATA SET	ADDU-9
1670	T65	TEST OF ADDU INSTR, DATA SET	ADDU-10
1693	T66	TEST OF ADDU INSTR, DATA SET	ADDU-11
1716	T67	TEST OF ADDU INSTR, DATA SET	ADDU-12
1739	T68	TEST OF ADDU INSTR, DATA SET	ADDU-13
1762	T69	TEST OF ADDU INSTR, DATA SET	ADDU-14
1785	T72	TEST OF ADDU INSTR, DATA SET	ADDU-15
1808	T73	TEST OF ADDU INSTR, DATA SET	ADDU-16
1831	T74	TEST OF ADDU INSTR, DATA SET	ADDU-17
1854	T75	TEST OF ADDU INSTR, DATA SET	ADDU-18
1877	T76	TEST OF ADDU INSTR, DATA SET	ADDU-19
1901	T77	TEST OF ADDU INSTR, DATA SET	ADDU-20
1921	T100	TEST OF SUBP INSTR, DATA SET	SUBP-1
1941	T101	TEST OF SUBP INSTR, DATA SET	SUBP-2
1961	T102	TEST OF SUBP INSTR, DATA SET	SUBP-3
1981	T103	TEST OF SUBP INSTR, DATA SET	SUBP-4
2001	T104	TEST OF SUBP INSTR, DATA SET	SUBP-5
2021	T105	TEST OF SUBP INSTR, DATA SET	SUBP-6
2041	T106	TEST OF SUBP INSTR, DATA SET	SUBP-7
2061	T107	TEST OF SUBP INSTR, DATA SET	SUBP-8
2081	T108	TEST OF SUBP INSTR, DATA SET	SUBP-9
2101	T109	TEST OF SUBP INSTR, DATA SET	SUBP-10
2121	T110	TEST OF SUBP INSTR, DATA SET	SUBP-11
2141	T111	TEST OF SUBP INSTR, DATA SET	SUBP-12
2161	T112	TEST OF SUBP INSTR, DATA SET	SUBP-13
2181	T113	TEST OF SUBP INSTR, DATA SET	SUBP-14
2201	T114	TEST OF SUBP INSTR, DATA SET	SUBP-15
2221	T115	TEST OF SUBP INSTR, DATA SET	SUBP-16
2241	T116	TEST OF SUBP INSTR, DATA SET	SUBP-17
2261	T117	TEST OF SUBP INSTR, DATA SET	SUBP-18
2281	T118	TEST OF SUBP INSTR, DATA SET	SUBP-19
2301	T119	TEST OF SUBP INSTR, DATA SET	SUBP-20
2321	T120	TEST OF SUBP INSTR, DATA SET	SUBP-21
2341	T121	TEST OF SUBP INSTR, DATA SET	SUBP-22
2361	T122	TEST OF SUBP INSTR, DATA SET	SUBP-23
2381	T123	TEST OF SUBP INSTR, DATA SET	SUBP-24
2401	T124	TEST OF SUBP INSTR, DATA SET	SUBP-25
2421	T125	TEST OF SUBP INSTR, DATA SET	SUBP-26
2441	T126	TEST OF SUBP INSTR, DATA SET	SUBP-27
2461	T127	TEST OF SUBP INSTR, DATA SET	SUBP-28
2481	T128	TEST OF SUBP INSTR, DATA SET	SUBP-29
2501	T129	TEST OF SUBP INSTR, DATA SET	SUBP-30
2521	T130	TEST OF SUBP INSTR, DATA SET	SUBP-31
2541	T131	TEST OF SUBP INSTR, DATA SET	SUBP-32
2561	T132	TEST OF SUBP INSTR, DATA SET	SUBP-33
2581	T133	TEST OF SUBP INSTR, DATA SET	SUBP-34
2601	T134	TEST OF SUBP INSTR, DATA SET	SUBP-35
2621	T135	TEST OF SUBP INSTR, DATA SET	SUBP-36
2641	T136	TEST OF SUBP INSTR, DATA SET	SUBP-37
2661	T137	TEST OF SUBP INSTR, DATA SET	SUBP-38
2681	T138	TEST OF SUBP INSTR, DATA SET	SUBP-39
2701	T139	TEST OF SUBP INSTR, DATA SET	SUBP-40
2721	T140	TEST OF SUBP INSTR, DATA SET	SUBP-41
2741	T141	TEST OF SUBP INSTR, DATA SET	SUBP-42
2761	T142	TEST OF SUBP INSTR, DATA SET	SUBP-43
2781	T143	TEST OF SUBP INSTR, DATA SET	SUBP-44
2801	T144	TEST OF SUBP INSTR, DATA SET	SUBP-45

2704	T143	TEST OF MULF INSTR, DATA SET MULF-13
2724	T144	TEST OF MULF INSTR, DATA SET MULF-14
2744	T147	TEST OF MULF INSTR, DATA SET MULF-15
2764	T150	TEST OF MULF INSTR, DATA SET MULF-16
2784	T151	TEST OF MULF INSTR, DATA SET MULF-17
2804	T152	TEST OF MULF INSTR, DATA SET MULF-20
2825	T153	TEST OF MULO INSTR, DATA SET MULO-1
2840	T154	TEST OF MULO INSTR, DATA SET MULO-2
2871	T155	TEST OF MULO INSTR, DATA SET MULO-3
2894	T156	TEST OF MULO INSTR, DATA SET MULO-4
2917	T157	TEST OF MULO INSTR, DATA SET MULO-5
2940	T160	TEST OF MULO INSTR, DATA SET MULO-6
2963	T161	TEST OF MULO INSTR, DATA SET MULO-7
2986	T162	TEST OF MULO INSTR, DATA SET MULO-10
3009	T163	TEST OF MULO INSTR, DATA SET MULO-11
3032	T164	TEST OF MULO INSTR, DATA SET MULO-12
3055	T165	TEST OF MULO INSTR, DATA SET MULO-13
3078	T166	TEST OF MULO INSTR, DATA SET MULO-14
3101	T167	TEST OF MULO INSTR, DATA SET MULO-15
3124	T170	TEST OF MULO INSTR, DATA SET MULO-16
3147	T171	TEST OF MULO INSTR, DATA SET MULO-17
3170	T172	TEST OF MULO INSTR, DATA SET MULO-20
3193	T173	TEST OF DIVF INSTR, DATA SET DIVF-1
3213	T174	TEST OF DIVF INSTR, DATA SET DIVF-2
3233	T175	TEST OF DIVF INSTR, DATA SET DIVF-3
3253	T176	TEST OF DIVF INSTR, DATA SET DIVF-4
3273	T177	TEST OF DIVF INSTR, DATA SET DIVF-5
3293	T200	TEST OF DIVF INSTR, DATA SET DIVF-6
3313	T201	TEST OF DIVF INSTR, DATA SET DIVF-7
3333	T202	TEST OF DIVF INSTR, DATA SET DIVF-10
3353	T203	TEST OF DIVF INSTR, DATA SET DIVF-11
3373	T204	TEST OF DIVF INSTR, DATA SET DIVF-12
3393	T205	TEST OF DIVF INSTR, DATA SET DIVF-13
3413	T206	TEST OF DIVF INSTR, DATA SET DIVF-14
3433	T207	TEST OF DIVF INSTR, DATA SET DIVF-15
3453	T210	TEST OF DIVF INSTR, DATA SET DIVF-16
3473	T211	TEST OF DIVF INSTR, DATA SET DIVF-17
3493	T212	TEST OF DIVF INSTR, DATA SET DIVF-20
3513	T213	TEST OF DIVF INSTR, DATA SET DIVF-21
3534	T214	TEST OF DIVO INSTR, DATA SET DIVO-1
3557	T215	TEST OF DIVO INSTR, DATA SET DIVO-2
3580	T216	TEST OF DIVO INSTR, DATA SET DIVO-3
3603	T217	TEST OF DIVO INSTR, DATA SET DIVO-4
3626	T220	TEST OF DIVO INSTR, DATA SET DIVO-5
3649	T221	TEST OF DIVO INSTR, DATA SET DIVO-6
3672	T222	TEST OF DIVO INSTR, DATA SET DIVO-7
3695	T223	TEST OF DIVO INSTR, DATA SET DIVO-10
3718	T224	TEST OF DIVO INSTR, DATA SET DIVO-11
3741	T225	TEST OF DIVO INSTR, DATA SET DIVO-12
3764	T226	TEST OF DIVO INSTR, DATA SET DIVO-13
3787	T227	TEST OF DIVO INSTR, DATA SET DIVO-14
3810	T230	TEST OF DIVO INSTR, DATA SET DIVO-15
3833	T231	TEST OF DIVO INSTR, DATA SET DIVO-16
3856	T232	TEST OF DIVO INSTR, DATA SET DIVO-17
3879	T233	TEST OF DIVO INSTR, DATA SET DIVO-20
3902	T234	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-1

3923	T235	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-2
3944	T236	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-3
3965	T237	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-4
3986	T240	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-5
4007	T241	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-6
4028	T242	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-7
4049	T243	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-10
4070	T244	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-11
4091	T245	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-12
4112	T246	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-13
4133	T247	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-14
4154	T250	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-15
4175	T251	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-16
4196	T252	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-17
4217	T253	TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-20
4239	T254	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-1
4264	T255	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-2
4289	T256	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-3
4314	T257	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-4
4339	T260	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-5
4364	T261	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-6
4389	T262	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-7
4414	T263	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-10
4439	T264	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-11
4464	T265	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-12
4489	T267	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-13
4514	T270	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-14
4539	T271	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-15
4564	T272	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-16
4589	T273	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-17
4614	T274	TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-20
4639	T274	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-1
4660	T275	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-2
4681	T276	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-3
4702	T277	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-4
4723	T280	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-5
4744	T281	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-6
4765	T282	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-7
4786	T283	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-10
4807	T284	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-11
4828	T285	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-12
4849	T286	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-13
4870	T287	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-14
4891	T210	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-15
4912	T211	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-16
4933	T212	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-17
4954	T213	TEST OF MODF(1 ACC) INSTR, DATA SET MD1F-20
4976	T214	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-1
5001	T215	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-2
5026	T216	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-3
5051	T217	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-4
5076	T220	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-5
5101	T221	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-6
5126	T222	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-7
5151	T223	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-10
5176	T224	TEST OF MODD(1 ACC) INSTR, DATA SET MD1D-11

5204	T325	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-12
5226	T326	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-13
5281	T327	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-14
5276	T328	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-15
5301	T329	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-16
5326	T330	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-17
5351	T331	TEST OF MODD(1 ACC) INSTR, DATA SET MODD-18
5376	T332	TEST OF LDCDF INSTR, DATA SET LDCDF-1
5396	T333	TEST OF LDCDF INSTR, DATA SET LDCDF-2
5416	T334	TEST OF LDCDF INSTR, DATA SET LDCDF-3
5420	T335	TEST OF LDCDF INSTR, DATA SET LDCDF-4
5455	T340	TEST OF LDCDF INSTR, DATA SET LDCDF-5
5475	T341	TEST OF LDCDF INSTR, DATA SET LDCDF-6
5499	T342	TEST OF LDCDF INSTR, DATA SET LDCDF-7
5516	T343	TEST OF LDCDF INSTR, DATA SET LDCDF-10
5536	T344	TEST OF LDCDF INSTR, DATA SET LDCDF-11
5550	T345	TEST OF LDCDF INSTR, DATA SET LDCDF-12
5575	T346	TEST OF LDCDF INSTR, DATA SET LDCDF-13
5596	T347	TEST OF LDCDF INSTR, DATA SET LDCDF-14
5616	T350	TEST OF LDCDF INSTR, DATA SET LDCDF-15
5636	T351	TEST OF LDCDF INSTR, DATA SET LDCDF-16
5657	T352	TEST OF LDCFD INSTR, DATA SET LDCFD-1
5677	T353	TEST OF LDCFD INSTR, DATA SET LDCFD-2
5697	T354	TEST OF LDCFD INSTR, DATA SET LDCFD-3
5717	T355	TEST OF LDCFD INSTR, DATA SET LDCFD-4
5737	T356	TEST OF LDCFD INSTR, DATA SET LDCFD-5
5757	T357	TEST OF LDCFD INSTR, DATA SET LDCFD-6
5777	T360	TEST OF LDCFD INSTR, DATA SET LDCFD-7
5797	T361	TEST OF LDCFD INSTR, DATA SET LDCFD-10
5818	T362	TEST OF STCDF INSTR, DATA SET STCDF-1
5838	T363	TEST OF STCDF INSTR, DATA SET STCDF-2
5859	T364	TEST OF STCDF INSTR, DATA SET STCDF-3
5878	T365	TEST OF STCDF INSTR, DATA SET STCDF-4
5899	T366	TEST OF STCDF INSTR, DATA SET STCDF-5
5918	T367	TEST OF STCDF INSTR, DATA SET STCDF-6
5938	T370	TEST OF STCDF INSTR, DATA SET STCDF-7
5959	T371	TEST OF STCDF INSTR, DATA SET STCDF-10
5978	T372	TEST OF STCDF INSTR, DATA SET STCDF-11
5999	T373	TEST OF STCDF INSTR, DATA SET STCDF-12
6018	T374	TEST OF STCDF INSTR, DATA SET STCDF-13
6038	T375	TEST OF STCDF INSTR, DATA SET STCDF-14
6059	T376	TEST OF STCFD INSTR, DATA SET STCFD-1
6079	T377	TEST OF STCFD INSTR, DATA SET STCFD-2
6099	T380	TEST OF STCFD INSTR, DATA SET STCFD-3
6119	T381	TEST OF STCFD INSTR, DATA SET STCFD-4
6139	T382	TEST OF STCFD INSTR, DATA SET STCFD-5
6159	T383	TEST OF STCFD INSTR, DATA SET STCFD-6
6179	T384	TEST OF LDCIF INSTR, DATA SET LDCIF-1
6197	T385	TEST OF LDCIF INSTR, DATA SET LDCIF-2
6215	T386	TEST OF LDCIF INSTR, DATA SET LDCIF-3
6233	T387	TEST OF LDCIF INSTR, DATA SET LDCIF-4
6251	T388	TEST OF LDCIF INSTR, DATA SET LDCIF-5
6270	T391	TEST OF LDCID INSTR, DATA SET LDCID-1
6289	T392	TEST OF LDCID INSTR, DATA SET LDCID-2
6308	T393	TEST OF LDCID INSTR, DATA SET LDCID-3
6327	T394	TEST OF LDCID INSTR, DATA SET LDCID-4

6346	T415	TEST OF LDCID INSTR, DATA SET LDCID-5
6366	T416	TEST OF LDCIF INSTR, DATA SET LDCIF-1
6386	T417	TEST OF LDCIF INSTR, DATA SET LDCIF-2
6407	T420	TEST OF LDCIF INSTR, DATA SET LDCIF-3
6420	T421	TEST OF LDCIF INSTR, DATA SET LDCIF-4
6438	T422	TEST OF LDCIF INSTR, DATA SET LDCIF-5
6455	T423	TEST OF LDCIF INSTR, DATA SET LDCIF-6
6474	T424	TEST OF LDCIF INSTR, DATA SET LDCIF-7
6493	T425	TEST OF LDCLD INSTR, DATA SET LDCLD-1
6512	T426	TEST OF LDCLD INSTR, DATA SET LDCLD-2
6531	T427	TEST OF LDCLD INSTR, DATA SET LDCLD-3
6550	T430	TEST OF LDCLD INSTR, DATA SET LDCLD-4
6569	T431	TEST OF LDCLD INSTR, DATA SET LDCLD-5
6589	T432	TEST OF STCFI INSTR, DATA SET STCFI-1
6608	T433	TEST OF STCFI INSTR, DATA SET STCFI-2
6627	T434	TEST OF STCFI INSTR, DATA SET STCFI-3
6646	T435	TEST OF STCFI INSTR, DATA SET STCFI-4
6665	T436	TEST OF STCFI INSTR, DATA SET STCFI-5
6684	T437	TEST OF STCFI INSTR, DATA SET STCFI-6
6703	T440	TEST OF STCFI INSTR, DATA SET STCFI-7
6723	T441	TEST OF STCUI INSTR, DATA SET STCUI-1
6743	T442	TEST OF STCUI INSTR, DATA SET STCUI-2
6763	T443	TEST OF STCUI INSTR, DATA SET STCUI-3
6783	T444	TEST OF STCUI INSTR, DATA SET STCUI-4
6803	T445	TEST OF STCUI INSTR, DATA SET STCUI-5
6823	T446	TEST OF STCUI INSTR, DATA SET STCUI-6
6843	T447	TEST OF STCUI INSTR, DATA SET STCUI-7
6864	T450	TEST OF STCFL INSTR, DATA SET STCFL-1
6883	T451	TEST OF STCFL INSTR, DATA SET STCFL-2
6903	T452	TEST OF STCFL INSTR, DATA SET STCFL-3
6921	T453	TEST OF STCFL INSTR, DATA SET STCFL-4
6940	T454	TEST OF STCFL INSTR, DATA SET STCFL-5
6959	T455	TEST OF STCFL INSTR, DATA SET STCFL-6
6978	T456	TEST OF STCFL INSTR, DATA SET STCFL-7
6998	T457	TEST OF STCUL INSTR, DATA SET STCUL-1
7018	T460	TEST OF STCUL INSTR, DATA SET STCUL-2
7038	T461	TEST OF STCUL INSTR, DATA SET STCUL-3
7058	T462	TEST OF STCUL INSTR, DATA SET STCUL-4
7078	T463	TEST OF STCUL INSTR, DATA SET STCUL-5
7098	T464	TEST OF STCUL INSTR, DATA SET STCUL-6
7118	T465	TEST OF STCUL INSTR, DATA SET STCUL-7
7139	T466	TEST OF LDEAP/F INSTR, DATA SET LDEAP-1
7159	T467	TEST OF LDEAP/F INSTR, DATA SET LDEAP-2
7179	T470	TEST OF LDEAP/F INSTR, DATA SET LDEAP-3
7199	T471	TEST OF LDEAP/F INSTR, DATA SET LDEAP-4
7219	T472	TEST OF LDEAP/F INSTR, DATA SET LDEAP-5
7239	T473	TEST OF LDEAP/F INSTR, DATA SET LDEAP-6
7259	T474	TEST OF LDEAP/F INSTR, DATA SET LDEAP-7
7279	T475	TEST OF LDEAP/F INSTR, DATA SET LDEAP-10
7299	T476	TEST OF LDEAP/F INSTR, DATA SET LDEAP-11
7319	T477	TEST OF LDEAP/F INSTR, DATA SET LDEAP-12
7339	T500	TEST OF LDEAP/F INSTR, DATA SET LDEAP-13
7359	T501	TEST OF LDEAP/F INSTR, DATA SET LDEAP-14
7379	T502	TEST OF LDEAP/F INSTR, DATA SET LDEAP-15
7399	T503	TEST OF LDEAP/F INSTR, DATA SET LDEAP-16
7419	T504	TEST OF LDEAP/F INSTR, DATA SET LDEAP-17

7439	T805	TEST OF LDEXP/F INSTR, DATA SET LEXP-20
7459	T806	TEST OF LDEXP/F INSTR, DATA SET LEXP-21
7479	T807	TEST OF LDEXP/F INSTR, DATA SET LEXP-22
7499	T810	TEST OF LDEXP/F INSTR, DATA SET LEXP-23
7519	T811	TEST OF LDEXP/F INSTR, DATA SET LEXP-24
7549	T813	TEST OF LDEXP/D INSTR, DATA SET LEXD-1
7564	T813	TEST OF LDEXP/D INSTR, DATA SET LEXD-2
7584	T814	TEST OF LDEXP/D INSTR, DATA SET LEXD-3
7606	T815	TEST OF LDEXP/D INSTR, DATA SET LEXD-4
7629	T816	TEST OF LDEXP/D INSTR, DATA SET LEXD-5
7650	T817	TEST OF LDEXP/D INSTR, DATA SET LEXD-6
7672	T820	TEST OF LDEXP/D INSTR, DATA SET LEXD-7
7694	T821	TEST OF LDEXP/D INSTR, DATA SET LEXD-10
7716	T823	TEST OF LDEXP/D INSTR, DATA SET LEXD-11
7739	T823	TEST OF LDEXP/D INSTR, DATA SET LEXD-12
7760	T824	TEST OF LDEXP/D INSTR, DATA SET LEXD-13
7782	T825	TEST OF LDEXP/D INSTR, DATA SET LEXD-14
7804	T826	TEST OF LDEXP/D INSTR, DATA SET LEXD-15
7826	T827	TEST OF LDEXP/D INSTR, DATA SET LEXD-16
7848	T830	TEST OF LDEXP/D INSTR, DATA SET LEXD-17
7870	T831	TEST OF LDEXP/D INSTR, DATA SET LEXD-20
7892	T832	TEST OF LDEXP/D INSTR, DATA SET LEXD-21
7914	T833	TEST OF LDEXP/D INSTR, DATA SET LEXD-22
7936	T834	TEST OF LDEXP/D INSTR, DATA SET LEXD-23
7958	T835	TEST OF LDEXP/D INSTR, DATA SET LEXD-26
7981	T836	TEST OF STEXP/F INSTR, DATA SET SEIF-1
7999	T837	TEST OF STEXP/F INSTR, DATA SET SEIF-2
8017	T840	TEST OF STEXP/F INSTR, DATA SET SEIF-3
8035	T841	TEST OF STEXP/F INSTR, DATA SET SEIF-4
8053	T842	TEST OF STEXP/F INSTR, DATA SET SEIF-5
8071	T843	TEST OF STEXP/F INSTR, DATA SET SEIF-6
8089	T844	TEST OF STEXP/F INSTR, DATA SET SEIF-7
8106	T845	TEST OF STEXP/D INSTR, DATA SET SEID-1
8127	T846	TEST OF STEXP/D INSTR, DATA SET SEID-2
8146	T847	TEST OF STEXP/D INSTR, DATA SET SEID-3
8165	T850	TEST OF STEXP/D INSTR, DATA SET SEID-6
8184	T851	TEST OF STEXP/D INSTR, DATA SET SEID-5
8203	T852	TEST OF STEXP/D INSTR, DATA SET SEID-6
8222	T853	TEST OF STEXP/D INSTR, DATA SET SEID-7
8244		SUB PASS AND CONTROL
8284		END OF PASS ROUTINE (MODIFIED SYMAC)
8324		SUBR TO TEST THE CNFP INSTRUCTION
8364		SUBR TO TEST THE CNPD INSTRUCTION
8410		SUBR TO TEST THE ADOP INSTRUCTION
8451		SUBR TO TEST THE ADUD INSTRUCTION
8499		SUBR TO TEST THE SUMP INSTRUCTION
8542		SUBR TO TEST THE SUSD INSTRUCTION
8588		SUBR TO TEST THE MUPF INSTRUCTION
8631		SUBR TO TEST THE MUPD INSTRUCTION
8677		SUBR TO TEST THE DIVF INSTRUCTION
8720		SUBR TO TEST THE DIVD INSTRUCTION
8767		SUBR TO TEST THE MOPF INSTRUCTION, USING 2 ACCUMULATORS
8823		SUBR TO TEST THE MOPD INSTRUCTION, USING 2 ACCUMULATORS
8884		SUBR TO TEST THE MOPF INSTRUCTION, USING 1 ACCUMULATOR
8940		SUBR TO TEST THE MOPD INSTRUCTION, USING 1 ACCUMULATOR
9001		SUBR TO TEST THE LOCDF INSTRUCTION

9045		SUBR TO TEST THE LDCFD INSTRUCTION
9091		SUBR TO TEST THE STCDF INSTRUCTION
9134		SUBR TO TEST THE STCFD INSTRUCTION
9169		SUBR TO TEST THE LDCIF INSTRUCTION
9202		SUBR TO TEST THE LCCID INSTRUCTION
9239		SUBR TO TEST THE LCCIF INSTRUCTION
9272		SUBR TO TEST THE LCCLD INSTRUCTION
9306		SUBR TO TEST THE STCFI INSTRUCTION
9356		SUBR TO TEST THE STCFD INSTRUCTION
9406		SUBR TO TEST THE STCFL INSTRUCTION
9450		SUBR TO TEST THE STCDL INSTRUCTION
9507		SUBR TO TEST THE LOEXP INSTRUCTION, F MODE
9550		SUBR TO TEST THE LDEXP INSTRUCTION, D MODE
9596		SUBR TO TEST THE STEXP INSTRUCTION, F MODE
9636		SUBR TO TEST THE STEXP INSTRUCTION, D MODE
9674		FPP UNEXPECTED TRAP CATCHER
9685		SLOPE HANDLER ROUTINE
9749		ERROR HANDLER ROUTINE
9812		ERROR MESSAGE TYPEOUT ROUTINE (MODIFIED SYMAC)
9878		TYPE ROUTINE
9937		APT COMMUNICATIONS ROUTINE
10014		BINARY TO OCTAL (ASCII) AND TYPE
10091		IMAP DECODER
10114		IMAP TABLE
10120		POWER DOWN AND UP ROUTINES
10175		ERROR MESSAGES, DATA HEADERS, DATA VECTORS, ETC

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*TITLE FPU ADVANCED INSTR TESTS
*COPYRIGHT (C) 1976
*DIGITAL EQUIPMENT CORP.
*MAYNARD, MASS. 01754
*
*PROGRAM BY DONALD NORTH
*
*THIS PROGRAM WAS ASSEMBLED USING THE POP-11 MAINDEC SYMAC
*PACKAGE (MAINDEC-11-DEQUAC-C1), JAN 19, 1977.
*
*BTTL OPERATIONAL SWITCH SETTINGS
*
* SWITCH OCTAL USE
*-----
* 12 100000 HALT ON ERROR
* 14 040000 LOOP ON CORRECTLY EXECUTING TEST
* 13 020000 INHIBIT ERROR TYPOLUTS
* 11 004000 INHIBIT STATUS TYPOLUTS
* 10 000000 INHIBIT ITERATIONS
* 9 002000 SWELL ON PASS END
* 8 001000 SWELL ON ERROR
* 7 000400 LOOP ON ERROR
* 6 000200 WTEST WFF/WFP ALTERNATELY EACH PASS
* 5 000002 WTEST ONLY UNIT SPECIFIED IN SWC005
* 4 000002 WSELECT WFF, IF SWC010=1
* 3 000003 WSELECT WFP, IF SWC010=1
*
*BTTL BASIC DEFINITIONS
*INITIAL ADDRESS OF THE STACK POINTER *** 1100 ***
STACKS 1100
*EQUIV EMT,ERROR ;BASIC DEFINITION OF ERROR CALL
*EQUIV IOT,SCOPE ;BASIC DEFINITION OF SCOPE CALL
*
* MISCELLANEOUS DEFINITIONS
MT= 11 ;CODE FOR HORIZONTAL TAB
LF= 12 ;CODE FOR LINE FEED
CR= 13 ;CODE FOR CARRIAGE RETURN
CRLF= 200 ;CODE FOR CARRIAGE RETURN+LINE FEED
PS= 177776 ;PROCESSOR STATUS WORD
*EQUIV PS,PSW
STKLM= 177774 ;STACK LIMIT REGISTER
PIRQ= 177772 ;PROGRAM INTERRUPT REQUEST REGISTER
OSWR= 177570 ;HARDWARE SWITCH REGISTER
ODISP= 177570 ;HARDWARE DISPLAY REGISTER
*
*GENERAL PURPOSE REGISTER DEFINITIONS
R0= 00 ;GENERAL REGISTER
R1= 01 ;GENERAL REGISTER
R2= 02 ;GENERAL REGISTER
R3= 03 ;GENERAL REGISTER
R4= 04 ;GENERAL REGISTER
R5= 05 ;GENERAL REGISTER

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R6= 06 ;GENERAL REGISTER
R7= 07 ;GENERAL REGISTER
SP= 06 ;STACK POINTER
PC= 07 ;PROGRAM COUNTER
*
*PRIORITY LEVEL DEFINITIONS
PR0= 0 ;PRIORITY LEVEL 0
PR1= 40 ;PRIORITY LEVEL 1
PR2= 100 ;PRIORITY LEVEL 2
PR3= 140 ;PRIORITY LEVEL 3
PR4= 200 ;PRIORITY LEVEL 4
PR5= 240 ;PRIORITY LEVEL 5
PR6= 300 ;PRIORITY LEVEL 6
PR7= 340 ;PRIORITY LEVEL 7
*
*SWITCH REGISTER SWITCH DEFINITIONS
SW10= 100000
SW14= 400000
SW13= 200000
SW12= 100000
SW11= 4000
SW10= 2000
SW09= 1000
SW08= 400
SW07= 200
SW06= 100
SW05= 40
SW04= 20
SW03= 10
SW02= 4
SW01= 2
SW00= 1
*EQUIV SW09,SW9
*EQUIV SW08,SW8
*EQUIV SW07,SW7
*EQUIV SW06,SW6
*EQUIV SW05,SW5
*EQUIV SW04,SW4
*EQUIV SW03,SW3
*EQUIV SW02,SW2
*EQUIV SW01,SW1
*EQUIV SW00,SW0
*
*DATA BIT DEFINITIONS (BIT0 TO BIT15)
BIT15= 100000
BIT14= 400000
BIT13= 200000
BIT12= 100000
BIT11= 4000
BIT10= 2000
BIT09= 1000
BIT08= 400
BIT07= 200
BIT06= 100
BIT05= 40
BIT04= 20

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113      000010      BIT03= 10
114      000004      BIT02= 4
115      000002      BIT01= 2
116      000001      BIT00= 1
117      .EQUIV BIT09,BIT9
118      .EQUIV BIT08,BIT8
119      .EQUIV BIT07,BIT7
120      .EQUIV BIT06,BIT6
121      .EQUIV BIT05,BIT5
122      .EQUIV BIT04,BIT4
123      .EQUIV BIT03,BIT3
124      .EQUIV BIT02,BIT2
125      .EQUIV BIT01,BIT1
126      .EQUIV BIT00,BIT0
127
128
129      000004      ;BASIC "CPU" TRAP VECTOR ADDRESSES
130      000010      LRRVEC= 4      ;TIME OUT AND OTHER ERRORS
131      000014      RESVEC= 10     ;RESERVED AND ILLEGAL INSTRUCTIONS
132      000014      IBITVEC= 14    ;"I" BIT
133      000014      IRTRVEC= 14    ;TRACE TRAP
134      000014      IPTVEC= 14     ;BREAKPOINT TRAP (BPT)
135      000020      IOTVEC= 20     ;INPUT/OUTPUT TRAP (IOT) **SCOPE**
136      000024      PNRVEC= 24     ;DUMPER FAIL
137      000030      CMYVEC= 30     ;EMULATOR TRAP (EMT) **EMUROR**
138      000034      TRAPVEC= 34    ;"TRAP" TRAP
139      000060      TKVEC= 60      ;TTY KEYBOARD VECTOR
140      000064      TPVEC= 64      ;TTY PRINTER VECTOR
141      000140      PIRGVEC= 240   ;PROGRAM INTERRUPT REQUEST VECTOR
142
143      076000      ;MED CODES
144      076000      MED= 076000    ;OPCODE
145
146      000022      RWHANI= 022     ;READ WHANI
147
148      000144      RFLAG= 144      ;READ FLAGS
149      000344      WFLAG= 344     ;WRITE FLAGS
150
151      000244      ;FLOATING POINT INTERRUPT VECTOR
152      000244      FIPVEC= 244
153
154      000000      ;FLOATING POINT REGISTER DEFINITIONS
155      000001      AC0= 00
156      000002      AC1= 01
157      000003      AC2= 02
158      000004      AC3= 03
159      000005      AC4= 04
160      000005      AC5= 05
161
162      052020      ;BIT PATTERNS FOR TESTS
163      052020      ALTP= 052020   ; 011...01
164      125282      AN= ALTP
165      125282      ALTN= 125282   ; 1010...10
166      007417      ALT4P= 007417 ; 000011100001111
167      170360      ALT4N= 170360 ; 11100001110000
168      177770      R2= 177770    ; 111...10 MINUS TWO
  
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169      177777      M1= 177777    ; 1111...11 MINUS ONE, ALL 1'S
170      100000      M0= 100000     ; 1000...00 MINUS ZERO
171      077777      LGP= 077777    ; 0111...11 LGST + NUM (1ST ND FLT)
172      177777      LGN= 177777    ; 1111...11 LGST - NUM (1ST ND FLT)
173      000200      SMP= 000200    ; -102...-120, SMLT + NUM (1ST ND FLT)
174      000200      SMN= 000200    ; -102...-120, SMLT - NUM (1ST ND FLT)
175      000177      XIIMP= 000177   ; ZERO EXP, ALL 1'S MANT (1ST ND FLT)
176      100177      XIIMN= 100177   ; ZERO EXP, ALL 1'S MANT (1ST ND FLT)
177      000200      F1P= 000200    ; -1.0E+0, 1ST ND FLT
178      100200      F1N= 100200    ; -1.0E+0, 1ST ND FLT
179      100210      P1Z0= 100210    ; 100010010001000
180      000377      L0= 000377     ; 000000011111111 LOWER BITS
181      177400      U0= 177400     ; 111111100000000 UPPER BITS
182
183      ;FPS BIT PATTERNS
184      147757      FP0= 147757     ; ALL BITS ON (HEADABLE)
185      000000      FP00= 000000   ; ALL BITS OFF
186      000000      N0= 000000     ; FOR FPC, WHEN NOT APPLICABLE
187
188      ;PSW BIT PATTERNS
189      177760      CCONLY= 177760  ; FOR SIC TO GET CC BITS UNHY
189
190      ;BTTL TRAP CATCHER
191
192
193      000000      ;BTTL
194
195      ;ALL UNUSED LOCATIONS FROM 4 - 776 CONTAIN A ".+J,NALI"
196      ;SEQUENCE TO CATCH ILLEGAL TRAPS AND INTERRUPTS
197      ;LOCATION 0 CONTAINS 0 TO CATCH IMPROPERLY LOADED VECTORS
198
199      000174      000000      ;=174
200      000176      000000      ;=176
201
202      000200      000137      002400
203      000137      JMP 002400      ;JUMP TO STARTING ADDRESS OF PROGRAM
204
205      ;BTTL ACT11 HOOKS
206
207      ;*****
208      ;HOOKS REQUIRED BY ACT11
209      000204      000000      ;SAVE PC
210      000046      033114      ;ENDAD
211      000052      000000      ;=52
212      000052      000000      ;WORD 0
213      000204      000000      ;=204
214      001900      000000      ;=1900
215
216      ;BTTL APT PARAMETER BLOCK
217
218      ;*****
219      ;SET LOCATIONS 24 AND 46 AS REQUIRED FOR APT
220      ;*****
221      001400      000000      ;=14
222      000024      000200      ;=24
223      000044      000000      ;=44
224      000044      001000      ;=44
  
```

225 001000
226 001000
227 001002 000000
228 001004 000001
229 001006 000001
230 001010 000000
231 001012 000014
232
233
234
235
236
237

W,EX IIREPT LOCATION COUNTER

ISETUP APT PARAMETER BLOCK AS DEFINED IN THE APT-DP11 DIAGNOSTIC
INTERFACE SPAC.
SPATNDI
SHIBTH: WORD 0 IITWO HIGH BITS OF 18 BIT MAILBOX ADDR.
SMBADR: WORD 0 IADDRESS OF APT MAILBOX (BITS 0-15)
STSTM: WORD 1 IIRUN TIM OF LONGEST TEST
SPATMI: WORD 1 IIRUN TIME IN SECS. OF 1ST PASS ON 1 UNIT (QUICK VERIFY)
SUNITM: WORD 0 IADDITIONAL RUN TIME (SECS) OF A PASS FOR EACH ADDITIONAL UNIT
SETEND-SMAIL/2 IILENGTH MAILBOX-ETABLE(WORDS)

238
239
240
241
242
243
244 001100 001100
245 001102 000000
246 001104 000000
247 001106 000000
248 001110 000000
249 001112 000000
250 001114 000000
251 001116 000000
252 001120 000001
253 001122 000000
254 001124 000000
255 001126 000000
256 001130 000000
257 001132 000000
258 001134 000000
259 001136 000000
260 001140 000000
261 001142 000000
262 001144 177570
263 001146 177570
264 001150 000000
265 001152 177560
266 001154 177562
267 001156 177564
268 001160 177566
269 001162 000000
270 001164 002000
271 001166 002000
272 001168 002000
273 001170 000000
274 001172 000000
275 001174 000000
276 001176 000000
277 001200 000000
278 001202 000000
279 001204 000000
280 001206 000000
281 001210 000000
282 001212 000000
283 001214 000000
284 001216 000000
285 001220 000000
286 001222 000000

ITHIS TABLE CONTAINS VARIOUS COMMON STORAGE LOCATIONS
IUSED IN THE PROGRAM.

001100
SMTAG: ISTART OF COMMON TAGS
I-----START OF CLEAR COMMON TAGS-----
SWR: WORD 0 IADDRESS OF SWITCH REGISTER
DISPLA: WORD DDISP IADDRESS OF DISPLAY REGISTER
SLPTST: WORD 0 ICONTAINS TEST NUMBER TO LOOP UPON
STKS: 177560 ITTY AND STATUS
STRB: 177562 ITTY AND BUFFER
STPB: 177564 ITTY PRINTER STATUS REG. ADDRESS
STPB: 177566 ITTY PRINTER BUFFER REG. ADDRESS
SMULL: BYTE 0 ICONTAINS NULL CHARACTER FOR FILLS
SFILLS: BYTE 2 ICONTAINS # OF FILLER CHARACTERS REQUIRED
SFILLS: BYTE 12 IINSERT FILL CHARS. AFTER A "LINE FEED"
STFLG: BYTE 0 I"TERMINAL AVAILABLE" FLAG (BIT#7) ICONTAINS THE ADDRESS FROM WHICH (%REG0) WAS OBTAINED
SREG0: WORD 0 ICONTAINS [(%REG0)+0]
SREG1: WORD 0 ICONTAINS [(%REG0)+2]
SREG2: WORD 0 ICONTAINS [(%REG0)+4]
SREG3: WORD 0 ICONTAINS [(%REG0)+6]
SREG4: WORD 0 ICONTAINS [(%REG0)+8]
SREG5: WORD 0 ICONTAINS [(%REG0)+10]
SREG6: WORD 0 ICONTAINS [(%REG0)+12]
SREG7: WORD 0 ICONTAINS [(%REG0)+14]
SREG8: WORD 0 ICONTAINS [(%REG0)+16]
SREG9: WORD 0 ICONTAINS [(%REG0)+18]
SREG10: WORD 0 ICONTAINS [(%REG0)+20]
SREG11: WORD 0 ICONTAINS [(%REG0)+22]
SREG12: WORD 0 ICONTAINS [(%REG0)+24]
SREG13: WORD 0 ICONTAINS [(%REG0)+26]
SREG14: WORD 0 ICONTAINS [(%REG0)+28]
SREG15: WORD 0 ICONTAINS [(%REG0)+30]

294	001224	000000	SREG161	,WORD	0	;;CONTAINS ((SREGAD)+34)
295	001226	000000	SREG171	,WORD	0	;;CONTAINS ((SREGAD)+36)
296	001230	000000	STMP01	,WORD	0	;;USER DEFINED
297	001232	000000	STMP11	,WORD	0	;;USER DEFINED
298	001234	000000	STMP21	,WORD	0	;;USER DEFINED
299	001236	000000	STMP31	,WORD	0	;;USER DEFINED
300	001240	000000	STMP41	,WORD	0	;;USER DEFINED
301	001242	000000	STMP51	,WORD	0	;;USER DEFINED
302	001244	000000	STMP61	,WORD	0	;;USER DEFINED
303	001246	000000	STMP71	,WORD	0	;;USER DEFINED
304	001250	000000	STMP81	,WORD	0	;;USER DEFINED
305	001252	000000	STMP91	,WORD	0	;;USER DEFINED
306	001254	000000	STMP101	,WORD	0	;;USER DEFINED
307	001256	000000	STMP111	,WORD	0	;;USER DEFINED
308	001260	000000	STMP121	,WORD	0	;;USER DEFINED
309	001262	000000	STMP131	,WORD	0	;;USER DEFINED
310	001264	000000	STMP141	,WORD	0	;;USER DEFINED
311	001266	000000	STMP151	,WORD	0	;;USER DEFINED
312	001270	000000	STMP161	,WORD	0	;;USER DEFINED
313	001272	000000	STMP171	,WORD	0	;;USER DEFINED
314	001274	000000	STMP181	,WORD	0	;;USER DEFINED
315	001276	000000	STMP191	,WORD	0	;;USER DEFINED
316	001300	000000	STMP201	,WORD	0	;;USER DEFINED
317	001302	000000	STMP211	,WORD	0	;;USER DEFINED
318	001304	000000	STMP221	,WORD	0	;;USER DEFINED
319	001306	000000	STMP231	,WORD	0	;;USER DEFINED
320	001310	000000	STMP241	,WORD	0	;;USER DEFINED
321	001312	000000	STMP251	,WORD	0	;;USER DEFINED
322	001314	177A07	STMP261	,WORD	0	;;USER DEFINED
323	001320	017	STMP271	,WORD	0	;;USER DEFINED
324	001321	015	STMP281	,WORD	0	;;USER DEFINED
325	001322	000012	STMP291	,WORD	0	;;USER DEFINED
326			STMP301	,WORD	0	;;USER DEFINED
327			STMP311	,WORD	0	;;USER DEFINED
328			STMP321	,WORD	0	;;USER DEFINED
329			STMP331	,WORD	0	;;USER DEFINED
330			STMP341	,WORD	0	;;USER DEFINED
331	001324		STMP351	,WORD	0	;;USER DEFINED
332	001324	000000	STMP361	,WORD	0	;;USER DEFINED
333	001326	000000	STMP371	,WORD	0	;;USER DEFINED
334	001330	000000	STMP381	,WORD	0	;;USER DEFINED
335	001332	000000	STMP391	,WORD	0	;;USER DEFINED
336	001334	000000	STMP401	,WORD	0	;;USER DEFINED
337	001336	000000	STMP411	,WORD	0	;;USER DEFINED
338	001340	000000	STMP421	,WORD	0	;;USER DEFINED
339	001342	000000	STMP431	,WORD	0	;;USER DEFINED
340	001344	000	STMP441	,WORD	0	;;USER DEFINED
341	001344	000	STMP451	,WORD	0	;;USER DEFINED
342	001345	000	STMP461	,WORD	0	;;USER DEFINED
343	001346	000000	STMP471	,WORD	0	;;USER DEFINED
344	001350	000000	STMP481	,WORD	0	;;USER DEFINED
345	001352	000000	STMP491	,WORD	0	;;USER DEFINED
346			STMP501	,WORD	0	;;USER DEFINED
347			STMP511	,WORD	0	;;USER DEFINED
348			STMP521	,WORD	0	;;USER DEFINED
349			STMP531	,WORD	0	;;USER DEFINED

350			STMP541	,WORD	0	;;USER DEFINED
351			STMP551	,WORD	0	;;USER DEFINED
352	001354		STMP561	,WORD	0	;;USER DEFINED
353			STMP571	,WORD	0	;;USER DEFINED

Line	Index	Code	Label	Pointer	Description
354			.SMTL		ERROR POINTER TABLE
355					
356	001354				SERRT01
357					
358					THIS TABLE CONTAINS THE INFORMATION FOR EACH ERROR THAT CAN OCCUR.
359					THE INFORMATION IS OBTAINED BY USING THE INDEX NUMBER FOUND IN
360					LOCATION ITEMS. THIS NUMBER INDICATES WHICH ITEM IN THE TABLE IS PERTINENT.
361					NOTE: IF ITEM 0 IS THE ONLY PERTINENT DATA IS (ERRRPC).
362					NOTE: EACH ITEM IN THE TABLE CONTAINS 4 POINTERS EXPLAINED AS FOLLOWS:
363					
364					EM
365					DM
366					DT
367					DF
368					NOTE: ERROR VECTOR TABLE (SERRT) HAS BEEN MODIFIED,
369					ELIMINATING UNUSED VALUE FOR DATA FORMAT POINTER.
370					ERROR TYPING ROUTINE HAS ALSO BEEN MODIFIED
371					ACCORDINGLY.
372					VECTORS FOR VPS ERRORS *****
373	001354	044147	045366	045042	EMV0011 WORD EMA,DNA,DTA ; LDCIF,STCFI,STEXP/F,TRAP-TSTR
374	001362	044147	045366	045050	EMV0021 WORD EMA,DNA,DTB ; CMPF,LDCFL,STCFL
375	001370	044147	045366	045056	EMV0031 WORD EMA,DNA,DTC ; LDCID,STCUI,LDCAP/F,STEXP/D
376	001376	044147	045366	045064	EMV0041 WORD EMA,DNA,DTD ; ADDF,BUHF,MULF,UIVF,LDCDF,LDCFD
377					STCDF,LDCSD,STCUL
378	001404	044147	045366	045072	EMV0051 WORD EMA,DNA,DTE ; CMPD,MODF,STCFD
379	001412	044147	045366	045700	EMV0061 WORD EMA,DNA,DTF ; LDCFP/D
380	001420	044147	045366	045706	EMV0071 WORD EMA,DNA,DTG ; ADDD,SUMD,MULD,DIYD
381	001426	044147	045366	045714	EMV0101 WORD EMA,DNA,DTH ; MODD
382					VECTORS FOR FLC/EA ERRORS *****
383	001434	044173	045402	045722	EMV0111 WORD EMB,DNB,DTI ; STCFI,TRAP-TSTR
384	001442	044173	045402	045734	EMV0121 WORD EMB,DNB,DTJ ; CMPF,STCFL
385	001450	044173	045402	045740	EMV0131 WORD EMB,DNB,DTK ; STCUI,LDCAP/F
386	001456	044173	045402	045750	EMV0141 WORD EMB,DNB,DTL ; ADDF,BUHF,MULF,UIVF,LDCUF
387					LDCFD,STCDF,STCUL
388	001464	044173	045402	045772	EMV0151 WORD EMB,DNB,DTM ; CMPD,MODF
389	001472	044173	045402	046004	EMV0161 WORD EMB,DNB,DTN ; LDCAP/D
390	001500	044173	045402	046016	EMV0171 WORD EMB,DNB,OTO ; ADDD,SUMD,MULD,DIYD
391	001506	044173	045402	046030	EMV0201 WORD EMB,DNB,OTP ; MODD
392					VECTORS FOR RESULT ERRORS *****
393	001514	044357	045442	046056	EMV0211 WORD EML,DNC,DTG ; CMPF
394	001522	044357	045500	046140	EMV0221 WORD EML,DNC,DTA ; CMPD
395	001530	044446	045442	046114	EMV0231 WORD EML,DNC,DTV ; ADDF,BUHF
396	001536	044446	045500	046250	EMV0241 WORD EML,DNC,DTAB ; ADDD,SUMD
397	001544	044320	045442	046114	EMV0251 WORD EML,DNC,DTV ; MULF,UIVF
398	001552	044320	045500	046250	EMV0261 WORD EML,DNC,DTAB ; MULD,DIYD
399	001560	044372	045442	046114	EMV0271 WORD EML,DNC,DTV ; MODF-FRAC
400	001566	044353	045442	046126	EMV0301 WORD EML,DNC,DTW ; MODF-INT
401	001574	044372	045500	046250	EMV0311 WORD EML,DNC,DTAC ; MODD-FRAC
402	001602	044653	045500	046272	EMV0321 WORD EML,DNC,DTAC ; MODD-INT
403	001610	044607	045442	046114	EMV0331 WORD EML,DNC,DTV ; LDCDF,STCDF
404	001616	044731	045500	046204	EMV0341 WORD EML,DNC,DTZ ; LDCFD
405	001624	044731	045500	046226	EMV0351 WORD EML,DNC,DTAA ; STCFD
406	001632	044688	045442	046070	EMV0361 WORD EML,DNC,DTT ; STCFI
407	001640	045065	045500	046162	EMV0371 WORD EML,DNC,DTI ; LDCIF
408	001646	045065	045442	046102	EMV0401 WORD EML,DNC,DTU ; LDCID
409	001654	045065	045500	046204	EMV0411 WORD EML,DNC,DTZ ; LDCFL

410	001662	045145	045366	046042	EMV0421 WORD EML,DNA,DTG ; STCFI
411	001670	045145	045366	046050	EMV0431 WORD EML,DNA,DTR ; STCUI
412	001676	045145	045442	046102	EMV0441 WORD EML,DNC,DTU ; STCFL
413	001704	045148	045442	046114	EMV0451 WORD EML,DNC,DTV ; STCUL
414	001712	045225	045442	046102	EMV0461 WORD EML,DNC,DTU ; LDCAP/F
415	001720	045225	045500	046226	EMV0471 WORD EML,DNC,DTAA ; LDCFP/D
416	001726	045305	045366	046042	EMV0501 WORD EMO,DNA,DTU ; STEXP/F
417	001734	045305	045366	046050	EMV0511 WORD EMO,DNA,DTR ; STEXP/D
418	001742	000000	000000	000000	EMV0521 WORD 0,0,0 ; (UNUSED)
419	001750	000000	000000	000000	EMV0531 WORD 0,0,0 ; (UNUSED)
420					VECTORS FOR CC COPY ERRORS *****
421	001756	044310	045366	046314	EMV0541 WORD EMO,DNA,DTAO ; STCFI,STCUI,STEXP/F,STEXP/D
422	001764	044310	045366	046322	EMV0551 WORD EMO,DNA,DTAB ; STCFL,STCUL
423					VECTORS FOR ILLEGAL TRAP CATCHER ROUTINE *****
424	001772	044223	045576	046330	EMV0561 WORD EML,DNF,DTAR ; UNEXPECTED TRAP


```

522 002602 104001 002046                TYPE      ,@GNMES      ; 10 MESSAGE AT START
523                                     ;
524                                     ;
525                                     ;
526                                     ;
527 002666 076600 000022                MED      ,RWHAMI      ;NHAKI INTO RW
528 002672 052700 000020                BIT      @BIT04,R0    ;IS THERE A HFP UNIT ?
529 002676 001403                        REG      700          ;NO, BK
530 002700 104001 002714                TYPE      ,@000      ;INDICATE FP11-E PRESENT
531 002704 000402                        BR       @000        ;GO FOR SUBPASS INIT
532 002706 104001 002734                700:    TYPE      ,@096      ;INDICATE NO FP11-E
533 002712 000402                        BR       @096        ;GO FOR SUBPASS INIT
534                                     ;
535 002714 000503 020002 050106 640:    ,ARCI0 <15><12>? FP11-E HFP UNIT PRESENT ? * <15><12>
536 002722 010401 002400 044040                ;
537 002730 050100 052400 044516                ;
538 002736 020124 051120 051300                ;
539 002744 047105 020124 006402                ;
540 002752 000012                        ;
541 002754 000010 020002 047516 090:    ,ARCI0 <15><12>? NO FP11-E HFP UNIT - ALL TESTS HFP ONLY * <15><12>
542 002762 031000 030520 025401                ;
543 002770 020105 043110 020120                ;
544 002776 047125 052111 020400                ;
545 003004 000400 046114 052000                ;
546 003012 051305 051524 053400                ;
547 003020 050100 047400 040116                ;
548 003026 020131 006402 000012                ;
549                                     ;
550                                     ;
551                                     ;
552                                     ;
553                                     ;
554                                     ;
555                                     ;
556                                     ;
557                                     ;
558 003034 012706 001100                NEWPASS: MOV      @STACK,SP      ;RESET STACK PTR
559                                     ;
560 003040 012777 010000 176076                BIT      @BIT12,@000    ;INHIBIT STATUS TYPLOUTS ?
561 003046 010111                        BNE     @SUBPASS      ;ER IF YES
562                                     ;
563 003050 104001 002130                TYPE      ,@NPASS1     ;"PASS 1"
564 003054 013746 001332                MOV      @PASS,=@(SP)   ;PASS COUNT INTO ...
565 003060 005216                INC      @SP            ; 1=H NAME
566 003062 104003                TYP00   ;TYPE OCTAL
567 003064 000000                ,BYTE   0,0           ; 6 DIGITS, NO LEADING ZEROS
568 003066 104001 001321                TYPE    ,@CRLF        ;END THE LINE
569                                     ;
570                                     ;
571                                     ;
572                                     ;
573                                     ;
574                                     ;
575 003072 012706 001100                SUBPASS: MOV      @STACK,SP      ;RESET SP FOR INSURANCE
576                                     ;
577 003076 070000 000022                MED      ,RWHAMI      ;GET WHAMI INTO RW

```

```

578 003102 012700 000020                BIT      @BIT04,R0    ;!HFP PRESENT, @000
579 003106 001403                        REG      200          ;IF NO HFP, TEST WARM UNDI
580                                     ;
581 003110 076000 000144                MED      ,@FLAG      ;GET FLAG INTO RW
582                                     ;
583 003114 012777 000002 176022                BIT      @0001,@000    ;@000: !HFP OR HFP TEST ONLY
584 003122 001413                        REG      10          ; @=ALTERNATE HFP/HFP PER PASS
585                                     ;
586 003124 012777 000001 176012                BIT      @0000,@000    ;@000: !HFP ONLY
587 003132 001403                        REG      20          ; @=HFP ONLY
588 003134 042700 010000                BIC     @BIT12,R0     ;CLEAR HFP ENABLE FLAGS> FOR HFP
589 003140 000402                        BR       10          ;
590 003142 052700 010000                20:    BIC     @BIT12,R0     ;SET HFP ENABLE FLAGS> FOR HFP
591 003146 076000 000344                10:    MED      ,@FLAG      ;REWRITE FLAG
592                                     ;
593 003152 052700 010000                10:    BIT      @BIT12,R0     ;TEST WHO'S ENABLED! NOT, WARM
594 003156 001404                        REG      200          ;SET APPROPRIATE HEADERS
595                                     ;
596 003160 312737 044132 042504 190:    MOV      @ASCROT,NOTH00 ;"NOT: "
597 003166 000401                        BR       210          ;
598 003170 012737 044140 042504 200:    MOV      @ASC0PM,NOTH00 ;"WARM: "
599 003176 210:

```

```

000
001
002
003
004
005 003170 000004
006 003200 012705 003212
007 003204 004737 033330
008
009 003210 000407
010
011 003212
012 003212 000000 000000
013 003216 000000 000000
014 003222 047451 047444
015 003226 000000
016
017
018
019
020
021
022
023 003230 000004
024 003232 012705 003244
025 003236 004737 033330
026
027 003242 000407
028
029 003244
030 003244 052525 052525
031 003250 052525 052525
032 003254 047513 047504
033 003260 000000
034
035
036
037
038
039
040
041 003262 000004
042 003264 012705 003276
043 003270 004737 033330
044
045 003274 000407
046
047 003276
048 003276 077777 177777
049 003302 177777 177777
050 003306 047507 047510
051 003312 000000
052
053
054
055

```

```

*****
;TEST 1 TEST OF CMPF INSTR, DATA SET CMPF-1
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST1: SCOPE
MOV 0CMPF1,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF1 ; GO TEST
BR TST2 ;;

CMPF1: ; TEST DATA SET CMPF-11
.WORD 0 ; INITIAL AC FLOAT NUMBER
.WORD 0 ; INITIAL MEM FLOAT NUMBER
.WORD 047453,047444 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 2 TEST OF CMPF INSTR, DATA SET CMPF-2
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST2: SCOPE
MOV 0CMPF2,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF2 ; GO TEST
BR TST3 ;;

CMPF2: ; TEST DATA SET CMPF-21
.WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
.WORD 047513,047504 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 3 TEST OF CMPF INSTR, DATA SET CMPF-3
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST3: SCOPE
MOV 0CMPF3,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF3 ; GO TEST
BR TST4 ;;

CMPF3: ; TEST DATA SET CMPF-31
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD LGN,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 047507,047510 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 4 TEST OF CMPF INSTR, DATA SET CMPF-4

```

```

056
057
058
059 003314 000004
060 003316 012705 003330
061 003322 004737 033330
062
063 003326 000407
064
065 003330
066 003330 125252 125252
067 003334 125252 125252
068 003340 047451 047444
069 003344 000000
070
071
072
073
074
075
076
077 003346 000004
078 003350 012705 003362
079 003354 004737 033330
080
081 003360 000407
082
083 003362
084 003362 177777 177777
085 003366 077777 177777
086 003372 047457 047440
087 003376 000000
088
089
090
091
092
093
094
095 003400 000004
096 003402 012705 003414
097 003406 004737 033330
098
099 003412 000407
100
101 003414
102 003414 177777 177777
103 003420 040000 000000
104 003424 047517 047500
105 003430 000000
106
107
108
109
110
111

```

```

*****
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST4: SCOPE
MOV 0CMPF4,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF4 ; GO TEST
BR TST5 ;;

CMPF4: ; TEST DATA SET CMPF-41
.WORD ALTN,ALTN ; INITIAL AC FLOAT NUMBER
.WORD ALTN,ALTN ; INITIAL MEM FLOAT NUMBER
.WORD 047453,047444 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 5 TEST OF CMPF INSTR, DATA SET CMPF-5
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST5: SCOPE
MOV 0CMPF5,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF5 ; GO TEST
BR TST6 ;;

CMPF5: ; TEST DATA SET CMPF-51
.WORD LGN,M1 ; INITIAL AC FLOAT NUMBER
.WORD LGP,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 047457,047440 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 6 TEST OF CMPF INSTR, DATA SET CMPF-6
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST6: SCOPE
MOV 0CMPF6,R5 ; PTR TO TEST DATA SET
JBR PC,00CMPF6 ; GO TEST
BR TST7 ;;

CMPF6: ; TEST DATA SET CMPF-61
.WORD 037777,M1 ; INITIAL AC FLOAT NUMBER
.WORD 040000,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 047517,047500 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

*****
;TEST 7 TEST OF CMPF INSTR, DATA SET CMPF-7
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES

```

712
713 003432 000004
714 003434 012705 003446
715 003440 004737 003330
716
717 003444 000407
718
719 003446 000000
720 003446 000000 000001
721 003452 000000 000000
722 003456 047547 047550
723 003462 000000
724
725
726
727
728
729
730
731 003464 000004
732 003466 012705 003500
733 003472 004737 003330
734
735 003476 000407
736
737 003500
738 003500 175000 000000
739 003504 175000 000000
740 003510 047417 047400
741 003514 000000
742
743
744
745
746
747
748
749 003516 000004
750 003520 012705 003537
751 003524 004737 003330
752
753 003530 000407
754
755 003532
756 003532 007417 007417
757 003536 100000 000000
758 003542 047443 147443
759 003546 100014
760
761
762
763
764
765
766
767 003550 000004

```

*****
TST7:  SCOPE
      MOV  %CMPF7,R5      ; PTR TO TEST DATA SET
      JSR  PC,%CMPF7     ; GO TEST
      BR   TST10        ;;

CMPF7:  ; TEST DATA SET CMPF-7:
        .WORD 050000,000001 ; INITIAL AC FLOAT NUMBER
        .WORD 450000,000000 ; INITIAL MEM FLOAT NUMBER
        .WORD 047547,047550 ; FPS: BEFORE, AFTER
        .WORD NA          ; FEC AFTER ( 0 = N/A )

*****
;TEST 10 TEST OF CMPF INSTR, DATA SET CMPF-10
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST10: SCOPE
      MOV  %CMPF10,R5     ; PTR TO TEST DATA SET
      JSR  PC,%CMPF10    ; GO TEST
      BR   TST11        ;;

CMPF10: ; TEST DATA SET CMPF-10:
        .WORD 120000,000000 ; INITIAL AC FLOAT NUMBER
        .WORD 124000,000000 ; INITIAL MEM FLOAT NUMBER
        .WORD 047417,047400 ; FPS: BEFORE, AFTER
        .WORD NA          ; FEC AFTER ( 0 = N/A )

*****
;TEST 11 TEST OF CMPF INSTR, DATA SET CMPF-11
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST11: SCOPE
      MOV  %CMPF11,R5     ; PTR TO TEST DATA SET
      JSR  PC,%CMPF11    ; GO TEST
      BR   TST12        ;;

CMPF11: ; TEST DATA SET CMPF-11:
        .WORD 01400,01400 ; INITIAL AC FLOAT NUMBER
        .WORD 00,0       ; INITIAL MEM FLOAT NUMBER
        .WORD 047443,147443 ; FPS: BEFORE, AFTER
        .WORD 100014     ; FEC AFTER ( 0 = N/A )

*****
;TEST 12 TEST OF CMPF INSTR, DATA SET CMPF-12
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST12: SCOPE

```

768 003552 012705 003564
769 003556 004737 003330
770
771 003562 000407
772
773 003564
774 003564 006177 177777
775 003570 006177 177777
776 003574 047507 047510
777 003600 000000
778
779
780
781
782
783
784
785 003602 000004
786 003604 012705 003616
787 003610 004737 003330
788
789 003614 000407
790
791 003616
792 003616 125252 125252
793 003622 100177 177777
794 003620 043567 043540
795 003632 000000
796
797
798
799
800
801
802
803 003634 000004
804 003636 012705 003650
805 003642 004737 003330
806
807 003646 000407
808
809 003650
810 003650 000377 177777
811 003654 000377 177776
812 003660 007407 047410
813 003664 000000
814
815
816

```

      MOV  %CMPF12,R5     ; PTR TO TEST DATA SET
      JSR  PC,%CMPF12    ; GO TEST
      BR   TST13        ;;

CMPF12: ; TEST DATA SET CMPF-12:
        .WORD 006177,M1    ; INITIAL AC FLOAT NUMBER
        .WORD 004177,M1    ; INITIAL MEM FLOAT NUMBER
        .WORD 047507,047510 ; FPS: BEFORE, AFTER
        .WORD NA          ; FEC AFTER ( 0 = N/A )

*****
;TEST 13 TEST OF CMPF INSTR, DATA SET CMPF-13
;# ALL INTERRUPT ENABLE OFF, ALL OTHERS ON
;# SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST13: SCOPE
      MOV  %CMPF13,R5     ; PTR TO TEST DATA SET
      JSR  PC,%CMPF13    ; GO TEST
      BR   TST14        ;;

CMPF13: ; TEST DATA SET CMPF-13:
        .WORD 01400,01400 ; INITIAL AC FLOAT NUMBER
        .WORD 21000,M1     ; INITIAL MEM FLOAT NUMBER
        .WORD 043557,043540 ; FPS: BEFORE, AFTER
        .WORD NA          ; FEC AFTER ( 0 = N/A )

*****
;TEST 14 TEST OF CMPF INSTR, DATA SET CMPF-14
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST14: SCOPE
      MOV  %CMPF14,R5     ; PTR TO TEST DATA SET
      JSR  PC,%CMPF14    ; GO TEST
      BR   TST15        ;;

CMPF14: ; TEST DATA SET CMPF-14:
        .WORD 000377,M1    ; INITIAL AC FLOAT NUMBER
        .WORD 000377,M2    ; INITIAL MEM FLOAT NUMBER
        .WORD 047407,047410 ; FPS: BEFORE, AFTER
        .WORD NA          ; FEC AFTER ( 0 = N/A )

```

```

017
018
019
020
021
022
023 003666 000004
024 003670 012705 003702
025 003674 004737 033476
026
027
028 003702 000413
029
030 003702 000000 000000 000000
031 003710 000000
032 003712 000000 000000
033 003720 000000
034 003722 007713 047704
035 003726 000000
036
037
038
039
040
041
042 003730 000004
043 003732 012705 003744
044 003736 004737 033476
045
046 003742 000413
047
048 003744
049 003744 177777 177777 177777
050 003752 177777
051 003754 177777 177777 177777
052 003762 177777
053 003764 047717 047700
054 003770 000000
055
056
057
058
059
060
061
062 003772 000004
063 003774 012705 004006
064 004000 004737 033476
065
066 004004 000413
067
068 004006
069 004006 170360 170360 170360
070 004014 170360
071 004016 170360 170360 170360
072 004024 170360

;*****
;TEST 15 TEST OF CMPD INSTR, DATA SET CMPD-1
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST15: SCOPE
MOV R0,CMPD1,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST16 ;

CMPD1: ; TEST DATA SET CMPD-11
;WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 047713,047704 ; FPS: BEFORE, AFTER
;WORD NA ; FIC AFTER ( 0 = N/A )

;*****
;TEST 16 TEST OF CMPD INSTR, DATA SET CMPD-2
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST16: SCOPE
MOV R0,CMPD2,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST17 ;

CMPD2: ; TEST DATA SET CMPD-21
;WORD LG0,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
;WORD LG0,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 047717,047700 ; FPS: BEFORE, AFTER
;WORD NA ; FIC AFTER ( 0 = N/A )

;*****
;TEST 17 TEST OF CMPD INSTR, DATA SET CMPD-3
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST17: SCOPE
MOV R0,CMPD3,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST20 ;

CMPD3: ; TEST DATA SET CMPD-31
;WORD ALT4N,ALT4N,ALT4N,ALT4N ; INITIAL AC FLOAT NUMBER
;WORD ALT4N,ALT4N,ALT4N,ALT4N ; INITIAL MEM FLOAT NUMBER

```

```

073 004026 047713 047704
074 004032 000000
075
076
077
078
079
080
081
082 004034 000004
083 004036 012705 004050
084 004042 004737 033476
085
086 004046 000413
087
088 004050
089 004050 177777 177777 177777
090 004056 177777
091 004060 177777 177777 177777
092 004066 177777
093 004070 047647 047650
094 004074 000000
095
096
097
098
099
100
101
102 004076 000004
103 004078 012705 004112
104 004084 004737 033476
105
106 004110 000413
107
108 004112
109 004112 007417 007417 007417
110 004120 007417
111 004122 007417 007417 007417
112 004130 007417
113 004132 047653 047644
114 004136 000000
115
116
117
118
119
120
121
122 004140 000004
123 004142 012705 004154
124 004146 004737 033476
125
126 004152 000413
127
128 004154

;*****
;TEST 20 TEST OF CMPD INSTR, DATA SET CMPD-4
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST20: SCOPE
MOV R0,CMPD4,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST21 ;

CMPD4: ; TEST DATA SET CMPD-41
;WORD LG0,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
;WORD LG0,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 047647,047650 ; FPS: BEFORE, AFTER
;WORD NA ; FIC AFTER ( 0 = N/A )

;*****
;TEST 21 TEST OF CMPD INSTR, DATA SET CMPD-5
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST21: SCOPE
MOV R0,CMPD5,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST22 ;

CMPD5: ; TEST DATA SET CMPD-51
;WORD ALT4P,ALT4P,ALT4P,ALT4P ; INITIAL AC FLOAT NUMBER
;WORD ALT4P,ALT4P,ALT4P,ALT4P ; INITIAL MEM FLOAT NUMBER
;WORD 047653,047644 ; FPS: BEFORE, AFTER
;WORD NA ; FIC AFTER ( 0 = N/A )

;*****
;TEST 22 TEST OF CMPD INSTR, DATA SET CMPD-6
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST22: SCOPE
MOV R0,CMPD6,R5 ; PTR TO TEST DATA SET
JSR PC,R0CMPDT ; GO TEST
BR TST23 ;

CMPD6: ; TEST DATA SET CMPD-61

```

```

929 004156 175252 125252 125252 .WORD ALIN,ALIN,ALIN,ALIN ; INITIAL AC FLOAT NUMBER
930 004162 175252
931 004164 108177 177777 177777 .WORD EX1MN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
932 004172 177777
933 004174 047703 147703 .WORD 047703,147703 ; FPS: BEFORE, AFTER
934 004200 108014 .WORD 108014 ; FEC AFTER ( 0 = N/A )
935
936
937
938
939
940
941
942 004202 000004
943 004204 012705 004216
944 004210 004737 033476
945
946 004214 000413
947
948 004216
949 004216 002177 177777 177777 CMPD71 ; TEST DATA SET CMPD-71
950 004224 177777 .WORD 002177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
951 004226 005177 177777 177777 .WORD 005177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
952 004234 177777
953 004236 047657 047640 .WORD 047657,047640 ; FPS: BEFORE, AFTER
954 004242 000000 .WORD NA ; FEC AFTER ( 0 = N/A )
955
956
957
958
959
960
961
962 004244 000004
963 004246 012705 004258
964 004252 004737 033476
965
966 004256 000413
967
968 004260
969 004260 000000 000000 000000 CMPD101 ; TEST DATA SET CMPD-101
970 004266 000000 .WORD 030000,000000,000000,000000 ; INITIAL AC FLOAT NUMBER
971 004270 027777 177777 177777 .WORD 027777,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
972 004276 177777
973 004300 047647 047650 .WORD 047647,047650 ; FPS: BEFORE, AFTER
974 004304 000000 .WORD NA ; FEC AFTER ( 0 = N/A )
975
976
977
978
979
980
981
982 004306 000004
983 004310 012705 004322
984 004314 004737 033476

```

```

985
986 004320 000413
987
988 004322
989 004322 142000 000000 000000 CMPD111 ; TEST DATA SET CMPD-111
990 004330 000000 .WORD 102000,000000,000000,000000 ; INITIAL AC FLOAT NUMBER
991 004332 142000 000000 000000 .WORD 102000,000000,000000,000000 ; INITIAL MEM FLOAT NUMBER
992 004340 000001
993 004342 047607 047610 .WORD 047607,047610 ; FPS: BEFORE, AFTER
994 004346 000000 .WORD NA ; FEC AFTER ( 0 = N/A )
995
996
997
998
999
1000
1001
1002 004350 000004
1003 004352 012705 004364
1004 004356 004737 033476
1005
1006 004362 000413
1007
1008 004364
1009 004364 002000 000000 000000 CMPD111 ; TEST DATA SET CMPD-111
1010 004372 000000 .WORD 002000,000000,000000,000000 ; INITIAL AC FLOAT NUMBER
1011 004374 010000 000000 000000 .WORD 014000,000000,000000,000000 ; INITIAL MEM FLOAT NUMBER
1012 004402 000000
1013 004404 047757 047740 .WORD 047757,047740 ; FPS: BEFORE, AFTER
1014 004410 000000 .WORD NA ; FEC AFTER ( 0 = N/A )
1015
1016
1017
1018
1019
1020
1021
1022 004412 000004
1023 004414 012705 004426
1024 004420 004737 033476
1025
1026 004424 000413
1027
1028 004426
1029 004426 000000 000000 000000 CMPD111 ; TEST DATA SET CMPD-111
1030 004434 000000 .WORD 000000,000000,000000,000000 ; INITIAL AC FLOAT NUMBER
1031 004436 108177 177777 000000 .WORD 021MN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1032 004444 177777
1033 004446 043713 043704 .WORD 043713,043704 ; FPS: BEFORE, AFTER
1034 004452 000000 .WORD NA ; FEC AFTER ( 0 = N/A )
1035
1036
1037
1038
1039
1040
1041
1042
1043
1044

```

```

1041
1042 004454 000000
1043 004456 012705 004470
1044 004462 004717 033604
1045
1046 004466 000013
1047
1048 004470
1049 004470 100777 000000 177777
1050 004476 000001
1051 004500 100777 000000 177777
1052 004506 000000
1053 004510 047657 047660
1054 004514 000000
1055
1056

```

```

;*****
TST30: SCOPE
MOV 0CMPD14,R5 ; PTR TO TEST DATA SET
J&M PC,0CMPD14 ; GO TEST
BR TST31 ;

```

```

CMPD14: ; TEST DATA SET CMPD-14:
.WORD 100777,000000,M1,000001 ; INITIAL AC FLOAT NUMBER
.WORD 100777,000000,M1,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 047657,047660 ; FPG: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

```

```

1057
1058
1059
1060
1061
1062 004516 000001
1063 004520 012705 004532
1064 004544 004717 033604
1065
1066 004530 000411
1067
1068 004532
1069 004532 000177 177777
1070 004536 000177 177777
1071 004542 000000 000000
1072 004546 047453 047464
1073 004552 000000
1074
1075
1076
1077
1078
1079
1080
1081 004554 000004
1082 004556 012705 004570
1083 004562 004717 033604
1084
1085 004566 000411
1086
1087 004570
1088 004570 000000 000000
1089 004574 125252 125252
1090 004600 125252 125252
1091 004604 047410 047410
1092 004610 000000
1093
1094
1095
1096
1097
1098
1099
1100 004612 000004
1101 004614 012705 004626
1102 004620 004717 033604
1103
1104 004624 000411
1105
1106 004626
1107 004626 052525 052525
1108 004632 000000 000000
1109 004636 125252 052525
1110 004642 147557 047560
1111 004646 000000
1112

```

```

;*****
;TEST 31 TEST OF ADDF INSTR, DATA SET ADDF-1
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST31: SCOPE
MOV 0ADDF1,R5 ; PTR TO TEST DATA SET
J&M PC,0ADDF1 ; GO TEST
BR TST32 ;

```

```

ADDF1: ; TEST DATA SET ADDF-1:
.WORD 0,M1 ; INITIAL AC FLOAT NUMBER
.WORD 0,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047453,047464 ; FPG: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

```

```

;*****
;TEST 32 TEST OF ADDF INSTR, DATA SET ADDF-2
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST32: SCOPE
MOV 0ADDF2,R5 ; PTR TO TEST DATA SET
J&M PC,0ADDF2 ; GO TEST
BR TST33 ;

```

```

ADDF2: ; TEST DATA SET ADDF-2:
.WORD 0,0 ; INITIAL AC FLOAT NUMBER
.WORD 0,M1,0,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,M1,0,M1 ; EXPECTED FLOAT RESULT
.WORD 047410,047410 ; FPG: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

```

```

;*****
;TEST 33 TEST OF ADDF INSTR, DATA SET ADDF-3
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST33: SCOPE
MOV 0ADDF3,R5 ; PTR TO TEST DATA SET
J&M PC,0ADDF3 ; GO TEST
BR TST34 ;

```

```

ADDF3: ; TEST DATA SET ADDF-3:
.WORD 0,M1,0,M1 ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; INITIAL MEM FLOAT NUMBER
.WORD 0,M1,0,M1 ; EXPECTED FLOAT RESULT
.WORD 047557,047560 ; FPG: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

```

```

1113
1114
1115 ;*****
1116 ;*TEST 34 TEST OF ADDF INSTR, DATA SET ADDF-4
1117 ;* ALL INTERRUPT ENABLER ON
1118 ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
1119 ;*****
1119 004650 000004
1120 004652 012705 004666
1121 004656 004737 033664
1122
1123 004662 000411
1124
1125 004664
1126 004664 017777 177777
1127 004670 177777 177777
1128 004674 000000 000000
1129 004700 047513 047504
1130 004704 000000
1131
1132
1133 ;*****
1134 ;*TEST 35 TEST OF ADDF INSTR, DATA SET ADDF-5
1135 ;* ALL INTERRUPT ENABLER ON
1136 ;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
1137 ;*****
1138 004706 000004
1139 004710 012705 004722
1140 004714 004737 033664
1141
1142 004720 000411
1143
1144 004722
1145 004722 042000 000000
1146 004726 050177 177777
1147 004732 000000 000000
1148 004736 047417 047400
1149 004742 000000
1150
1151
1152 ;*****
1153 ;*TEST 36 TEST OF ADDF INSTR, DATA SET ADDF-6
1154 ;* ALL INTERRUPT ENABLER ON
1155 ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
1156 ;*****
1157 004744 000004
1158 004746 012705 004760
1159 004752 004737 033664
1160
1161 004756 000411
1162
1163 004760
1164 004760 042000 000000
1165 004764 050177 177777
1166 004770 000177 177777
1167 004774 047457 047440
1168 005000 000000

```

```

1169
1170
1171 ;*****
1172 ;*TEST 37 TEST OF ADDF INSTR, DATA SET ADDF-7
1173 ;* ALL INTERRUPT ENABLER ON
1174 ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
1175 ;*****
1176 005002 000004
1177 005004 012705 005016
1178 005010 004737 033664
1179
1180 005014 000411
1181
1182 005016
1183 005016 141777 177777
1184 005022 100177 177777
1185 005026 100177 177777
1186 005032 047507 047510
1187 005036 000000
1188
1189
1190 ;*****
1191 ;*TEST 40 TEST OF ADDF INSTR, DATA SET ADDF-10
1192 ;* ALL INTERRUPT ENABLER ON
1193 ;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
1194 ;*****
1195 005040 000004
1196 005042 012705 005054
1197 005046 004737 033664
1198
1199 005052 000411
1200
1201 005054
1202 005054 141777 177777
1203 005060 100177 177777
1204 005064 100177 177777
1205 005070 047547 047550
1206 005074 000000
1207
1208
1209 ;*****
1210 ;*TEST 41 TEST OF ADDF INSTR, DATA SET ADDF-11
1211 ;* ALL INTERRUPT ENABLER ON
1212 ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
1213 ;*****
1214 005076 000004
1215 005100 012705 005112
1216 005104 004737 033664
1217
1218 005110 000411
1219
1220 005112
1221 005112 050177 177777
1222 005116 032200 000000
1223 005122 040200 000000
1224 005126 047457 047440

```

```

1225 005132 000000
1226
1227
1228
1229
1230
1231
1232
1233 005134 000004
1234 005136 012705 005150
1235 005142 004737 033664
1236
1237 005146 000411
1238
1239 005150
1240 005154 140252 125252
1241 005154 140452 125252
1242 005160 140377 177777
1243 005164 047407 047410
1244 005170 000000
1245
1246
1247
1248
1249
1250
1251
1252 005172 000004
1253 005174 012705 005200
1254 005200 004737 033664
1255
1256 005204 000411
1257
1258 005206
1259 005206 000010 104210
1260 005212 000014 104210
1261 005216 000210 104210
1262 005222 047537 047540
1263 005226 000000
1264
1265
1266
1267
1268
1269
1270
1271 005230 000004
1272 005232 012705 005244
1273 005236 004737 033664
1274
1275 005242 000411
1276
1277 005244
1278 005244 174177 177777
1279 005250 074177 177776
1280 005254 100200 000000

```

```

;WORD NA ; F&C AFTER ( 0 = N/A )

;*****
;TEST 42 TEST OF ADDF INSTR, DATA SET ADDF-11
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST42: SCOPE
MOV #ADDF12,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST43 ;;

ADDF12: ; TEST DATA SET ADDF-12:
;WORD 140252,125252 ; INITIAL AC FLOAT NUMBER
;WORD 140053,125252 ; INITIAL MEM FLOAT NUMBER
;WORD 140377,M1 ; EXPECTED FLOAT RESULT
;WORD 047407,047410 ; FPS: BEFORE, AFTER
;WORD NA ; F&C AFTER ( 0 = N/A )

;*****
;TEST 43 TEST OF ADDF INSTR, DATA SET ADDF-11
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST43: SCOPE
MOV #ADDF13,R6 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST44 ;;

ADDF13: ; TEST DATA SET ADDF-13:
;WORD 040010,104210 ; INITIAL AC FLOAT NUMBER
;WORD 040010,104210 ; INITIAL MEM FLOAT NUMBER
;WORD 040010,104210 ; EXPECTED FLOAT RESULT
;WORD 047557,047540 ; FPS: BEFORE, AFTER
;WORD NA ; F&C AFTER ( 0 = N/A )

;*****
;TEST 44 TEST OF ADDF INSTR, DATA SET ADDF-11
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST44: SCOPE
MOV #ADDF14,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST45 ;;

ADDF14: ; TEST DATA SET ADDF-14:
;WORD 174177,M1 ; INITIAL AC FLOAT NUMBER
;WORD 074177,M2 ; INITIAL MEM FLOAT NUMBER
;WORD 100200,000000 ; EXPECTED FLOAT RESULT

```

```

1281 005260 047507 047510
1282 005264 000000
1283
1284
1285
1286
1287
1288
1289
1290 005266 000004
1291 005270 012705 005302
1292 005274 004737 033664
1293
1294 005300 000411
1295
1296 005302
1297 005302 142200 000000
1298 005306 050177 177777
1299 005312 050177 177776
1300 005316 047417 047400
1301 005322 000000
1302
1303
1304
1305
1306
1307
1308
1309 005324 000004
1310 005326 012705 005340
1311 005332 004737 033664
1312
1313 005336 000411
1314
1315 005340
1316 005340 077777 177777
1317 005344 077777 177777
1318 005350 000177 177777
1319 005354 047451 147446
1320 005360 100010
1321
1322
1323
1324
1325
1326
1327
1328 005362 000004
1329 005364 012705 005376
1330 005370 004737 033664
1331
1332 005374 000411
1333
1334 005376
1335 005376 100000 000000
1336 005402 000000 000000

```

```

;WORD 047507,047510 ; FPS: BEFORE, AFTER
;WORD NA ; F&C AFTER ( 0 = N/A )

;*****
;TEST 45 TEST OF ADDF INSTR, DATA SET ADDF-10
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST45: SCOPE
MOV #ADDF15,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST46 ;;

ADDF15: ; TEST DATA SET ADDF-15:
;WORD 142200,000000 ; INITIAL AC FLOAT NUMBER
;WORD 050177,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 050177,M2 ; EXPECTED FLOAT RESULT
;WORD 047417,047400 ; FPS: BEFORE, AFTER
;WORD NA ; F&C AFTER ( 0 = N/A )

;*****
;TEST 46 TEST OF ADDF INSTR, DATA SET ADDF-10
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST46: SCOPE
MOV #ADDF16,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST47 ;;

ADDF16: ; TEST DATA SET ADDF-16:
;WORD L0P,M1 ; INITIAL AC FLOAT NUMBER
;WORD L0P,M1 ; INITIAL MEM FLOAT NUMBER
;WORD Z1,M1 ; EXPECTED FLOAT RESULT
;WORD 047451,147446 ; FPS: BEFORE, AFTER
;WORD 100010 ; F&C AFTER ( 0 = N/A )

;*****
;TEST 47 TEST OF ADDF INSTR, DATA SET ADDF-11
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST47: SCOPE
MOV #ADDF17,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF7 ; GO TEST
BR TST50 ;;

ADDF17: ; TEST DATA SET ADDF-17:
;WORD 100000,M ; INITIAL AC FLOAT NUMBER
;WORD 004000,1 ; INITIAL MEM FLOAT NUMBER

```


1337 005406 076200 000000
1338 005412 047517 147500
1339 005416 100012
1340
1341
1342
1343
1344
1345
1346
1347 005420 000004
1348 005422 012705 005434
1349 005426 004737 033664
1350
1351 005432 000411
1352
1353 005434
1354 005434 177777 177777
1355 005440 000000 000000
1356 005444 177777 177777
1357 005450 047517 147543
1358 005454 100014
1359
1360
1361
1362
1363
1364
1365
1366 005456 000004
1367 005460 012705 005472
1368 005464 004737 033664
1369
1370 005470 000411
1371
1372 005472
1373 005472 177777 177777
1374 005476 177777 177777
1375 005502 000000 000000
1376 005506 046511 046506
1377 005512 000000
1378
1379
1380
1381
1382
1383
1384
1385 005514 000004
1386 005516 012705 005530
1387 005522 004737 033664
1388
1389 005526 000411
1390
1391 005530
1392 005534 052525 052525

```

)WORD 076200,0 ; EXPECTED FLOAT RESULT
)WORD 047517,147500 ; FFS1 BEFORE, AFTER
)WORD 100012 ; FEC AFTER ( 0 = N7A )

)*****
)TEST S0 TEST OF ADDF INSTR, DATA SET ADDF-20
)0 ALL INTERRUPT ENABLES ON
)0 SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
)*****
TSTS0: SCOPE
MOV #ADDF20,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF20 ; GO TEST
BR TSTS1 ;

ADDF20: ; TEST DATA SET ADDF-20:
)WORD LCM,M1 ; INITIAL AC FLOAT NUMBER
)WORD M0,0 ; INITIAL MEM FLOAT NUMBER
)WORD LCM,M1 ; EXPECTED FLOAT RESULT
)WORD 047517,147543 ; FFS1 BEFORE, AFTER
)WORD 100014 ; FEC AFTER ( 0 = N7A )

)*****
)TEST S1 TEST OF ADDF INSTR, DATA SET ADDF-21
)0 OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
)0 SHORT FLOAT, LONG INTEGER, ROUND MODES
)*****
TSTS1: SCOPE
MOV #ADDF21,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF21 ; GO TEST
BR TSTS2 ;

ADDF21: ; TEST DATA SET ADDF-21:
)WORD LCM,M1 ; INITIAL AC FLOAT NUMBER
)WORD LCM,M1 ; INITIAL MEM FLOAT NUMBER
)WORD S,0 ; EXPECTED FLOAT RESULT
)WORD 046511,046506 ; FFS1 BEFORE, AFTER
)WORD NA ; FEC AFTER ( 0 = N7A )

)*****
)TEST S2 TEST OF ADDF INSTR, DATA SET ADDF-22
)0 UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
)0 SHORT FLOAT, LONG INTEGER, ROUND MODES
)*****
TSTS2: SCOPE
MOV #ADDF22,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF22 ; GO TEST
BR TSTS3 ;

ADDF22: ; TEST DATA SET ADDF-22:
)WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER

```

1393 005534 100177 177777
1394 005540 052525 052525
1395 005544 043717 043700
1396 005550 000000
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1404 005552 000004
1405 005554 012705 005566
1406 005560 004737 033664
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1408 005564 000411
1409
1410 005566
1411 005566 000000 000000
1412 005572 140000 000000
1413 005576 000000 000000
1414 005602 045413 045404
1415 005606 000000
1416
1417
1418

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)WORD ZX1M,M1 ; INITIAL MEM FLOAT NUMBER
)WORD ALTP,ALTP ; EXPECTED FLOAT RESULT
)WORD 043717,043700 ; FFS1 BEFORE, AFTER
)WORD NA ; FEC AFTER ( 0 = N7A )

)*****
)TEST S3 TEST OF ADDF INSTR, DATA SET ADDF-23
)0 UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
)0 SHORT FLOAT, LONG INTEGER, ROUND MODES
)*****
TSTS3: SCOPE
MOV #ADDF23,R5 ; PTR TO TEST DATA SET
JSR PC,#ADDF23 ; GO TEST
BR TSTS4 ;

ADDF23: ; TEST DATA SET ADDF-23:
)WORD 004000,000001 ; INITIAL AC FLOAT NUMBER
)WORD 140000,000000 ; INITIAL MEM FLOAT NUMBER
)WORD 000000,000000 ; EXPECTED FLOAT RESULT
)WORD 045413,045404 ; FFS1 BEFORE, AFTER
)WORD NA ; FEC AFTER ( 0 = N7A )

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1424 005610 000004
1425 005612 012705 005624
1426 005616 004737 014034
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1428 005622 000417
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1431 005624 000177 177777 177777
1432 005632 177777
1433 005634 000000 000000 000000
1434 005642 000000
1435 005644 000000 000000 000000
1436 005652 000000
1437 005654 047710 047704
1438 005600 000000
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1446 005662 000004
1447 005604 012705 005676
1448 005670 004737 014034
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1450 005674 000417
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1452 005676
1453 005676 125252 125252 125252
1454 005704 125252
1455 005706 000000 000000 000000
1456 005714 000000
1457 005716 125252 125252 125252
1458 005724 125252
1459 005726 047710 047750
1460 005732 000000
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1468 005734 000004
1469 005736 012705 005750
1470 005742 004737 014034
1471
1472 005706 000417
1473
1474 005750

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1475 005750 000177 177777 177777
1476 005756 177777
1477 005760 052525 052525 052525
1478 005766 052525
1479 005770 052525 052525 052525
1480 005776 052525
1481 006000 047610 047600
1482 006004 000000
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1490 006006 000004
1491 006010 012705 006022
1492 006014 004737 014034
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1494 006020 000417
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1496 006022
1497 006022 177777 177777 177777
1498 006030 177777
1499 006032 077777 177777 177777
1500 006040 177777
1501 006042 000000 000000 000000
1502 006050 000000
1503 006052 047653 047644
1504 006056 000000
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1512 006060 000004
1513 006062 012705 006074
1514 006066 004737 014034
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1516 006072 000417
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1518 006074
1519 006074 106177 177777 177777
1520 006102 177777
1521 006104 100000 000000 000000
1522 006112 000000
1523 006114 106200 000000 000000
1524 006122 000000
1525 006124 047607 047610
1526 006130 000000
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1534 000132 000004
1535 000134 012705 006146
1536 000140 004737 034034
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1538 000144 000417
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1540 000146
1541 000146 106177 177777 177777 ADDD6: ; TEST DATA SET ADDD-0;
      .WORD 106177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
1542 000154 177777
1543 000156 150000 000000 000000 .WORD 150000,0,0,0 ; INITIAL MEM FLOAT NUMBER
1544 000164 000000
1545 000166 106177 177777 177777 .WORD 106177,M1,M1,M1 ; EXPECTED FLOAT RESULT
1546 000174 177777
1547 000176 047647 047650 .WORD 047647,047650 ; FPC BEFORE, AFTER
1548 000202 000000 .WORD NA ; FPC AFTER ( 0 = N/A )
1549
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1556 000204 000004
1557 000206 012705 006220
1558 000212 004737 034034
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1560 000216 000417
1561
1562 000220
1563 000220 006177 177777 177777 ADDD7: ; TEST DATA SET ADDD-7;
      .WORD 006177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
1564 000226 177777
1565 000230 004777 177777 177777 .WORD 004777,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1566 000236 177777
1567 000240 006177 177777 177777 .WORD 006177,M1,M1,M1 ; EXPECTED FLOAT RESULT
1568 000246 177777
1569 000250 047717 047700 .WORD 047717,047700 ; FPC BEFORE, AFTER
1570 000254 000000 .WORD NA ; FPC AFTER ( 0 = N/A )
1571
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1578 000256 000004
1579 000260 012705 006272
1580 000266 004737 034034
1581
1582 000270 000417
1583
1584 000272
1585 000272 006177 177777 177777 ADDD10: ; TEST DATA SET ADDD-10;
      .WORD 006177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
1586 000300 177777

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1587 000302 004777 177777 177777 .WORD 004777,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1588 000310 177777
1589 000312 006177 177777 177777 .WORD 006177,M1,M1,M1 ; EXPECTED FLOAT RESULT
1590 000320 177777
1591 000322 004777 047740 .WORD 047757,047740 ; FPC BEFORE, AFTER
1592 000326 000000 .WORD NA ; FPC AFTER ( 0 = N/A )
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1600 000330 000004
1601 000332 012705 006344
1602 000336 004737 034034
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1604 000342 000417
1605
1606 000344
1607 000344 004010 104210 104210 ADDD11: ; TEST DATA SET ADDD-11;
      .WORD 004010,P132,P132,P132 ; INITIAL AC FLOAT NUMBER
1608 000352 104210
1609 000354 004010 104210 104210 .WORD 004010,P132,P132,P132 ; INITIAL MEM FLOAT NUMBER
1610 000362 104210
1611 000364 004210 104210 104210 .WORD 004210,P132,P132,P132 ; EXPECTED FLOAT RESULT
1612 000372 104210
1613 000374 047017 047600 .WORD 047617,047600 ; FPC BEFORE, AFTER
1614 000400 000000 .WORD NA ; FPC AFTER ( 0 = N/A )
1615
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1622 000402 000004
1623 000404 012705 006416
1624 000410 004737 034034
1625
1626 000414 000417
1627
1628 000416
1629 000416 122200 000000 000000 ADDD12: ; TEST DATA SET ADDD-12;
      .WORD 122200,0,0,0 ; INITIAL AC FLOAT NUMBER
1630 000424 000000
1631 000426 106177 177777 177777 .WORD 106177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1632 000434 177777
1633 000436 106200 000000 000000 .WORD 106200,0,0,0 ; EXPECTED FLOAT RESULT
1634 000444 000000
1635 000446 047747 047750 .WORD 047747,047750 ; FPC BEFORE, AFTER
1636 000452 000000 .WORD NA ; FPC AFTER ( 0 = N/A )
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1644 006454 000004
1645 006456 012705 006470
1646 006462 004737 034034
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1648 006466 000417
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1651 006470 042253 125252 125252 ADDD131 ; TEST DATA SET ADDU=131
1652 006476 125252 ,WORD 042252,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
1653 006500 042052 125252 125252 ,WORD 042052,ALTN,ALTN,ALTN ; INITIAL MEM FLOAT NUMBER
1654 006506 125252 ,WORD
1655 006510 042377 177777 177777 ,WORD 042377,M1,M1,M1 ; EXPECTED FLOAT RESULT
1656 006516 177777 ,WORD
1657 006520 047717 047700 ,WORD 047717,047700 ; FPS: BEFORE, AFTER
1658 006524 000000 ,WORD NA ; FEC AFTER ( M = N/A )
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1666 006526 000004
1667 006530 012705 006542
1668 006534 004737 034034
1669
1670 006540 000417
1671
1672
1673 006542 074177 177777 177777 ADDD141 ; TEST DATA SET ADDU=141
1674 006550 177777 ,WORD 074177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
1675 006552 174177 177777 177777 ,WORD 174177,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
1676 006560 177777 ,WORD
1677 006562 056200 000000 000000 ,WORD 056200,0,0,0 ; EXPECTED FLOAT RESULT
1678 006570 000000 ,WORD
1679 006572 047617 047600 ,WORD 047617,047600 ; FPS: BEFORE, AFTER
1680 006576 000000 ,WORD NA ; FEC AFTER ( M = N/A )
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1690 006600 000004
1691 006602 012705 006614
1692 006606 004737 034034
1693
1694 006612 000417
1695
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1697 006614 132200 000000 000000 ADDD151 ; TEST DATA SET ADDU=151
1698 006622 000000 ,WORD 132200,0,0,0 ; INITIAL AC FLOAT NUMBER
1699 006624 000177 177777 177777 ,WORD 000177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1700 006632 177777 ,WORD

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1699 006634 000177 177777 177777 ,WORD 000177,M1,M1,M2 ; EXPECTED FLOAT RESULT
1700 006642 177776 ,WORD
1701 006644 047717 047700 ,WORD 047717,047700 ; FPS: BEFORE, AFTER
1702 006650 000000 ,WORD NA ; FEC AFTER ( M = N/A )
1703
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1710 006652 000004
1711 006654 012705 006666
1712 006660 004737 034034
1713
1714 006664 000417
1715
1716
1717 006666 077777 177777 177777 ADDD161 ; TEST DATA SET ADDU=161
1718 006674 177777 ,WORD LCP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
1719 006676 000177 177777 177777 ,WORD EX1M,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
1720 006704 177777 ,WORD
1721 006726 077777 177777 177777 ,WORD LCP,M1,M1,M1 ; EXPECTED FLOAT RESULT
1722 006714 177777 ,WORD
1723 006716 047603 147603 ,WORD 047603,147603 ; FPS: BEFORE, AFTER
1724 006722 100014 ,WORD 100014 ; FEC AFTER ( M = N/A )
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1732 006724 000004
1733 006726 012705 006740
1734 006732 004737 034034
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1736 006736 000417
1737
1738
1739 006740 102000 000000 000000 ADDD171 ; TEST DATA SET ADDU=171
1740 006746 000001 ,WORD 102000,0,0,1 ; INITIAL AC FLOAT NUMBER
1741 006750 042004 000000 000000 ,WORD 002000,0,0,0 ; INITIAL MEM FLOAT NUMBER
1742 006756 000000 ,WORD
1743 006764 104200 000000 000000 ,WORD 104200,0,0,0 ; EXPECTED FLOAT RESULT
1744 006766 000000 ,WORD
1745 006770 047647 147650 ,WORD 047647,147650 ; FPS: BEFORE, AFTER
1746 006774 100012 ,WORD 100012 ; FEC AFTER ( M = N/A )
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1754 006776 000004

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1755 007000 012705 007012
1756 007000 004737 034034      MOV    #ADDD20,R5      ; PTR TO TEST DATA SET
1757                                JSR    PC,#ADDD07      ; GO TEST
1758                                BR     TST74           ;;
1759                                BR     TST74           ;;
1760                                BR     TST74           ;;
1761 007012 177777 177777 177777  ADDD20: ; TEST DATA SET ADDD-20:
1762 007020 177777 177777 177777  .WORD  LGP,M1,M1,M1    ; INITIAL AC FLOAT NUMBER
1763 007022 177777 177777 177777  .WORD  LGP,M1,M1,M1    ; INITIAL MEM FLOAT NUMBER
1764 007030 177777 177777 177777  .WORD  LGP,M1,M1,M1    ; INITIAL MEM FLOAT NUMBER
1765 007032 100177 177777 177777  .WORD  EX1MN,M1,M1,M1  ; EXPECTED FLOAT RESULT
1766 007040 177777 177777 177777  .WORD  EX1MN,M1,M1,M1  ; EXPECTED FLOAT RESULT
1767 007042 047701 107716 107716  .WORD  047701,147716   ; FFS: BEFORE, AFTER
1768 007046 100010 100010 100010  .WORD  100010          ; SEC AFTER ( 0 * N7A )
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1776 007050 000404
1777 007052 012705 007054
1778 007056 004737 034034      MOV    #ADDD21,R5      ; PTR TO TEST DATA SET
1779                                JSR    PC,#ADDD07      ; GO TEST
1780                                BR     TST75           ;;
1781                                BR     TST75           ;;
1782                                BR     TST75           ;;
1783 007062 000417
1784
1785 007064 000000 000000 000000  ADDD21: ; TEST DATA SET ADDD-21:
1786 007072 000000 000000 000000  .WORD  002000,0,0,0    ; INITIAL AC FLOAT NUMBER
1787 007074 102000 000000 000000  .WORD  102000,0,0,0    ; INITIAL MEM FLOAT NUMBER
1788 007082 000000 000000 000000  .WORD  0,0,0,0        ; INITIAL MEM FLOAT NUMBER
1789 007100 000000 000000 000000  .WORD  0,0,0,0        ; EXPECTED FLOAT RESULT
1790 007112 000000 000000 000000  .WORD  0,0,0,0        ; EXPECTED FLOAT RESULT
1791 007114 045711 045704
1792 007120 000000 000000 000000  .WORD  045711,045704   ; FFS: BEFORE, AFTER
1793                                .WORD  NA              ; SEC AFTER ( 0 * N7A )
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1811 007122 000004
1812 007124 012705 007126
1813 007130 004737 034034      MOV    #ADDD22,R5      ; PTR TO TEST DATA SET
1814                                JSR    PC,#ADDD07      ; GO TEST
1815                                BR     TST76           ;;
1816                                BR     TST76           ;;
1817                                BR     TST76           ;;
1818 007134 000417
1819
1820 007136 000000 000000 177777  ADDD22: ; TEST DATA SET ADDD-22:
1821 007138 077777 000000 177777  .WORD  LGP,0,M1,0      ; INITIAL AC FLOAT NUMBER
1822 007144 000000 000000 000000  .WORD  00,0,0,0        ; INITIAL MEM FLOAT NUMBER
1823 007146 100000 000000 000000  .WORD  00,0,0,0        ; INITIAL MEM FLOAT NUMBER
1824 007154 000000 000000 177777  .WORD  LGP,0,M1,0      ; EXPECTED FLOAT RESULT
1825 007156 077777 000000 177777  .WORD  LGP,0,M1,0      ; EXPECTED FLOAT RESULT
1826 007160 000000 000000 000000  .WORD  000000,0,0,0    ; EXPECTED FLOAT RESULT

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1811 007166 043757 043748      MOV    043757,043748   ; FFS: BEFORE, AFTER
1812 007172 000000 000000 000000  .WORD  NA              ; SEC AFTER ( 0 * N7A )
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1043 007146 000004
1044 007350 012705 007262
1045 007234 004737 034224
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1047 007260 000411
1048
1049 007262
1050 007262 000000 000000
1051 007266 000000 000000
1052 007272 000000 000000
1053 007276 007413 007404
1054 007302 000000
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1062 007304 000004
1063 007306 012705 007320
1064 007312 004737 034224
1065
1066 007316 000411
1067
1068 007320
1069 007320 000177 177777
1070 007324 000177 125252
1071 007330 000000 000000
1072 007334 007453 007444
1073 007340 000000
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1080
1081 007342 000004
1082 007344 012705 007350
1083 007350 004737 034224
1084
1085 007354 000411
1086
1087 007356
1088 007356 000177 052525
1089 007362 000345 123456
1090 007366 000345 123456
1091 007372 007517 007500
1092 007376 000000
1093

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*****
*TEST 77 TEST OF SUBF INSTR, DATA SET SUBF-1
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST177: SCOPE
MOV #SUBF1,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST100 ;

SUBF1: ; TEST DATA SET SUBF-1:
.WORD 0,0 ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047413,047404 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
*TEST 100 TEST OF SUBF INSTR, DATA SET SUBF-1
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST100: SCOPE
MOV #SUBF2,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST101 ;

SUBF2: ; TEST DATA SET SUBF-2:
.WORD 2X10P,N1 ; INITIAL AC FLOAT NUMBER
.WORD 2X10P,ALIM ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047453,047444 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
*TEST 101 TEST OF SUBF INSTR, DATA SET SUBF-1
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST101: SCOPE
MOV #SUBF3,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST102 ;

SUBF3: ; TEST DATA SET SUBF-3:
.WORD 2X10P,ALTP ; INITIAL AC FLOAT NUMBER
.WORD 100345,123456 ; INITIAL MEM FLOAT NUMBER
.WORD 000345,123456 ; EXPECTED FLOAT RESULT
.WORD 047517,047500 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

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1100 007400 000004
1101 007402 012705 007414
1102 007406 004737 034224
1103
1104 007412 000411
1105
1106 007414
1107 007414 000200 000000
1108 007420 000200 000000
1109 007424 000000 000000
1110 007430 007553 007544
1111 007434 000000
1112
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1118
1119 007436 000004
1120 007440 012705 007452
1121 007444 004737 034224
1122
1123 007450 000411
1124
1125 007452
1126 007452 100200 000000
1127 007456 100200 000000
1128 007462 000000 000000
1129 007466 007413 007404
1130 007472 000000
1131
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1138 007474 000004
1139 007476 012705 007510
1140 007502 004737 034224
1141
1142 007506 000411
1143
1144 007510
1145 007514 100365 052525
1146 007516 007252 125252
1147 007520 100377 177777
1148 007524 007447 007450
1149 007510 000000

```

*****
*TEST 102 TEST OF SUBF INSTR, DATA SET SUBF-4
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST102: SCOPE
MOV #SUBF4,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST103 ;

SUBF4: ; TEST DATA SET SUBF-4:
.WORD F1P,0 ; INITIAL AC FLOAT NUMBER
.WORD F1P,0 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 007553,007544 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
*TEST 103 TEST OF SUBF INSTR, DATA SET SUBF-5
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST103: SCOPE
MOV #SUBF5,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST104 ;

SUBF5: ; TEST DATA SET SUBF-5:
.WORD F1M,0 ; INITIAL AC FLOAT NUMBER
.WORD F1M,0 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047413,047404 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
*TEST 104 TEST OF SUBF INSTR, DATA SET SUBF-6
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST104: SCOPE
MOV #SUBF6,R5 ; PTR TO TEST DATA SET
JSH PC,#SUBFT ; GO TEST
BR TST105 ;

SUBF6: ; TEST DATA SET SUBF-6:
.WORD 150365,ALTP ; INITIAL AC FLOAT NUMBER
.WORD 007252,ALIM ; INITIAL MEM FLOAT NUMBER
.WORD 150377,N1 ; EXPECTED FLOAT RESULT
.WORD 007447,007450 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****

```

1950
1951
1952
1953
1954
1955
1956
1957 007532 000004
1958 007534 012705 007546
1959 007540 004737 034224
1960
1961 007544 000011
1962
1963 007546
1964 007546 000005 002525
1965 007552 147252 125252
1966 007556 000000 000000
1967 007562 047517 047500
1968 007566 000000
1969
1970
1971
1972
1973
1974
1975
1976 007570 000004
1977 007572 012705 007604
1978 007576 004737 034224
1979
1980 007602 000011
1981
1982 007604
1983 007604 077777 177777
1984 007610 100177 177777
1985 007614 077777 177777
1986 007620 047555 147505
1987 007624 100014
1988
1989
1990
1991
1992
1993
1994
1995 007626 000004
1996 007630 012705 007642
1997 007634 004737 034224
1998
1999 007640 000011
2000
2001 007642
2002 007642 077777 177777
2003 007646 100177 177777
2004 007652 077777 177777
2005 007656 043457 043440

```

*****
*TEST 105 TEST OF SUBF INSTR, DATA SET SUBF-7
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST105: SCOPE
MOV #SUBF7,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST106 ;;

SUBF7: ; TEST DATA SET SUBF-7:
.WORD #00000,AL7P ; INITIAL AC FLOAT NUMBER
.WORD 147252,AL7M ; INITIAL MEM FLOAT NUMBER
.WORD #00000,0 ; EXPECTED FLOAT RESULT
.WORD 007517,047500 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

*****
*TEST 106 TEST OF SUBF INSTR, DATA SET SUBF-10
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST106: SCOPE
MOV #SUBF10,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST107 ;;

SUBF10: ; TEST DATA SET SUBF-10:
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD EX1MM,M1 ; INITIAL MEM FLOAT NUMBER
.WORD LGP,M1 ; EXPECTED FLOAT RESULT
.WORD 047555,147535 ; FPS: BEFORE, AFTER
.WORD 100014 ; FEC AFTER ( 0 = N/A )

*****
*TEST 107 TEST OF SUBF INSTR, DATA SET SUBF-11
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST107: SCOPE
MOV #SUBF11,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST108 ;;

SUBF11: ; TEST DATA SET SUBF-11:
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD EX1MM,M1 ; INITIAL MEM FLOAT NUMBER
.WORD LGP,M1 ; EXPECTED FLOAT RESULT
.WORD 043457,043440 ; FPS: BEFORE, AFTER

```

2006 007662 000000
2007
2008
2009
2010
2011
2012
2013 007664 000004
2014 007666 012705 007700
2015 007670 004737 034224
2016
2017 007676 000011
2018
2019 007700
2020 007700 177777 177777
2021 007704 071000 000000
2022 007710 177777 177777
2023 007714 047447 047450
2024 007720 000000
2025
2026
2027
2028
2029
2030
2031
2032
2033 007722 000004
2034 007724 012705 007736
2035 007730 004737 034224
2036
2037 007734 000011
2038
2039 007736
2040 007736 177777 177777
2041 007742 071000 000000
2042 007746 100000 000000
2043 007752 047501 147516
2044 007756 100010
2045
2046
2047
2048
2049
2050
2051
2052 007760 000004
2053 007762 012705 007774
2054 007766 004737 034224
2055
2056 007772 000011
2057
2058 007774
2059 007774 177777 177777
2060 010000 071000 000000
2061 010004 000000 000000

```

.WORD NA ; FEC AFTER ( 0 = N/A )

*****
*TEST 110 TEST OF SUBF INSTR, DATA SET SUBF-12
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST110: SCOPE
MOV #SUBF12,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST111 ;;

SUBF12: ; TEST DATA SET SUBF-12:
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD #71000,0 ; INITIAL MEM FLOAT NUMBER
.WORD LGP,M1 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

*****
*TEST 111 TEST OF SUBF INSTR, DATA SET SUBF-13
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST111: SCOPE
MOV #SUBF13,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST112 ;;

SUBF13: ; TEST DATA SET SUBF-13:
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD #71000,0 ; INITIAL MEM FLOAT NUMBER
.WORD #0,0 ; EXPECTED FLOAT RESULT
.WORD 047501,147516 ; FPS: BEFORE, AFTER
.WORD 100010 ; FEC AFTER ( 0 = N/A )

*****
*TEST 112 TEST OF SUBF INSTR, DATA SET SUBF-14
* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST112: SCOPE
MOV #SUBF14,R5 ; PTR TO TEST DATA SET
J&H PC,#SUBFT ; GO TEST
BR TST113 ;;

SUBF14: ; TEST DATA SET SUBF-14:
.WORD LGP,M1 ; INITIAL AC FLOAT NUMBER
.WORD #71000,0 ; INITIAL MEM FLOAT NUMBER
.WORD #0,0 ; EXPECTED FLOAT RESULT

```

2062 010010 046511 046506
 2063 010014 000000
 2064
 2065
 2066
 2067
 2068
 2069
 2070
 2071 010016 000004
 2072 010020 012705 010032
 2073 010024 004737 034224
 2074
 2075 010030 000411
 2076
 2077 010032
 2078 010032 004200 000000
 2079 010036 004200 000001
 2080 010042 176400 000000
 2081 010046 047447 147400
 2082 010052 100012
 2083
 2084
 2085
 2086
 2087
 2088
 2089
 2090 010054 000004
 2091 010056 012705 010070
 2092 010062 004737 034224
 2093
 2094 010066 000411
 2095
 2096 010070
 2097 010070 004200 000000
 2098 010074 004200 000001
 2099 010078 000000 000000
 2100 010084 045444 045444
 2101 010110 000000
 2102
 2103
 2104

```

;*****
;TEST 113 TEST OF SUBF INSTR, DATA SET SUBF-14
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TEST113 SCOPE
MOV #SUBF14,R5 ; PTR TO TEST DATA SET
JBR PC,#SUBFT ; GO TEST

BR TEST114 ;;

SUBF14: ; TEST DATA SET SUBF-14:
.WORD 004200,0 ; INITIAL AC FLOAT NUMBER
.WORD 004200,1 ; INITIAL MEM FLOAT NUMBER
.WORD 176400,0 ; EXPECTED FLOAT RESULT
.WORD 047447,147400 ; FFS: BEFORE, AFTER
.WORD 100012 ; FEC AFTER ( W = N7A )

;*****
;TEST 114 TEST OF SUBF INSTR, DATA SET SUBF-10
;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TEST114 SCOPE
MOV #SUBF14,R5 ; PTR TO TEST DATA SET
JBR PC,#SUBFT ; GO TEST

BR TEST115 ;;

SUBF14: ; TEST DATA SET SUBF-14:
.WORD 004200,0 ; INITIAL AC FLOAT NUMBER
.WORD 004200,1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 045444,045444 ; FFS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( W = N7A )

```

2105
 2106
 2107
 2108
 2109
 2110 010112 000004
 2111 010114 012705 010126
 2112 010120 004737 034374
 2113
 2114 010124 000417
 2115
 2116 010126
 2117 010126 000000 000000 000000
 2118 010130 000000
 2119 010136 000000 000000 000000
 2120 010144 000000
 2121 010146 000000 000000 000000
 2122 010154 000000
 2123 010156 047753 047744
 2124 010162 000000
 2125
 2126
 2127
 2128
 2129
 2130
 2131
 2132 010164 000004
 2133 010166 012705 010200
 2134 010172 004737 034374
 2135
 2136 010176 000417
 2137
 2138 010200
 2139 010200 000177 052525 052525
 2140 010206 052525
 2141 010210 000177 177777 177777
 2142 010216 177777
 2143 010220 000000 000000 000000
 2144 010226 000000
 2145 010230 047713 047704
 2146 010234 000000
 2147
 2148
 2149
 2150
 2151
 2152
 2153
 2154 010236 000004
 2155 010240 012705 010252
 2156 010244 004737 034374
 2157
 2158 010250 000417
 2159
 2160 010252

```

;*****
;TEST 115 TEST OF SUBD INSTR, DATA SET SUBD-1
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TEST115 SCOPE
MOV #SUBD1,R5 ; PTR TO TEST DATA SET
JBR PC,#SUBD1 ; GO TEST

BR TEST116 ;;

SUBD1: ; TEST DATA SET SUBD-1:
.WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
.WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
.WORD 047753,047744 ; FFS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( W = N7A )

;*****
;TEST 116 TEST OF SUBD INSTR, DATA SET SUBD-2
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TEST116 SCOPE
MOV #SUBD2,R5 ; PTR TO TEST DATA SET
JBR PC,#SUBD2 ; GO TEST

BR TEST117 ;;

SUBD2: ; TEST DATA SET SUBD-2:
.WORD 0A1MP,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD 0A1MP,0A1M,0A1M,0A1M ; INITIAL MEM FLOAT NUMBER
.WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
.WORD 047713,047704 ; FFS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( W = N7A )

;*****
;TEST 117 TEST OF SUBD INSTR, DATA SET SUBD-3
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TEST117 SCOPE
MOV #SUBD3,R5 ; PTR TO TEST DATA SET
JBR PC,#SUBD3 ; GO TEST

BR TEST120 ;;

SUBD3: ; TEST DATA SET SUBD-3:

```



```

2161 010352 000000 000000 000000      ,WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
2162 010360 000000 000000 000000      ,WORD 012345,M1,ALTN,M0 ; INITIAL MEM FLOAT NUMBER
2163 010367 012345 177777 125252      ,WORD 012345,M1,ALTN,M0 ; EXPECTED FLOAT RESULT
2164 010370 100000 000000 000000      ,WORD 012345,M1,ALTN,M0 ; EXPECTED FLOAT RESULT
2165 010372 112345 177777 125252      ,WORD 012345,M1,ALTN,M0 ; EXPECTED FLOAT RESULT
2166 010380 100000 000000 000000      ,WORD 047647,047600 ; FPS BEFORE AFTER
2167 010382 047647 047600      ,WORD 047647,047600 ; FPC AFTER ( 0 = N/A )
2168 010390 000000 000000 000000      ,WORD NA
2169
2170
2171
2172
2173
2174
2175
2176 010310 000004      TEST120 SCOPE
2177 010312 012705 010324      MOV 0SUBD4,R5 ; PTR TO TEST DATA SET
2178 010316 004737 034374      JBR PC,0SUBD1 ; GO TEST
2179
2180 010322 000017      BR TST121 ;;
2181
2182 010324      SUBD4: ; TEST DATA SET SUBD=4:
2183 010324 140200 000000 000000      ,WORD FIN,0,0,0 ; INITIAL AC FLOAT NUMBER
2184 010332 000000 000000 000000      ,WORD FIN,0,0,0 ; INITIAL MEM FLOAT NUMBER
2185 010334 140200 000000 000000      ,WORD FIN,0,0,0 ; INITIAL MEM FLOAT NUMBER
2186 010342 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2187 010344 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2188 010352 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2189 010354 047751 047744      ,WORD 047751,047744 ; FPS BEFORE AFTER
2190 010360 000000 000000 000000      ,WORD NA ; FPC AFTER ( 0 = N/A )
2191
2192
2193
2194
2195
2196
2197
2198 010362 000004      TEST121 SCOPE
2199 010364 012705 010376      MOV 0SUBD5,R5 ; PTR TO TEST DATA SET
2200 010370 004737 034374      JBR PC,0SUBD1 ; GO TEST
2201
2202 010374 000017      BR TST122 ;;
2203
2204 010376      SUBD5: ; TEST DATA SET SUBD=5:
2205 010376 040200 000000 000000      ,WORD FIP,0,0,0 ; INITIAL AC FLOAT NUMBER
2206 010404 000000 000000 000000      ,WORD FIP,0,0,0 ; INITIAL MEM FLOAT NUMBER
2207 010406 040200 000000 000000      ,WORD FIP,0,0,0 ; INITIAL MEM FLOAT NUMBER
2208 010414 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2209 010416 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2210 010424 000000 000000 000000      ,WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2211 010426 047613 047604      ,WORD 047613,047604 ; FPS BEFORE AFTER
2212 010432 000000 000000 000000      ,WORD NA ; FPC AFTER ( 0 = N/A )
2213
2214
2215
2216

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```

2217
2218
2219
2220 010434 000004      TEST122 SCOPE
2221 010436 012705 010450      MOV 0SUBD6,R5 ; PTR TO TEST DATA SET
2222 010442 004737 034374      JBR PC,0SUBD1 ; GO TEST
2223
2224 010446 000017      BR TST123 ;;
2225
2226 010450      SUBD6: ; TEST DATA SET SUBD=6:
2227 010450 037302 125252 125252      ,WORD 037282,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
2228 010454 125252 052525 052525      ,WORD 140365,ALTP,ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
2229 010460 140365 052525 052525      ,WORD 140365,ALTP,ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
2230 010466 052525 052525 052525      ,WORD 040377,M1,M1,M1 ; EXPECTED FLOAT RESULT
2231 010470 040377 177777 177777      ,WORD 040377,M1,M1,M1 ; EXPECTED FLOAT RESULT
2232 010476 177777 047740      ,WORD 047757,047740 ; FPS BEFORE AFTER
2233 010500 047757 047740      ,WORD 047757,047740 ; FPC AFTER ( 0 = N/A )
2234 010504 000000 000000 000000      ,WORD NA
2235
2236
2237
2238
2239
2240
2241
2242 010506 000004      TEST123 SCOPE
2243 010510 012705 010522      MOV 0SUBD7,R5 ; PTR TO TEST DATA SET
2244 010514 004737 034374      JBR PC,0SUBD1 ; GO TEST
2245
2246 010520 000017      BR TST124 ;;
2247
2248 010522      SUBD7: ; TEST DATA SET SUBD=7:
2249 010522 137352 125252 125252      ,WORD 137282,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
2250 010530 125252 052525 052525      ,WORD 040365,ALTP,ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
2251 010532 040365 052525 052525      ,WORD 040365,ALTP,ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
2252 010540 052525 000000 000000      ,WORD 140400,0,0,0 ; EXPECTED FLOAT RESULT
2253 010542 140400 000000 000000      ,WORD 140400,0,0,0 ; EXPECTED FLOAT RESULT
2254 010550 000000 000000 000000      ,WORD 047607,047610 ; FPS BEFORE AFTER
2255 010552 047607 047610      ,WORD 047607,047610 ; FPC AFTER ( 0 = N/A )
2256 010556 000000 000000 000000      ,WORD NA
2257
2258
2259
2260
2261
2262
2263
2264 010558 000004      TEST124 SCOPE
2265 010562 012705 010574      MOV 0SUBD10,R5 ; PTR TO TEST DATA SET
2266 010566 004737 034374      JBR PC,0SUBD1 ; GO TEST
2267
2268 010572 000017      BR TST125 ;;
2269
2270 010574      SUBD10: ; TEST DATA SET SUBD=10:
2271 010574 177777 177777 000000      ,WORD LGN,M1,0,M1 ; INITIAL AC FLOAT NUMBER
2272 010602 177777

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```

2273 010604 100000 000000 177777          ,WORD  M0,0,M1,0          ; INITIAL MEM FLOAT NUMBER
2274 010612 000000 177777 177777 000000          ,WORD  LGN,M1,0,M1        ; EXPECTED FLOAT RESULT
2275 010614 177777 177777 000000          ,WORD  LGN,M1,0,M1        ; EXPECTED FLOAT RESULT
2276 010622 177777 177777          ,WORD  M0,0,M1,0          ; INITIAL MEM FLOAT NUMBER
2277 010624 047003 147003          ,WORD  047003,147003      ; FPS: BEFORE, AFTER
2278 010630 100014 100014          ,WORD  100014            ; FPC AFTER ( 0 = N/A )
2280
2281
2282
2283 *****
2284 ;*TEST 125 TEST OF SUBD INSTR, DATA SET SUBD-11
2285 ;*
2286 ;* ALL INTERRUPT ENABLES ON
2287 ;* LONG FLOAT, LONG INTEGER, ROUND MODES
2288 ;* *****
2289 TST125: SCOPE
2290 MOV          $SUBD11,R5          ; PTR TO TEST DATA SET
2291 JBR          PC,$SUBDT          ; GO TEST
2292 BR          TST126            ;
2293
2294 SUBD111 ; TEST DATA SET SUBD-111
2295 ,WORD  LGN,M1,0,M1            ; INITIAL AC FLOAT NUMBER
2296 ,WORD  M0,0,M1,0            ; INITIAL MEM FLOAT NUMBER
2297 ,WORD  LGN,M1,0,M1            ; EXPECTED FLOAT RESULT
2298 ,WORD  043707,043710        ; FPS: BEFORE, AFTER
2299 ,WORD  NA                     ; FPC AFTER ( 0 = N/A )
2300
2301
2302
2303 *****
2304 ;*TEST 126 TEST OF SUBD INSTR, DATA SET SUBD-12
2305 ;*
2306 ;* ALL INTERRUPT ENABLES ON
2307 ;* LONG FLOAT, LONG INTEGER, ROUND MODES
2308 ;* *****
2309 TST126: SCOPE
2310 MOV          $SUBD12,R5          ; PTR TO TEST DATA SET
2311 JBR          PC,$SUBDT          ; GO TEST
2312 BR          TST127            ;
2313
2314 SUBD121 ; TEST DATA SET SUBD-121
2315 ,WORD  104200,0,0,0          ; INITIAL AC FLOAT NUMBER
2316 ,WORD  104200,0,0,1          ; INITIAL MEM FLOAT NUMBER
2317 ,WORD  104200,0,0,1          ; EXPECTED FLOAT RESULT
2318 ,WORD  066400,0,0,0          ; FPS: BEFORE, AFTER
2319 ,WORD  047717,147700        ; FPC AFTER ( 0 = N/A )
2320
2321
2322
2323 *****
2324 ;*TEST 127 TEST OF SUBD INSTR, DATA SET SUBD-13
2325 ;*
2326 ;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
2327 ;* LONG FLOAT, LONG INTEGER, ROUND MODES
2328 ;* *****

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2329 *****
2330 TST127: SCOPE
2331 MOV          $SUBD13,R5          ; PTR TO TEST DATA SET
2332 JBR          PC,$SUBDT          ; GO TEST
2333 BR          TST128            ;
2334
2335 SUBD131 ; TEST DATA SET SUBD-131
2336 ,WORD  104200,0,0,1          ; INITIAL AC FLOAT NUMBER
2337 ,WORD  104200,0,0,0          ; INITIAL MEM FLOAT NUMBER
2338 ,WORD  104200,0,0,0          ; EXPECTED FLOAT RESULT
2339 ,WORD  048713,048700        ; FPS: BEFORE, AFTER
2340 ,WORD  NA                     ; FPC AFTER ( 0 = N/A )
2341
2342
2343 *****
2344 ;*TEST 128 TEST OF SUBD INSTR, DATA SET SUBD-14
2345 ;*
2346 ;* ALL INTERRUPT ENABLES ON
2347 ;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
2348 ;* *****
2349 TST128: SCOPE
2350 MOV          $SUBD14,R5          ; PTR TO TEST DATA SET
2351 JBR          PC,$SUBDT          ; GO TEST
2352 BR          TST129            ;
2353
2354 SUBD141 ; TEST DATA SET SUBD-141
2355 ,WORD  LGP,M1,M1,M1            ; INITIAL AC FLOAT NUMBER
2356 ,WORD  101600,0,0,0          ; INITIAL MEM FLOAT NUMBER
2357 ,WORD  LGP,M1,M1,M1            ; EXPECTED FLOAT RESULT
2358 ,WORD  047757,047740        ; FPS: BEFORE, AFTER
2359 ,WORD  NA                     ; FPC AFTER ( 0 = N/A )
2360
2361
2362
2363 *****
2364 ;*TEST 131 TEST OF SUBD INSTR, DATA SET SUBD-15
2365 ;*
2366 ;* ALL INTERRUPT ENABLES ON
2367 ;* LONG FLOAT, SHORT INTEGER, ROUND MODES
2368 ;* *****
2369 TST131: SCOPE
2370 MOV          $SUBD15,R5          ; PTR TO TEST DATA SET
2371 JBR          PC,$SUBDT          ; GO TEST
2372 BR          TST132            ;
2373
2374 SUBD151 ; TEST DATA SET SUBD-151
2375 ,WORD  LGP,M1,M1,M1            ; INITIAL AC FLOAT NUMBER
2376 ,WORD  101600,0,0,0          ; INITIAL MEM FLOAT NUMBER
2377
2378
2379
2380
2381
2382
2383
2384

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```

2385 #11136 #00000 #00000 #00000 ,WORD 0,0,0 ; EXPECTED FLOAT RESULT
2386 #11144 #00000 #00000 #00000 ,WORD 0,0,0 ; EXPECTED FLOAT RESULT
2387 #11146 #07011 147606 ,WORD 047611,147606 ; FPG1 BEFORE, AFTER
2388 #11152 #00010 #00000 #00000 ,WORD 100010 ; FPC AFTER ( 0 = N/A )
2389
2390
2391
2392
2393
2394
2395
2396 #11154 #00004 #00000 #00000
2397 #11156 #12705 #11170 #34374
2398 #11162 #04737 #04374
2399
2400 #11166 #00017 #00000 #00000
2401
2402 #11170 #00000 #00000 #00000
2403 #11170 #07777 177777 177777
2404 #11176 177777 177777
2405 #11200 101600 #00000 #00000
2406 #11200 #00000 #00000 #00000
2407 #11210 #00000 #00000 #00000
2408 #11216 #00000 #00000 #00000
2409 #11220 #04611 #04606
2410 #11224 #00000 #00000 #00000
2411
2412

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2413
2414
2415
2416
2417
2418 #11226 #00004 #00000 #00000
2419 #11230 #12705 #11242 #34564
2420 #11234 #04737 #04564
2421
2422 #11240 #00011 #00000 #00000
2423
2424 #11242 #00000 #00000 #00000
2425 #11242 #00000 #00000 #00000
2426 #11246 177777 177777
2427 #11252 #00000 #00000 #00000
2428 #11256 #04713 #04704
2429 #11262 #00000 #00000 #00000
2430
2431
2432
2433
2434
2435
2436
2437 #11264 #00004 #00000 #00000
2438 #11266 #12705 #11300 #34564
2439 #11272 #04737 #04564
2440
2441 #11276 #00011 #00000 #00000
2442
2443 #11300 #07777 177777
2444 #11304 #00177 177777
2445 #11310 #00000 #00000 #00000
2446 #11314 #04703 #04704
2447 #11320 #00000 #00000 #00000
2448
2449
2450
2451
2452
2453
2454
2455
2456 #11324 #00004 #00000 #00000
2457 #11324 #12705 #11336 #34564
2458 #11334 #04737 #04564
2459
2460 #11334 #00011 #00000 #00000
2461
2462 #11336 #07777 177777
2463 #11336 173652 125252
2464 #11342 #17509 #00000 #00000
2465 #11346 #03177 177777
2466 #11352 #04747 #04740
2467 #11356 #00000 #00000 #00000
2468

```

2469
2470
2471
2472
2473
2474
2475 011360 000004
2476 011362 012705 011374
2477 011366 004737 034564
2478
2479 011372 000611
2480
2481 011374
2482 011374 217500 000000
2483 011400 023052 125252
2484 011404 003177 177777
2485 011410 047417 047400
2486 011414 000000
2487
2488
2489
2490
2491
2492
2493

```

*****
*TEST 136 TEST OF MULF INSTR, DATA SET MULF-4
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST136: SCOPE
MOV 0MULF4,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF4 ; GO TEST
BR TST137 ;

MULF4: ; TEST DATA SET MULF-4
.WORD 017500,000000 ; INITIAL AC FLOAT NUMBER
.WORD 023052,ALTA ; INITIAL MEM FLOAT NUMBER
.WORD 003177,M1 ; EXPECTED FLOAT RESULT
.WORD 047417,047400 ; FFS: BEFORE, AFTER
.WORD NA ; FCC AFTER ( 0 = N/A )

```

2494 011416 000004
2495 011420 012705 011432
2496 011424 004737 034564
2497
2498 011430 000411
2499
2500 011432
2501 011432 030400 000001
2502 011430 106777 177776
2503 011442 105177 177777
2504 011440 107547 047550
2505 011452 100000
2506
2507
2508
2509
2510
2511
2512

```

*****
*TEST 137 TEST OF MULF INSTR, DATA SET MULF-5
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST137: SCOPE
MOV 0MULF5,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF5 ; GO TEST
BR TST140 ;

MULF5: ; TEST DATA SET MULF-5
.WORD 030400,000001 ; INITIAL AC FLOAT NUMBER
.WORD 106777,M2 ; INITIAL MEM FLOAT NUMBER
.WORD 105177,M1 ; EXPECTED FLOAT RESULT
.WORD 047547,047550 ; FFS: BEFORE, AFTER
.WORD NA ; FCC AFTER ( 0 = N/A )

```

2513 011454 000004
2514 011450 012705 011470
2515 011462 004737 034564
2516
2517 011460 000411
2518
2519 011470
2520 011470 030400 000001
2521 011474 106777 177776
2522 011500 105200 000000
2523 011504 047407 047410
2524 011510 000000

```

*****
*TEST 140 TEST OF MULF INSTR, DATA SET MULF-6
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST140: SCOPE
MOV 0MULF6,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF6 ; GO TEST
BR TST141 ;

MULF6: ; TEST DATA SET MULF-6
.WORD 030400,000001 ; INITIAL AC FLOAT NUMBER
.WORD 106777,M2 ; INITIAL MEM FLOAT NUMBER
.WORD 105200,000000 ; EXPECTED FLOAT RESULT
.WORD 047407,047410 ; FFS: BEFORE, AFTER
.WORD NA ; FCC AFTER ( 0 = N/A )

```

2525
2526
2527
2528
2529
2530
2531
2532 011512 000004
2533 011514 012705 011526
2534 011520 004737 034564
2535
2536 011524 000411
2537
2538 011526
2539 011526 106277 000000
2540 011532 000000 000001
2541 011536 106077 000001
2542 011542 047407 047410
2543 011546 000000
2544
2545
2546
2547
2548
2549
2550

```

*****
*TEST 141 TEST OF MULF INSTR, DATA SET MULF-7
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST141: SCOPE
MOV 0MULF7,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF7 ; GO TEST
BR TST142 ;

MULF7: ; TEST DATA SET MULF-7
.WORD 106277,000000 ; INITIAL AC FLOAT NUMBER
.WORD 000000,000001 ; INITIAL MEM FLOAT NUMBER
.WORD 106077,000001 ; EXPECTED FLOAT RESULT
.WORD 047407,047410 ; FFS: BEFORE, AFTER
.WORD NA ; FCC AFTER ( 0 = N/A )

```

2551 011550 000004
2552 011552 012705 011564
2553 011556 004737 034564
2554
2555 011562 000411
2556
2557 011564
2558 011564 000000 000001
2559 011570 042277 000000
2560 011574 000077 000001
2561 011600 047407 047400
2562 011604 000000
2563
2564
2565
2566
2567
2568
2569

```

*****
*TEST 142 TEST OF MULF INSTR, DATA SET MULF-10
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST142: SCOPE
MOV 0MULF10,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF10 ; GO TEST
BR TST143 ;

MULF10: ; TEST DATA SET MULF-10
.WORD 000000,000001 ; INITIAL AC FLOAT NUMBER
.WORD 042277,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 000077,000001 ; EXPECTED FLOAT RESULT
.WORD 047407,047400 ; FFS: BEFORE, AFTER
.WORD NA ; FCC AFTER ( 0 = N/A )

```

2570 011606 000004
2571 011610 012705 011622
2572 011614 004737 034564
2573
2574 011620 000411
2575
2576 011622
2577 011622 100300 000000
2578 011626 100000 000001
2579 011632 000100 000002
2580 011636 047557 047500

```

*****
*TEST 143 TEST OF MULF INSTR, DATA SET MULF-11
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST143: SCOPE
MOV 0MULF11,R5 ; PTR TO TEST DATA SET
JSH PC,0MULF11 ; GO TEST
BR TST144 ;

MULF11: ; TEST DATA SET MULF-11
.WORD 100300,000000 ; INITIAL AC FLOAT NUMBER
.WORD 100000,000001 ; INITIAL MEM FLOAT NUMBER
.WORD 000100,000002 ; EXPECTED FLOAT RESULT
.WORD 047557,047500 ; FFS: BEFORE, AFTER

```

```
2581 011642 000000 ,WORD NA ; FPC AFTER ( 0 = N/A )
2582
2583
2584
2585
2586
2587
2588
2589 011644 000004
2590 011646 012705 011600
2591 011652 004737 034504
2592
2593 011656 000411
2594
2595 011660
2596 011660 000000 000001
2597 011664 140300 000000
2598 011670 100100 000001
2599 011674 047547 047500
2600 011700 000000
2601
2602
2603
2604
2605
2606
2607
2608 011702 000004
2609 011704 012705 011716
2610 011710 004737 034504
2611
2612 011714 000411
2613
2614 011716
2615 011716 002177 177777
2616 011722 002177 177777
2617 011726 004177 177776
2618 011732 047513 147500
2619 011736 100012
2620
2621
2622
2623
2624
2625
2626
2627 011740 000000
2628 011742 012705 011754
2629 011746 004737 034504
2630
2631 011752 000411
2632
2633 011754
2634 011754 100000 000000
2635 011760 050200 000000
2636 011764 100000 000000

;*****
;TEST 144 TEST OF MULP INSTR, DATA SET MULP-11
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST144: SCOPE
MOV #MULP12,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP12 ; GO TEST
BR TST145 ;;

MULP12: ; TEST DATA SET MULP-12:
,WORD 000000,000001 ; INITIAL AC FLOAT NUMBER
,WORD 140300,000000 ; INITIAL MEM FLOAT NUMBER
,WORD 100100,000001 ; EXPECTED FLOAT RESULT
,WORD 047547,047500 ; FPC BEFORE, AFTER
,WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 145 TEST OF MULP INSTR, DATA SET MULP-11
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST145: SCOPE
MOV #MULP13,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP13 ; GO TEST
BR TST146 ;;

MULP13: ; TEST DATA SET MULP-13:
,WORD 002177,M1 ; INITIAL AC FLOAT NUMBER
,WORD 002177,M1 ; INITIAL MEM FLOAT NUMBER
,WORD 044177,M2 ; EXPECTED FLOAT RESULT
,WORD 047513,147500 ; FPC BEFORE, AFTER
,WORD 100012 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 146 TEST OF MULP INSTR, DATA SET MULP-14
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST146: SCOPE
MOV #MULP14,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP14 ; GO TEST
BR TST147 ;;

MULP14: ; TEST DATA SET MULP-14:
,WORD 170000,000000 ; INITIAL AC FLOAT NUMBER
,WORD 050200,000000 ; INITIAL MEM FLOAT NUMBER
,WORD M0,0 ; EXPECTED FLOAT RESULT

;*****
;TEST 147 TEST OF MULP INSTR, DATA SET MULP-15
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST147: SCOPE
MOV #MULP15,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP15 ; GO TEST
BR TST150 ;;

MULP15: ; TEST DATA SET MULP-15:
,WORD LGN,M1 ; INITIAL AC FLOAT NUMBER
,WORD EX,MN,M1 ; INITIAL MEM FLOAT NUMBER
,WORD LGN,M1 ; EXPECTED FLOAT RESULT
,WORD 047447,147447 ; FPC BEFORE, AFTER
,WORD 100014 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 150 TEST OF MULP INSTR, DATA SET MULP-16
;
; OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST150: SCOPE
MOV #MULP16,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP16 ; GO TEST
BR TST151 ;;

MULP16: ; TEST DATA SET MULP-16:
,WORD 050377,000000 ; INITIAL AC FLOAT NUMBER
,WORD 070000,M1 ; INITIAL MEM FLOAT NUMBER
,WORD 0.0 ; EXPECTED FLOAT RESULT
,WORD 046411,046406 ; FPC BEFORE, AFTER
,WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 151 TEST OF MULP INSTR, DATA SET MULP-17
;
; UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST151: SCOPE
MOV #MULP17,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP17 ; GO TEST
BR TST152 ;;

MULP17: ; TEST DATA SET MULP-17:
,WORD 002177,M1 ; INITIAL AC FLOAT NUMBER
,WORD 002177,M1 ; INITIAL MEM FLOAT NUMBER
```

```
2637 011770 047441 147406
2638 011774 100010
2639
2640
2641
2642
2643
2644
2645
2646 011776 000004
2647 012000 012705 012012
2648 012004 004737 034504
2649
2650 012010 000411
2651
2652 012012
2653 012012 177777 177777
2654 012016 100177 177777
2655 012022 177777 177777
2656 012026 047447 147447
2657 012032 100014
2658
2659
2660
2661
2662
2663
2664
2665 012034 000004
2666 012036 012705 012050
2667 012042 004737 034504
2668
2669 012046 000411
2670
2671 012050
2672 012050 050377 000000
2673 012054 070000 177777
2674 012060 0.0 000000
2675 012064 046411 046406
2676 012070 000000
2677
2678
2679
2680
2681
2682
2683
2684 012072 000004
2685 012074 012705 012106
2686 012100 004737 034504
2687
2688 012104 000411
2689
2690 012106
2691 012106 002177 177777
2692 012112 002177 177777

;*****
;TEST 147 TEST OF MULP INSTR, DATA SET MULP-15
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST147: SCOPE
MOV #MULP15,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP15 ; GO TEST
BR TST150 ;;

MULP15: ; TEST DATA SET MULP-15:
,WORD LGN,M1 ; INITIAL AC FLOAT NUMBER
,WORD EX,MN,M1 ; INITIAL MEM FLOAT NUMBER
,WORD LGN,M1 ; EXPECTED FLOAT RESULT
,WORD 047447,147447 ; FPC BEFORE, AFTER
,WORD 100014 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 150 TEST OF MULP INSTR, DATA SET MULP-16
;
; OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST150: SCOPE
MOV #MULP16,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP16 ; GO TEST
BR TST151 ;;

MULP16: ; TEST DATA SET MULP-16:
,WORD 050377,000000 ; INITIAL AC FLOAT NUMBER
,WORD 070000,M1 ; INITIAL MEM FLOAT NUMBER
,WORD 0.0 ; EXPECTED FLOAT RESULT
,WORD 046411,046406 ; FPC BEFORE, AFTER
,WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 151 TEST OF MULP INSTR, DATA SET MULP-17
;
; UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST151: SCOPE
MOV #MULP17,R5 ; PTR TO TEST DATA SET
JBR PC,#MULP17 ; GO TEST
BR TST152 ;;

MULP17: ; TEST DATA SET MULP-17:
,WORD 002177,M1 ; INITIAL AC FLOAT NUMBER
,WORD 002177,M1 ; INITIAL MEM FLOAT NUMBER
```

2693 012116 000000 000000
 2694 012122 045553 045544
 2695 012126 000000
 2696
 2697
 2698
 2699
 2700
 2701
 2702
 2703 012130 000004
 2704 012132 012705 012144
 2705 012136 004737 034964
 2706
 2707 012142 000011
 2708
 2709 012144
 2710 012144 052525 052525
 2711 012150 100000 177777
 2712 012154 000000 000000
 2713 012160 043513 043504
 2714 012164 000000
 2715
 2716
 2717

```

;*****
;TEST 152 TEST OF MULF INSTR, DATA SET MULF-20
;# INTERRUPT ENABLES ON
;# SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TEST152I SCOPE
MOV 0MULF10,R5 ; PTR TO TEST DATA SET
JSR PC,0MULFT ; GO TEST
BR TEST153 ;

MULF20I ; TEST DATA SET MULF-20:
;WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER
;WORD M0,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0 ; EXPECTED FLOAT RESULT
;WORD 043513,043504 ; FFS: BEFORE, AFTER
;WORD NA ; FFC AFTER ( 0 = N/A )

```

2718
 2719
 2720
 2721
 2722
 2723 012166 000004
 2724 012174 012705 012202
 2725 012174 004737 034734
 2726
 2727 012200 000017
 2728
 2729 012202
 2730 012202 077777 177777 177777
 2731 012210 177777
 2732 012212 000000 000000 000000
 2733 012214 000000 000000 000000
 2734 012216 000000 000000 000000
 2735 012218 000000 000000 000000
 2736 012222 047713 047704
 2737 012230 000000
 2738
 2739
 2740
 2741
 2742
 2743
 2744
 2745 012244 000004
 2746 012242 012705 012234
 2747 012246 004737 034734
 2748
 2749 012252 000017
 2750
 2751 012254
 2752 012254 000177 177777 177777
 2753 012262 177777
 2754 012264 177777 177777 177777
 2755 012272 177777
 2756 012274 000000 000000 000000
 2757 012302 000000
 2758 012304 047003 047004
 2759 012310 000000
 2760
 2761
 2762
 2763
 2764
 2765
 2766
 2767 012312 000004
 2768 012314 012705 012326
 2769 012320 004737 034734
 2770
 2771 012324 000017
 2772
 2773 012326

```

;*****
;TEST 153 TEST OF MULD INSTR, DATA SET MULD-1
;# INTERRUPT ENABLES ON
;# LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TEST153I SCOPE
MOV 0MULD1,R5 ; PTR TO TEST DATA SET
JSR PC,0MULD1T ; GO TEST
BR TEST154 ;

MULD1I ; TEST DATA SET MULD-1:
;WORD LGP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
;WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047713,047704 ; FFS: BEFORE, AFTER
;WORD NA ; FFC AFTER ( 0 = N/A )

;*****
;TEST 154 TEST OF MULD INSTR, DATA SET MULD-2
;# INTERRUPT ENABLES ON
;# LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TEST154I SCOPE
MOV 0MULD2,R5 ; PTR TO TEST DATA SET
JSR PC,0MULD2T ; GO TEST
BR TEST155 ;

MULD2I ; TEST DATA SET MULD-2:
;WORD R1,M0,M1,M1 ; INITIAL AC FLOAT NUMBER
;WORD LGM,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047003,047004 ; FFS: BEFORE, AFTER
;WORD NA ; FFC AFTER ( 0 = N/A )

;*****
;TEST 155 TEST OF MULD INSTR, DATA SET MULD-3
;# INTERRUPT ENABLES ON
;# LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TEST155I SCOPE
MOV 0MULD3,R5 ; PTR TO TEST DATA SET
JSR PC,0MULD3T ; GO TEST
BR TEST156 ;

MULD3I ; TEST DATA SET MULD-3:

```

```

2774 012326 023052 125252 125252 .WORD 023052,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
2775 012324 125252
2776 012326 017500 000000 000000 .WORD 017500,0,0,0 ; INITIAL MEM FLOAT NUMBER
2777 012344 000000
2778 012346 003177 177777 177777 .WORD 003177,M1,M1,M1 ; EXPECTED FLOAT RESULT
2779 012354 177777
2780 012356 047757 047740 .WORD 047757,047740 ; FPS: BEFORE, AFTER
2781 012362 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
2782
2783
2784
2785
2786
2787
2788
2789 012364 000000
2790 012366 012705 012400
2791 012372 004737 034734
2792
2793 012376 000417
2794
2795 012400
2796 012400 117500 000000 000000 MULD4: ; TEST DATA SET MULD-41
2797 012400 000000 .WORD 117500,0,0,0 ; INITIAL AC FLOAT NUMBER
2798 012410 125252 125252 .WORD 123052,ALTN,ALTN,ALTN ; INITIAL MEM FLOAT NUMBER
2799 012416 125252
2800 012420 003177 177777 177777 .WORD 003177,M1,M1,M1 ; EXPECTED FLOAT RESULT
2801 012426 177777
2802 012430 047617 047600 .WORD 047617,047600 ; FPS: BEFORE, AFTER
2803 012434 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
2804
2805
2806
2807
2808
2809
2810
2811 012436 000000
2812 012440 012705 012452
2813 012444 004737 034734
2814
2815 012450 000417
2816
2817 012452
2818 012452 105400 000000 000000 MULD5: ; TEST DATA SET MULD-51
2819 012460 000000 .WORD 105400,0,0,1 ; INITIAL AC FLOAT NUMBER
2820 012462 003757 177777 177777 .WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
2821 012470 177776
2822 012472 104777 177777 177777 .WORD 104777,M1,M1,M1 ; EXPECTED FLOAT RESULT
2823 012500 177777
2824 012502 047750 047750 .WORD 047757,047750 ; FPS: BEFORE, AFTER
2825 012506 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
2826
2827
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2874
2875
2876
2877 012514 000000
2878 012516 012705 012524
2879 012518 004737 034734
2880
2881 012522 000417
2882
2883 012524
2884 012524 105400 000000 000000 MULD6: ; TEST DATA SET MULD-61
2885 012532 000000 .WORD 105400,0,0,1 ; INITIAL AC FLOAT NUMBER
2886 012534 037577 177777 177777 .WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
2887 012542 177776
2888 012544 105000 000000 000000 .WORD 105000,0,0,0 ; EXPECTED FLOAT RESULT
2889 012552 000000
2890 012554 047707 047710 .WORD 047707,047710 ; FPS: BEFORE, AFTER
2891 012560 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
2892
2893
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3001
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3003 012510 000000
3004 012512 012705 012524
3005 012516 004737 034734
3006
3007 012522 000417
3008
3009 012524
3010 012524 105400 000000 000000 MULD6: ; TEST DATA SET MULD-61
3011 012532 000000 .WORD 105400,0,0,1 ; INITIAL AC FLOAT NUMBER
3012 012534 037577 177777 177777 .WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
3013 012542 177776
3014 012544 105000 000000 000000 .WORD 105000,0,0,0 ; EXPECTED FLOAT RESULT
3015 012552 000000
3016 012554 047707 047710 .WORD 047707,047710 ; FPS: BEFORE, AFTER
3017 012560 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
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3077 012514 000000
3078 012516 012705 012524
3079 012518 004737 034734
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3081 012522 000417
3082
3083 012524
3084 012524 105400 000000 000000 MULD7: ; TEST DATA SET MULD-71
3085 012532 000000 .WORD 105400,0,0,1 ; INITIAL AC FLOAT NUMBER
3086 012534 034200 000000 000000 .WORD 034200,0,0,1 ; INITIAL MEM FLOAT NUMBER
3087 012542 034277 000000 000000 .WORD 034277,0,0,1 ; EXPECTED FLOAT RESULT
3088 012544 000000
3089 012546 047657 047640 .WORD 047657,047640 ; FPS: BEFORE, AFTER
3090 012552 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
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2886 012660 034200 000000 000000 .WORD 034200,0,0,1 ; INITIAL MEM FLOAT NUMBER
2887 012666 000001 000000 .WORD 134277,0,0,1 ; EXPECTED FLOAT RESULT
2888 012670 134277 000000 000000 .WORD 047607,047610 ; FPS: BEFORE, AFTER
2889 012676 000001 000000 .WORD NA ; FPC AFTER ( M = N7A )
2890 012700 047607 047610
2891 012704 000000
2892
2893
2894
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2899 012706 000004
2900 012710 012705 012722
2901 012714 004737 034734
2902
2903 012720 000417
2904
2905 012722
2906 012724 000000 000000 000000 MULD11 ; TEST DATA SET MULD=11:
2907 012730 000000 .WORD 040300,0,0,0 ; INITIAL AC FLOAT NUMBER
2908 012732 134200 000000 000000 .WORD 134200,0,0,1 ; INITIAL MEM FLOAT NUMBER
2909 012740 000001 000000 000000 .WORD 134300,0,0,1 ; EXPECTED FLOAT RESULT
2910 012742 134300 000000 000000 .WORD 047747,047750 ; FPS: BEFORE, AFTER
2911 012750 000001 047750 .WORD NA ; FPC AFTER ( M = N7A )
2912 012752 047747
2913 012756 000000
2914
2915
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2921 012760 000004
2922 012762 012705 012774
2923 012766 004737 034734
2924
2925 012772 000417
2926
2927 012774
2928 012774 140300 000000 000000 MULD12 ; TEST DATA SET MULD=12:
2929 013002 000000 .WORD 140300,0,0,0 ; INITIAL AC FLOAT NUMBER
2930 013004 134200 000000 000000 .WORD 134200,0,0,1 ; INITIAL MEM FLOAT NUMBER
2931 013012 000001 000000 000000 .WORD 034300,0,0,1 ; EXPECTED FLOAT RESULT
2932 013014 034300 000000 000000 .WORD 047717,047700 ; FPS: BEFORE, AFTER
2933 013022 000002 047700 .WORD NA ; FPC AFTER ( M = N7A )
2934 013024 047717
2935 013030 000000
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2943 013032 000004
2944 013034 012705 013046
2945 013040 004737 034734
2946
2947 013044 000417
2948
2949 013046
2950 013046 177777 177777 177777 MULD13 ; TEST DATA SET MULD=13:
2951 013054 177777 .WORD LGN,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
2952 013056 177777 177777 177777 .WORD LGN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
2953 013064 177777 .WORD 037577,M1,M1,M2 ; EXPECTED FLOAT RESULT
2954 013066 047517 177777 177777 .WORD 047655,147642 ; FPS: BEFORE, AFTER
2955 013074 177776 147642 .WORD 100010 ; FPC AFTER ( M = N7A )
2956 013076 047655
2957 013102 100010
2958
2959
2960
2961
2962
2963
2964
2965 013104 000004
2966 013106 012705 013120
2967 013112 004737 034734
2968
2969 013116 000417
2970
2971 013120
2972 013120 077777 177777 177777 MULD14 ; TEST DATA SET MULD=14:
2973 013126 177777 .WORD LGP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
2974 013130 077777 177777 177777 .WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
2975 013136 177777 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
2976 013140 000000 000000 000000 .WORD 046751,046746 ; FPS: BEFORE, AFTER
2977 013146 000000 046746 .WORD NA ; FPC AFTER ( M = N7A )
2978 013150 046751
2979 013154 000000
2980
2981
2982
2983
2984
2985
2986
2987 013156 000004
2988 013160 012705 013172
2989 013164 004737 034734
2990
2991 013170 000417
2992
2993 013172
2994 013172 003177 177777 177777 MULD15 ; TEST DATA SET MULD=15:
2995 012200 177777 .WORD 003177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
2996 013202 003177 177777 177777 .WORD 141177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
2997 012210 177777

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2998 013212 146177 177777 177777 .WORD 146177,M1,M1,M2 ; EXPECTED FLOAT RESULT
2999 013220 177770 .WORD 177770,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
3000 013222 047647 147650 .WORD 047647,147650 ; FPG: BEFORE, AFTER
3001 013216 100012 .WORD 100012 ; FPC AFTER ( M = M7A )
3002
3003
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3009 013230 000004
3010 013232 012705 013244
3011 013236 004737 034734
3012
3013 013242 000417
3014
3015 013244
3016 013244 123177 177777 177777 MULD16 ; TEST DATA SET MULD=16
3017 013252 177777 .WORD 103177,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
3018 013254 001177 177777 177777 .WORD 001177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
3019 013262 177777 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3020 013264 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3021 013272 000000
3022 013274 045713 045704 .WORD 045713,045704 ; FPG: BEFORE, AFTER
3023 013208 000000 .WORD NA ; FPC AFTER ( M = M7A )
3024
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3031 013302 000004
3032 013304 012705 013316
3033 013310 004737 034734
3034
3035 013314 000417
3036
3037 013316
3038 013316 052525 052525 052525 MULD17 ; TEST DATA SET MULD=17
3039 013324 052525 .WORD ALTP,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
3040 013326 100177 177777 177777 .WORD 2X1FN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
3041 013330 177777 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3042 013336 052525 052525 052525 .WORD ALTP,ALTP,ALTP,ALTP ; EXPECTED FLOAT RESULT
3043 013344 052525
3044 013346 047647 147657 .WORD 047647,147657 ; FPG: BEFORE, AFTER
3045 013352 100014 .WORD 100014 ; FPC AFTER ( M = M7A )
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3053 013354 000004

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3054 013354 012705 013370
3055 013362 004737 034734
3056
3057 013366 000417
3058
3059 013370
3060 013370 125252 125252 125252 MULD20 ; TEST DATA SET MULD=20
3061 013376 125252 .WORD ALTH,ALTH,ALTH,ALTH ; INITIAL AC FLOAT NUMBER
3062 013400 100000 177777 052525 .WORD 00,M1,ALTP,ALTH ; INITIAL MEM FLOAT NUMBER
3063 013406 125252 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3064 013410 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3065 013416 000000
3066 013420 043744 .WORD 043743,043744 ; FPG: BEFORE, AFTER
3067 013424 000000 .WORD NA ; FPC AFTER ( M = M7A )
3068
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3075 013426 000004
3076 013410 012705 013442
3077 013434 004737 035124
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3079 013440 000411
3080
3081 013442
3082 013442 103177 177777
3083 013446 071952 120252
3084 013452 117500 000000
3085 013456 047447 047450
3086 013462 000000
3087
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3094 013464 000004
3095 013466 012705 013500
3096 013472 004737 035124
3097
3098 013476 000411
3099
3100 013500
3101 013500 052525 052525
3102 013504 000000 000000
3103 013510 052525 052525
3104 013514 047517 147517
3105 013520 000004
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3113 013522 000004
3114 013524 012705 013536
3115 013530 004737 035124
3116
3117 013534 000411
3118
3119 013536
3120 013536 140400 000000
3121 013542 040500 000000
3122 013546 140552 125252
3123 013552 047447 047450
3124 013556 000000
3125

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;*****
;TEST 173 TEST OF DIVF INSTR, DATA SET DIVF-1
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST173: SCOPE
MOV 0DIVF1,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF1 ; GO TEST
BR TST174 ;;

DIVF1: ; TEST DATA SET DIVF-11
.WORD 103177,01 ; INITIAL AC FLOAT NUMBER
.WORD 021052,ALTN ; INITIAL MEM FLOAT NUMBER
.WORD 117500,0 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 174 TEST OF DIVF INSTR, DATA SET DIVF-2
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST174: SCOPE
MOV 0DIVF2,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF2 ; GO TEST
BR TST175 ;;

DIVF2: ; TEST DATA SET DIVF-21
.WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; INITIAL MEM FLOAT NUMBER
.WORD ALTP,ALTP ; EXPECTED FLOAT RESULT
.WORD 047517,147517 ; FPS: BEFORE, AFTER
.WORD 000004 ; FEC AFTER ( 0 = N/A )

;*****
;TEST 175 TEST OF DIVF INSTR, DATA SET DIVF-3
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST175: SCOPE
MOV 0DIVF3,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF3 ; GO TEST
BR TST176 ;;

DIVF3: ; TEST DATA SET DIVF-31
.WORD 140400,000000 ; INITIAL AC FLOAT NUMBER
.WORD 040500,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 140552,ALTN ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 176 TEST OF DIVF INSTR, DATA SET DIVF-4
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST176: SCOPE
MOV 0DIVF4,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF4 ; GO TEST
BR TST177 ;;

DIVF4: ; TEST DATA SET DIVF-41
.WORD 040400,000000 ; INITIAL AC FLOAT NUMBER
.WORD 140500,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 140552,ALTN+1 ; EXPECTED FLOAT RESULT
.WORD 047507,047510 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 177 TEST OF DIVF INSTR, DATA SET DIVF-5
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST177: SCOPE
MOV 0DIVF5,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF5 ; GO TEST
BR TST178 ;;

DIVF5: ; TEST DATA SET DIVF-51
.WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047417,047400 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 178 TEST OF DIVF INSTR, DATA SET DIVF-6
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST178: SCOPE
MOV 0DIVF6,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF6 ; GO TEST
BR TST179 ;;

DIVF6: ; TEST DATA SET DIVF-61
.WORD 104400,000000 ; INITIAL AC FLOAT NUMBER
.WORD 150000,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 040500,000000 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

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3132 013560 000004
3133 013562 012705 013574
3134 013566 004737 035124
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3136 013572 000411
3137
3138 013574
3139 013574 040400 000000
3140 013600 140500 000000
3141 013604 140552 125252
3142 013610 047507 047510
3143 013614 000000
3144
3145
3146
3147
3148
3149
3150
3151 013616 000004
3152 013620 012705 013632
3153 013624 004737 035124
3154
3155 013630 000411
3156
3157 013632
3158 013632 007417 007417
3159 013636 007417 007417
3160 013642 040500 000000
3161 013646 047417 047400
3162 013652 000000
3163
3164
3165
3166
3167
3168
3169
3170 013654 000004
3171 013656 012705 013670
3172 013662 004737 035124
3173
3174 013666 000411
3175
3176 013670
3177 013674 100400 000000
3178 013678 140400 000000
3179 013700 140500 000000
3180 013704 047517 047540
3181 013710 000000

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;*****
;TEST 176 TEST OF DIVF INSTR, DATA SET DIVF-4
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST176: SCOPE
MOV 0DIVF4,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF4 ; GO TEST
BR TST177 ;;

DIVF4: ; TEST DATA SET DIVF-41
.WORD 040400,000000 ; INITIAL AC FLOAT NUMBER
.WORD 140500,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 140552,ALTN+1 ; EXPECTED FLOAT RESULT
.WORD 047507,047510 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 177 TEST OF DIVF INSTR, DATA SET DIVF-5
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST177: SCOPE
MOV 0DIVF5,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF5 ; GO TEST
BR TST178 ;;

DIVF5: ; TEST DATA SET DIVF-51
.WORD ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD ALTP,ALTP ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047417,047400 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 178 TEST OF DIVF INSTR, DATA SET DIVF-6
;
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST178: SCOPE
MOV 0DIVF6,R5 ; PTR TO TEST DATA SET
JSH PC,0DIVF6 ; GO TEST
BR TST179 ;;

DIVF6: ; TEST DATA SET DIVF-61
.WORD 104400,000000 ; INITIAL AC FLOAT NUMBER
.WORD 150000,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 040500,000000 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

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3189 013712 000004
3190 013714 012705 013726
3191 013720 004737 035124
3192
3193 013724 000411
3194
3195 013726
3196 013720 000177 177777
3197 013732 177777 177777
3198 013736 000000 000000
3199 013742 047444 047444
3200 013746 000000
3201
3202
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3204
3205
3206
3207
3208 013750 000004
3209 013752 012705 013704
3210 013756 004737 035124
3211
3212 013762 000411
3213
3214 013764
3215 013764 100077 000000
3216 013770 100277 000000
3217 013774 000000 000000
3218 014000 047517 047500
3219 014004 000000
3220
3221
3222
3223
3224
3225
3226
3227 014006 000004
3228 014010 012705 014022
3229 014014 004737 035124
3230
3231 014020 000411
3232
3233 014022
3234 014022 100077 000000
3235 014026 100277 000000
3236 014032 100000 000000
3237 014036 047447 047450

;*****
;TEST 201 TEST OF DIVF INSTR, DATA SET DIVF=7
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST201 SCOPE
MOV #DIVF7,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF7 ; GO TEST
BR TST202 ;;

DIVF7: ; TEST DATA SET DIVF=7!
.WORD 21MP,M1 ; INITIAL AC FLOAT NUMBER
.WORD LGM,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0.0 ; EXPECTED FLOAT RESULT
.WORD 047451,047444 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 202 TEST OF DIVF INSTR, DATA SET DIVF=10
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST202 SCOPE
MOV #DIVF10,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF10 ; GO TEST
BR TST203 ;;

DIVF10: ; TEST DATA SET DIVF=10!
.WORD 100077,000000 ; INITIAL AC FLOAT NUMBER
.WORD 100277,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 000000,000000 ; EXPECTED FLOAT RESULT
.WORD 047517,047500 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 203 TEST OF DIVF INSTR, DATA SET DIVF=11
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST203 SCOPE
MOV #DIVF11,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF11 ; GO TEST
BR TST204 ;;

DIVF11: ; TEST DATA SET DIVF=11!
.WORD 100077,000000 ; INITIAL AC FLOAT NUMBER
.WORD 000277,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 100000,000000 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

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3238 014042 000000
3239
3240
3241
3242
3243
3244
3245
3246 014044 000004
3247 014046 012705 014050
3248 014052 004737 035124
3249
3250 014056 000411
3251
3252 014058
3253 014058 000100 000001
3254 014064 040100 000000
3255 014070 000000 000001
3256 014074 047517 047500
3257 014100 000000
3258
3259
3260
3261
3262
3263
3264
3265 014102 000004
3266 014104 012705 014116
3267 014110 004737 035124
3268
3269 014114 000411
3270
3271 014116
3272 014115 000100 000001
3273 014122 100000 000000
3274 014126 100000 000000
3275 014132 047447 047450
3276 014136 000000
3277
3278
3279
3280
3281
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3283
3284 014140 000004
3285 014142 012705 014154
3286 014146 004737 035124
3287
3288 014152 000411
3289
3290 014154
3291 014154 000177 177777
3292 014160 000177 177777
3293 014164 000177 177777

.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 204 TEST OF DIVF INSTR, DATA SET DIVF=14
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST204 SCOPE
MOV #DIVF12,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF12 ; GO TEST
BR TST205 ;;

DIVF12: ; TEST DATA SET DIVF=12!
.WORD 000100,000001 ; INITIAL AC FLOAT NUMBER
.WORD 040300,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 000000,000001 ; EXPECTED FLOAT RESULT
.WORD 047517,047500 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 205 TEST OF DIVF INSTR, DATA SET DIVF=13
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST205 SCOPE
MOV #DIVF13,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF13 ; GO TEST
BR TST206 ;;

DIVF13: ; TEST DATA SET DIVF=13!
.WORD 000100,000001 ; INITIAL AC FLOAT NUMBER
.WORD 100300,000000 ; INITIAL MEM FLOAT NUMBER
.WORD 100000,000000 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

;*****
;TEST 206 TEST OF DIVF INSTR, DATA SET DIVF=14
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST206 SCOPE
MOV #DIVF14,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVF14 ; GO TEST
BR TST207 ;;

DIVF14: ; TEST DATA SET DIVF=14!
.WORD 21MP,M1 ; INITIAL AC FLOAT NUMBER
.WORD 21MP,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 21MP,M1 ; EXPECTED FLOAT RESULT

```

3294 014170 047543 147543
 3295 014174 100014
 3296
 3297
 3298
 3299
 3300
 3301
 3302
 3303 014176 000004
 3304 014200 012705 014212
 3305 014204 004737 035124
 3306
 3307 014210 000411
 3308
 3309 014212
 3310 014212 000177 177777
 3311 014210 000177 177777
 3312 014222 000177 177777
 3313 014226 013413 143413
 3314 014232 100004
 3315
 3316
 3317
 3318
 3319
 3320
 3321
 3322 014234 000004
 3323 014236 012705 014250
 3324 014242 004737 035124
 3325
 3326 014246 000411
 3327
 3328 014250
 3329 014250 077777 052525
 3330 014254 003777 170300
 3331 014260 030177 002134
 3332 014264 047515 147502
 3333 014270 100010
 3334
 3335
 3336
 3337
 3338
 3339
 3340
 3341 014272 000004
 3342 014274 012705 014306
 3343 014300 004737 035124
 3344
 3345 014304 000411
 3346
 3347 014306
 3348 014306 177777 052525
 3349 014312 103777 170300

```

;*****
;TEST 207 TEST OF DIVI INSTR, DATA SET DIVI-14
;*
;* =0 INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST207: SCOPE
MOV 0DIVI15,R5 ; PTR TO TEST DATA SET
JSH PC,00DIVI7 ; GO TEST
BR TST210 ;;

DIVI15: ; TEST DATA SET DIVI-14:
;WORD 047543,147543 ; FPS: BEFORE, AFTER
;WORD 100014 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 210 TEST OF DIVI INSTR, DATA SET DIVI-15
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST210: SCOPE
MOV 0DIVI16,R5 ; PTR TO TEST DATA SET
JSH PC,00DIVI7 ; GO TEST
BR TST211 ;;

DIVI16: ; TEST DATA SET DIVI-16:
;WORD 047515,147502 ; INITIAL AC FLOAT NUMBER
;WORD 100004 ; INITIAL MEM FLOAT NUMBER
;WORD 03177,062134 ; EXPECTED FLOAT RESULT
;WORD 047515,147502 ; FPS: BEFORE, AFTER
;WORD 100010 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 211 TEST OF DIVI INSTR, DATA SET DIVI-17
;*
;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST211: SCOPE
MOV 0DIVI17,R5 ; PTR TO TEST DATA SET
JSH PC,00DIVI7 ; GO TEST
BR TST212 ;;

DIVI17: ; TEST DATA SET DIVI-17:
;WORD LG0,ALTP ; INITIAL AC FLOAT NUMBER
;WORD 103777,ALT4M ; INITIAL MEM FLOAT NUMBER

```

3350 014316 000000 000000
 3351 014322 000411 046406
 3352 014326 000000
 3353
 3354
 3355
 3356
 3357
 3358
 3359
 3360 014330 000004
 3361 014332 012705 014344
 3362 014336 004737 035124
 3363
 3364 014342 000411
 3365
 3366 014344
 3367 014346 100200 000000
 3368 014350 077777 177777
 3369 014354 100400 000000
 3370 014360 047547 147550
 3371 014364 100012
 3372
 3373
 3374
 3375
 3376
 3377
 3378
 3379 014360 000004
 3380 014370 012705 014402
 3381 014374 004737 035124
 3382
 3383 014380 000411
 3384
 3385 014402
 3386 014402 000200 000000
 3387 014406 177777 177777
 3388 014412 000004 000000
 3389 014416 045433 045444
 3390 014422 000004
 3391
 3392
 3393

```

;*****
;TEST 212 TEST OF DIVI INSTR, DATA SET DIVI-20
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST212: SCOPE
MOV 0DIVI20,R5 ; PTR TO TEST DATA SET
JSH PC,00DIVI7 ; GO TEST
BR TST213 ;;

DIVI20: ; TEST DATA SET DIVI-20:
;WORD 047547,147550 ; INITIAL AC FLOAT NUMBER
;WORD 100012 ; INITIAL MEM FLOAT NUMBER
;WORD 100400,000000 ; EXPECTED FLOAT RESULT
;WORD 047547,147550 ; FPS: BEFORE, AFTER
;WORD 100012 ; FPC AFTER ( 0 = N/A )

;*****
;TEST 213 TEST OF DIVI INSTR, DATA SET DIVI-21
;*
;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST213: SCOPE
MOV 0DIVI21,R5 ; PTR TO TEST DATA SET
JSH PC,00DIVI7 ; GO TEST
BR TST214 ;;

DIVI21: ; TEST DATA SET DIVI-21:
;WORD 045453,045444 ; INITIAL AC FLOAT NUMBER
;WORD LG0,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 045 ; EXPECTED FLOAT RESULT
;WORD 045453,045444 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

```

```

3394
3395
3396
3397
3398
3399 014424 000004
3400 014426 012705 014440
3401 014432 004737 035274
3402
3403 014436 000417
3404
3405 014440
3406 014448 000137 177777 177777
3407 014448 177777
3408 014450 077777 177777 177777
3409 014456 177777
3410 014460 000000 000000 000000
3411 014466 000000
3412 014470 047613 047604
3413 014474 000000
3414
3415
3416
3417
3418
3419
3420
3421 014476 000000
3422 014500 012705 014512
3423 014506 004737 035274
3424
3425 014510 000417
3426
3427 014512
3428 014512 044277 000000 000000
3429 014520 000000
3430 014522 000277 000000 000000
3431 014530 000000
3432 014532 034200 000000 000000
3433 014540 000000
3434 014542 047717 047700
3435 014546 000000
3436
3437
3438
3439
3440
3441
3442
3443 014550 000004
3444 014552 012705 014564
3445 014556 004737 035274
3446
3447 014562 000417
3448
3449 014564

```

```

;*****
;TEST 214 TEST OF DIVD INSTR, DATA SET DIVD-1
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST214 SCOPE
MOV #DIVD1,R5 ; PTR TO TEST DATA SET
JSR PC,#DIVD1 ; GO TEST
BR TST215 ;
DIVD1: ; TEST DATA SET DIVD-1:
;WORD ZKJMP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
;WORD LQP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047613,047604 ; FPS: BEFORE, AFTER
;WORD NA ; FEC AFTER ( 0 = N/A )
;*****
;TEST 215 TEST OF DIVD INSTR, DATA SET DIVD-2
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST215 SCOPE
MOV #DIVD2,R5 ; PTR TO TEST DATA SET
JSR PC,#DIVD2 ; GO TEST
BR TST216 ;
DIVD2: ; TEST DATA SET DIVD-2:
;WORD 034277,0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 040277,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 034200,0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047717,047700 ; FPS: BEFORE, AFTER
;WORD NA ; FEC AFTER ( 0 = N/A )
;*****
;TEST 216 TEST OF DIVD INSTR, DATA SET DIVD-3
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST216 SCOPE
MOV #DIVD3,R5 ; PTR TO TEST DATA SET
JSR PC,#DIVD3 ; GO TEST
BR TST217 ;
DIVD3: ; TEST DATA SET DIVD-3:

```

```

3450 014564 134277 000000 000000
3451 014572 000000
3452 014574 004737 000000 000000
3453 014602 000000
3454 014604 134200 000000 000000
3455 014612 000000
3456 014614 047617 047600
3457 014620 000000
3458
3459
3460
3461
3462
3463
3464
3465 014622 000004
3466 014624 012705 014636
3467 014630 004737 035274
3468
3469 014634 000417
3470
3471 014636
3472 014636 134300 000000 000000
3473 014644 000001
3474 014646 140300 000000 000000
3475 014654 000000
3476 014656 034200 000000 000000
3477 014664 000000
3478 014666 047757 047740
3479 014672 000000
3480
3481
3482
3483
3484
3485
3486 014674 000004
3488 014676 012705 014710
3489 014702 004737 035274
3490
3491 014706 000417
3492
3493 014710
3494 014710 044300 000000 000000
3495 014716 000001
3496 014720 140300 000000 000000
3497 014726 000000
3498 014730 134300 000000 000000
3499 014736 000001
3500 014740 047607 047610
3501 014744 000000
3502
3503
3504
3505

```

```

;*****
;TEST 217 TEST OF DIVD INSTR, DATA SET DIVD-4
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST217 SCOPE
MOV #DIVD4,R5 ; PTR TO TEST DATA SET
JSR PC,#DIVD4 ; GO TEST
BR TST218 ;
DIVD4: ; TEST DATA SET DIVD-4:
;WORD 134300,0,0,1 ; INITIAL AC FLOAT NUMBER
;WORD 140300,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 034200,0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047757,047740 ; FPS: BEFORE, AFTER
;WORD NA ; FEC AFTER ( 0 = N/A )
;*****
;TEST 220 TEST OF DIVD INSTR, DATA SET DIVD-5
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST220 SCOPE
MOV #DIVD5,R5 ; PTR TO TEST DATA SET
JSR PC,#DIVD5 ; GO TEST
BR TST221 ;
DIVD5: ; TEST DATA SET DIVD-5:
;WORD 034300,0,0,1 ; INITIAL AC FLOAT NUMBER
;WORD 140300,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 134300,0,0,1 ; EXPECTED FLOAT RESULT
;WORD 047607,047610 ; FPS: BEFORE, AFTER
;WORD NA ; FEC AFTER ( 0 = N/A )
;*****
;TEST 221 TEST OF DIVD INSTR, DATA SET DIVD-6

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```

3500
3507
3508
3509 014746 000004
3510 014750 012705 014762
3511 014754 004737 035274
3512
3513 014760 000417
3514
3515 014762
3516 014762 100400 000000 000000 DIVD6: 1 TEST DATA SET DIVD=61
3517 014770 000000 .WORD 100400,0,0,0 ; INITIAL AC FLOAT NUMBER
3518 014772 004700 000000 000000 .WORD 000500,0,0,0 ; INITIAL MEM FLOAT NUMBER
3519 015000 000000 .WORD 140052,ALTN,ALTN,ALTN ; EXPECTED FLOAT RESULT
3520 015002 140052 125252 125252
3521 015010 125252
3522 015012 047650 047650 .WORD 047647,047650 ; FFS: BEFORE, AFTER
3523 015016 000000 .WORD NA ; FLC AFTER ( 0 = N/A )
3524
3525
3526
3527
3528
3529
3530
3531 015020 000004
3532 015024 012705 015036
3533 015026 004737 035274
3534
3535 015032 000417
3536
3537 015034
3538 015034 100400 000000 000000 DIVD7: 1 TEST DATA SET DIVD=71
3539 015042 000000 .WORD 100400,0,0,0 ; INITIAL AC FLOAT NUMBER
3540 015044 000500 000000 000000 .WORD 000500,0,0,0 ; INITIAL MEM FLOAT NUMBER
3541 015052 000000 .WORD 140052,ALTN,ALTN,ALTN+1 ; EXPECTED FLOAT RESULT
3542 015054 140052 125252 125252
3543 015062 125252
3544 015064 047650 047650 .WORD 047607,047610 ; FFS: BEFORE, AFTER
3545 015070 000000 .WORD NA ; FLC AFTER ( 0 = N/A )
3546
3547
3548
3549
3550
3551
3552
3553 015072 000004
3554 015074 012705 015106
3555 015100 004737 035274
3556
3557 015104 000417
3558
3559 015106
3560 015106 170360 170360 DIVD10: 1 TEST DATA SET DIVD=101
3561 015114 170360 .WORD ALTN,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER

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3562 015116 170360 170360 170360 .WORD ALTN,ALTN,ALTN,ALTN ; INITIAL MEM FLOAT NUMBER
3563 015124 170360 .WORD 170360,0,0,0 ; EXPECTED FLOAT RESULT
3564 015126 004700 000000 000000 .WORD 047717,047700 ; FFS: BEFORE, AFTER
3565 015134 000000 .WORD NA ; FLC AFTER ( 0 = N/A )
3566 015136 047717 047700
3567 015142 000000
3568
3569
3570
3571
3572
3573
3574
3575 015144 000004
3576 015146 012705 015160
3577 015152 004737 035274
3578
3579 015156 000417
3580
3581 015160
3582 015160 070200 000000 000000 DIVD11: 1 TEST DATA SET DIVD=111
3583 015166 000000 .WORD 070200,0,0,0 ; INITIAL AC FLOAT NUMBER
3584 015170 004700 000000 000000 .WORD 050400,0,0,0 ; INITIAL MEM FLOAT NUMBER
3585 015176 000000 .WORD 050000,0,0,0 ; EXPECTED FLOAT RESULT
3586 015200 003000 000000 000000
3587 015200 000000
3588 015210 047650 047650 .WORD 047657,047640 ; FFS: BEFORE, AFTER
3589 015214 000000 .WORD NA ; FLC AFTER ( 0 = N/A )
3590
3591
3592
3593
3594
3595
3596
3597 015216 000004
3598 015220 012705 015232
3599 015224 004737 035274
3600
3601 015230 000417
3602
3603 015232
3604 015232 125252 125252 125252 DIVD12: 1 TEST DATA SET DIVD=121
3605 015240 125252 .WORD ALTN,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
3606 015242 000000 000000 000000 .WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
3607 015250 000000 .WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
3608 015252 125252 125252 125252
3609 015260 125252 .WORD ALTN,ALTN,ALTN,ALTN ; EXPECTED FLOAT RESULT
3610 015262 047707 147707 .WORD 047707,147707 ; FFS: BEFORE, AFTER
3611 015266 100004 .WORD 100004 ; FLC AFTER ( 0 = N/A )
3612
3613
3614
3615
3616
3617

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```

3618
3619 015270 000004
3620 015272 012705 015304
3621 015276 004737 035274
3622
3623 015302 000417
3624
3625 015304
3626 015304 000177 177777 177777
3627 015312 177777
3628 015314 100177 177777 177777
3629 015322 177777
3630 015324 000177 177777 177777
3631 015332 177777
3632 015334 047643 147643
3633 015340 100014
3634
3635
3636
3637
3638
3639
3640
3641 015342 000004
3642 015344 012705 015356
3643 015350 004737 035274
3644
3645 015354 000417
3646
3647 015356
3648 015356 000177 177777 177777
3649 015364 177777
3650 015366 100177 177777 177777
3651 015374 177777
3652 015376 000177 177777 177777
3653 015404 177777
3654 015406 043643 143643
3655 015412 100004
3656
3657
3658
3659
3660
3661
3662
3663 015414 000004
3664 015416 012705 015430
3665 015422 004737 035274
3666
3667 015426 000417
3668
3669 015430
3670 015438 052525 052525 052525
3671 114436 052525
3672 115444 000000 000000
3673 115446 000000

```

```

3674 015450 012525 052525 052525
3675 015456 052525
3676 015460 147643 147643
3677 015464 100010
3678
3679
3680
3681
3682
3683 015466 000004
3684 015470 012705 015507
3685 015474 004737 035274
3686
3687 015500 000417
3688
3689 015502
3690 015502 052525 052525 052525
3691 015510 052525
3692 015512 100177 000000 000000
3693 015520 000000 000000
3694 015522 100000 000000
3695 015530 000000
3696 015532 046646
3697 015534 000000
3698 015536 047707 147710
3699 015540 100012
3700
3701
3702
3703
3704
3705
3706
3707 015540 000004
3708 015542 012705 015554
3709 015546 004737 035274
3710
3711 015552 000417
3712
3713 015554
3714 015554 100200 177777 125252
3715 015562 000000
3716 015564 077777 177777 177777
3717 015572 177777
3718 015574 140400 177777 125252
3719 015582 000001
3720 015584 047707 147710
3721 015610 100012
3722
3723
3724
3725
3726
3727
3728
3729 015612 000004

```

3730 015614 012705 015626
3731 015620 004737 035274
3732
3733 015624 000417
3734
3735 015626
3736 015626 100200 177777 125282
3737 015634 000000
3738 015630 177777 177777
3739 015644 177777
3740 015646 000000 000000
3741 015654 000000
3742 015656 045711 045704
3743 015662 000000
3744
3745

MOV #DIVD20,R5 ; PTR TO TEST DATA SET
JBR PC,#DIVD1 ; GU TEST
BR T87234 ;
DIVD20: ; TEST DATA SET DIVD-20:
;WORD 04N,M1,ALTN,M ; INITIAL AC FLOAT NUMBER
;WORD LGN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
;WORD 045711,045704 ; FWS: BEFORE, AFTER
;WORD NA ; FRC AFTER (0 = N/A)

3746
3747
3748
3749
3750
3751 015664 000004
3752 015666 012705 015700
3753 015672 004737 035464
3754
3755 015676 000413
3756
3757 015700
3758 015700 000000 000000
3759 015704 000000 000000
3760 015712 000000 000000
3761 015714 000000 000000
3762 015720 047513 047504
3763 015721 000000
3764
3765
3766
3767
3768
3769
3770
3771 015726 000004
3772 015730 012705 015742
3773 015734 004737 035464
3774
3775 015740 000413
3776
3777 015742
3778 015742 000177 177777
3779 015746 017777 177777
3780 015752 000000 000000
3781 015756 000000 000000
3782 015762 047553 047544
3783 015766 000000
3784
3785
3786
3787
3788
3789
3790
3791 015770 000004
3792 015772 012705 016004
3793 015776 004737 035464
3794
3795 016002 000413
3796
3797 016004
3798 016004 177777 177777
3799 016010 000177 177777
3800 016014 000000 000000
3801 016020 000000 000000

;;*****
;TEST 234 TEST OF MODF(2 ACC) INSTR, DATA SET MODF-1
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST234: SCOPE
MOV #MODF1,R5 ; PTR TO TEST DATA SET
JBR PC,#MODFT ; GU TEST
BR T87238 ;
MODF1: ; TEST DATA SET MODF-1:
;WORD 0,0 ; INITIAL AC FLOAT NUMBER
;WORD 0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD 0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047513,047504 ; FWS: BEFORE, AFTER
;WORD NA ; FRC AFTER (0 = N/A)
;;*****
;TEST 235 TEST OF MODF(2 ACC) INSTR, DATA SET MODF-2
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST235: SCOPE
MOV #MODF2,R5 ; PTR TO TEST DATA SET
JBR PC,#MODFT ; GU TEST
BR T87236 ;
MODF2: ; TEST DATA SET MODF-2:
;WORD 2X1M,M1 ; INITIAL AC FLOAT NUMBER
;WORD LG0,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD 0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047553,047544 ; FWS: BEFORE, AFTER
;WORD NA ; FRC AFTER (0 = N/A)
;;*****
;TEST 236 TEST OF MODF(2 ACC) INSTR, DATA SET MODF-3
;# ALL INTERRUPT ENABLE OFF, ALL OTHERS ON
;# SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST236: SCOPE
MOV #MODF3,R5 ; PTR TO TEST DATA SET
JBR PC,#MODFT ; GU TEST
BR T87237 ;
MODF3: ; TEST DATA SET MODF-3:
;WORD LGN,M1 ; INITIAL AC FLOAT NUMBER
;WORD 2X1M,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD 0,0 ; EXPECTED INTEGER=PART FLOAT RESULT


```

3002 010024 043413 043404      ,WORD 043413,043404 ; FPS: BEFORE, AFTER
3003 010030 000000      ,WORD NA ; FLC AFTER ( 0 = N/A )
3004
3005
3006
3007
3008
3009
3010
3011 010032 000004      ;*****
3012 010034 012705 016846 ;*TEST 237 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-4
3013 010040 004737 035464 ;* ALL INTERRUPT ENABLES ON
3014 ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
3015 ;*****
3016
3017 010044 000413      TST237: SCOPE
3018 010046 000000      MOV 0MD2F4,R5 ; PTR TO TEST DATA SET
3019 010052 100177 177777 JBR PC,00MD2FT ; GO TEST
3020 010056 177777 177777
3021 010062 052025 177777
3022 010066 047447 147447
3023 010072 000014
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3031 010074 000004      ;*****
3032 010076 012705 016110 ;*TEST 240 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-5
3033 010102 004737 035464 ;* ALL INTERRUPT ENABLES ON
3034 ;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
3035 ;*****
3036
3037 010110 000000      TST240: SCOPE
3038 010116 042177 000000 MOV 0MD2F5,R5 ; PTR TO TEST DATA SET
3039 010118 100200 000000 JBR PC,00MD2FT ; GO TEST
3040 010120 000000 000000
3041 010124 102177 000000
3042 010130 047553 047544
3043 010134 000000
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3051 010136 000004      ;*****
3052 010140 012705 016152 ;*TEST 241 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-6
3053 010144 004737 035464 ;* ALL INTERRUPT ENABLES ON
3054 ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
3055 ;*****
3056
3057 010150 000413      TST241: SCOPE
3058 010156 000000      MOV 0MD2F6,R5 ; PTR TO TEST DATA SET
3059 010162 000000 000000 JBR PC,00MD2FT ; GO TEST
3060 010168 000000 000000
3061 010174 000000 000000
3062 010180 000000 000000
3063 010186 000000 000000
3064
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3071 010200 000004      ;*****
3072 010202 012705 016214 ;*TEST 242 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-7
3073 010206 004737 035464 ;* ALL INTERRUPT ENABLES ON
3074 ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
3075 ;*****
3076
3077 010212 000413      TST242: SCOPE
3078 010218 000000      MOV 0MD2F7,R5 ; PTR TO TEST DATA SET
3079 010224 100200 077600 JBR PC,00MD2FT ; GO TEST
3080 010230 000000 000000
3081 010236 037777 000000
3082 010242 042177 000000
3083 010248 047457 047440
3084 010254 000000
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3092 010256 000004      ;*****
3093 010258 012705 016256 ;*TEST 243 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-8
3094 010262 004737 035464 ;* ALL INTERRUPT ENABLES ON
3095 ;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
3096 ;*****
3097
3098 010268 000413      TST243: SCOPE
3099 010274 000000      MOV 0MD2F8,R5 ; PTR TO TEST DATA SET
3100 010280 000000 000000 JBR PC,00MD2FT ; GO TEST
3101 010286 000000 000000
3102 010292 000000 000000
3103 010298 000000 000000
3104 010304 000000 000000
3105 010310 000000 000000
3106 010316 000000 000000
3107 010322 000000 000000
3108 010328 000000 000000
3109 010334 000000 000000
3110 010340 000000 000000
3111 010346 000000 000000
3112 010352 000000 000000
3113 010358 000000 000000
3114
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3116
3117 010364 000004      ;*****
3118 010366 012705 016320 ;*TEST 244 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-9
3119 010370 004737 035464 ;* ALL INTERRUPT ENABLES ON
3120 ;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
3121 ;*****
3122
3123 010376 000413      TST244: SCOPE
3124 010382 000000      MOV 0MD2F9,R5 ; PTR TO TEST DATA SET
3125 010388 000000 000000 JBR PC,00MD2FT ; GO TEST
3126 010394 000000 000000
3127 010400 000000 000000
3128 010406 000000 000000
3129 010412 000000 000000
3130 010418 000000 000000
3131 010424 000000 000000
3132 010430 000000 000000
3133 010436 000000 000000
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3050 010152 000000      ,WORD 010152 ; INITIAL AC FLOAT NUMBER
3051 010156 100177 177777 ,WORD 100177,M1 ; INITIAL NEW FLOAT NUMBER
3052 010162 100177 177777 ,WORD 100177,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
3053 010168 000000 000000 ,WORD 0,0 ; EXPECTED INTEGER-PART FLOAT RESULT
3054 010174 047553 047544 ,WORD 047553,047544 ; FPS: BEFORE, AFTER
3055 010180 000000      ,WORD NA ; FLC AFTER ( 0 = N/A )
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3914
3915 016316 000413
3916
3917 016320
3918 016324 142700 000000
3919 016324 040377 177777
3920 016330 140177 177776
3921 016334 140200 000000
3922 016340 047547 047550
3923 016344 000000
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3926
3927
3928
3929
3930
3931 016346 000004
3932 016350 012705 016362
3933 016354 040377 035464
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3935 016360 000413
3936
3937 016362
3938 016362 040452 125252
3939 016366 021700 000000
3940 016372 040177 177400
3941 016376 042177 000000
3942 016402 047517 047550
3943 016406 000000
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3951 016410 000004
3952 016412 012705 016424
3953 016416 040377 035464
3954
3955 016422 000413
3956
3957 016424
3958 016424 041400 000001
3959 016432 141377 177776
3960 016434 140177 177777
3961 016440 142177 000000
3962 016444 047517 047550
3963 016452 000000
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BR T6T245 ;;
MD2F11: J TEST DATA SET MD2F-11:
.WORD FIN,0 ; INITIAL AC FLOAT NUMBER
.WORD 040377,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 140177,M2 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD FIN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 047547,047550 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 245 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-11
;*
;* ALL INTERRUPT ENABLES ON
;*
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST245: SCOPE
MOV #MD2F12,R5 ; PTR TO TEST DATA SET
JBR PC,#MD2FT ; GO TEST
BR T6T246 ;;

MD2F12: J TEST DATA SET MD2F-12:
.WORD 060452,ALTN ; INITIAL AC FLOAT NUMBER
.WORD 021700,0 ; INITIAL MEM FLOAT NUMBER
.WORD 040177,0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD 042177,0 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 047517,047550 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 246 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-11
;*
;* ALL INTERRUPT ENABLES ON
;*
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST246: SCOPE
MOV #MD2F13,R5 ; PTR TO TEST DATA SET
JBR PC,#MD2FT ; GO TEST
BR T6T247 ;;

MD2F13: J TEST DATA SET MD2F-13:
.WORD 041000,000001 ; INITIAL AC FLOAT NUMBER
.WORD 141377,M2 ; INITIAL MEM FLOAT NUMBER
.WORD 140177,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD 142177,000000 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 047547,047550 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 247 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-14
;*
;* ALL INTERRUPT ENABLES ON
;*
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****

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3970
3971 016452 000004
3972 016454 012705 016466
3973 016460 040377 035464
3974
3975 016466 000413
3976
3977 016466
3978 016466 041000 000001
3979 016472 141377 177776
3980 016476 140177 177777
3981 016502 142177 000000
3982 016506 047517 047550
3983 016512 000000
3984
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3986
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3989
3990
3991 016514 000004
3992 016516 012705 016528
3993 016522 040377 035464
3994
3995 016526 000413
3996
3997 016530
3998 016534 047600 000000
3999 016534 044452 125252
4000 016540 040000 000000
4001 016544 140000 125252
4002 016550 047411 147406
4003 016554 140010
4004
4005
4006
4007
4008
4009
4010
4011 016556 000004
4012 016560 012705 016572
4013 016564 040377 035464
4014
4015 016570 000413
4016
4017 016572
4018 016576 077600 000000
4019 016576 044452 125252
4020 016602 000000 000000
4021 016606 000000 000000
4022 016612 040411 040406
4023 016616 000000
4024
4025

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;*****
TST247: SCOPE
MOV #MD2F14,R5 ; PTR TO TEST DATA SET
JBR PC,#MD2FT ; GO TEST
BR T6T250 ;;

MD2F14: J TEST DATA SET MD2F-14:
.WORD 041000,000001 ; INITIAL AC FLOAT NUMBER
.WORD 141377,M2 ; INITIAL MEM FLOAT NUMBER
.WORD 140177,000000 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD 142177,000000 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 047547,047550 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 250 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-15
;*
;* ALL INTERRUPT ENABLES ON
;*
;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST250: SCOPE
MOV #MD2F15,R5 ; PTR TO TEST DATA SET
JBR PC,#MD2FT ; GO TEST
BR T6T251 ;;

MD2F15: J TEST DATA SET MD2F-15:
.WORD 077600,0 ; INITIAL AC FLOAT NUMBER
.WORD 044452,ALTN ; INITIAL MEM FLOAT NUMBER
.WORD 0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD 040000,ALTN ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 047411,147406 ; FPS: BEFORE, AFTER
.WORD 100010 ; FLC AFTER ( 0 = N/A )

;*****
;TEST 251 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-16
;*
;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;*
;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST251: SCOPE
MOV #MD2F16,R5 ; PTR TO TEST DATA SET
JBR PC,#MD2FT ; GO TEST
BR T6T252 ;;

MD2F16: J TEST DATA SET MD2F-16:
.WORD 077600,0 ; INITIAL AC FLOAT NUMBER
.WORD 044452,ALTN ; INITIAL MEM FLOAT NUMBER
.WORD 0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD 0 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD 040411,040406 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

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4031 016620 000004
4032 016622 012705 016634
4033 016626 004737 035664
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4035 016632 000413
4036
4037 016634
4038 016634 001577 177777
4039 016647 101800 000000
4040 016644 142377 177777
4041 016650 000000 000000
4042 016654 007547 147550
4043 016660 100012
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4051 016662 000004
4052 016664 012705 016676
4053 016670 004737 035664
4054
4055 016674 000413
4056
4057 016676
4058 016676 001577 177777
4059 016722 101800 000000
4060 016706 000000 000000
4061 016712 000000 000000
4062 016716 045551 045544
4063 016722 000000
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4066

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;*****
;TEST 257 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-17
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST257: SCOPE
MOV #MD2F17,R5 ; PTR TO TEST DATA SET
JSR PC,#MD2F17 ; GO TEST

BR TST253 ;

MD2F17: ; TEST DATA SET MD2F-17
;WORD 001577,M1 ; INITIAL AC FLOAT NUMBER
;WORD 101800,0 ; INITIAL MEM FLOAT NUMBER
;WORD 142377,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
;WORD 0,0 ; EXPECTED INTEGER-PART FLOAT RESULT
;WORD 047547,147550 ; FPA: BEFORE, AFTER
;WORD 100012 ; FLC AFTER ( 0 = N/A )

;*****
;TEST 253 TEST OF MODF(2 ACC) INSTR, DATA SET MD2F-20
;*
;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST253: SCOPE
MOV #MD2F20,R5 ; PTR TO TEST DATA SET
JSR PC,#MD2F17 ; GO TEST

BR TST254 ;

MD2F20: ; TEST DATA SET MD2F-20
;WORD 001577,M1 ; INITIAL AC FLOAT NUMBER
;WORD 101800,0 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
;WORD 0,0 ; EXPECTED INTEGER-PART FLOAT RESULT
;WORD 045553,045544 ; FPA: BEFORE, AFTER
;WORD NA ; FLC AFTER ( 0 = N/A )

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4072 016724 000004
4073 016726 012705 016740
4074 016732 004737 035664
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4076 016736 000413
4077
4078 016740
4079 016740 000000 000000 000000
4080 016746 000000 000000
4081 016750 000000 000000 000000
4082 016756 000000 000000
4083 016762 000000 000000 000000
4084 016766 000000 000000
4085 016770 000000 000000 000000
4086 016776 000000
4087 017000 047051 047044
4088 017004 000000
4089
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4096 017006 000004
4097 017010 012705 017022
4098 017014 004737 035664
4099
4100 017020 000413
4101
4102 017022
4103 017022 000177 177777 177777
4104 017030 177777
4105 017032 177777 177777 177777
4106 017040 177777
4107 017042 000000 000000 000000
4108 017050 000000 000000
4109 017052 000000 000000 000000
4110 017060 000000
4111 017062 047713 047704
4112 017066 000000
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4119
4120 017070 000004
4121 017072 012705 017104
4122 017076 004737 035664

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;*****
;TEST 254 TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-1
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST254: SCOPE
MOV #MD2D1,R5 ; PTR TO TEST DATA SET
JSR PC,#MD2D1 ; GO TEST

BR TST255 ;

MD2D1: ; TEST DATA SET MD2D-1
;WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
;WORD 0,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT
;WORD 017053,047044 ; FPA: BEFORE, AFTER
;WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 255 TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-2
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST255: SCOPE
MOV #MD2D2,R5 ; PTR TO TEST DATA SET
JSR PC,#MD2D1 ; GO TEST

BR TST256 ;

MD2D2: ; TEST DATA SET MD2D-2
;WORD Z(1,M1,M1,M1) ; INITIAL AC FLOAT NUMBER
;WORD LGN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
;WORD 0,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT
;WORD 047713,047704 ; FPA: BEFORE, AFTER
;WORD NA ; FLC AFTER ( 0 = N/A )

;*****
;TEST 256 TEST OF MODD(2 ACC) INSTR, DATA SET MD2D-3
;*
;* INTERRUPT ENABLE OFF, ALL OTHERS ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST256: SCOPE
MOV #MD2D3,R5 ; PTR TO TEST DATA SET
JSR PC,#MD2D1 ; GO TEST

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4123
4124 017102 000423 BR TST257 ;
4125
4126 017104 MD2D11 ; TEST DATA SET M02D=31
4127 017104 017777 177777 177777 .WORD LCP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4128 017112 177777 .WORD ZX1MN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4129 017114 100177 177777 177777 .WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4130 017122 177777 .WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4131 017124 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4132 017132 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4133 017134 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4134 017142 000000 .WORD 043653,043644 ; FPS: BEFORE, AFTER
4135 017144 043653 043644 .WORD NA ; FEC AFTER ( 0 = N7A )
4136 017150 000000
4137
4138
4139
4140
4141 *****
4142 !*TEST 257 TEST OF MODD(2 ACC) INSTR, DATA SET M02D=4
4143 !* ALL INTERRUPT ENABLES ON
4144 !* LONG FLOAT, LONG INTEGER, ROUND MODES
4145 *****
4146 TST257: SCOPE
4147 MOV #M02D4,R5 ; PTR TO TEST DATA SET
4148 JSR PC,#M02D1 ; GO TEST
4149
4150 BR TST260 ;
4151
4152 017106 MD2D41 ; TEST DATA SET M02D=41
4153 017106 077777 177777 177777 .WORD LCP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4154 017114 100177 177777 177777 .WORD ZX1MN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4155 017204 177777 .WORD LCP,M1,M1,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
4156 017204 077777 177777 177777 .WORD ALTP,M1,ALTN,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4157 017214 177777 .WORD 047713,047713 ; FPS: BEFORE, AFTER
4158 017224 000000 .WORD 100014 ; FEC AFTER ( 0 = N7A )
4159 017226 047713 100014
4160 017232 100014
4161
4162
4163 *****
4164 !*TEST 260 TEST OF MODD(2 ACC) INSTR, DATA SET M02D=5
4165 !* ALL INTERRUPT ENABLES ON
4166 !* LONG FLOAT, SHORT INTEGER, ROUND MODES
4167 *****
4168 TST260: SCOPE
4169 MOV #M02D5,R5 ; PTR TO TEST DATA SET
4170 JSR PC,#M02D1 ; GO TEST
4171
4172 BR TST261 ;
4173
4174 017234 MD2D51 ; TEST DATA SET M02D=51
4175 017236 042177 000000 000000 .WORD 042177,0,0,0 ; INITIAL AC FLOAT NUMBER
4176 017242 044737 035666 .WORD FIP,0,0,0 ; INITIAL MEM FLOAT NUMBER
4177 017246 000423
4178 017246 000000

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4179 017273 000000 000000 000000 .WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4180 017276 000000 .WORD 042177,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4181 017300 042177 000000 000000 .WORD 047613,047604 ; FPS: BEFORE, AFTER
4182 017306 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
4183 017310 047613 047604
4184 017314 000000
4185
4186
4187 *****
4188 !*TEST 261 TEST OF MODD(2 ACC) INSTR, DATA SET M02D=6
4189 !* ALL INTERRUPT ENABLES ON
4190 !* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
4191 *****
4192 TST261: SCOPE
4193 MOV #M02D6,R5 ; PTR TO TEST DATA SET
4194 JSR PC,#M02D1 ; GO TEST
4195
4196 BR TST262 ;
4197
4198 017332 MD2D61 ; TEST DATA SET M02D=61
4199 017332 100200 000000 000000 .WORD FIP,0,0,0 ; INITIAL AC FLOAT NUMBER
4200 017340 000000 .WORD 040177,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4201 017342 040177 177777 177777 .WORD 040177,M1,M1,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
4202 017352 040177 177777 177777 .WORD 140177,M1,M1,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
4203 017360 177777 .WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4204 017362 000000 000000 .WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4205 017372 047747 047750 .WORD 047747,047750 ; FPS: BEFORE, AFTER
4206 017376 000000 .WORD NA ; FEC AFTER ( 0 = N7A )
4207 017376 000000
4208
4209
4210 *****
4211 !*TEST 262 TEST OF MODD(2 ACC) INSTR, DATA SET M02D=7
4212 !* ALL INTERRUPT ENABLES ON
4213 !* LONG FLOAT, SHORT INTEGER, ROUND MODES
4214 *****
4215 TST262: SCOPE
4216 MOV #M02D7,R5 ; PTR TO TEST DATA SET
4217 JSR PC,#M02D1 ; GO TEST
4218
4219 BR TST263 ;
4220
4221 017414 MD2D71 ; TEST DATA SET M02D=71
4222 017414 042176 077600,0,0,0 ; INITIAL AC FLOAT NUMBER
4223 017422 000000 .WORD FIP,0,0,0 ; INITIAL MEM FLOAT NUMBER
4224 017424 100200 000000 000000 .WORD FIP,0,0,0 ; INITIAL MEM FLOAT NUMBER
4225 017432 000000 .WORD 137777,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4226 017434 137777 000000 000000 .WORD 137777,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4227 017442 000000 .WORD 142176,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4228 017444 142176 000000 000000 .WORD 142176,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4229 017452 000000 .WORD 047607,047610 ; FPS: BEFORE, AFTER
4230 017454 047607 047610 .WORD NA ; FEC AFTER ( 0 = N7A )
4231 017460 000000
4232
4233
4234

```

```
4235 ;*****  
4236 ;TEST 263 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-10  
4237 ;* ALL INTERRUPT ENABLES ON  
4238 ;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES  
4239 ;*****  
4240 TST263: SCOPE  
4241 MOV 8MD2D10,R5 ; PTR TO TEST DATA SET  
4242 J&K PC,8MD2D7 ; GO TEST  
4243  
4244 BR TST264 ;  
4245  
4246 MD2D10: ; TEST DATA SET MD2D-10:  
4247 ,WORD 142177,MO,0,0 ; INITIAL AC FLOAT NUMBER  
4248 ,WORD 142177,MO,0,0 ; INITIAL MEM FLOAT NUMBER  
4249 ,WORD F1P,0,0,0 ; INITIAL MEM FLOAT NUMBER  
4250 ,WORD 140000,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT  
4251 ,WORD 142177,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4252 ,WORD 142177,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4253 ,WORD 047767,047760 ; FPS: BEFORE, AFTER  
4254 ,WORD NA ; FEC AFTER ( 0 = N7A )  
4255  
4256 ;*****  
4257 ;TEST 264 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-11  
4258 ;* ALL INTERRUPT ENABLES ON  
4259 ;* LONG FLOAT, SHORT INTEGER, ROUND MODES  
4260 ;*****  
4261 TST264: SCOPE  
4262 MOV 8MD2D11,R5 ; PTR TO TEST DATA SET  
4263 J&K PC,8MD2D7 ; GO TEST  
4264  
4265 BR TST265 ;  
4266  
4267 MD2D11: ; TEST DATA SET MD2D-11:  
4268 ,WORD 71400,0,0,0 ; INITIAL AC FLOAT NUMBER  
4269 ,WORD 140377,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER  
4270 ,WORD 040177,M1,M1,M2 ; EXPECTED FRACTION-PART FLOAT RESULT  
4271 ,WORD F1P,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4272 ,WORD 047617,047600 ; FPS: BEFORE, AFTER  
4273 ,WORD NA ; FEC AFTER ( 0 = N7A )  
4274  
4275 ;*****  
4276 ;TEST 265 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-12  
4277 ;* ALL INTERRUPT ENABLES ON  
4278 ;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES  
4279 ;*****  
4280 TST265: SCOPE  
4281 MOV 8MD2D12,R5 ; PTR TO TEST DATA SET  
4282 J&K PC,8MD2D7 ; GO TEST  
4283  
4284 BR TST266 ;  
4285  
4286 MD2D12: ; TEST DATA SET MD2D-12:  
4287 ,WORD 167452,AN,AN,AN ; INITIAL AC FLOAT NUMBER  
4288 ,WORD 112700,0,0,0 ; INITIAL MEM FLOAT NUMBER  
4289 ,WORD 040177,M1,M1,UB ; EXPECTED FRACTION-PART FLOAT RESULT  
4290 ,WORD 042177,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4291 ,WORD 047767,047760 ; FPS: BEFORE, AFTER  
4292 ,WORD NA ; FEC AFTER ( 0 = N7A )  
4293  
4294 ;*****  
4295 ;TEST 266 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-13  
4296 ;* ALL INTERRUPT ENABLES ON  
4297 ;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES  
4298 ;*****  
4299 TST266: SCOPE  
4300 MOV 8MD2D13,R5 ; PTR TO TEST DATA SET  
4301 J&K PC,8MD2D7 ; GO TEST  
4302  
4303 BR TST267 ;  
4304  
4305 MD2D13: ; TEST DATA SET MD2D-13:  
4306 ,WORD 041000,0,0,1 ; INITIAL AC FLOAT NUMBER  
4307 ,WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER  
4308 ,WORD 040177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT  
4309 ,WORD 040200,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4310 ,WORD 047657,047600 ; FPS: BEFORE, AFTER  
4311 ,WORD NA ; FEC AFTER ( 0 = N7A )  
4312  
4313 ;*****  
4314 ;TEST 267 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-14  
4315 ;* ALL INTERRUPT ENABLES ON  
4316 ;* LONG FLOAT, SHORT INTEGER, ROUND MODES  
4317 ;*****  
4318 TST267: SCOPE  
4319 MOV 8MD2D14,R5 ; PTR TO TEST DATA SET  
4320 J&K PC,8MD2D7 ; GO TEST  
4321  
4322 BR TST268 ;  
4323  
4324 MD2D14: ; TEST DATA SET MD2D-14:  
4325 ,WORD 031000,0,0,1 ; INITIAL AC FLOAT NUMBER  
4326 ,WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
```

```
4291 ;*****  
4292 ;TEST 268 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-15  
4293 ;* ALL INTERRUPT ENABLES ON  
4294 ;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES  
4295 ;*****  
4296 TST268: SCOPE  
4297 MOV 8MD2D15,R5 ; PTR TO TEST DATA SET  
4298 J&K PC,8MD2D7 ; GO TEST  
4299  
4300 BR TST269 ;  
4301  
4302 MD2D15: ; TEST DATA SET MD2D-15:  
4303 ,WORD 041000,0,0,1 ; INITIAL AC FLOAT NUMBER  
4304 ,WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER  
4305 ,WORD 040177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT  
4306 ,WORD 040200,0,0,0 ; EXPECTED INTEGER-PART FLOAT RESULT  
4307 ,WORD 047657,047600 ; FPS: BEFORE, AFTER  
4308 ,WORD NA ; FEC AFTER ( 0 = N7A )  
4309  
4310 ;*****  
4311 ;TEST 269 TEST OF MOVD(2 ACC) INSTR, DATA SET MD2D-16  
4312 ;* ALL INTERRUPT ENABLES ON  
4313 ;* LONG FLOAT, SHORT INTEGER, ROUND MODES  
4314 ;*****  
4315 TST269: SCOPE  
4316 MOV 8MD2D16,R5 ; PTR TO TEST DATA SET  
4317 J&K PC,8MD2D7 ; GO TEST  
4318  
4319 BR TST270 ;  
4320  
4321 MD2D16: ; TEST DATA SET MD2D-16:  
4322 ,WORD 031000,0,0,1 ; INITIAL AC FLOAT NUMBER  
4323 ,WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
```

```

4347 020026 000000 000000 000000
4348 020034 000000 000000
4349 020036 000000 000000
4350 020044 000000 000000
4351 020046 000000 047600
4352 020052 000000
4353
4354
4355
4356
4357
4358
4359
4360 020054 000000
4361 020056 012705 020070
4362 020062 004737 035666
4363
4364 020066 000423
4365
4366 020070
4367 020070 140452 125252 125252 MD2015: ; TEST DATA SET MD20=15:
4368 040076 125252 ; WORD 140452,AN,AN,AN ; INITIAL AC FLOAT NUMBER
4369 020100 077000 000000 000000 ; WORD 077000,0,0,0 ; INITIAL MEM FLOAT NUMBER
4370 020106 000000
4371 020110 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4372 020116 000000
4373 020120 100052 125252 125252 ; WORD 100052,AN,AN,AN ; EXPECTED INTEGER=PART FLOAT RESULT
4374 020126 125252
4375 020130 047651 147646 ; WORD 047651,147646 ; FPO: BEFORE, AFTER
4376 020134 100010 ; WORD 100010 ; FPC AFTER ( 0 = N7A )
4377
4378
4379
4380
4381
4382
4383
4384 020136 000000
4385 020140 012705 020152
4386 020144 004737 035666
4387
4388 020150 000423
4389
4390 020152
4391 020152 140452 125252 125252 MD2016: ; TEST DATA SET MD20=16:
4392 020160 125252 ; WORD 140452,AN,AN,AN ; INITIAL AC FLOAT NUMBER
4393 020162 077000 000000 000000 ; WORD 077000,0,0,0 ; INITIAL MEM FLOAT NUMBER
4394 020170 000000
4395 020172 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4396 020200 000000
4397 020202 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4398 020210 000000
4399 020212 046751 046746 ; WORD 046751,046746 ; FPO: BEFORE, AFTER
4400 020216 000000 ; WORD NA ; FPC AFTER ( 0 = N7A )
4401
4402

```

```

4403
4404
4405
4406
4407
4408 020220 000000
4409 020222 012705 020234
4410 020226 004737 035666
4411
4412 020232 000423
4413
4414 020234
4415 020236 101577 177777 177777 MD2017: ; TEST DATA SET MD20=17:
4416 020242 177777 ; WORD 101577,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4417 020244 101000 000000 000000 ; WORD 101000,0,0,0 ; INITIAL MEM FLOAT NUMBER
4418 020252 000000
4419 020254 042377 177777 177777 ; WORD 042377,M1,M1,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
4420 020262 177777
4421 020264 100000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4422 020272 000000
4423 020274 047617 147600 ; WORD 047617,147600 ; FPO: BEFORE, AFTER
4424 020300 100012 ; WORD 100012 ; FPC AFTER ( 0 = N7A )
4425
4426
4427
4428
4429
4430
4431
4432 020302 000000
4433 020304 012705 020316
4434 020310 004737 035666
4435
4436 020314 000423
4437
4438 020316
4439 020316 101577 177777 177777 MD2020: ; TEST DATA SET MD20=20:
4440 020324 177777 ; WORD 101577,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4441 020326 101000 000000 000000 ; WORD 101000,0,0,0 ; INITIAL MEM FLOAT NUMBER
4442 020334 000000
4443 020336 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION=PART FLOAT RESULT
4444 020344 000000
4445 020346 100000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED INTEGER=PART FLOAT RESULT
4446 020354 000000
4447 020356 045713 045704 ; WORD 045713,045704 ; FPO: BEFORE, AFTER
4448 020362 000000 ; WORD NA ; FPC AFTER ( 0 = N7A )
4449
4450

```

4451
4452
4453
4454
4455
4456 020364 000004
4457 020366 012705 020400
4458 020372 004737 036130
4459
4460 020376 000413
4461
4462 020400
4463 020400 000000 000000
4464 020404 000000 000000
4465 020412 000000 000000
4466 020414 052525 177777
4467 020420 047513 047504
4468 020426 000000
4469
4470
4471
4472
4473
4474
4475

```
*****  
TEST 274 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-1  
*  
* ALL INTERRUPT ENABLES ON  
* SHORT FLOAT, LONG INTEGER, ROUND MODES  
*****  
TST274: SCOPE  
MOV 0MDIF1,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF1 ; GO TEST  
  
BR TST275 ;  
  
MDIF1: ; TEST DATA SET MDIF-1:  
*WORD 0.0 ; INITIAL AC FLOAT NUMBER  
*WORD 0.0 ; INITIAL MEM FLOAT NUMBER  
*WORD 0.0 ; EXPECTED FRACTION-PART FLOAT RESULT  
*WORD AP,M1 ; EXPECTED INTEGER-PART FLOAT RESULT  
*WORD 047513,047504 ; FPS: BEFORE, AFTER  
*WORD NA ; FEC AFTER ( 0 = N7A )
```

4476 020426 000004
4477 020430 012705 020442
4478 020434 004737 036130
4479
4480 020440 000413
4481
4482 020442
4483 020442 000177 177777
4484 020446 077777 177777
4485 020452 000000 000000
4486 020456 052525 177777
4487 020462 047513 047544
4488 020466 000000
4489
4490
4491
4492
4493
4494
4495

```
*****  
TEST 275 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-2  
*  
* ALL INTERRUPT ENABLES ON  
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES  
*****  
TST275: SCOPE  
MOV 0MDIF2,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF2 ; GO TEST  
  
BR TST276 ;  
  
MDIF2: ; TEST DATA SET MDIF-2:  
*WORD 2.14E-1 ; INITIAL AC FLOAT NUMBER  
*WORD 1.0E-1 ; INITIAL MEM FLOAT NUMBER  
*WORD 0.0 ; EXPECTED FRACTION-PART FLOAT RESULT  
*WORD AP,M1 ; EXPECTED INTEGER-PART FLOAT RESULT  
*WORD 047513,047544 ; FPS: BEFORE, AFTER  
*WORD NA ; FEC AFTER ( 0 = N7A )
```

4496 020470 000004
4497 020472 012705 020504
4498 020476 004737 036130
4499
4500 020502 000413
4501
4502 020504
4503 020506 177777 177777
4504 020510 100177 177777
4505 020514 000000 000000
4506 020520 052525 177777

```
*****  
TEST 276 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-3  
*  
* ALL INTERRUPT ENABLES OFF, ALL OTHERS ON  
* SHORT FLOAT, SHORT INTEGER, ROUND MODES  
*****  
TST276: SCOPE  
MOV 0MDIF3,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF3 ; GO TEST  
  
BR TST277 ;  
  
MDIF3: ; TEST DATA SET MDIF-3:  
*WORD 1.0E-1 ; INITIAL AC FLOAT NUMBER  
*WORD 2.14E-1 ; INITIAL MEM FLOAT NUMBER  
*WORD 0.0 ; EXPECTED FRACTION-PART FLOAT RESULT  
*WORD AP,M1 ; EXPECTED INTEGER-PART FLOAT RESULT
```

4507 020524 004413 043404
4508 020530 000000
4509
4510
4511
4512
4513
4514
4515
4516 020532 000004
4517 020534 012705 020546
4518 020540 004737 036130
4519
4520 020544 000413
4521
4522 020546
4523 020546 177777 177777
4524 020552 100177 177777
4525 020556 177777 177777
4526 020562 052525 177777
4527 020566 047447 147447
4528 020572 100014
4529
4530
4531
4532
4533
4534
4535

```
*****  
TEST 277 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-4  
*  
* ALL INTERRUPT ENABLES ON  
* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES  
*****  
TST277: SCOPE  
MOV 0MDIF4,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF4 ; GO TEST  
  
BR TST300 ;  
  
MDIF4: ; TEST DATA SET MDIF-4:  
*WORD 1.0E-1 ; INITIAL AC FLOAT NUMBER  
*WORD 2.14E-1 ; INITIAL MEM FLOAT NUMBER  
*WORD 1.0E-1 ; EXPECTED FRACTION-PART FLOAT RESULT  
*WORD AP,M1 ; EXPECTED INTEGER-PART FLOAT RESULT  
*WORD 047447,147447 ; FPS: BEFORE, AFTER  
*WORD 100014 ; FEC AFTER ( 0 = N7A )
```

4536 020574 000004
4537 020576 012705 020610
4538 020602 004737 036130
4539
4540 020606 000413
4541
4542 020610
4543 020610 042177 000000
4544 020614 144200 000000
4545 020620 000000 000000
4546 020624 052525 177777
4547 020630 047513 047544
4548 020634 000000
4549
4550
4551
4552
4553
4554
4555

```
*****  
TEST 300 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-5  
*  
* ALL INTERRUPT ENABLES ON  
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES  
*****  
TST300: SCOPE  
MOV 0MDIF5,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF5 ; GO TEST  
  
BR TST301 ;  
  
MDIF5: ; TEST DATA SET MDIF-5:  
*WORD 042177,0 ; INITIAL AC FLOAT NUMBER  
*WORD F1M,0 ; INITIAL MEM FLOAT NUMBER  
*WORD 0.0 ; EXPECTED FRACTION-PART FLOAT RESULT  
*WORD AP,M1 ; EXPECTED INTEGER-PART FLOAT RESULT  
*WORD 047513,047544 ; FPS: BEFORE, AFTER  
*WORD NA ; FEC AFTER ( 0 = N7A )
```

4556 020636 000004
4557 020640 012705 020652
4558 020644 004737 036130
4559
4560 020650 000413
4561
4562 020652

```
*****  
TEST 301 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-6  
*  
* ALL INTERRUPT ENABLES ON  
* SHORT FLOAT, LONG INTEGER, ROUND MODES  
*****  
TST301: SCOPE  
MOV 0MDIF6,R5 ; PTR TO TEST DATA SET  
JSR PC,00MDIF6 ; GO TEST  
  
BR TST302 ;  
  
MDIF6: ; TEST DATA SET MDIF-6:
```

```

4563 020652 040200 000000
4564 020656 140177 177777
4565 020662 140177 177777
4566 020666 052525 177777
4567 020672 047507 047510
4568 020676 000000
4569
4570
4571
4572
4573
4574
4575
4576 020700 000004
4577 020702 012705 020714
4578 020706 004737 036130
4579
4580 020712 000413
4581
4582 020714
4583 020714 142176 077600
4584 020720 040200 000000
4585 020724 047777 000000
4586 020730 052525 177777
4587 020734 047507 047440
4588 020740 000000
4589
4590
4591
4592
4593
4594
4595
4596 020742 000004
4597 020744 012705 020756
4598 020750 004737 036130
4599
4600 020754 000413
4601
4602 020756
4603 020756 042177 100000
4604 020762 040200 000000
4605 020766 040000 000000
4606 020772 052525 177777
4607 020776 047507 047400
4608 021002 000000
4609
4610
4611
4612
4613
4614
4615
4616 021004 000004
4617 021006 012705 021020
4618 021012 004737 036130

```

```

;WORD FIN,0 ; INITIAL AC FLOAT NUMBER
;WORD 140177,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 140177,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047507,047510 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 302 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=1
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST302 SCOPE
MOV 0MDIF0,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF0 ; GO TEST
BR TST303 ;;

MDIF0 ; TEST DATA SET MDIF=1
;WORD 142176,077600 ; INITIAL AC FLOAT NUMBER
;WORD FIN,0 ; INITIAL MEM FLOAT NUMBER
;WORD 037777,0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047457,047440 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 303 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=10
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST303 SCOPE
MOV 0MDIF10,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF10 ; GO TEST
BR TST304 ;;

MDIF10 ; TEST DATA SET MDIF=10
;WORD 042177,00 ; INITIAL AC FLOAT NUMBER
;WORD FIN,0 ; INITIAL MEM FLOAT NUMBER
;WORD 040000,0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047417,047400 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 304 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=11
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST304 SCOPE
MOV 0MDIF11,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF11 ; GO TEST
BR TST305 ;;

MDIF11 ; TEST DATA SET MDIF=11
;WORD FIN,0 ; INITIAL AC FLOAT NUMBER
;WORD 040377,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 140177,M2 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047547,047550 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 305 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=12
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST305 SCOPE
MOV 0MDIF12,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF12 ; GO TEST
BR TST306 ;;

MDIF12 ; TEST DATA SET MDIF=12
;WORD 000452,ALTN ; INITIAL AC FLOAT NUMBER
;WORD 021700,M ; INITIAL MEM FLOAT NUMBER
;WORD 040177,U0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047517,047500 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 306 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=13
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST306 SCOPE
MOV 0MDIF13,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF13 ; GO TEST
BR TST307 ;;

MDIF13 ; TEST DATA SET MDIF=13
;WORD 001000,000001 ; INITIAL AC FLOAT NUMBER
;WORD 141377,M2 ; INITIAL MEM FLOAT NUMBER
;WORD 140177,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047547,047550 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 307 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=14
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES

```

```

4619
4620 021016 000413
4621
4622 021020
4623 021020 140200 000000
4624 021024 040377 177777
4625 021030 140177 177776
4626 021034 052525 177777
4627 021040 047547 047550
4628 021044 000004
4629
4630
4631
4632
4633
4634
4635
4636 021046 000004
4637 021050 012705 021062
4638 021054 004737 036130
4639
4640 021060 000413
4641
4642 021062
4643 021062 000452 125252
4644 021066 021700 000000
4645 021072 040177 177400
4646 021076 052525 177777
4647 021102 047517 047500
4648 021106 000000
4649
4650
4651
4652
4653
4654
4655
4656 021110 000004
4657 021112 012705 021124
4658 021116 004737 036130
4659
4660 021122 000413
4661
4662 021124
4663 021124 041000 000001
4664 021130 141377 177776
4665 021134 140177 177777
4666 021140 052525 177777
4667 021144 047547 047550
4668 021150 000000
4669
4670
4671
4672
4673
4674

```

```

BR TST305 ;;

MDIF11 ; TEST DATA SET MDIF=11
;WORD FIN,0 ; INITIAL AC FLOAT NUMBER
;WORD 040377,M1 ; INITIAL MEM FLOAT NUMBER
;WORD 140177,M2 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047547,047550 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 305 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=12
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST305 SCOPE
MOV 0MDIF12,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF12 ; GO TEST
BR TST306 ;;

MDIF12 ; TEST DATA SET MDIF=12
;WORD 000452,ALTN ; INITIAL AC FLOAT NUMBER
;WORD 021700,M ; INITIAL MEM FLOAT NUMBER
;WORD 040177,U0 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047517,047500 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 306 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=13
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST306 SCOPE
MOV 0MDIF13,R5 ; PTR TO TEST DATA SET
JSR PC,0MDIF13 ; GO TEST
BR TST307 ;;

MDIF13 ; TEST DATA SET MDIF=13
;WORD 001000,000001 ; INITIAL AC FLOAT NUMBER
;WORD 141377,M2 ; INITIAL MEM FLOAT NUMBER
;WORD 140177,M1 ; EXPECTED FRACTION=PART FLOAT RESULT
;WORD AP,M1 ; EXPECTED INTEGER=PART FLOAT RESULT
;WORD 047547,047550 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 307 TEST OF MODF(1 ACC) INSTR, DATA SET MDIF=14
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES

```


4075
4076 #21152 #00004
4077 #21154 #12705 #21166
4078 #21160 #04737 #36130
4079
4080 #21164 #00413
4081
4082 #21166
4083 #21166 #41000 #00001
4084 #21172 141377 177776
4085 #21176 140200 #00000
4086 #21202 #52525 177777
4087 #21206 #47507 #47510
4088 #21212 #00000
4089
4090
4091
4092
4093
4094
4095
4096 #21214 #00004
4097 #21216 #12705 #21230
4098 #21222 #04737 #36130
4099
4100 #21226 #00413
4101
4102 #21233
4103 #21230 #17000 #00000
4104 #21234 #40452 125252
4105 #21246 #00000 #00000
4106 #21244 #52525 177777
4107 #21250 #47411 147406
4108 #21254 100010
4109
4110
4111
4112
4113
4114
4115
4116 #21256 #00004
4117 #21260 #12705 #21272
4118 #21264 #04737 #36130
4119
4120 #21270 #00413
4121
4122 #21272
4123 #21272 #17000 #00000
4124 #21276 #40452 125252
4125 #21302 #00000 #00000
4126 #21300 #52525 177777
4127 #21312 #46411 #46406
4128 #21316 #00000
4129
4130

```

;*****
;TEST 307  TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-14
;=
;= ALL INTERRUPT ENABLES ON
;= SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST307 SCOPE
MOV #MDIF14,R5 ; PTR TO TEST DATA SET
JBR PC,#MDIF7 ; GO TEST
BR TST310 ;

MDIF14 ; TEST DATA SET MDIF-14:
.WORD #41000,#00001 ; INITIAL AC FLOAT NUMBER
.WORD 141377,#2 ; INITIAL MEM FLOAT NUMBER
.WORD 140200,#00000 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD #P,#1 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD #47507,#47510 ; FPs: BEFORE, AFTER
.WORD NA ; FcC AFTER ( 0 = N/A )

;*****
;TEST 310  TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-15
;=
;= ALL INTERRUPT ENABLES ON
;= SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST310 SCOPE
MOV #MDIF15,R5 ; PTR TO TEST DATA SET
JBR PC,#MDIF7 ; GO TEST
BR TST311 ;

MDIF15 ; TEST DATA SET MDIF-15:
.WORD #77000,#0 ; INITIAL AC FLOAT NUMBER
.WORD #40452,#ALTN ; INITIAL MEM FLOAT NUMBER
.WORD #0,#0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD #P,#1 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD #47411,#47406 ; FPs: BEFORE, AFTER
.WORD 100010 ; FcC AFTER ( 0 = N/A )

;*****
;TEST 311  TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-16
;=
;= OVERFLOW INTERRUPT ENABL OFF, ALL OTHERS ON
;= SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST311 SCOPE
MOV #MDIF16,R5 ; PTR TO TEST DATA SET
JBR PC,#MDIF7 ; GO TEST
BR TST312 ;

MDIF16 ; TEST DATA SET MDIF-16:
.WORD #77000,#0 ; INITIAL AC FLOAT NUMBER
.WORD #40452,#ALTN ; INITIAL MEM FLOAT NUMBER
.WORD #0,#0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD #P,#1 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD #40411,#40406 ; FPs: BEFORE, AFTER
.WORD NA ; FcC AFTER ( 0 = N/A )

```

4131
4132
4133
4134
4135
4136 #21320 #00004
4137 #21322 #12705 #21334
4138 #21326 #04737 #36130
4139
4140 #21332 #00413
4141
4142 #21334
4143 #21334 #01577 177777
4144 #21340 101000 #00000
4145 #21344 142377 177777
4146 #21350 #52525 177777
4147 #21354 #47547 147550
4148 #21360 140012
4149
4150
4151
4152
4153
4154
4155
4156 #21362 #00004
4157 #21364 #12705 #21376
4158 #21370 #04737 #36130
4159
4160 #21374 #00413
4161
4162 #21376
4163 #21376 #01577 177777
4164 #21402 101000 #00000
4165 #21406 #00000 #00000
4166 #21412 #52525 177777
4167 #21416 #45553 #45544
4168 #21422 #00000
4169
4170
4171

```

;*****
;TEST 312  TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-17
;=
;= ALL INTERRUPT ENABLES ON
;= SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST312 SCOPE
MOV #MDIF17,R5 ; PTR TO TEST DATA SET
JBR PC,#MDIF7 ; GO TEST
BR TST313 ;

MDIF17 ; TEST DATA SET MDIF-17:
.WORD #01577,#1 ; INITIAL AC FLOAT NUMBER
.WORD 101000,# ; INITIAL MEM FLOAT NUMBER
.WORD 142377,#1 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD #P,#1 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD #47547,#47550 ; FPs: BEFORE, AFTER
.WORD 100012 ; FcC AFTER ( 0 = N/A )

;*****
;TEST 313  TEST OF MODF(1 ACC) INSTR, DATA SET MDIF-20
;=
;= UNDERFLOW INTERRUPT ENABL OFF, ALL OTHERS ON
;= SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST313 SCOPE
MOV #MDIF20,R5 ; PTR TO TEST DATA SET
JBR PC,#MDIF7 ; GO TEST
BR TST314 ;

MDIF20 ; TEST DATA SET MDIF-20:
.WORD #01577,#1 ; INITIAL AC FLOAT NUMBER
.WORD 101000,# ; INITIAL MEM FLOAT NUMBER
.WORD #0,#0 ; EXPECTED FRACTION-PART FLOAT RESULT
.WORD #P,#1 ; EXPECTED INTEGER-PART FLOAT RESULT
.WORD #45553,#45544 ; FPs: BEFORE, AFTER
.WORD NA ; FcC AFTER ( 0 = N/A )

```

```

4772
4773
4774
4775
4776
4777 021424 000004
4778 021426 012705 021440
4779 021432 004737 036332
4780
4781 021436 000423
4782
4783 021440
4784 021442 000000 000000 000000 MD1D1: ; TEST DATA SET MD10-11
4785 021444 000000 ; WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
4786 021450 000000 000000 000000 ; WORD 0,0,0,0 ; INITIAL MEM FLOAT NUMBER
4787 021456 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4788 021460 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4789 021466 000000
4790 021470 052525 177777 125252 ; WORD AP,M1,AN,M ; EXPECTED INTEGER-PART FLOAT RESULT
4791 021476 000000
4792 021500 047653 047644 ; WORD 047653,047644 ; FPS: BEFORE, AFTER
4793 021504 000000 ; WORD NA ; FEC AFTER ( 0 = N7A )
4794
4795
4796
4797
4798
4799
4800
4801 021506 000004
4802 021510 012705 021522
4803 021514 004737 036332
4804
4805 021520 000423
4806
4807 021522
4808 021522 000177 177777 177777 MD1D2: ; TEST DATA SET MD10-23
4809 021530 177777 ; WORD 2X1M,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4810 021532 177777 177777 177777 ; WORD LGN,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4811 021540 177777 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4812 021542 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4813 021550 000000
4814 021552 052525 177777 125252 ; WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4815 021560 000000
4816 021562 047713 047704 ; WORD 047713,047704 ; FPS: BEFORE, AFTER
4817 021566 000000 ; WORD NA ; FEC AFTER ( 0 = N7A )
4818
4819
4820
4821
4822
4823
4824
4825
4826 021570 000004
4827 021572 012705 021604
4828 021576 004737 036332

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4829
4830 021602 000423
4831
4832 021604
4833 021604 177777 177777 177777 MD1D3: ; TEST DATA SET MD10-31
4834 021612 177777 ; WORD LGP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4835 021614 000177 177777 177777 ; WORD 2X1M,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4836 021622 177777 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4837 021624 000000 000000 000000 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4838 021634 052525 177777 125252 ; WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4839 021642 000000
4840 021644 043653 043644 ; WORD 043653,043644 ; FPS: BEFORE, AFTER
4841 021650 000000 ; WORD NA ; FEC AFTER ( 0 = N7A )
4842
4843
4844
4845
4846
4847
4848
4849 021652 000004
4850 021654 012705 021666
4851 021660 004737 036332
4852
4853 021664 000423
4854
4855 021666
4856 021666 077777 177777 177777 MD1D4: ; TEST DATA SET MD10-41
4857 021674 177777 ; WORD LGP,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
4858 021676 100177 177777 177777 ; WORD 2X1M,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
4859 021704 177777 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4860 021706 177777 177777 177777 ; WORD LGP,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4861 021714 177777 ; WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4862 021716 052525 177777 125252 ; WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4863 021724 000000
4864 021726 047713 047713 ; WORD 047713,047713 ; FPS: BEFORE, AFTER
4865 021732 100014 ; WORD 100014 ; FEC AFTER ( 0 = N7A )
4866
4867
4868
4869
4870
4871
4872
4873 021734 000004
4874 021736 012705 021750
4875 021742 004737 036332
4876
4877 021746 000423
4878
4879 021750
4880 021750 042177 000000 000000 MD1D5: ; TEST DATA SET MD10-51
4881 021756 000000 ; WORD 042177,0,0,0 ; INITIAL AC FLOAT NUMBER
4882 021760 000000 000000 000000 ; WORD 1FP,0,0,0 ; INITIAL MEM FLOAT NUMBER
4883 021766 000000

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FPU ADVANCED INSTR TESTS MAC11 47(1006) 25-APR-77 09119 PAGE 98 840 0205
 DGFPPB.P11 19-APR-77 13137 TEST OF MODD(1 ACC) INSTR, DATA SET MODD=0

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4884 021770 000000 000000 .WORD 0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4885 021776 000000 000000 .WORD 0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4886 022000 022525 177777 125252 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4887 022000 000000 000000 .WORD 0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4888 022010 047613 047604 .WORD 047613,047604 ; FPS: BEFORE, AFTER
4889 022014 000000 000000 .WORD NA ; FPC AFTER ( 0 = N7A )
4890
4891
4892
4893
4894
4895
4896
4897 022016 000004 022032 030332
4898 022020 017705 022032 030332
4899 022024 004737 030332
4900
4901 022030 000423
4902
4903 022032 000000 000000 MD106 ; TEST DATA SET MODD=01
4904 022032 140200 000000 000000 .WORD FIN,0,0,0 ; INITIAL AC FLOAT NUMBER
4905 022040 000000 000000 .WORD 040177,M1,M1,M1 ; INITIAL MM FLOAT NUMBER
4906 022042 040177 177777 177777 .WORD 040177,M1,M1,M1 ; INITIAL MM FLOAT NUMBER
4907 022050 177777 177777 177777 .WORD 140177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4908 022052 140177 177777 177777 .WORD 140177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4909 022054 177777 177777 177777 .WORD 140177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4910 022056 022525 177777 125252 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4911 022070 000000 000000 .WORD 047747,047750 ; FPS: BEFORE, AFTER
4912 022072 047747 047750 .WORD 047747,047750 ; FPS: BEFORE, AFTER
4913 022076 000000 000000 .WORD NA ; FPC AFTER ( 0 = N7A )
4914
4915
4916
4917
4918
4919
4920
4921 022100 000004 022114 030332
4922 022102 012705 022114 030332
4923 022106 004737 030332
4924
4925 022112 000423
4926
4927 022114 000000 000000 MD107 ; TEST DATA SET MODD=01
4928 022114 042176 077600 000000 .WORD 042176,077600,0,0 ; INITIAL AC FLOAT NUMBER
4929 022122 000000 000000 .WORD FIN,0,0,0 ; INITIAL MM FLOAT NUMBER
4930 022124 140200 000000 000000 .WORD 140200,0,0,0 ; INITIAL MM FLOAT NUMBER
4931 022132 000000 000000 .WORD 137777,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4932 022134 177777 000000 000000 .WORD 137777,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4933 022142 000000 000000 .WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4934 022144 022525 177777 125252 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4935 022152 000000 000000 .WORD 047607,047610 ; FPS: BEFORE, AFTER
4936 022154 047607 047610 .WORD 047607,047610 ; FPS: BEFORE, AFTER
4937 022160 000000 000000 .WORD NA ; FPC AFTER ( 0 = N7A )
4938
4939

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FPU ADVANCED INSTR TESTS MAC11 47(1006) 25-APR-77 09119 PAGE 99 840 0206
 DGFPPB.P11 19-APR-77 13137 TEST OF MODD(1 ACC) INSTR, DATA SET MODD=10

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4940
4941
4942
4943
4944
4945 022162 000004 022176 030332
4946 022164 012705 022176 030332
4947 022170 004737 030332
4948
4949 022174 000423
4950
4951 022176 000000 000000 MD108 ; TEST DATA SET MODD=10
4952 022176 142177 100000 000000 .WORD 142177,100000,0,0 ; INITIAL AC FLOAT NUMBER
4953 022204 000000 000000 .WORD FIN,0,0,0 ; INITIAL MM FLOAT NUMBER
4954 022206 040200 000000 000000 .WORD 040200,0,0,0 ; INITIAL MM FLOAT NUMBER
4955 022214 000000 000000 .WORD 140000,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4956 022216 140000 000000 000000 .WORD 140000,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4957 022224 000000 000000 .WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
4958 022226 022525 177777 125252 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4959 022234 000000 000000 .WORD 047747,047750 ; FPS: BEFORE, AFTER
4960 022236 047747 047750 .WORD 047747,047750 ; FPS: BEFORE, AFTER
4961 022242 000000 000000 .WORD NA ; FPC AFTER ( 0 = N7A )
4962
4963
4964
4965
4966
4967
4968
4969 022244 000004 022260 030332
4970 022246 012705 022260 030332
4971 022252 004737 030332
4972
4973 022256 000423
4974
4975 022260 000000 000000 MD109 ; TEST DATA SET MODD=11
4976 022260 140200 000000 000000 .WORD 140200,0,0,0 ; INITIAL AC FLOAT NUMBER
4977 022266 000000 000000 .WORD FIN,0,0,0 ; INITIAL MM FLOAT NUMBER
4978 022270 140377 177777 177777 .WORD 140377,M1,M1,M1 ; INITIAL MM FLOAT NUMBER
4979 022276 177777 177777 177777 .WORD 140377,M1,M1,M1 ; INITIAL MM FLOAT NUMBER
4980 022280 040177 177777 177777 .WORD 040177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4981 022286 177777 177777 177777 .WORD 040177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
4982 022310 022525 177777 125252 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
4983 022316 000000 000000 .WORD 047617,047600 ; FPS: BEFORE, AFTER
4984 022320 047617 047600 .WORD 047617,047600 ; FPS: BEFORE, AFTER
4985 022324 000000 000000 .WORD NA ; FPC AFTER ( 0 = N7A )
4986
4987
4988
4989
4990
4991
4992
4993 022326 000004 022342 030332
4994 022330 012705 022342 030332
4995 022334 004737 030332

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```

4990
4997 #22340 #00423 BR T8T326 ;;
4998
4999 #22342 #00000 #00000 #00000 MD1D12 ; TEST DATA SET MD10=12;
5000 #22342 167452 125252 125252 .WORD 167452,AN,AN,AN ; INITIAL AC FLOAT NUMBER
5001 #22350 125252 #00000 #00000 .WORD 112700,0,0,0 ; INITIAL MEM FLOAT NUMBER
5002 #22352 112700 #00000 #00000 .WORD 040177,M1,M1,UB ; EXPECTED FRACTION-PART FLOAT RESULT
5003 #22360 #00000 #00000 #00000 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
5004 #22362 #00177 177777 177777 .WORD #47757,047740 ; FPS1 BEFORE, AFTER
5005 #22374 177400 #00000 #00000 .WORD NA ; FPC AFTER ( 0 = N/A )
5006 #22374 177400 #00000 #00000
5007 #22400 #00000 #00000 #00000
5008 #22402 #47757 047740
5009 #22406 #00000 #00000 #00000
5010
5011
5012
5013
5014
5015
5016
5017 #22414 #00004 #00000 #00000
5018 #22412 #12705 022574 #36332
5019 #22416 #04737 #36332
5020
5021 #22422 #00423 BR T8T327 ;;
5022
5023 #22424 #00000 #00000 #00000 MD1D13 ; TEST DATA SET MD10=13;
5024 #22424 #41000 #00000 #00000 .WORD 041000,0,0,1 ; INITIAL AC FLOAT NUMBER
5025 #22432 #00001 #00000 #00000 .WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
5026 #22434 #037577 177777 177777 .WORD 040177,M1,M1,M1 ; EXPECTED FRACTION-PART FLOAT RESULT
5027 #22442 177776 #00000 #00000 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
5028 #22444 #00177 177777 177777 .WORD #47657,047640 ; FPS1 BEFORE, AFTER
5029 #22452 177777 125252 125252 .WORD NA ; FPC AFTER ( 0 = N/A )
5030 #22454 #032325 177777
5031 #22462 #00000 #00000 #00000
5032 #22464 #47657 047640
5033 #22470 #00000 #00000 #00000
5034
5035
5036
5037
5038
5039
5040
5041 #22472 #00004 #00000 #00000
5042 #22474 #12705 022506 #36332
5043 #22500 #04737 #36332
5044
5045 #22504 #00423 BR T8T330 ;;
5046
5047 #22506 #41000 #00000 #00000 MD1D14 ; TEST DATA SET MD10=14;
5048 #22514 #00001 #00000 #00000 .WORD 041000,0,0,1 ; INITIAL AC FLOAT NUMBER
5049 #22516 #037577 177777 177777 .WORD 037577,M1,M1,M2 ; INITIAL MEM FLOAT NUMBER
5050 #22524 177776 #00000 #00000 #00000

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5052 #22526 #00200 #00000 #00000 .WORD 040200,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
5053 #22530 #00000 #00000 #00000 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
5054 #22536 #02525 177777 125252 .WORD #47617,047600 ; FPS1 BEFORE, AFTER
5055 #22544 #00000 #00000 #00000 .WORD NA ; FPC AFTER ( 0 = N/A )
5056 #22546 #47617 047600
5057 #22552 #00000 #00000 #00000
5058
5059
5060
5061
5062
5063
5064
5065 #22554 #00004 #00000 #00000
5066 #22556 #12705 022570 #36332
5067 #22562 #04737 #36332
5068
5069 #22566 #00423 BR T8T331 ;;
5070
5071 #22570 #00000 #00000 #00000 MD1D15 ; TEST DATA SET MD10=15;
5072 #22570 142452 125252 125252 .WORD 142452,ALH,ALH,ALH ; INITIAL AC FLOAT NUMBER
5073 #22576 125252 #00000 #00000 .WORD 077600,0,0,0 ; INITIAL MEM FLOAT NUMBER
5074 #22600 #077600 #00000 #00000 .WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
5075 #22606 #00000 #00000 #00000 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
5076 #22610 #00000 #00000 #00000 .WORD #47651,147640 ; FPS1 BEFORE, AFTER
5077 #22610 #00000 #00000 #00000 .WORD 100010 ; FPC AFTER ( 0 = N/A )
5078 #22620 #02525 177777 125252
5079 #22626 #00000 #00000 #00000
5080 #22630 #04751 147640
5081 #22634 #00010 #00000 #00000
5082
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5089
5090 #22636 #00004 #00000 #00000
5091 #22640 #12705 022592 #36332
5092 #22644 #04737 #36332
5093 #22654 #00423 BR T8T332 ;;
5094
5095 #22652 #00000 #00000 #00000 MD1D16 ; TEST DATA SET MD10=16;
5096 #22652 142452 125252 125252 .WORD 142452,ALH,ALH,ALH ; INITIAL AC FLOAT NUMBER
5097 #22660 125252 #00000 #00000 .WORD 077600,0,0,0 ; INITIAL MEM FLOAT NUMBER
5098 #22662 #077600 #00000 #00000 .WORD 0,0,0,0 ; EXPECTED FRACTION-PART FLOAT RESULT
5099 #22670 #00000 #00000 #00000 .WORD AP,M1,AN,0 ; EXPECTED INTEGER-PART FLOAT RESULT
5100 #22672 #00000 #00000 #00000 .WORD #46751,046740 ; FPS1 BEFORE, AFTER
5101 #22674 #00000 #00000 #00000 .WORD NA ; FPC AFTER ( 0 = N/A )
5102 #22710 #00000 #00000 #00000
5103 #22712 #46751 046740
5104 #22716 #00000 #00000 #00000
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5107

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5219 023216 000004
5220 023220 012705 023232
5221 023224 004737 036574
5222
5223 023230 000411
5224
5225 023232
5226 023232 040200 000000 000000
5227 023240 000000
5228 023242 040200 000000
5229 023246 047557 047540
5230 023252 000000
5231
5232
5233
5234
5235
5236
5237 023254 000004
5238 023256 012705 023270
5239 023262 004737 036574
5240
5241 023266 000411
5242
5243 023270
5244 023272 140200 000000 100000
5245 023276 000000
5246 023304 140200 000001
5247 023304 047427 047410
5248 023310 000000
5249
5250
5251
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5253
5254
5255
5256 023312 000004
5257 023314 012705 023326
5258 023320 004737 036574
5259
5260 023324 000411
5261
5262 023326
5263 023326 140200 000000 100000
5264 023334 000000
5265 023336 140200 000000
5266 023342 047427 047450
5267 023346 000000

```

*****
TEST 337 TEST OF LDCDF INSTR, DATA SET LDCDF-3
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST337) SCOPE
MOV #LDCDF4,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF4 ; GU TEST
BR TST340 ;;

LDCDF4: ; TEST DATA SET LDCDF-4
.WORD F10,0,0,0 ; INITIAL MEM FLOAT NUMBER
.WORD F10,0 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 340 TEST OF LDCDF INSTR, DATA SET LDCDF-4
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST340) SCOPE
MOV #LDCDF5,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF5 ; GU TEST
BR TST341 ;;

LDCDF5: ; TEST DATA SET LDCDF-5
.WORD F10,0,0,0 ; INITIAL MEM FLOAT NUMBER
.WORD F10,1 ; EXPECTED FLOAT RESULT
.WORD 047427,047410 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 341 TEST OF LDCDF INSTR, DATA SET LDCDF-5
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST341) SCOPE
MOV #LDCDF6,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF6 ; GU TEST
BR TST342 ;;

LDCDF6: ; TEST DATA SET LDCDF-6
.WORD F10,0,0,0 ; INITIAL MEM FLOAT NUMBER
.WORD F10,0 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 342 TEST OF LDCDF INSTR, DATA SET LDCDF-6
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST342) SCOPE
MOV #LDCDF7,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF7 ; GU TEST
BR TST343 ;;

LDCDF7: ; TEST DATA SET LDCDF-7
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047511,147500 ; FPS: BEFORE, AFTER
.WORD 100010 ; FLC AFTER ( 0 = N/A )

*****
TEST 343 TEST OF LDCDF INSTR, DATA SET LDCDF-7
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST343) SCOPE
MOV #LDCDF10,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF10 ; GU TEST
BR TST344 ;;

LDCDF10: ; TEST DATA SET LDCDF-10
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 344 TEST OF LDCDF INSTR, DATA SET LDCDF-11
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST344) SCOPE
MOV #LDCDF11,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF11 ; GU TEST
BR TST345 ;;

LDCDF11: ; TEST DATA SET LDCDF-11
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 121200,0 ; EXPECTED FLOAT RESULT
.WORD 047427,047410 ; FPS: BEFORE, AFTER

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5268
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5275 023350 000004
5276 023352 012705 023364
5277 023356 004737 036574
5278
5279 023362 000411
5280
5281 023364
5282 023364 077777 177777 177777
5283 023372 177777
5284 023374 000000 000000
5285 023400 047311 147500
5286 023404 100010
5287
5288
5289
5290
5291
5292
5293
5294 023406 000004
5295 023410 012705 023422
5296 023414 004737 036574
5297
5298 023420 000411
5299
5300 023422
5301 023422 077777 177777 177777
5302 023430 177777
5303 023432 077777 177777
5304 023436 047557 047540
5305 023442 000000
5306
5307
5308
5309
5310
5311
5312
5313 023444 000004
5314 023446 012705 023460
5315 023452 004737 036574
5316
5317 023456 000411
5318
5319 023460
5320 023460 121177 177777 100000
5321 023466 000000
5322 023470 171200 000000
5323 023474 047427 047410

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*****
TEST 342 TEST OF LDCDF INSTR, DATA SET LDCDF-6
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST342) SCOPE
MOV #LDCDF7,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF7 ; GU TEST
BR TST343 ;;

LDCDF7: ; TEST DATA SET LDCDF-7
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047511,147500 ; FPS: BEFORE, AFTER
.WORD 100010 ; FLC AFTER ( 0 = N/A )

*****
TEST 343 TEST OF LDCDF INSTR, DATA SET LDCDF-10
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST343) SCOPE
MOV #LDCDF10,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF10 ; GU TEST
BR TST344 ;;

LDCDF10: ; TEST DATA SET LDCDF-10
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 344 TEST OF LDCDF INSTR, DATA SET LDCDF-11
*
* ALL INTERRUPT ENABLES ON
* SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TST344) SCOPE
MOV #LDCDF11,R5 ; PTR TO TEST DATA SET
JSR PC,#LDCDF11 ; GU TEST
BR TST345 ;;

LDCDF11: ; TEST DATA SET LDCDF-11
.WORD LGP,M1,M1,M1 ; INITIAL MEM FLOAT NUMBER
.WORD 121200,0 ; EXPECTED FLOAT RESULT
.WORD 047427,047410 ; FPS: BEFORE, AFTER

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5324 023500 000000          ,WORD NA          ; FPC AFTER ( B = N/A )
5325
5326
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5332 023502 000004          ;*****
5333 023504 012705 023516  ;*TEST 343 TEST OF LDCDF INSTR, DATA SET LCDF=12
5334 023510 004737 036574  ;* ALL INTERRUPT ENABLES ON
5335                                     ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
5336                                     ;*****
5337
5338 023516 000000          ;*****
5339 023516 121177 177777 100000  ;*TEST 345 SCOPE
5340 023524 000000          ;* MOV RLCDF12,R5 ; PTR TO TEST DATA SET
5341 023526 121177 177777          ;* JSR PC,RLCDF1 ; GO TEST
5342 023532 047447 047450          ;* BR TST346 ;
5343 023536 000000          ;*****
5344
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5351 023540 000004          ;*****
5352 023542 012705 023554  ;*TEST 346 TEST OF LDCDF INSTR, DATA SET LCDF=13
5353 023546 004737 036574  ;* ALL INTERRUPT ENABLES ON
5354                                     ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
5355                                     ;*****
5356
5357 023554 000000          ;*****
5358 023554 040200 000000 077777  ;*TEST 347 SCOPE
5359 023562 177777          ;* MOV RLCDF13,R5 ; PTR TO TEST DATA SET
5360 023564 040200 000000          ;* JSR PC,RLCDF1 ; GO TEST
5361 023570 047517 047500          ;* BR TST347 ;
5362 023574 000000          ;*****
5363
5364
5365
5366
5367
5368
5369
5370 023576 000004          ;*****
5371 023580 012705 023612  ;*TEST 348 TEST OF LDCDF INSTR, DATA SET LCDF=14
5372 023604 004737 036574  ;* ALL INTERRUPT ENABLES ON
5373                                     ;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
5374                                     ;*****
5375
5376 023612 000000          ;*****
5377 023612 040200 000000 077777  ;*TEST 349 SCOPE
5378 023620 177777          ;* MOV RLCDF14,R5 ; PTR TO TEST DATA SET
5379 023622 040200 000000          ;* JSR PC,RLCDF1 ; GO TEST
5380                                     ;* BR TST348 ;
5381                                     ;*****
5382
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5388
5389 023634 000004          ;*****
5390 023636 012705 023650  ;*TEST 350 TEST OF LDCDF INSTR, DATA SET LCDF=15
5391 023642 004737 036574  ;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
5392                                     ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
5393                                     ;*****
5394
5395 023646 000000          ;*****
5396 023646 177777 177777 100000  ;*TEST 351 SCOPE
5397 023656 000000          ;* MOV RLCDF15,R5 ; PTR TO TEST DATA SET
5398 023664 000000 000000          ;* JSR PC,RLCDF1 ; GO TEST
5399 023664 040511 040500          ;* BR TST351 ;
5400 023670 000000          ;*****
5401
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5407
5408 023672 000004          ;*****
5409 023674 012705 023706  ;*TEST 352 TEST OF LDCDF INSTR, DATA SET LCDF=16
5410 023700 004737 036574  ;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
5411                                     ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
5412                                     ;*****
5413
5414 023706 000000          ;*****
5415 023706 100000 177777 177777  ;*TEST 353 SCOPE
5416 023714 000000          ;* MOV RLCDF16,R5 ; PTR TO TEST DATA SET
5417 023716 000000 000000          ;* JSR PC,RLCDF1 ; GO TEST
5418 023722 043453 043444          ;* BR TST352 ;
5419 023726 000000          ;*****
5420
5421
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5380 023622 040200 000000          ,WORD NA          ; FPC AFTER ( B = N/A )
5381
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5387
5388
5389 023634 000004          ;*****
5390 023636 012705 023650  ;*TEST 350 TEST OF LDCDF INSTR, DATA SET LCDF=15
5391 023642 004737 036574  ;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
5392                                     ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
5393                                     ;*****
5394
5395 023646 000000          ;*****
5396 023646 177777 177777 100000  ;*TEST 351 SCOPE
5397 023656 000000          ;* MOV RLCDF15,R5 ; PTR TO TEST DATA SET
5398 023664 000000 000000          ;* JSR PC,RLCDF1 ; GO TEST
5399 023664 040511 040500          ;* BR TST351 ;
5400 023670 000000          ;*****
5401
5402
5403
5404
5405
5406
5407
5408 023672 000004          ;*****
5409 023674 012705 023706  ;*TEST 352 TEST OF LDCDF INSTR, DATA SET LCDF=16
5410 023700 004737 036574  ;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
5411                                     ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
5412                                     ;*****
5413
5414 023706 000000          ;*****
5415 023706 100000 177777 177777  ;*TEST 353 SCOPE
5416 023714 000000          ;* MOV RLCDF16,R5 ; PTR TO TEST DATA SET
5417 023716 000000 000000          ;* JSR PC,RLCDF1 ; GO TEST
5418 023722 043453 043444          ;* BR TST352 ;
5419 023726 000000          ;*****
5420
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5424
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5428 023730 000004
5429 023732 012705 023744
5430 023736 004737 036744
5431
5432 023742 000411
5433
5434 023744
5435 023744 100000 000000
5436 023754 052525 177777 125252
5437 023756 000000
5438 023760 047643 147654
5439 023764 100014
5440
5441
5442
5443
5444
5445
5446
5447 023766 000004
5448 023770 012705 024002
5449 023774 004737 036744
5450
5451 024000 000411
5452
5453 024002
5454 024002 125252 125252
5455 024006 125252 125252 000000
5456 024014 000000
5457 024016 047610 047610
5458 024022 000000
5459
5460
5461
5462
5463
5464
5465
5466 024024 000004
5467 024026 012705 024040
5468 024032 004737 036744
5469
5470 024036 000411
5471
5472 024040
5473 024040 000000 000000
5474 024044 000000 000000 000000
5475 024052 000000
5476 024054 047733 047744
5477 024060 000000
5478

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*****
TEST 352 TEST OF LDCFD INSTR, DATA SET LCFD-1
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
T3T352I SCOPE
MOV RLCFD1,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD1 ; GU TEST
BR T3T353 ;
LCFD1I ; TEST DATA SET LCFD-1I
.WORD M0,0 ; INITIAL NEM FLOAT NUMBER
.WORD ALTN,M1,ALTN,0 ; EXPECTED FLOAT RESULT
.WORD 047643,147654 ; FPS: BEFORE, AFTER
.WORD 100014 ; FIC AFTER ( M = N7A )
*****
TEST 353 TEST OF LDCFD INSTR, DATA SET LCFD-2
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
T3T353I SCOPE
MOV RLCFD2,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD2 ; GU TEST
BR T3T354 ;
LCFD2I ; TEST DATA SET LCFD-2I
.WORD R0IN,ALTN ; INITIAL NEM FLOAT NUMBER
.WORD ALTN,ALTN,0,0 ; EXPECTED FLOAT RESULT
.WORD 047607,047610 ; FPS: BEFORE, AFTER
.WORD NA ; FIC AFTER ( M = N7A )
*****
TEST 354 TEST OF LDCFD INSTR, DATA SET LCFD-3
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
*****
T3T354I SCOPE
MOV RLCFD3,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD3 ; GU TEST
BR T3T355 ;
LCFD3I ; TEST DATA SET LCFD-3I
.WORD R0,0 ; INITIAL NEM FLOAT NUMBER
.WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
.WORD 047753,047744 ; FPS: BEFORE, AFTER
.WORD NA ; FIC AFTER ( M = N7A )
*****

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5479
5480
5481
5482
5483
5484
5485 024062 000004
5486 024064 012705 024076
5487 024070 004737 036744
5488
5489 024074 000411
5490
5491 024076
5492 024076 077777 177777
5493 024102 177777 177777 000000
5494 024110 000000
5495 024112 047717 047700
5496 024116 000000
5497
5498
5499
5500
5501
5502
5503
5504 024120 000004
5505 024122 012705 024136
5506 024126 004737 036744
5507
5508 024132 000411
5509
5510 024134
5511 024134 000177 177777
5512 024140 000000 000000 000000
5513 024146 000000
5514 024150 047653 047644
5515 024154 000000
5516
5517
5518
5519
5520
5521
5522
5523 024156 000004
5524 024160 012705 024172
5525 024164 004737 036744
5526
5527 024170 000411
5528
5529 024172
5530 024172 177777 177777
5531 024176 177777 177777 000000
5532 024204 000000
5533 024206 047647 047610
5534 024212 000000

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*****
TEST 355 TEST OF LDCFD INSTR, DATA SET LCFD-4
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, LONG INTEGER, ROUND MODES
*****
T3T355I SCOPE
MOV RLCFD4,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD4 ; GU TEST
BR T3T356 ;
LCFD4I ; TEST DATA SET LCFD-4I
.WORD L0,M1 ; INITIAL NEM FLOAT NUMBER
.WORD L0,M1,0,0 ; EXPECTED FLOAT RESULT
.WORD 047717,047700 ; FPS: BEFORE, AFTER
.WORD NA ; FIC AFTER ( M = N7A )
*****
TEST 356 TEST OF LDCFD INSTR, DATA SET LCFD-5
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
T3T356I SCOPE
MOV RLCFD5,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD5 ; GU TEST
BR T3T357 ;
LCFD5I ; TEST DATA SET LCFD-5I
.WORD Z1,M1 ; INITIAL NEM FLOAT NUMBER
.WORD L0,M1,0,0 ; EXPECTED FLOAT RESULT
.WORD 047653,047644 ; FPS: BEFORE, AFTER
.WORD NA ; FIC AFTER ( M = N7A )
*****
TEST 357 TEST OF LDCFD INSTR, DATA SET LCFD-6
*
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
T3T357I SCOPE
MOV RLCFD6,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCFD6 ; GU TEST
BR T3T358 ;
LCFD6I ; TEST DATA SET LCFD-6I
.WORD L0,M1 ; INITIAL NEM FLOAT NUMBER
.WORD L0,M1,0,0 ; EXPECTED FLOAT RESULT
.WORD 047607,047610 ; FPS: BEFORE, AFTER
.WORD NA ; FIC AFTER ( M = N7A )
*****

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5535
5536
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5539
5540
5541
5542 024214 000004
5543 024216 012705 024230
5544 024222 004737 036744
5545
5546 024226 000411
5547
5548
5549 024230 100177 177777
5550 024232 000000 000000 000000
5551 024242 000000
5552 024244 043701 043744
5553 024250 000000
5554
5555
5556
5557
5558
5559
5560
5561 024252 000004
5562 024254 012705 024206
5563 024260 004737 036744
5564
5565 024264 000411
5566
5567 024266 007417 007417
5568 024268 007417 000000
5569 024272 007417 000000
5570 024300 000000
5571 024302 047707 047700
5572 024306 000000
5573
5574
5575

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;*****
;TEST 100 TEST OF LDCFD INSTR, DATA SET LCFD-0
;= ALL INTERRUPT ENABLES ON
;= LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST300 SCOPE
MOV 0LCFD0,R5 ; PTR TO TEST DATA SET
JBR PC,0LCFD0 ; GO TEST
BR TST301 ;;

LCFD0: ; TEST DATA SET LCFD-0:
;WORD 0100,0100 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0 ; EXPECTED FLOAT RESULT
;WORD 043703,043704 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 101 TEST OF LDCFD INSTR, DATA SET LCFD-10
;= ALL INTERRUPT ENABLES ON
;= LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST301 SCOPE
MOV 0LCFD10,R5 ; PTR TO TEST DATA SET
JBR PC,0LCFD10 ; GO TEST
BR TST302 ;;

LCFD10: ; TEST DATA SET LCFD-10:
;WORD 0100,0100 ; INITIAL MEM FLOAT NUMBER
;WORD 0,0,0 ; EXPECTED FLOAT RESULT
;WORD 047717,047700 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

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5576
5577
5578
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5580
5581 024310 000004
5582 024312 012705 024324
5583 024316 004737 037134
5584
5585 024322 000411
5586
5587 024324 000000 000000 000000
5588 024326 000000 000000
5589 024332 000000 000000
5590 024334 000000 000000
5591 024340 047707 047744
5592 024344 000000
5593
5594
5595
5596
5597
5598
5599
5600 024346 000004
5601 024350 012705 024362
5602 024354 004737 037134
5603
5604 024360 000411
5605
5606 024362 100200 000000 100200
5607 024364 100200 000000
5608 024370 000000 000000
5609 024372 100200 000001
5610 024376 047707 047710
5611 024402 000004
5612
5613
5614
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5616
5617
5618
5619 024404 000004
5620 024406 012705 024420
5621 024412 004737 037134
5622
5623 024416 000411
5624
5625 024420 000000 100000
5626 024422 040200 000000 100000
5627 024426 000000 000000
5628 024430 000000 000000
5629 024434 047057 047640
5630 024440 000000
5631

```

```

;*****
;TEST 102 TEST OF STCDF INSTR, DATA SET SCDF-1
;= ALL INTERRUPT ENABLES ON
;= LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST302 SCOPE
MOV 0SCDF1,R5 ; PTR TO TEST DATA SET
JBR PC,0SCDF1 ; GO TEST
BR TST303 ;;

SCDF1: ; TEST DATA SET SCDF-1:
;WORD 0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 0,0 ; EXPECTED FLOAT RESULT
;WORD 047703,047744 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 103 TEST OF STCDF INSTR, DATA SET SCDF-2
;= ALL INTERRUPT ENABLES ON
;= LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST303 SCOPE
MOV 0SCDF2,R5 ; PTR TO TEST DATA SET
JBR PC,0SCDF2 ; GO TEST
BR TST304 ;;

SCDF2: ; TEST DATA SET SCDF-2:
;WORD 010,0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 010,0 ; EXPECTED FLOAT RESULT
;WORD 047707,047710 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 104 TEST OF STCDF INSTR, DATA SET SCDF-3
;= ALL INTERRUPT ENABLES ON
;= LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST304 SCOPE
MOV 0SCDF3,R5 ; PTR TO TEST DATA SET
JBR PC,0SCDF3 ; GO TEST
BR TST305 ;;

SCDF3: ; TEST DATA SET SCDF-3:
;WORD 010,0,0,0 ; INITIAL AC FLOAT NUMBER
;WORD 010,0 ; EXPECTED FLOAT RESULT
;WORD 047057,047640 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

```

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5632
5633
5634
5635
5636
5637
5638 024442 000004
5639 024444 012705 024456
5640 024450 004737 037134
5641
5642 024454 000411
5643
5644 024456
5645 024456 000177 177777 177777
5646 024460 177777
5647 024466 000000 000000
5648 024472 047013 047004
5649 024476 000000
5650
5651
5652
5653
5654
5655
5656
5657 024500 000004
5658 024502 012705 024514
5659 024506 004737 037134
5660
5661 024512 000411
5662
5663 024514
5664 024514 040200 000000 100000
5665 024522 000000
5666 024524 040200 000000
5667 024530 047717 047700
5668 024534 000000
5669
5670
5671
5672
5673
5674
5675
5676 024536 000004
5677 024540 012705 024552
5678 024544 004737 037134
5679
5680 024550 000411
5681
5682 024552
5683 024552 177777 177777 177777
5684 024560 177777
5685 024562 177777 177777
5686 024566 047747 047700
5687 024572 000000

```

```

*****
TEST 365 TEST OF STCDF INSTR, DATA SET SCDF-4
ALL INTERRUPT ENABLES ON
LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST365: SCOPE
MOV #SCDF4,R5 ; PTR TO TEST DATA SET
JSR PC,04SCDF1 ; GO TEST
BR TST366 ;

SCDF4: ; TEST DATA SET SCDF-4:
.WORD 24100,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD 047013,047004 ; FPS: BEFORE, AFTER
.WORD NA ; REC AFTER ( 0 = N/A )

*****
TEST 366 TEST OF STCDF INSTR, DATA SET SCDF-5
ALL INTERRUPT ENABLES ON
LONG FLOAT, LONG INTEGER, ROUND MODES
*****
TST366: SCOPE
MOV #SCDF5,R5 ; PTR TO TEST DATA SET
JSR PC,05SCDF1 ; GO TEST
BR TST367 ;

SCDF5: ; TEST DATA SET SCDF-5:
.WORD 510,0,M0,0 ; INITIAL AC FLOAT NUMBER
.WORD 510,0 ; EXPECTED FLOAT RESULT
.WORD 047717,047700 ; FPS: BEFORE, AFTER
.WORD NA ; REC AFTER ( 0 = N/A )

*****
TEST 367 TEST OF STCDF INSTR, DATA SET SCDF-6
ALL INTERRUPT ENABLES ON
LONG FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST367: SCOPE
MOV #SCDF6,R5 ; PTR TO TEST DATA SET
JSR PC,06SCDF1 ; GO TEST
BR TST370 ;

SCDF6: ; TEST DATA SET SCDF-6:
.WORD LGN,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
.WORD LGN,M1 ; EXPECTED FLOAT RESULT
.WORD 047747,047700 ; FPS: BEFORE, AFTER
.WORD NA ; REC AFTER ( 0 = N/A )

```

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5688
5689
5690
5691
5692
5693
5694
5695 024574 000004
5696 024576 012705 024610
5697 024602 004737 037134
5698
5699 024606 000411
5700
5701 024610
5702 024610 040300 000000 077777
5703 024616 177777
5704 024620 040300 000000
5705 024624 047017 047000
5706 024630 000000
5707
5708
5709
5710
5711
5712
5713
5714 024632 000004
5715 024634 012705 024646
5716 024640 004737 037134
5717
5718 024644 000411
5719
5720 024646
5721 024646 177777 177777 177777
5722 024654 177777
5723 024656 100000 000000
5724 024662 047001 147016
5725 024666 100010
5726
5727
5728
5729
5730
5731
5732
5733 024670 000004
5734 024672 012705 024704
5735 024676 004737 037134
5736
5737 024682 000411
5738
5739 024684
5740 024700 040300 000000 077777
5741 024712 177777
5742 024714 040300 000000
5743 024720 047757 047700

```

```

*****
TEST 370 TEST OF STCDF INSTR, DATA SET SCDF-7:
ALL INTERRUPT ENABLES ON
LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST370: SCOPE
MOV #SCDF7,R5 ; PTR TO TEST DATA SET
JSR PC,07SCDF1 ; GO TEST
BR TST371 ;

SCDF7: ; TEST DATA SET SCDF-7:
.WORD 510,0,LGN,M1 ; INITIAL AC FLOAT NUMBER
.WORD 510,0 ; EXPECTED FLOAT RESULT
.WORD 047617,047600 ; FPS: BEFORE, AFTER
.WORD NA ; REC AFTER ( 0 = N/A )

*****
TEST 371 TEST OF STCDF INSTR, DATA SET SCDF-10
ALL INTERRUPT ENABLES ON
LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST371: SCOPE
MOV #SCDF10,R5 ; PTR TO TEST DATA SET
JSR PC,10SCDF1 ; GO TEST
BR TST372 ;

SCDF10: ; TEST DATA SET SCDF-10:
.WORD LGN,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
.WORD M0,0 ; EXPECTED FLOAT RESULT
.WORD 047601,147616 ; FPS: BEFORE, AFTER
.WORD 100010 ; REC AFTER ( 0 = N/A )

*****
TEST 372 TEST OF STCDF INSTR, DATA SET SCDF-11
ALL INTERRUPT ENABLES ON
LONG FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST372: SCOPE
MOV #SCDF11,R5 ; PTR TO TEST DATA SET
JSR PC,11SCDF1 ; GO TEST
BR TST373 ;

SCDF11: ; TEST DATA SET SCDF-11:
.WORD 510,0,LGN,M1 ; INITIAL AC FLOAT NUMBER
.WORD 510,0 ; EXPECTED FLOAT RESULT
.WORD 047757,047700 ; FPS: BEFORE, AFTER

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```

5744 024724 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5745
5746
5747
5748
5749
5750
5751
5752 024726 000004          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5753 024730 012705 024742          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5754 024734 004737 037134          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5755
5756 024740 000411          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5757
5758 024742          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5759 024742 101777 177777 100000          .WORD  101777,M1,M0,0 ; INITIAL AC FLOAT NUMBER
5760 024750 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5761 024752 102000 000000          .WORD  102000,0      ; EXPECTED FLOAT RESULT
5762 024756 047707 047710          .WORD  047707,047710 ; FFS: BEFORE, AFTER
5763 024762 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5764
5765
5766
5767
5768
5769
5770
5771 024764 000004          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5772 024766 012705 025000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5773 024772 004737 037134          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5774
5775 024776 000411          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5776
5777 025000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5778 025000 101777 177777 100000          .WORD  101777,M1,M0,0 ; INITIAL AC FLOAT NUMBER
5779 025000 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5780 025010 101777 177777          .WORD  101777,M1      ; EXPECTED FLOAT RESULT
5781 025010 047647 047650          .WORD  047647,047650 ; FFS: BEFORE, AFTER
5782 025020 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5783
5784
5785
5786
5787
5788
5789
5790 025022 000004          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5791 025024 012705 025036          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5792 025030 004737 037134          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5793
5794 025034 000411          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5795
5796 025036          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5797 025036 077777 177777 100000          .WORD  101777,M1,M0,0 ; INITIAL AC FLOAT NUMBER
5798 025044 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5799 025046 000000 000000          .WORD  0,0          ; EXPECTED FLOAT RESULT

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5800 025052 046011 046006          .WORD  046011,046006 ; FFS: BEFORE, AFTER
5801 025056 000000          .WORD  NA          ; FEC AFTER ( 0 = N/A )
5802
5803
5804
5805

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```

5005 ;*****
5006 ;TEST 376 TEST OF STCFD INSTR, DATA SET SCFD-1
5007 ;* ALL INTERRUPT ENABLES ON
5008 ;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
5009 ;*****
5010 TST376: SCOPE
5011 MOV #SCFD1,RS ; PTR TO TEST DATA SET
5012 JBR PC,#SCFD1 ; GO TEST
5013
5014 BR TST377 ;;
5015
5016 SCFD1: ; TEST DATA SET SCFD-1
5017 ;WORD ALTP,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
5018
5019 ;WORD ALTP,ALTP,0,0 ; EXPECTED FLOAT RESULT
5020
5021 ;WORD 047417,047400 ; FPS: BEFORE, AFTER
5022
5023 ;*****
5024 ;TEST 377 TEST OF STCFD INSTR, DATA SET SCFD-1
5025 ;* ALL INTERRUPT ENABLES ON
5026 ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
5027 ;*****
5028 TST377: SCOPE
5029 MOV #SCFD2,RS ; PTR TO TEST DATA SET
5030 JBR PC,#SCFD2 ; GO TEST
5031
5032 BR TST400 ;;
5033
5034 SCFD2: ; TEST DATA SET SCFD-2
5035 ;WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
5036
5037 ;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
5038
5039 ;WORD 047513,047504 ; FPS: BEFORE, AFTER
5040
5041 ;*****
5042 ;TEST 400 TEST OF STCFD INSTR, DATA SET SCFD-2
5043 ;* ALL INTERRUPT ENABLES ON
5044 ;* SHORT FLOAT, SHORT INTEGER, ROUND MODES
5045 ;*****
5046 TST400: SCOPE
5047 MOV #SCFD3,RS ; PTR TO TEST DATA SET
5048 JBR PC,#SCFD3 ; GO TEST
5049
5050 BR TST401 ;;
5051
5052 SCFD3: ; TEST DATA SET SCFD-3
5053 ;WORD LGN,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
5054
5055 ;WORD LGN,M1,0,0 ; EXPECTED FLOAT RESULT
5056
5057 ;WORD 047407,047410 ; FPS: BEFORE, AFTER
5058
5059 ;*****

```

```

5061 ;*****
5062 ;TEST 401 TEST OF STCFD INSTR, DATA SET SCFD-3
5063 ;* ALL INTERRUPT ENABLES ON
5064 ;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
5065 ;*****
5066 TST401: SCOPE
5067 MOV #SCFD4,RS ; PTR TO TEST DATA SET
5068 JBR PC,#SCFD4 ; GO TEST
5069
5070 BR TST402 ;;
5071
5072 SCFD4: ; TEST DATA SET SCFD-4
5073 ;WORD ALT4N,ALT4N,ALT4N,ALT4N ; INITIAL AC FLOAT NUMBER
5074
5075 ;WORD ALT4N,ALT4N,0,0 ; EXPECTED FLOAT RESULT
5076
5077 ;WORD 047547,047550 ; FPS: BEFORE, AFTER
5078
5079 ;*****
5080 ;TEST 402 TEST OF STCFD INSTR, DATA SET SCFD-3
5081 ;* ALL INTERRUPT ENABLES ON
5082 ;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
5083 ;*****
5084 TST402: SCOPE
5085 MOV #SCFD5,RS ; PTR TO TEST DATA SET
5086 JBR PC,#SCFD5 ; GO TEST
5087
5088 BR TST403 ;;
5089
5090 SCFD5: ; TEST DATA SET SCFD-5
5091 ;WORD 0,0,0,0 ; INITIAL AC FLOAT NUMBER
5092
5093 ;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
5094
5095 ;WORD 047453,047444 ; FPS: BEFORE, AFTER
5096
5097 ;*****
5098 ;TEST 403 TEST OF STCFD INSTR, DATA SET SCFD-3
5099 ;* ALL INTERRUPT ENABLES ON
5100 ;* SHORT FLOAT, LONG INTEGER, ROUND MODES
5101 ;*****
5102 TST403: SCOPE
5103 MOV #SCFD6,RS ; PTR TO TEST DATA SET
5104 JBR PC,#SCFD6 ; GO TEST
5105
5106 BR TST404 ;;
5107
5108 SCFD6: ; TEST DATA SET SCFD-6
5109 ;WORD LGP,0,M1,M1 ; INITIAL AC FLOAT NUMBER
5110
5111 ;WORD LGP,0,0,0 ; EXPECTED FLOAT RESULT
5112
5113 ;WORD 047517,047500 ; FPS: BEFORE, AFTER
5114
5115 ;*****

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5919
5920
5921
5922
5923
5924 025360 000004
5925 025362 012705 025374
5926 025366 004737 037422
5927
5928 025372 000405
5929
5930 025374
5931 025374 100000
5932 025376 144000 000000
5933 025402 047407 047410
5934
5935
5936
5937
5938
5939
5940
5941 025406 000004
5942 025410 012705 025422
5943 025414 004737 037422
5944
5945 025420 000405
5946
5947 025422
5948 025422 007417
5949 025424 043100 170000
5950 025430 047457 047440
5951
5952
5953
5954
5955
5956
5957
5958 025434 000004
5959 025436 012705 025450
5960 025442 004737 037422
5961
5962 025446 000405
5963
5964 025450
5965 025450 000000
5966 025452 000000 000000
5967 025456 047413 047404
5968
5969
5970
5971
5972
5973
5974

```

)*****
)TEST 404 TEST OF LDCIF INSTR, DATA SET LDCIF-1
)P ALL INTERRUPT ENABLES ON
)P SHORT FLOAT, SHORT INTEGER, ROUND MODES
)*****
TST404: SCOPE
MOV RLCIF1,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCIFT ; GO TEST
BR TST405 ;)

LDCIF1: ; TEST DATA SET LDCIF-11
.NORD 100000 ; INITIAL INTEGER VALUE
.NORD 144000,000000 ; EXPECTED FLOAT RESULT
.NORD 047407,047410 ; FPS: BEFORE, AFTER

)*****
)TEST 405 TEST OF LDCIF INSTR, DATA SET LDCIF-2
)P ALL INTERRUPT ENABLES ON
)P SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
)*****
TST405: SCOPE
MOV RLCIF2,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCIFT ; GO TEST
BR TST406 ;)

LDCIF2: ; TEST DATA SET LDCIF-21
.NORD 007417 ; INITIAL INTEGER VALUE
.NORD 043100,170000 ; EXPECTED FLOAT RESULT
.NORD 047457,047440 ; FPS: BEFORE, AFTER

)*****
)TEST 406 TEST OF LDCIF INSTR, DATA SET LDCIF-3
)P ALL INTERRUPT ENABLES ON
)P SHORT FLOAT, SHORT INTEGER, ROUND MODES
)*****
TST406: SCOPE
MOV RLCIF3,R5 ; PTR TO TEST DATA SET
JBR PC,0RLCIFT ; GO TEST
BR TST407 ;)

LDCIF3: ; TEST DATA SET LDCIF-31
.NORD 000000 ; INITIAL INTEGER VALUE
.NORD 000000,000000 ; EXPECTED FLOAT RESULT
.NORD 047413,047404 ; FPS: BEFORE, AFTER

)*****
)TEST 407 TEST OF LDCIF INSTR, DATA SET LDCIF-4
)P ALL INTERRUPT ENABLES ON
)P SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
)*****

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5975 025462 000004
5976 025461 012705 025476
5977 025470 004737 037422
5978
5979 025474 000405
5980
5981 025476
5982 025476 170300
5983 025500 143161 000000
5984 025504 047447 047450
5985
5986
5987
5988
5989
5990
5991
5992 025510 000004
5993 025512 012705 025524
5994 025516 004737 037422
5995
5996 025522 000405
5997
5998 025524
5999 025524 077777
0000 025526 043777 177000
0001 025532 047417 047400
0002
0003
0004

TEST407 SCOPE
MOV LCIF4,R5 ; PTR TO TEST DATA SET
JSH PC,04LCIFT ; GO TEST
BR TEST410 ;
LCIF4: ; TEST DATA SET LCIF-4:
.WORD 170300 ; INITIAL INTEGER VALUE
.WORD 143161,000000 ; EXPECTED FLOAT RESULT
.WORD 047447,047450 ; FPS: BEFORE, AFTER
;*****
;TEST 410 TEST OF LCIF INSTR, DATA SET LCIF-4
;# ALL INTERRUPT ENABLES ON
;# SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TEST410 SCOPE
MOV LCIF5,R5 ; PTR TO TEST DATA SET
JSH PC,04LCIFT ; GO TEST
BR TEST411 ;
LCIF5: ; TEST DATA SET LCIF-5:
.WORD 077777 ; INITIAL INTEGER VALUE
.WORD 043777,177000 ; EXPECTED FLOAT RESULT
.WORD 047417,047400 ; FPS: BEFORE, AFTER

0005
0006
0007
0008
0009
0010 025516 000004
0011 025516 012705 025524
0012 025544 004737 037522
0013
0014 025550 000407
0015
0016 025552
0017 025552 107070
0018 025554 143743 110000 000000
0019 025562 000000
0020 025564 047610 047610
0021
0022
0023
0024
0025
0026
0027
0028 025570 000004
0029 025572 012705 025604
0030 025576 004737 037522
0031
0032 025602 000407
0033
0034 025604
0035 025604 000000
0036 025606 000000 000000 000000
0037 025614 000000
0038 025616 047653 047644
0039
0040
0041
0042
0043
0044
0045
0046 025622 000004
0047 025624 012705 025636
0048 025630 004737 037522
0049
0050 025634 000407
0051
0052 025636
0053 025636 077777
0054 025640 043777 177000 000000
0055 025646 000000
0056 025650 047657 047640
0057
0058
0059
0060

;*****
;TEST 411 TEST OF LDCID INSTR, DATA SET LDCID-1
;# ALL INTERRUPT ENABLES ON
;# LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TEST411 SCOPE
MOV LDCID1,R5 ; PTR TO TEST DATA SET
JSH PC,04LDCIDT ; GO TEST
BR TEST412 ;
LDCID1: ; TEST DATA SET LDCID-1:
.WORD 107070 ; INITIAL INTEGER VALUE
.WORD 143743,110000,0,0 ; EXPECTED FLOAT RESULT
.WORD 047600,047610 ; FPS: BEFORE, AFTER
;*****
;TEST 412 TEST OF LDCID INSTR, DATA SET LDCID-2
;# ALL INTERRUPT ENABLES ON
;# LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TEST412 SCOPE
MOV LDCID2,R5 ; PTR TO TEST DATA SET
JSH PC,04LDCIDT ; GO TEST
BR TEST413 ;
LDCID2: ; TEST DATA SET LDCID-2:
.WORD 000000 ; INITIAL INTEGER VALUE
.WORD 000000,000000,0,0 ; EXPECTED FLOAT RESULT
.WORD 047653,047644 ; FPS: BEFORE, AFTER
;*****
;TEST 413 TEST OF LDCID INSTR, DATA SET LDCID-3
;# ALL INTERRUPT ENABLES ON
;# LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TEST413 SCOPE
MOV LDCID3,R5 ; PTR TO TEST DATA SET
JSH PC,04LDCIDT ; GO TEST
BR TEST414 ;
LDCID3: ; TEST DATA SET LDCID-3:
.WORD 077777 ; INITIAL INTEGER VALUE
.WORD 043777,177000,0,0 ; EXPECTED FLOAT RESULT
.WORD 047657,047640 ; FPS: BEFORE, AFTER
;*****
;TEST 414 TEST OF LDCID INSTR, DATA SET LDCID-4

0061
0062
0063
0064 025654 000004
0065 025656 012705 025670
0066 025662 004737 037522
0067
0068 025666 000407
0069
0070 025670
0071 025670 070707
0072 025672 043743 107000 000000
0073 025700 000000
0074 025702 047617 047600
0075
0076
0077
0078
0079
0080
0081
0082 025706 000004
0083 025710 012705 025722
0084 025714 004737 037522
0085
0086 025720 000407
0087
0088 025722
0089 025722 100000
0090 025724 140000 000000 000000
0091 025732 000000
0092 025734 047617 047650
0093
0094
0095

```

;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, ROUND MODES
;*)*****
TST414: SCOPE
MOV RLCID4,R5 ; PTR TO TEST DATA SET
JSR PC,RLCID1 ; GO TEST
BR TST415 ;;

LDCID4: ; TEST DATA SET LDCID=01
;WORD 070707 ; INITIAL INTEGER VALUE
;WORD 043743,107000,0.0 ; EXPECTED FLOAT RESULT
;WORD 047617,047600 ; FPR: BEFORE, AFTER

;*)*****
;*TEST 415 TEST OF LDCID INSTR, DATA SET LDCID=0
;*
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*)*****
TST415: SCOPE
MOV RLCID5,R5 ; PTR TO TEST DATA SET
JSR PC,RLCID1 ; GO TEST
BR TST416 ;;

LDCID5: ; TEST DATA SET LDCID=01
;WORD 100000 ; INITIAL INTEGER VALUE
;WORD 140000,000000,0.0 ; EXPECTED FLOAT RESULT
;WORD 047647,047600 ; FPR: BEFORE, AFTER

```

0096
0097
0098
0099
0100
0101 025740 000004
0102 025742 012705 025754
0103 025746 004737 037642
0104
0105 025752 000400
0106
0107 025754
0108 025754 077777 177777
0109 025760 000000 000000
0110 025764 047517 047500
0111
0112
0113
0114
0115
0116
0117
0118 025770 000004
0119 025772 012705 026004
0120 025776 004737 037642
0121
0122 026002 000400
0123
0124 026004
0125 026006 077777 177777
0126 026010 047777 177777
0127 026014 047557 047540
0128
0129
0130
0131
0132
0133
0134
0135 026020 000004
0136 026022 012705 026034
0137 026026 004737 037642
0138
0139 026032 000400
0140
0141 026034
0142 026036 170300 170300
0143 026040 147100 170301
0144 026044 047507 047510
0145
0146
0147
0148
0149
0150
0151

```

;*)*****
;*TEST 416 TEST OF LDCLF INSTR, DATA SET LCLF-1
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*)*****
TST416: SCOPE
MOV RLCLF1,R5 ; PTR TO TEST DATA SET
JSR PC,RLCLF1 ; GO TEST
BR TST417 ;;

LCLF1: ; TEST DATA SET LCLF=11
;WORD 077777,01 ; INITIAL INTEGER VALUE
;WORD 000000,000000 ; EXPECTED FLOAT RESULT
;WORD 047517,047500 ; FPR: BEFORE, AFTER

;*)*****
;*TEST 417 TEST OF LDCLF INSTR, DATA SET LCLF=4
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*)*****
TST417: SCOPE
MOV RLCLF2,R5 ; PTR TO TEST DATA SET
JSR PC,RLCLF1 ; GO TEST
BR TST418 ;;

LCLF2: ; TEST DATA SET LCLF=21
;WORD 077777,01 ; INITIAL INTEGER VALUE
;WORD 047777,01 ; EXPECTED FLOAT RESULT
;WORD 047557,047540 ; FPR: BEFORE, AFTER

;*)*****
;*TEST 420 TEST OF LDCLF INSTR, DATA SET LCLF=3
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*)*****
TST420: SCOPE
MOV RLCLF3,R5 ; PTR TO TEST DATA SET
JSR PC,RLCLF1 ; GO TEST
BR TST421 ;;

LCLF3: ; TEST DATA SET LCLF=31
;WORD 170300,170300 ; INITIAL INTEGER VALUE
;WORD 147100,170301 ; EXPECTED FLOAT RESULT
;WORD 047507,047510 ; FPR: BEFORE, AFTER

;*)*****
;*TEST 421 TEST OF LDCLF INSTR, DATA SET LCLF=6
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
;*)*****

```

0152 026050 000004
0153 026052 012705 026004
0154 026056 004737 037042
0155
0156 026067 000000
0157
0158 026064
0159 026064 000000 000000
0160 026070 000000 000000
0161 026074 047513 047504
0162
0163
0164
0165
0166
0167
0168
0169 026100 000004
0170 026102 012705 026114
0171 026106 004737 037042
0172
0173 026112 000000
0174
0175 026115
0176 026114 077777 177677
0177 026120 097777 177777
0178 026124 047517 047500
0179
0180
0181
0182
0183
0184
0185
0186 026130 000004
0187 026132 012705 026144
0188 026136 004737 037042
0189
0190 026142 000000
0191
0192 026144
0193 026144 100000 000000
0194 026150 150000 000000
0195 026154 047547 047550
0196
0197
0198
0199
0200
0201
0202
0203 026160 000004
0204 026162 012705 026174
0205 026166 004737 037042
0206
0207 026172 000000

```

TST421: SCOPE
MOV 0LCLF4,R5 ; PTR TO TEST DATA SET
JBR PC,0LCLF1 ; GO TEST
BR TST422 ;;

LCLF4: ; TEST DATA SET LCLF=41
.WORD 000000,000000 ; INITIAL INTEGER VALUE
.WORD 000000,000000 ; EXPECTED FLOAT RESULT
.WORD 047513,047504 ; FPS: BEFORE, AFTER

;*****
;TEST 422 TEST OF LCLF INSTR, DATA SET LCLF=4
;#
;# ALL INTERRUPT ENABLER ON
;# SHORT FLOAT, LONG INTEGER, ROUND MODES
;*****
TST422: SCOPE
MOV 0LCLF5,R5 ; PTR TO TEST DATA SET
JBR PC,0LCLF1 ; GO TEST
BR TST423 ;;

LCLF5: ; TEST DATA SET LCLF=51
.WORD 077777,177677 ; INITIAL INTEGER VALUE
.WORD 097777,01 ; EXPECTED FLOAT RESULT
.WORD 047517,047500 ; FPS: BEFORE, AFTER

;*****
;TEST 423 TEST OF LCLF INSTR, DATA SET LCLF=0
;#
;# ALL INTERRUPT ENABLER ON
;# SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST423: SCOPE
MOV 0LCLF6,R5 ; PTR TO TEST DATA SET
JBR PC,0LCLF1 ; GO TEST
BR TST424 ;;

LCLF6: ; TEST DATA SET LCLF=61
.WORD 100000,000000 ; INITIAL INTEGER VALUE
.WORD 150000,000000 ; EXPECTED FLOAT RESULT
.WORD 047547,047550 ; FPS: BEFORE, AFTER

;*****
;TEST 424 TEST OF LCLF INSTR, DATA SET LCLF=7
;#
;# ALL INTERRUPT ENABLER ON
;# SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST424: SCOPE
MOV 0LCLF7,R5 ; PTR TO TEST DATA SET
JBR PC,0LCLF1 ; GO TEST
BR TST425 ;;

```

0208
0209 026174
0210 026174 043434 070707
0211 026200 047016 034343
0212 026204 047557 047540
0213
0214
0215

```

LCLF7: ; TEST DATA SET LCLF=71
.WORD 043434,070707 ; INITIAL INTEGER VALUE
.WORD 047016,034343 ; EXPECTED FLOAT RESULT
.WORD 047557,047540 ; FPS: BEFORE, AFTER

```



```

021b
0217
0218
0219
0220
0221 026210 000004
0222 026212 012705 026224
0223 026216 004737 037742
0224
0225 026222 000410
0226
0227 026224
0228 026224 007417 007417
0229 026230 047160 170360 170000
0230 026236 000000
0231 026240 047717 047700
0232
0233
0234
0235
0236
0237
0238
0239 026244 000004
0240 026246 012705 026260
0241 026252 004737 037742
0242
0243 026256 000410
0244
0245 026260
0246 026260 100000 000000
0247 026264 150000 000000 000000
0248 026272 000000
0249 026274 047747 047750
0250
0251
0252
0253
0254
0255
0256
0257 026300 000004
0258 026302 012705 026314
0259 026306 004737 037742
0260
0261 026312 000410
0262
0263 026314
0264 026314 077777 177777
0265 026316 047777 177777 177000
0266 026320 000000
0267 026330 047757 047740
0268
0269
0270
0271

;*****
;TEST 425 TEST OF LDCLO INSTR, DATA SET LCLD-1
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST425: SCOPE
MOV RLCLO1,R5 ; PTR TO TEST DATA SET
JSR PC,RCLCLO1 ; GO TEST
BR TST426 ;;

LCLD1: ; TEST DATA SET LCLD=11
.WORD 007417,007417 ; INITIAL INTEGER VALUE
.WORD 047160,170360,170000.0 ; EXPECTED FLOAT RESULT
.WORD 047717,047700 ; FPG: BEFORE, AFTER

;*****
;TEST 426 TEST OF LDCLO INSTR, DATA SET LCLD-2
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST426: SCOPE
MOV RLCLO2,R5 ; PTR TO TEST DATA SET
JSR PC,RCLCLO2 ; GO TEST
BR TST427 ;;

LCLD2: ; TEST DATA SET LCLD=21
.WORD 100000,000000 ; INITIAL INTEGER VALUE
.WORD 150000,000000,000000.0 ; EXPECTED FLOAT RESULT
.WORD 047747,047750 ; FPG: BEFORE, AFTER

;*****
;TEST 427 TEST OF LDCLO INSTR, DATA SET LCLD-3
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST427: SCOPE
MOV RLCLO3,R5 ; PTR TO TEST DATA SET
JSR PC,RCLCLO3 ; GO TEST
BR TST428 ;;

LCLD3: ; TEST DATA SET LCLD=31
.WORD 077777,R1 ; INITIAL INTEGER VALUE
.WORD 047777,R1,177000.0 ; EXPECTED FLOAT RESULT
.WORD 047757,047740 ; FPG: BEFORE, AFTER

;*****
;TEST 430 TEST OF LDCLO INSTR, DATA SET LCLD-4

```

```

0272
0273
0274
0275 026334 000004
0276 026336 012705 026350
0277 026342 004737 037742
0278
0279 026346 000410
0280
0281 026350
0282 026350 107070 161616
0283 026354 147741 107070 162000
0284 026362 000000
0285 026364 047700 047710
0286
0287
0288
0289
0290
0291
0292
0293 026370 000004
0294 026372 012705 026404
0295 026376 004737 037742
0296
0297 026402 000410
0298
0299 026404
0300 026404 000000 000000
0301 026410 000000 000000 000000
0302 026416 000000
0303 026420 047753 047744
0304
0305
0306

;*****
;TEST 431 TEST OF LDCLO INSTR, DATA SET LCLD-5
;
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST431: SCOPE
MOV RLCLO5,R5 ; PTR TO TEST DATA SET
JSR PC,RCLCLO1 ; GO TEST
BR TST432 ;;

LCLD5: ; TEST DATA SET LCLD=51
.WORD 000000,000000 ; INITIAL INTEGER VALUE
.WORD 000000,000000,000000.0 ; EXPECTED FLOAT RESULT
.WORD 047753,047744 ; FPG: BEFORE, AFTER

```

```

0307
0308
0309
0310
0311
0312 026424 000004
0313 026426 012705 026440
0314 026432 004737 040002
0315
0316 026436 000406
0317
0318 026440
0319 026440 000000 000000
0320 026444 000000
0321 026446 047453 047444
0322 026452 000000
0323
0324
0325
0326
0327
0328
0329
0330 026454 000004
0331 026456 012705 026470
0332 026462 004737 040002
0333
0334 026466 000406
0335
0336 026470
0337 026470 041532 000000
0338 026474 000000
0339 026476 047457 047440
0340 026502 000000
0341
0342
0343
0344
0345
0346
0347
0348 026504 000004
0349 026506 012705 026520
0350 026512 004737 040002
0351
0352 026516 000406
0353
0354 026520
0355 026520 052525 052525
0356 026524 000000
0357 026526 047457 147445
0358 026532 100000
0359
0360
0361
0362

```

```

;*****
;TEST 432 TEST OF STCF1 INSTR, DATA SET SCF1-1
;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST432: SCOPE
MOV #SCF1,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST433 ;;

SCF11: ; TEST DATA SET SCF1-11
.WORD 004000,000000 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047453,047444 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( W = N/A )

;*****
;TEST 433 TEST OF STCF1 INSTR, DATA SET SCF1-2
;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST433: SCOPE
MOV #SCF2,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST434 ;;

SCF12: ; TEST DATA SET SCF1-21
.WORD 041532,000000 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047457,047440 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( W = N/A )

;*****
;TEST 434 TEST OF STCF1 INSTR, DATA SET SCF1-3
;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST434: SCOPE
MOV #SCF3,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST435 ;;

SCF13: ; TEST DATA SET SCF1-31
.WORD 052525,052525 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047457,147445 ; FPS: BEFORE, AFTER
.WORD 100000 ; FPC AFTER ( W = N/A )

;*****
;TEST 435 TEST OF STCF1 INSTR, DATA SET SCF1-4

```

```

0363
0364
0365
0366 026534 000004
0367 026536 012705 026550
0368 026542 004737 040002
0369
0370 026546 000406
0371
0372 026550
0373 026550 141531 177777
0374 026554 177712
0375 026556 047407 047410
0376 026562 000000
0377
0378
0379
0380
0381
0382
0383
0384 026564 000004
0385 026566 012705 026580
0386 026572 004737 040002
0387
0388 026576 000406
0389
0390 026600
0391 026600 041532 000000
0392 026604 000000
0393 026606 047417 047400
0394 026612 000000
0395
0396
0397
0398
0399
0400
0401
0402 026614 000004
0403 026616 012705 026630
0404 026622 004737 040002
0405
0406 026626 000406
0407
0408 026630
0409 026630 172011 123456
0410 026634 000000
0411 026636 047652 047645
0412 026642 000000
0413
0414
0415
0416
0417
0418

```

```

;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST435: SCOPE
MOV #SCF4,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST436 ;;

SCF14: ; TEST DATA SET SCF1-41
.WORD 141531,01 ; INITIAL FLOAT VALUE
.WORD 177712 ; EXPECTED INTEGER RESULT
.WORD 047417,047400 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( W = N/A )

;*****
;TEST 436 TEST OF STCF1 INSTR, DATA SET SCF1-5
;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST436: SCOPE
MOV #SCF5,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST437 ;;

SCF15: ; TEST DATA SET SCF1-51
.WORD 041532,000000 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047417,047400 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( W = N/A )

;*****
;TEST 437 TEST OF STCF1 INSTR, DATA SET SCF1-6
;
; INTEGER CONVERSION INTERRUPT ENABLE OFF, ALL OTHERS ON
;
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST437: SCOPE
MOV #SCF6,RS ; PTR TO TEST DATA SET
JSH PC,#SCFIT ; GU TEST
BR TST438 ;;

SCF16: ; TEST DATA SET SCF1-61
.WORD 172011,123456 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047052,047045 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( W = N/A )

;*****
;TEST 438 TEST OF STCF1 INSTR, DATA SET SCF1-7
;
; ALL INTERRUPT ENABLES ON
;
; SHORT FLOAT, SHORT INTEGER, ROUND MODES

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0419
0420 026644 000004
0421 026646 012705 026660
0422 026652 004737 040002
0423
0424 026656 000400
0425
0426 026660 000000 177777
0427 026660 000000 177777
0428 026664 000000
0429 026666 007411 047604
0430 026672 000000
0431
0432
0433

```

;*****
TST440: SCOPE
MOV 0SCFI7,R5 ; PTR TO TEST DATA SET
JBR PC,04SCFI7 ; GO TEST
BR TST441 ;;

SCFI7: ; TEST DATA SET SCFI=71
;WORD 000000,R1 ; INITIAL FLOAT VALUE
;WORD 000000 ; EXPECTED INTEGER RESULT
;WORD 047411,047404 ; FFS: BEFORE, AFTER
;WORD NA ; FCC AFTER ( 0 = N/A )

```

0434
0435
0436
0437
0438
0439 026674 000004
0440 026676 012705 026710
0441 026702 004737 040200
0442
0443 026706 000410
0444
0445 026710 044000 000000 000000
0446 026710 044000 000000 000000
0447 026716 000000
0448 026720 000000
0449 026722 047652 147645
0450 026726 100000
0451
0452
0453
0454
0455
0456
0457
0458 026730 000004
0459 026732 012705 026744
0460 026736 004737 040200
0461
0462 026742 000410
0463
0464 026744 043777 177377 177777
0465 026744 043777 177377 177777
0466 026752 177777
0467 026754 077777
0468 026756 047617 047600
0469 026762 000000
0470
0471
0472
0473
0474
0475
0476
0477 026764 000004
0478 026766 012705 027000
0479 026772 004737 040200
0480
0481 026776 000410
0482
0483 027000
0484 027000 000000 000000 000000
0485 027000 000000
0486 027010 000000
0487 027012 047613 047604
0488 027016 000000
0489

```

;*****
;TEST 441 TEST OF STCDI INSTR, DATA SET SCDI-1
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
TST441: SCOPE
MOV 0SCDI1,R5 ; PTR TO TEST DATA SET
JBR PC,04SCDI1 ; GO TEST
BR TST442 ;;

SCDI1: ; TEST DATA SET SCDI=1
;WORD 044000,000000,000000,000000 ; INITIAL FLOAT VALUE
;WORD 000000 ; EXPECTED INTEGER RESULT
;WORD 047652,147645 ; FFS: BEFORE, AFTER
;WORD 100000 ; FCC AFTER ( 0 = N/A )

;*****
;TEST 442 TEST OF STCDI INSTR, DATA SET SCDI-2
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST442: SCOPE
MOV 0SCDI2,R5 ; PTR TO TEST DATA SET
JBR PC,04SCDI2 ; GO TEST
BR TST443 ;;

SCDI2: ; TEST DATA SET SCDI=21
;WORD 043777,177377,R1,R1 ; INITIAL FLOAT VALUE
;WORD 077777 ; EXPECTED INTEGER RESULT
;WORD 047617,047600 ; FFS: BEFORE, AFTER
;WORD NA ; FCC AFTER ( 0 = N/A )

;*****
;TEST 443 TEST OF STCDI INSTR, DATA SET SCDI-3
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
TST443: SCOPE
MOV 0SCDI3,R5 ; PTR TO TEST DATA SET
JBR PC,04SCDI3 ; GO TEST
BR TST444 ;;

SCDI3: ; TEST DATA SET SCDI=31
;WORD 000000,000000,000000,000000 ; INITIAL FLOAT VALUE
;WORD 000000 ; EXPECTED INTEGER RESULT
;WORD 047613,047604 ; FFS: BEFORE, AFTER
;WORD NA ; FCC AFTER ( 0 = N/A )

```

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0494
0495
0496
0497
0498
0499
0500
0501
0502
0503
0504
0505
0506
0507
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0510
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0543
0544
0545

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```

*****
*TEST 446 TEST OF STCDI INSTR, DATA SET SCDI-3
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST443: SCOPE
MOV #SCDI4,R5 ; PTR TO TEST DATA SET
JBR PC,#SCDI7 ; GO TEST
BR TST445 ;;
SCDI4: ; TEST DATA SET SCDI-4
.WORD 143161,007777,M1,M1 ; INITIAL FLOAT VALUE
.WORD 178360 ; EXPECTED INTEGER RESULT
.WORD 047647,047610 ; FPR: BEFORE, AFTER
.WORD NA ; FPC AFTER ( # = N/A )
*****
*TEST 445 TEST OF STCDI INSTR, DATA SET SCDI-5
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST445: SCOPE
MOV #SCDI5,R5 ; PTR TO TEST DATA SET
JBR PC,#SCDI7 ; GO TEST
BR TST446 ;;
SCDI5: ; TEST DATA SET SCDI-5
.WORD 143777,M1,M1,M1 ; INITIAL FLOAT VALUE
.WORD 100001 ; EXPECTED INTEGER RESULT
.WORD 047647,047650 ; FPR: BEFORE, AFTER
.WORD NA ; FPC AFTER ( # = N/A )
*****
*TEST 446 TEST OF STCDI INSTR, DATA SET SCDI-6
* INTEGER CONVERSION INTERRUPT ENABLE OFF, ALL OTHERS ON
* LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST446: SCOPE
MOV #SCDI6,R5 ; PTR TO TEST DATA SET
JBR PC,#SCDI7 ; GO TEST
BR TST447 ;;
SCDI6: ; TEST DATA SET SCDI-6
.WORD 152525,052525,M1,000000 ; INITIAL FLOAT VALUE
.WORD 000000 ; EXPECTED INTEGER RESULT
.WORD 047217,047205 ; FPR: BEFORE, AFTER
.WORD NA ; FPC AFTER ( # = N/A )

```

```

0546
0547
0548
0549
0550
0551
0552
0553
0554
0555
0556
0557
0558
0559
0560
0561
0562
0563
0564
0565
0566
0567

```

```

*****
*TEST 447 TEST OF STCDI INSTR, DATA SET SCDI-7
* ALL INTERRUPT ENABLES ON
* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST447: SCOPE
MOV #SCDI7,R5 ; PTR TO TEST DATA SET
JBR PC,#SCDI7 ; GO TEST
BR TST448 ;;
SCDI7: ; TEST DATA SET SCDI-7
.WORD 140377,M1,M1,052525 ; INITIAL FLOAT VALUE
.WORD M1 ; EXPECTED INTEGER RESULT
.WORD 047647,047650 ; FPR: BEFORE, AFTER
.WORD NA ; FPC AFTER ( # = N/A )

```



```

0680
0681 027434 000004
0682 027436 012705 027450
0683 027442 004737 040650
0684
0685 027446 000407
0686
0687 027450
0688 027450 000000 123456
0689 027454 000000 000000
0690 027460 047152 047145
0691 027464 000000
0692
0693
0694

```

```

;*****
;TST456: SCOPE
MOV 0BCFL7,R5 ; PTR TO TEST DATA SET
JBR PC,00BCFLT ; GU TEST
BR TST457 ;;

SCFL7: ; TEST DATA SET SCFL=7:
.WORD 000000,123456 ; INITIAL FLOAT VALUE
.WORD 000000,000000 ; EXPECTED INTEGER RESULT
.WORD 047152,047145 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

```

```

0695
0696
0697
0698
0699
0700 027466 000004
0701 027470 012705 027502
0702 027474 004737 040650
0703
0704 027500 000411
0705
0706 027502
0707 027502 000000 177000 177000
0708 027510 177000
0709 027512 000000 000000
0710 027516 047712 147705
0711 027522 100000
0712
0713
0714
0715
0716
0717
0718
0719 027524 000004
0720 027526 012705 027540
0721 027532 004737 040650
0722
0723 027536 000411
0724
0725 027540
0726 027540 047777 177777 177777
0727 027546 177777
0728 027550 017777 177777
0729 027554 047777 047700
0730 027550 000000
0731
0732
0733
0734
0735
0736
0737
0738 027562 000004
0739 027564 012705 027576
0740 027570 004737 040650
0741
0742 027574 000411
0743
0744 027576
0745 027576 177777 125252 177777
0746 027604 177777
0747 027606 000000 000000
0748 027612 047713 047704
0749 027610 000000
0750

```

```

;*****
;TEST 457 TEST OF STCDL INSTR, DATA SET SCDL=1
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
;TST457: SCOPE
MOV 0SCDL1,R5 ; PTR TO TEST DATA SET
JBR PC,00SCDLT ; GU TEST
BR TST460 ;;

SCDL1: ; TEST DATA SET SCDL=1:
.WORD 000000,177000,177000 ; INITIAL FLOAT VALUE
.WORD 000000,000000 ; EXPECTED INTEGER RESULT
.WORD 047712,147705 ; FPS: BEFORE, AFTER
.WORD 100000 ; FEC AFTER ( 0 = N/A )

```

```

;*****
;TEST 458 TEST OF STCDL INSTR, DATA SET SCDL=1
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
;TST458: SCOPE
MOV 0SCDL2,R5 ; PTR TO TEST DATA SET
JBR PC,00SCDLT ; GU TEST
BR TST461 ;;

SCDL2: ; TEST DATA SET SCDL=2:
.WORD 047777,M1,177777,M1 ; INITIAL FLOAT VALUE
.WORD 077777,M1 ; EXPECTED INTEGER RESULT
.WORD 047717,047700 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

```

```

;*****
;TEST 461 TEST OF STCDL INSTR, DATA SET SCDL=1
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
;TST461: SCOPE
MOV 0SCDL3,R5 ; PTR TO TEST DATA SET
JBR PC,00SCDLT ; GU TEST
BR TST462 ;;

SCDL3: ; TEST DATA SET SCDL=3:
.WORD 177777,125252,M1,M1 ; INITIAL FLOAT VALUE
.WORD 000000,000000 ; EXPECTED INTEGER RESULT
.WORD 047713,047704 ; FPS: BEFORE, AFTER
.WORD NA ; FEC AFTER ( 0 = N/A )

```

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0751
0752
0753
0754
0755
0756
0757 027620 000004
0758 027622 012705 027634
0759 02762b 004737 040664
0760
0761 027632 000411
0762
0763 027634
0764 027634 147777 177777 177777
0765 027642 177777
0766 027644 100000 000001
0767 027650 047707 047710
0768 027654 000000
0769
0770
0771
0772
0773
0774
0775
0776 027656 000004
0777 027660 012705 027672
0778 027664 004737 040664
0779
0780 027670 000411
0781
0782 027672
0783 027672 047160 170360 177777
0784 027680 177777
0785 027702 007417 007417
0786 027706 047757 047760
0787 027712 000000
0788
0789
0790
0791
0792
0793
0794
0795 027716 000004
0796 027716 012705 027730
0797 027722 004737 040664
0798
0799 027726 000411
0800
0801 027730
0802 027730 000177 177777 175252
0803 027730 101010
0804 027740 000000 000000
0805 027744 047713 047704
0806 027750 000000

;*****
;TEST 462 TEST OF STCDL INSTR, DATA SET SCDL=3
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST462: SCOPE
MOV #SCDL4,R5 ; PTR TO TEST DATA SET
JSR PC,04SCDLT ; GO TEST
BR TST463 ;;

SCDL4: ; TEST DATA SET SCDL=4
.WORD 147777,M1,M1,M1 ; INITIAL FLOAT VALUE
.WORD 100000,000001 ; EXPECTED INTEGER RESULT
.WORD 047707,047710 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 463 TEST OF STCDL INSTR, DATA SET SCDL=5
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
TST463: SCOPE
MOV #SCDL5,R5 ; PTR TO TEST DATA SET
JSR PC,04SCDLT ; GO TEST
BR TST464 ;;

SCDL5: ; TEST DATA SET SCDL=5
.WORD 047160,170360,M1,M1 ; INITIAL FLOAT VALUE
.WORD 007417,007417 ; EXPECTED INTEGER RESULT
.WORD 047757,047760 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

;*****
;TEST 464 TEST OF STCDL INSTR, DATA SET SCDL=6
; ALL INTERRUPT ENABLES ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST464: SCOPE
MOV #SCDL6,R5 ; PTR TO TEST DATA SET
JSR PC,04SCDLT ; GO TEST
BR TST465 ;;

SCDL6: ; TEST DATA SET SCDL=6
.WORD 000177,M1,125252,101010 ; INITIAL FLOAT VALUE
.WORD 000000,000000 ; EXPECTED INTEGER RESULT
.WORD 047713,047704 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

```

```

0807
0808
0809
0810
0811
0812
0813
0814 027752 000004
0815 027754 012705 027766
0816 027760 004737 040664
0817
0818 027764 000411
0819
0820 027766
0821 027766 002141 125252 052525
0822 027770 125252
0823 027776 000000 000000
0824 028002 047312 047305
0825 030006 000000
0826
0827
0828

;*****
;TEST 465 TEST OF STCDL INSTR, DATA SET SCDL=7
; INTEGER CONVERSION INTERRUPT ENABLE OFF, ALL OTHERS ON
; LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
TST465: SCOPE
MOV #SCDL7,R5 ; PTR TO TEST DATA SET
JSR PC,04SCDLT ; GO TEST
BR TST466 ;;

SCDL7: ; TEST DATA SET SCDL=7
.WORD 002141,125252,052525,125252 ; INITIAL FLOAT VALUE
.WORD 000000,000000 ; EXPECTED INTEGER RESULT
.WORD 047312,047305 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

```

0429
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0441
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0445
0446
0447
0448
0449
0450
0451
0452
0453
0454
0455
0456
0457
0458
0459
0460
0461
0462
0463
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0494

```

)*****
)TEST 406 TEST OF LDEXP/F INSTN, DATA SET LEXF-1
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
)*****
TST466) SCOPE
MOV 1LEXP1,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP1 ; GO TEST
BR TST467 ;

LEXP1) ; TEST DATA SET LEXF-1)
)WORD 020177,M1 ; INITIAL AC FLOAT NUMBER
)WORD 000177,M1 ; EXPECTED FLOAT RESULT
)WORD 201 ; EXPONENT TO BE LOADED
)WORD 047555,147542 ; FPS: BEFORE, AFTER
)WORD 100010 ; FLC AFTER ( 0 = N/A )

)*****
)TEST 407 TEST OF LDEXP/F INSTN, DATA SET LEXF-2
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, LONG INTEGER, ROUND MODES
)*****
TST467) SCOPE
MOV 1LEXP2,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP2 ; GO TEST
BR TST468 ;

LEXP2) ; TEST DATA SET LEXF-2)
)WORD 120000,0 ; INITIAL AC FLOAT NUMBER
)WORD 100000,0 ; EXPECTED FLOAT RESULT
)WORD 200 ; EXPONENT TO BE LOADED
)WORD 047551,147516 ; FPS: BEFORE, AFTER
)WORD 100010 ; FLC AFTER ( 0 = N/A )

)*****
)TEST 470 TEST OF LDEXP/F INSTN, DATA SET LEXF-3
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
)*****
TST470) SCOPE
MOV 1LEXP3,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP3 ; GO TEST
BR TST471 ;

LEXP3) ; TEST DATA SET LEXF-3)
)WORD 020125,ALTP ; INITIAL AC FLOAT NUMBER
)WORD 077725,ALTP ; EXPECTED FLOAT RESULT
)WORD 177 ; EXPONENT TO BE LOADED
)WORD 047457,047440 ; FPS: BEFORE, AFTER
)WORD NA ; FLC AFTER ( 0 = N/A )

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0495
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0540

```

)*****
)TEST 471 TEST OF LDEXP/F INSTN, DATA SET LEXF-4
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, SHORT INTEGER, ROUND MODES
)*****
TST471) SCOPE
MOV 1LEXP4,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP4 ; GO TEST
BR TST472 ;

LEXP4) ; TEST DATA SET LEXF-4)
)WORD 120052,ALTM ; INITIAL AC FLOAT NUMBER
)WORD 100052,ALTM ; EXPECTED FLOAT RESULT
)WORD 100 ; EXPONENT TO BE LOADED
)WORD 047457,047410 ; FPS: BEFORE, AFTER
)WORD NA ; FLC AFTER ( 0 = N/A )

)*****
)TEST 472 TEST OF LDEXP/F INSTN, DATA SET LEXF-5
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
)*****
TST472) SCOPE
MOV 1LEXP5,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP5 ; GO TEST
BR TST473 ;

LEXP5) ; TEST DATA SET LEXF-5)
)WORD 020017,ALT4P ; INITIAL AC FLOAT NUMBER
)WORD 040217,ALT4P ; EXPECTED FLOAT RESULT
)WORD 1 ; EXPONENT TO BE LOADED
)WORD 047557,047540 ; FPS: BEFORE, AFTER
)WORD NA ; FLC AFTER ( 0 = N/A )

)*****
)TEST 473 TEST OF LDEXP/F INSTN, DATA SET LEXF-6
) ALL INTERRUPT ENABLES ON
) SHORT FLOAT, LONG INTEGER, ROUND MODES
)*****
TST473) SCOPE
MOV 1LEXP6,R5 ; PTR TO TEST DATA SET
JSR PC,01LEXP6 ; GO TEST
BR TST474 ;

LEXP6) ; TEST DATA SET LEXF-6)
)WORD 120100,ALTM ; INITIAL AC FLOAT NUMBER
)WORD 100100,ALTM ; EXPECTED FLOAT RESULT
)WORD 0 ; EXPONENT TO BE LOADED
)WORD 047507,047510 ; FPS: BEFORE, AFTER
)WORD NA ; FLC AFTER ( 0 = N/A )

```



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0541
0542
0543
0544
0545
0546
0547
0548 030260 000004
0549 030262 012705 030274
0550 030266 004737 041072
0551
0552 030272 000410
0553
0554 030274
0555 030274 020177 177777
0556 030300 047777 177777
0557 030304 177777
0558 030306 047410 047440
0559 030312 000000
0560
0561
0562
0563
0564
0565
0566
0567 030314 000004
0568 030316 012705 030330
0569 030322 004737 041072
0570
0571 030326 000410
0572
0573 030330
0574 030330 120000 000000
0575 030330 120000 000000
0576 030340 177700
0577 030342 047407 047410
0578 030346 000000
0579
0580
0581
0582
0583
0584
0585
0586 030350 000004
0587 030352 012705 030364
0588 030356 004737 041072
0589
0590 030362 000410
0591
0592 030364
0593 030364 020125 032525
0594 030370 000325 032525
0595 030374 177001
0596 030376 047557 047560

```

```

*****
TEST 474 TEST OF LDEXP/F INSTR, DATA SET LEXP=7
ALL INTERRUPT ENABLES ON
SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TEST474: SCOPE
MOV 0LEXP7,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP7 ; GO TEST
BR TST475 ;;

LEXP7: ; TEST DATA SET LEXP=7
.WORD 020177,R1 ; INITIAL AC FLOAT NUMBER
.WORD 037777,R1 ; EXPECTED FLOAT RESULT
.WORD -1 ; EXPONENT TO BE LOADED
.WORD 047457,047440 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

```

```

*****
TEST 475 TEST OF LDEXP/F INSTR, DATA SET LEXP=10
ALL INTERRUPT ENABLES ON
SHORT FLOAT, SHORT INTEGER, ROUND MODES
*****
TEST475: SCOPE
MOV 0LEXP10,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP10 ; GO TEST
BR TST476 ;;

LEXP10: ; TEST DATA SET LEXP=10
.WORD 120000,0 ; INITIAL AC FLOAT NUMBER
.WORD 120000,0 ; EXPECTED FLOAT RESULT
.WORD -100 ; EXPONENT TO BE LOADED
.WORD 047407,047410 ; FPS: BEFORE, AFTER
.WORD NA ; FPC AFTER ( 0 = N/A )

```

```

*****
TEST 476 TEST OF LDEXP/F INSTR, DATA SET LEXP=11
ALL INTERRUPT ENABLES ON
SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TEST476: SCOPE
MOV 0LEXP11,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP11 ; GO TEST
BR TST477 ;;

LEXP11: ; TEST DATA SET LEXP=11
.WORD 020125,ALT0 ; INITIAL AC FLOAT NUMBER
.WORD 000325,ALT0 ; EXPECTED FLOAT RESULT
.WORD -177 ; EXPONENT TO BE LOADED
.WORD 047557,047560 ; FPS: BEFORE, AFTER

```

```

0597 030402 000000
0598
0599
0600
0601
0602
0603
0604
0605 030404 000004
0606 030406 012705 030420
0607 030412 004737 041072
0608
0609 030416 000410
0610
0611 030420
0612 030420 120052 125252
0613 030424 100052 125252
0614 030430 177000
0615 030432 047503 147514
0616 030436 100012
0617
0618
0619
0620
0621
0622
0623
0624 030440 000004
0625 030442 012705 030454
0626 030446 004737 041072
0627
0628 030452 000410
0629
0630 030454
0631 030454 020017 007417
0632 030460 077017 007417
0633 030464 177577
0634 030466 047457 147460
0635 030472 100012
0636
0637
0638
0639
0640
0641
0642
0643 030474 000004
0644 030476 012705 030510
0645 030502 004737 041072
0646
0647 030506 000410
0648
0649 030510
0650 030510 120100 170300
0651 030514 177500 170300
0652 030520 177570

```

```

*****
TEST 477 TEST OF LDEXP/F INSTR, DATA SET LEXP=12
ALL INTERRUPT ENABLES ON
SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TEST477: SCOPE
MOV 0LEXP12,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP12 ; GO TEST
BR TST500 ;;

LEXP12: ; TEST DATA SET LEXP=12
.WORD 120052,ALT0 ; INITIAL AC FLOAT NUMBER
.WORD 100052,ALT0 ; EXPECTED FLOAT RESULT
.WORD -200 ; EXPONENT TO BE LOADED
.WORD 047503,147514 ; FPS: BEFORE, AFTER
.WORD 100012 ; FPC AFTER ( 0 = N/A )

```

```

*****
TEST 500 TEST OF LDEXP/F INSTR, DATA SET LEXP=13
ALL INTERRUPT ENABLES ON
SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TEST500: SCOPE
MOV 0LEXP13,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP13 ; GO TEST
BR TST501 ;;

LEXP13: ; TEST DATA SET LEXP=13
.WORD 020017,ALT40 ; INITIAL AC FLOAT NUMBER
.WORD 077017,ALT40 ; EXPECTED FLOAT RESULT
.WORD -201 ; EXPONENT TO BE LOADED
.WORD 047457,147460 ; FPS: BEFORE, AFTER
.WORD 100012 ; FPC AFTER ( 0 = N/A )

```

```

*****
TEST 501 TEST OF LDEXP/F INSTR, DATA SET LEXP=14
ALL INTERRUPT ENABLES ON
SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TEST501: SCOPE
MOV 0LEXP14,R5 ; PTR TO TEST DATA SET
JSH PC,0LEXP14 ; GO TEST
BR TST502 ;;

LEXP14: ; TEST DATA SET LEXP=14
.WORD 120100,ALT40 ; INITIAL AC FLOAT NUMBER
.WORD 177500,ALT40 ; EXPECTED FLOAT RESULT
.WORD -202 ; EXPONENT TO BE LOADED

```

7053 030521 047507 147510
 7054 030526 100012
 7055
 7056
 7057
 7058
 7059
 7060
 7061
 7062 030530 000004
 7063 030532 012705 030544
 7064 030536 004737 041072
 7065
 7066 030542 000410
 7067
 7068 030544
 7069 030544 020177 177777
 7070 030550 077377 177777
 7071 030554 177375
 7072 030556 047457 147440
 7073 030562 100012
 7074
 7075
 7076
 7077
 7078
 7079
 7080

```

*****
;TEST 502 TEST OF LDEXP/F INSTR, DATA SET LEXF-14
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST502: SCOPE
MOV 0LEXF15,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST503 ;

LEXF15: ; TEST DATA SET LEXF-14:
;WORD 020177,01 ; INITIAL AC FLOAT NUMBER
;WORD 077377,01 ; EXPECTED FLOAT RESULT
;WORD 0 ; EXPONENT TO BE LOADED
;WORD 047457,147440 ; FPS: BEFORE, AFTER
;WORD 100012 ; FPC AFTER ( 0 = N/A )

```

7081 030564 000004
 7082 030566 012705 030600
 7083 030572 004737 041072
 7084
 7085 030576 000410
 7086
 7087 030600
 7088 030604 142000 000000
 7089 030606 100000 000000
 7090 030610 000000
 7091 030612 047547 047550
 7092 030616 000000
 7093
 7094
 7095
 7096
 7097
 7098
 7099
 7100

```

*****
;TEST 503 TEST OF LDEXP/F INSTR, DATA SET LEXF-16
;*
;* ALL INTERRUPT ENABLES ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST503: SCOPE
MOV 0LEXF16,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST504 ;

LEXF16: ; TEST DATA SET LEXF-16:
;WORD 142000,0 ; INITIAL AC FLOAT NUMBER
;WORD 100000,0 ; EXPECTED FLOAT RESULT
;WORD 0 ; EXPONENT TO BE LOADED
;WORD 047547,047550 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

```

7101 030620 000004
 7102 030622 012705 030634
 7103 030626 004737 041072
 7104
 7105 030632 000410
 7106
 7107 030634 020177 177777
 7108 030640 000000 000000
 7109

```

*****
;TEST 504 TEST OF LDEXP/F INSTR, DATA SET LEXF-17
;*
;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
*****
TST504: SCOPE
MOV 0LEXF17,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST505 ;

LEXF17: ; TEST DATA SET LEXF-17:
;WORD 020177,01 ; INITIAL AC FLOAT NUMBER
;WORD 0,0 ; EXPECTED FLOAT RESULT

```

7109 030644 000004
 7110 030646 046551 046546
 7111 030652 000000
 7112
 7113
 7114
 7115
 7116
 7117
 7118
 7119 030654 000004
 7120 030656 012705 030670
 7121 030662 004737 041072
 7122
 7123 030666 000410
 7124
 7125 030670
 7126 030674 120000 000000
 7127 030676 000000 000000
 7128 030700 000200
 7129 030702 046511 046506
 7130 030706 000000
 7131
 7132
 7133
 7134
 7135
 7136
 7137
 7138 030710 000004
 7139 030712 012705 030724
 7140 030716 004737 041072
 7141
 7142 030722 000410
 7143
 7144 030724
 7145 030726 120052 125252
 7146 030730 000000 000000
 7147 030734 177000
 7148 030736 045513 045504
 7149 030742 000000
 7150
 7151
 7152
 7153
 7154
 7155
 7156

```

*****
;TEST 505 TEST OF LDEXP/F INSTR, DATA SET LEXF-20
;*
;* OVERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST505: SCOPE
MOV 0LEXF20,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST506 ;

LEXF20: ; TEST DATA SET LEXF-20:
;WORD 120000,0 ; INITIAL AC FLOAT NUMBER
;WORD 0,0 ; EXPECTED FLOAT RESULT
;WORD 0 ; EXPONENT TO BE LOADED
;WORD 046511,046506 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

```

7157 030744 000004
 7158 030746 012705 030760
 7159 030752 004737 041072
 7160
 7161 030756 000410
 7162
 7163 030758
 7164 030760 120052 125252
 7165 030764 000000 000000
 7166 030768 177000
 7167 030770 045513 045504
 7168 030774 000000
 7169
 7170
 7171
 7172
 7173
 7174
 7175
 7176
 7177
 7178
 7179
 7180

```

*****
;TEST 506 TEST OF LDEXP/F INSTR, DATA SET LEXF-21
;*
;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST506: SCOPE
MOV 0LEXF21,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST507 ;

LEXF21: ; TEST DATA SET LEXF-21:
;WORD 120052,ALTN ; INITIAL AC FLOAT NUMBER
;WORD 0,0 ; EXPECTED FLOAT RESULT
;WORD 0 ; EXPONENT TO BE LOADED
;WORD 045513,045504 ; FPS: BEFORE, AFTER
;WORD NA ; FPC AFTER ( 0 = N/A )

```

7181 030776 000004
 7182 030778 012705 030792
 7183 030784 004737 041072
 7184
 7185 030788 000410
 7186
 7187 030790
 7188 030792 120052 125252
 7189 030796 000000 000000
 7190 030800 177000
 7191 030804 045513 045504
 7192 030808 000000
 7193
 7194
 7195
 7196
 7197
 7198
 7199
 7200

```

*****
;TEST 507 TEST OF LDEXP/F INSTR, DATA SET LEXF-22
;*
;* UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
;* SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST507: SCOPE
MOV 0LEXF22,R5 ; PTR TO TEST DATA SET
JSR PC,04LEAFT ; GO TEST
BR TST510 ;

LEXF22: ; TEST DATA SET LEXF-22:
;WORD 120017,ALTN ; INITIAL AC FLOAT NUMBER

```

7165 #30764 #00000 #00000
 7166 #30770 177577
 7167 #30772 045453 045444
 7168 #30776 #00000
 7169
 7170
 7171
 7172
 7173
 7174
 7175
 7176 #31000 #00004
 7177 #31002 #12705 #31014
 7178 #31004 #04737 #41072
 7179
 7180 #31012 #00410
 7181
 7182 #31014
 7183 #31014 120160 170300
 7184 #31020 #00000 #00000
 7185 #31024 177576
 7186 #31026 045513 045504
 7187 #31032 #00000
 7188
 7189
 7190
 7191
 7192
 7193
 7194
 7195 #31034 #00004
 7196 #31036 #12705 #31050
 7197 #31042 #04737 #41072
 7198
 7199 #31046 #00410
 7200
 7201 #31050
 7202 #31050 020177 177777
 7203 #31054 #00000 #00000
 7204 #31060 177575
 7205 #31062 045453 045444
 7206 #31060 #00000
 7207
 7208
 7209

```

*****
TEST 510 TEST OF LEXAP/F INSTR, DATA SET LEX1-23
/*
UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
/*
SHORT FLOAT, LONG INTEGER, ROUND MODES
*****
TST510: SCOPE
MOV #LEXF23,R5 ; PTR TO TEST DATA SET
JSR PC,@LEXF23 ; GO TEST
BR TST511 ;;

LEXF23: ; TEST DATA SET LEX1-23:
.WORD 128160,ALT4M ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD -201 ; EXPONENT TO BE LOADED
.WORD 045513,045504 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

*****
TEST 511 TEST OF LEXAP/F INSTR, DATA SET LEX1-24
/*
UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
/*
SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST511: SCOPE
MOV #LEXF24,R5 ; PTR TO TEST DATA SET
JSR PC,@LEXF24 ; GO TEST
BR TST512 ;;

LEXF24: ; TEST DATA SET LEX1-24:
.WORD 020177,M1 ; INITIAL AC FLOAT NUMBER
.WORD 0,0 ; EXPECTED FLOAT RESULT
.WORD -203 ; EXPONENT TO BE LOADED
.WORD 045453,045444 ; FPS: BEFORE, AFTER
.WORD NA ; FLC AFTER ( 0 = N/A )

```

7210
 7211
 7212
 7213
 7214
 7215 #31070 #00004
 7216 #31072 #12705 #31104
 7217 #31076 #04737 #41242
 7218
 7219 #31102 #00414
 7220
 7221 #31104
 7222 #31104 152325 052525 052525
 7223 #31112 052525
 7224 #31114 100325 052525 052525
 7225 #31122 052525
 7226 #31124 #00000
 7227 #31126 047065 147052
 7228 #31132 100010
 7229
 7230
 7231
 7232
 7233
 7234
 7235
 7236
 7237 #31134 #00004
 7238 #31136 #12705 #31150
 7239 #31142 #04737 #41242
 7240
 7241 #31146 #00014
 7242
 7243 #31150
 7244 #31150 052377 177777 177777
 7245 #31156 177777
 7246 #31160 #00177 177777 177777
 7247 #31170 #00000
 7248 #31172 #47711 147706
 7249 #31170 100010
 7250
 7251
 7252
 7253
 7254
 7255
 7256
 7257 #31200 #00004
 7258 #31202 #12705 #31214
 7259 #31206 #04737 #41242
 7260
 7261 #31212 #00014
 7262
 7263 #31214
 7264 #31214 152360 170360 170360
 7265 #31222 170360

```

*****
TEST 512 TEST OF LEXAP/D INSTR, DATA SET LEAD-1
/*
ALL INTERRUPT ENABLES ON
/*
LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
*****
TST512: SCOPE
MOV #LEXD1,R5 ; PTR TO TEST DATA SET
JSR PC,@LEXD1 ; GO TEST
BR TST513 ;;

LEXD1: ; TEST DATA SET LEAD-1:
.WORD 152325,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
.WORD 100325,ALTP,ALTP,ALTP ; EXPECTED FLOAT RESULT
.WORD 201 ; EXPONENT TO BE LOADED
.WORD 047045,147052 ; FPS: BEFORE, AFTER
.WORD 100010 ; FLC AFTER ( 0 = N/A )

*****
TEST 513 TEST OF LEXAP/D INSTR, DATA SET LEAD-2
/*
ALL INTERRUPT ENABLES ON
/*
LONG FLOAT, LONG INTEGER, ROUND MODES
*****
TST513: SCOPE
MOV #LEXD2,R5 ; PTR TO TEST DATA SET
JSR PC,@LEXD2 ; GO TEST
BR TST514 ;;

LEXD2: ; TEST DATA SET LEAD-2:
.WORD 052377,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
.WORD 000177,M1,M1,M1 ; EXPECTED FLOAT RESULT
.WORD 200 ; EXPONENT TO BE LOADED
.WORD 047711,147706 ; FPS: BEFORE, AFTER
.WORD 100010 ; FLC AFTER ( 0 = N/A )

*****
TEST 514 TEST OF LEXAP/D INSTR, DATA SET LEAD-3
/*
ALL INTERRUPT ENABLES ON
/*
LONG FLOAT, SHORT INTEGER, ROUND MODES
*****
TST514: SCOPE
MOV #LEXD3,R5 ; PTR TO TEST DATA SET
JSR PC,@LEXD3 ; GO TEST
BR TST515 ;;

LEXD3: ; TEST DATA SET LEAD-3:
.WORD 152360,ALT4M,ALT4M,ALT4M ; INITIAL AC FLOAT NUMBER

```

```

7260 031224 177700 170000 170000 ,WORD 177700,ALTN,ALTN,ALTN ; EXPECTED FLOAT RESULT
7267 031232 170300 ,WORD 177 ; EXPONENT TO BE LOADED
7268 031234 000177 ,WORD 047607,047610 ; FPS: BEFORE, AFTER
7269 031236 047607 047610 ,WORD NA ; FPC AFTER ( 0 = N/A )
7270 031242 000000
7271
7272
7273
7274 ;*****
;TEST 515 TEST OF LDEXP/D INSTR, DATA SET LEAD-4
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
7275
7276
7277
7278 031244 000004
7279 031246 012705 031260
7280 031252 004737 041242
7281
7282 031256 000414
7283
7284 LEAD4: ; TEST DATA SET LEAD-4
7285 031260 052200 000000 000000 ,WORD 052200,0,0,0 ; INITIAL AC FLOAT NUMBER
7286 031265 000000 ,WORD 000000,0,0,0 ; EXPECTED FLOAT RESULT
7287 031270 000000 000000 000000
7288 031275 000000 ,WORD 100 ; EXPONENT TO BE LOADED
7289 031300 000100 ,WORD 047757,047740 ; FPS: BEFORE, AFTER
7290 031302 047757 047740 ,WORD NA ; FPC AFTER ( 0 = N/A )
7291 031305 000000
7292
7293
7294 ;*****
;TEST 516 TEST OF LDEXP/D INSTR, DATA SET LEAD-5
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
;*****
7295
7296
7297
7298
7299 031310 000004
7300 031312 012705 031324
7301 031315 004737 041242
7302
7303 031322 000414
7304
7305 LEAD5: ; TEST DATA SET LEAD-5
7306 031324 125252 125252 125252 ,WORD 125252,ALTN,ALTN,ALTN ; INITIAL AC FLOAT NUMBER
7307 031332 125252 ,WORD 100 ; EXPECTED FLOAT RESULT
7308 031334 100252 125252 125252
7309 031342 125252 ,WORD 1 ; EXPONENT TO BE LOADED
7310 031344 000001 ,WORD 047647,047650 ; FPS: BEFORE, AFTER
7311 031346 047647 047650 ,WORD NA ; FPC AFTER ( 0 = N/A )
7312 031352 000000
7313
7314
7315 ;*****
;TEST 517 TEST OF LDEXP/D INSTR, DATA SET LEAD-6
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, ROUND MODES
;*****
7316
7317
7318
7319
7320 031354 000004
7321 031356 012705 031370

```

```

7322 031362 004737 041242 JSR PC,0LEXD7 ; GO TEST
7323
7324 031366 000414 BR TST520 ;
7325
7326 LEAD6: ; TEST DATA SET LEAD-6
7327 031370 052217 007417 007417 ,WORD 052217,ALT4P,ALT4P,ALT4P ; INITIAL AC FLOAT NUMBER
7328 031375 007417 ,WORD 000017,ALT4P,ALT4P,ALT4P ; EXPECTED FLOAT RESULT
7329 031400 004017 007417 007417
7330 031405 007417 ,WORD 0 ; EXPONENT TO BE LOADED
7331 031410 000000 ,WORD 047717,047700 ; FPS: BEFORE, AFTER
7332 031412 047717 047700 ,WORD NA ; FPC AFTER ( 0 = N/A )
7333 031415 000000
7334
7335
7336 ;*****
;TEST 520 TEST OF LDEXP/D INSTR, DATA SET LEAD-7
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, SHORT INTEGER, ROUND MODES
;*****
7337
7338
7339
7340
7341 031420 000004
7342 031422 012705 031434
7343 031425 004737 041242
7344
7345 031432 000414
7346
7347 LEAD7: ; TEST DATA SET LEAD-7
7348 031434 152325 052525 052525 ,WORD 152325,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
7349 031442 052525 ,WORD 137725,ALTP,ALTP,ALTP ; EXPECTED FLOAT RESULT
7350 031444 137725 052525 052525
7351 031452 052525 ,WORD =1 ; EXPONENT TO BE LOADED
7352 031454 177777 ,WORD 047607,047610 ; FPS: BEFORE, AFTER
7353 031456 047607 047610 ,WORD NA ; FPC AFTER ( 0 = N/A )
7354 031462 000000
7355
7356
7357 ;*****
;TEST 521 TEST OF LDEXP/D INSTR, DATA SET LEAD-10
;* ALL INTERRUPT ENABLES ON
;* LONG FLOAT, LONG INTEGER, TRUNCATE MODES
;*****
7358
7359
7360
7361
7362 031464 000004
7363 031466 012705 031500
7364 031472 004737 041242
7365
7366 031476 000414
7367
7368 LEAD10: ; TEST DATA SET LEAD-10
7369 031500 052377 177777 177777 ,WORD 052377,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
7370 031505 177777 ,WORD 020177,M1,M1,M1 ; EXPECTED FLOAT RESULT
7371 031510 020177 177777 177777
7372 031515 177777 ,WORD =100 ; EXPONENT TO BE LOADED
7373 031520 177700 ,WORD 047757,047740 ; FPS: BEFORE, AFTER
7374 031522 047757 047740 ,WORD NA ; FPC AFTER ( 0 = N/A )
7375 031525 000000
7376
7377

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```

7378
7379
7380
7381
7382
7383 @31530 @00004
7384 @31532 @12705 @31544
7385 @31530 @04737 @41242
7386
7387 @31542 @00414
7388
7389 @11544
7390 @31544 152360 170360 170360 LEXD11: ; TEST DATA SET LEXD-11:
7391 @31552 170360 ;WORD 152360,ALT4,ALT4,ALT4 ; INITIAL AC FLOAT NUMBER
7392 @31554 100360 170360 170360 ;WORD 100360,ALT4,ALT4,ALT4 ; EXPECTED FLOAT RESULT
7393 @31562 170360
7394 @31564 177601 ;WORD -177 ; EXPONENT TO BE LOADED
7395 @31566 @47647 @47650 ;WORD @47647,@47650 ; FPR: BEFORE, AFTER
7396 @31572 @00000 ;WORD NA ; REC AFTER ( 0 = N/A )
7397
7398
7399
7400
7401
7402
7403
7404 @31574 @00004
7405 @31576 @12705 @31610
7406 @31602 @04737 @41242
7407
7408 @31606 @00414
7409
7410 @31610
7411 @31610 152200 @00000 @00000 LEXD12: ; TEST DATA SET LEXD-12:
7412 @31616 @00000 @00000 ;WORD @52200,0,0,0 ; INITIAL AC FLOAT NUMBER
7413 @31620 @00000 @00000 @00000 ;WORD 0,0,0,0 ; EXPECTED FLOAT RESULT
7414 @31626 @00000
7415 @31630 177601 ;WORD -200 ; EXPONENT TO BE LOADED
7416 @31632 @47713 @47704 ;WORD @47713,@47704 ; FPR: BEFORE, AFTER
7417 @31636 100012 ;WORD 100012 ; REC AFTER ( 0 = N/A )
7418
7419
7420
7421
7422
7423
7424
7425 @31640 @00004
7426 @31642 @12705 @31654
7427 @31646 @04737 @41242
7428
7429 @31652 @00414
7430
7431 @31654
7432 @31654 152252 125252 125252 LEXD13: ; TEST DATA SET LEXD-13:
7433 @31662 125252 ;WORD 152252,ALT4,ALT4,ALT4 ; INITIAL AC FLOAT NUMBER

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```

7434 @31664 177652 125252 125252 ;WORD 177652,ALT4,ALT4,ALT4 ; EXPECTED FLOAT RESULT
7435 @31672 125252
7436 @31674 177652 ;WORD -201 ; EXPONENT TO BE LOADED
7437 @31676 @47647 @47610 ;WORD @47647,@47610 ; FPR: BEFORE, AFTER
7438 @31702 100012 ;WORD 100012 ; REC AFTER ( 0 = N/A )
7439
7440
7441
7442
7443
7444
7445
7446 @31704 @00004
7447 @31706 @12705 @31720
7448 @31712 @04737 @41242
7449
7450 @31716 @00414
7451
7452 @31720
7453 @31720 @52217 @07417 @07417 LEXD14: ; TEST DATA SET LEXD-14:
7454 @31726 @07417 ;WORD @52217,ALT4,ALT4,ALT4 ; INITIAL AC FLOAT NUMBER
7455 @31730 @07417 @07417 @07417 ;WORD @07417,ALT4,ALT4,ALT4 ; EXPECTED FLOAT RESULT
7456 @31736 @07417
7457 @31740 177576 ;WORD -202 ; EXPONENT TO BE LOADED
7458 @31742 @47757 @47740 ;WORD @47757,@47740 ; FPR: BEFORE, AFTER
7459 @31746 100012 ;WORD 100012 ; REC AFTER ( 0 = N/A )
7460
7461
7462
7463
7464
7465
7466
7467 @31750 @00004
7468 @31752 @12705 @31764
7469 @31756 @04737 @41242
7470
7471 @31762 @00414
7472
7473 @31764
7474 @31764 152325 @52525 @52525 LEXD15: ; TEST DATA SET LEXD-15:
7475 @31772 @52525 @52525 ;WORD 152325,ALT4,ALT4,ALT4 ; INITIAL AC FLOAT NUMBER
7476 @31774 177325 @52525 @52525 ;WORD 177325,ALT4,ALT4,ALT4 ; EXPECTED FLOAT RESULT
7477 @32002 @52525
7478 @32004 177575 ;WORD -203 ; EXPONENT TO BE LOADED
7479 @32006 @47647 @47650 ;WORD @47647,@47650 ; FPR: BEFORE, AFTER
7480 @32012 100012 ;WORD 100012 ; REC AFTER ( 0 = N/A )
7481
7482
7483
7484
7485
7486
7487
7488 @32014 @00004
7489 @32016 @12705 @32030

```

```

7490 032022 004737 041242      JSR    PC,04LEADT      ; GO TEST
7491
7492 032020 000414      BR     T8T530         ;|
7493
7494 032030      LEXD161 ; TEST DATA SET LEAD=161
7495 032030 177000 000000 000000 ;,WORD 177000,0,0 ; INITIAL AC FLOAT NUMBER
7496 032036 000000      ;,WORD 14000,0,0 ; EXPECTED FLOAT RESULT
7497 032040 140000 000000 000000
7498 032046 000000      ;,WORD 0 ; EXPONENT TO BE LOADED
7499 032050 000000      ;,WORD 047707,047710 ; FPS: BEFORE, AFTER
7500 032052 047707 047710      ;,WORD NA ; REC AFTER ( 0 = N/A )
7501 032056 000000
7502
7503
7504
7505
7506
7507
7508
7509 032060 000004      T8T5301 SCOPE
7510 032062 012705 032074      MOV    0LEXD17,R5 ; PTR TO TEST DATA SET
7511 032066 004737 041242      JSR    PC,04LEADT ; GO TEST
7512
7513 032072 000414      BR     T8T531         ;|
7514
7515 032074      LEXD171 ; TEST DATA SET LEAD=171
7516 032074 152325 052525 052525 ;,WORD 152325,ALT0,ALT0,ALT0 ; INITIAL AC FLOAT NUMBER
7517 032102 052525      ;,WORD 0,0,0 ; EXPECTED FLOAT RESULT
7518 044104 000000 000000 000000
7519 032112 000000      ;,WORD 201 ; EXPONENT TO BE LOADED
7520 032114 000201      ;,WORD 046651,046646 ; FPS: BEFORE, AFTER
7521 032116 046651 046646      ;,WORD NA ; REC AFTER ( 0 = N/A )
7522 032122 000000
7523
7524
7525
7526
7527
7528
7529
7530 032124 000004      T8T5311 SCOPE
7531 032126 012705 032140      MOV    0LEXD09,R5 ; PTR TO TEST DATA SET
7532 032132 004737 041242      JSR    PC,04LEADT ; GO TEST
7533
7534 032136 000414      BR     T8T532         ;|
7535
7536 032140      LEXD201 ; TEST DATA SET LEAD=201
7537 032140 052377 177777 177777 ;,WORD 052377,M1,M1,M1 ; INITIAL AC FLOAT NUMBER
7538 032146 177777      ;,WORD 0,0,0 ; EXPECTED FLOAT RESULT
7539 032150 000000 000000 000000
7540 032156 000000      ;,WORD 200 ; EXPONENT TO BE LOADED
7541 032160 000200      ;,WORD 046711,046706 ; FPS: BEFORE, AFTER
7542 032162 046711 046706      ;,WORD NA ; REC AFTER ( 0 = N/A )
7543 032166 000000
7544
7545

```

```

7546
7547
7548
7549
7550
7551 032170 000004      T8T5321 SCOPE
7552 032174 012705 032204      MOV    0LEXD21,R5 ; PTR TO TEST DATA SET
7553 032176 004737 041242      JSR    PC,04LEADT ; GO TEST
7554
7555 032202 000414      BR     T8T533         ;|
7556
7557 032204      LEXD211 ; TEST DATA SET LEAD=211
7558 032204 052201 000002 000003 ;,WORD 052201,2,3,0 ; INITIAL AC FLOAT NUMBER
7559 032212 000000      ;,WORD 0,0,0 ; EXPECTED FLOAT RESULT
7560 032214 000000 000000 000000
7561 032222 000000      ;,WORD -200 ; EXPONENT TO BE LOADED
7562 032226 177000      ;,WORD 045713,045704 ; FPS: BEFORE, AFTER
7563 032228 045713 045704      ;,WORD NA ; REC AFTER ( 0 = N/A )
7564 032232 000000
7565
7566
7567
7568
7569
7570
7571
7572 032234 000004      T8T5331 SCOPE
7573 032236 012705 032250      MOV    0LEXD12,R5 ; PTR TO TEST DATA SET
7574 032242 004737 041242      JSR    PC,04LEADT ; GO TEST
7575
7576 032246 000414      BR     T8T534         ;|
7577
7578 032250      LEXD221 ; TEST DATA SET LEAD=221
7579 032250 152252 125252 175252 ;,WORD 152252,ALT0,ALT0,ALT0 ; INITIAL AC FLOAT NUMBER
7580 032256 125252      ;,WORD 0,0,0 ; EXPECTED FLOAT RESULT
7581 032260 000000 000000 000000
7582 032266 000000      ;,WORD -201 ; EXPONENT TO BE LOADED
7583 032270 177000      ;,WORD 045013,045004 ; FPS: BEFORE, AFTER
7584 032272 045013 045004      ;,WORD NA ; REC AFTER ( 0 = N/A )
7585 032276 000000
7586
7587
7588
7589
7590
7591
7592
7593 032300 000004      T8T5341 SCOPE
7594 032302 012705 032314      MOV    0LEXD23,R5 ; PTR TO TEST DATA SET
7595 032306 004737 041242      JSR    PC,04LEADT ; GO TEST
7596
7597 032312 000414      BR     T8T535         ;|
7598
7599 032314      LEXD231 ; TEST DATA SET LEAD=231
7600 032314 052217 007437 007417 ;,WORD 052217,ALT4,ALT4,ALT4 ; INITIAL AC FLOAT NUMBER
7601 032324 007417

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```

7602 032324 000000 000000 000000 .WORD 0,0,0 ; EXPECTED FLOAT RESULT
7603 032332 000000 000000 000000 .WORD -202 ; EXPONENT TO BE LOADED
7604 032334 177576 000000 .WORD 045753,045744 ; FPS: BEFORE, AFTER
7605 032336 045753 045744 .WORD NA ; FEC AFTER ( 0 = N/A )
7606 032342 000000 000000 000000
7607
7608
7609
7610
7611 *****
7612 *TEST 535 TEST OF LDEXP/D INSTR, DATA SET LEXU-24
7613 * UNDERFLOW INTERRUPT ENABLE OFF, ALL OTHERS ON
7614 * LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
7615 *****
7616 TST535: SCOPE
7617 MOV #LXD74,RS ; PTR TO TEST DATA SET
7618 JBR PC,09LXD7 ; GO TEST
7619 BR TST536 ;;
7620
7621 LEXD24: ; TEST DATA SET LEXD-24:
7622 .WORD 152328,ALTP,ALTP,ALTP ; INITIAL AC FLOAT NUMBER
7623
7624 .WORD 0,0,0 ; EXPECTED FLOAT RESULT
7625
7626 .WORD -203 ; EXPONENT TO BE LOADED
7627 .WORD 045683,045644 ; FPS: BEFORE, AFTER
7628 .WORD NA ; FEC AFTER ( 0 = N/A )
7629
7630

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```

7631 *****
7632 *TEST 536 TEST OF STEXP/F INSTR, DATA SET SEXF-1
7633 * ALL INTERRUPT ENABLES ON
7634 * SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES
7635 *****
7636 TST536: SCOPE
7637 MOV #SEXF1,RS ; PTR TO TEST DATA SET
7638 JBR PC,09SEAF1 ; GO TEST
7639 BR TST537 ;;
7640
7641 SEXF1: ; TEST DATA SET SEXF-1:
7642 .WORD M1,M1 ; INITIAL AC FLOAT NUMBER
7643 .WORD 177 ; EXPONENT EXPECTED TO BE STORED
7644 .WORD 047457,047448 ; FPS: BEFORE, AFTER
7645
7646
7647 *****
7648 *TEST 537 TEST OF STEXP/F INSTR, DATA SET SEXF-2
7649 * ALL INTERRUPT ENABLES ON
7650 * SHORT FLOAT, LONG INTEGER, ROUND MODES
7651 *****
7652 TST537: SCOPE
7653 MOV #SEXF2,RS ; PTR TO TEST DATA SET
7654 JBR PC,09SEAF2 ; GO TEST
7655 BR TST540 ;;
7656
7657 SEXF2: ; TEST DATA SET SEXF-2:
7658 .WORD 000052,ALTN ; INITIAL AC FLOAT NUMBER
7659 .WORD 100 ; EXPONENT EXPECTED TO BE STORED
7660 .WORD 047517,047508 ; FPS: BEFORE, AFTER
7661
7662
7663 *****
7664 *TEST 540 TEST OF STEXP/F INSTR, DATA SET SEXF-3
7665 * ALL INTERRUPT ENABLES ON
7666 * SHORT FLOAT, LONG INTEGER, TRUNCATE MODES
7667 *****
7668 TST540: SCOPE
7669 MOV #SEXF3,RS ; PTR TO TEST DATA SET
7670 JBR PC,09SEAF3 ; GO TEST
7671 BR TST541 ;;
7672
7673 SEXF3: ; TEST DATA SET SEXF-3:
7674 .WORD 140270,107070 ; INITIAL AC FLOAT NUMBER
7675 .WORD 1 ; EXPONENT EXPECTED TO BE STORED
7676 .WORD 047557,047540 ; FPS: BEFORE, AFTER
7677
7678
7679 *****
7680 *TEST 543 TEST OF STEXP/F INSTR, DATA SET SEXF-4
7681 * ALL INTERRUPT ENABLES ON
7682 * SHORT FLOAT, SHORT INTEGER, ROUND MODES
7683 *****
7684
7685
7686

```

7687 032512 000004
7688 032514 012705 032526
7689 032520 004737 041432
7690
7691 032524 000405
7692
7693 032526
7694 032526 040125 047417
7695 032532 000000
7696 032534 047413 047404
7697
7698
7699

T5411 SCOPE
MOV 0SEXP4,R5 ; PTR TO TEST DATA SET
JBR PC,0SEXP4 ; GO TEST
BR T5412 ;
SEXP4: ; TEST DATA SET SEXF=41
.WORD 040125,ALT4F ; INITIAL AC FLOAT NUMBER
.WORD 0 ; EXPONENT EXPECTED TO BE STORED
.WORD 047413,047404 ; FFS: BEFORE, AFTER

;TEST 542 TEST OF STEXP/F INSTR, DATA SET SEXF=5
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, ROUND MODES

7701 032540 000004
7702 032542 012705 032554
7703 032546 004737 041432
7704
7705 032552 000405
7706
7707 032554
7708 032554 137760 170300
7709 032560 177707
7710 032562 047407 047410
7711
7712
7713
7714
7715
7716
7717
7718
7719
7720

T5421 SCOPE
MOV 0SEXP5,R5 ; PTR TO TEST DATA SET
JBR PC,0SEXP5 ; GO TEST
BR T5423 ;
SEXP5: ; TEST DATA SET SEXF=51
.WORD 137760,ALT4F ; INITIAL AC FLOAT NUMBER
.WORD -1 ; EXPONENT EXPECTED TO BE STORED
.WORD 047407,047410 ; FFS: BEFORE, AFTER

;TEST 543 TEST OF STEXP/F INSTR, DATA SET SEXF=6
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, LONG INTEGER, ROUND MODES

7721 032566 000004
7722 032570 012705 032602
7723 032574 004737 041432
7724
7725 032600 000405
7726
7727 032602
7728 032602 100307 070707
7729 032606 177001
7730 032610 047507 047510
7731
7732
7733
7734
7735
7736
7737

T5431 SCOPE
MOV 0SEXP6,R5 ; PTR TO TEST DATA SET
JBR PC,0SEXP6 ; GO TEST
BR T5434 ;
SEXP6: ; TEST DATA SET SEXF=61
.WORD 100307,070707 ; INITIAL AC FLOAT NUMBER
.WORD -177 ; EXPONENT EXPECTED TO BE STORED
.WORD 047507,047510 ; FFS: BEFORE, AFTER

;TEST 544 TEST OF STEXP/F INSTR, DATA SET SEXF=7
; ALL INTERRUPT ENABLES ON
; SHORT FLOAT, SHORT INTEGER, TRUNCATE MODES

7738 032614 000004
7739 032616 012705 032630
7740 032622 004737 041432
7741
7742 032626 000405

T5441 SCOPE
MOV 0SEXP7,R5 ; PTR TO TEST DATA SET
JBR PC,0SEXP7 ; GO TEST
BR T5445 ;

7743
7744 032630
7745 032630 000000 000000
7746 032634 177000
7747 032636 047447 047450
7748
7749
7750

SEXP7: ; TEST DATA SET SEXF=71
.WORD 0,0 ; INITIAL AC FLOAT NUMBER
.WORD -200 ; EXPONENT EXPECTED TO BE STORED
.WORD 047447,047450 ; FFS: BEFORE, AFTER


```

7751
7752
7753
7754
7755
7756 032642 000004
7757 032644 012705 032656
7758 032650 004717 041506
7759
7760 032654 000407
7761
7762 032656
7763 032656 077600 000000 000000
7764 032664 000000
7765 032666 000177
7766 032670 047717 047700
7767
7768
7769
7770
7771
7772
7773
7774 032674 000004
7775 032676 012705 032710
7776 032702 004717 041506
7777
7778 032706 000407
7779
7780 032710
7781 032710 040360 170360 170360
7782 032716 170360
7783 032720 000001
7784 032722 047657 047640
7785
7786
7787
7788
7789
7790
7791
7792 032726 000004
7793 032730 012705 032742
7794 032734 004717 041506
7795
7796 032740 000407
7797
7798 032742
7799 032742 140107 070707 070707
7800 032750 070707
7801 032752 000000
7802 032754 047613 047604
7803
7804
7805
7806
)*****
)TEST 546 TEST OF STEAP/D INSTR, DATA SET SEXU-1
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, LONG INTEGER, ROUND MODES
)*****
TSTS46: SCOPE
MOV 0SEXD1,R5 ; PTR TO TEST DATA SET
JBR PC,0SEADT ; GO TEST
BR TSTS46 ;;
SEXD1: ; TEST DATA SET SEXU-1
.WORD 077600,0,0,0 ; INITIAL AC FLOAT NUMBER
.WORD 177 ; EXPONENT EXPECTED TO BE STORED
.WORD 047717,047700 ; FPS: BEFORE, AFTER
)*****
)TEST 547 TEST OF STEAP/D INSTR, DATA SET SEXU-2
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
)*****
TSTS47: SCOPE
MOV 0SEXD2,R5 ; PTR TO TEST DATA SET
JBR PC,0SEADT ; GO TEST
BR TSTS47 ;;
SEXD2: ; TEST DATA SET SEXU-2
.WORD 040360,ALT4R,ALT4R,ALT4R ; INITIAL AC FLOAT NUMBER
.WORD 1 ; EXPONENT EXPECTED TO BE STORED
.WORD 047657,047640 ; FPS: BEFORE, AFTER
)*****
)TEST 547 TEST OF STEAP/D INSTR, DATA SET SEXU-1
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, SHORT INTEGER, ROUND MODES
)*****
TSTS47: SCOPE
MOV 0SEXD3,R5 ; PTR TO TEST DATA SET
JBR PC,0SEADT ; GO TEST
BR TSTS47 ;;
SEXD3: ; TEST DATA SET SEXU-3
.WORD 140107,070707,070707,070707 ; INITIAL AC FLOAT NUMBER
.WORD 0 ; EXPONENT EXPECTED TO BE STORED
.WORD 047613,047604 ; FPS: BEFORE, AFTER
)*****
)TEST 550 TEST OF STEAP/D INSTR, DATA SET SEXU-4

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```

7807
7808
7809
7810 032760 000004
7811 032762 012705 032774
7812 032766 004717 041506
7813
7814 032772 000407
7815
7816 032774
7817 032774 037652 126252 126252
7818 033002 126252
7819 033004 177777
7820 033006 047707 047710
7821
7822
7823
7824
7825
7826
7827
7828 033012 000004
7829 033014 012705 033026
7830 033020 004717 041506
7831
7832 033024 000407
7833
7834 033026
7835 033026 170770 107070 107070
7836 033034 107070
7837 033036 177700
7838 033040 047747 047750
7839
7840
7841
7842
7843
7844
7845
7846
7847 033044 000004
7848 033046 012705 033050
7849 033052 004717 041506
7850
7851 033056 000407
7852
7853 033060
7854 033060 000217 007417 007417
7855 033066 007417
7856 033070 177001
7857 033072 047647 047600
7858
7859
7860
7861
7862
)*****
)TEST 551 TEST OF STEAP/D INSTR, DATA SET SEXU-5
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, LONG INTEGER, TRUNCATE MODES
)*****
TSTS51: SCOPE
MOV 0SEXD5,R5 ; PTR TO TEST DATA SET
JBR PC,0SEADT ; GO TEST
BR TSTS51 ;;
SEXD5: ; TEST DATA SET SEXU-5
.WORD 120070,107070,107070,107070 ; INITIAL AC FLOAT NUMBER
.WORD -100 ; EXPONENT EXPECTED TO BE STORED
.WORD 047747,047750 ; FPS: BEFORE, AFTER
)*****
)TEST 552 TEST OF STEAP/D INSTR, DATA SET SEXU-6
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, SHORT INTEGER, TRUNCATE MODES
)*****
TSTS52: SCOPE
MOV 0SEXD6,R5 ; PTR TO TEST DATA SET
JBR PC,0SEADT ; GO TEST
BR TSTS52 ;;
SEXD6: ; TEST DATA SET SEXU-6
.WORD 000217,ALT4P,ALT4P,ALT4P ; INITIAL AC FLOAT NUMBER
.WORD -177 ; EXPONENT EXPECTED TO BE STORED
.WORD 047647,047600 ; FPS: BEFORE, AFTER
)*****
)TEST 553 TEST OF STEAP/D INSTR, DATA SET SEXU-7
)
) ALL INTERRUPT ENABLES ON
) LONG FLOAT, SHORT INTEGER, ROUND MODES
)*****

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7954 033254 000327          DEC      (PC)+      ; PASS LOOP 7
7955 033256 000001          $EOPCT1 ,WORD 1      ;
7956 033260 000001          MOV      $DOAGH      ;
7957 033262 012737          MOV      (PC)+,(PC)+ ; RESTORE COUNTER
7958 033264 000001          $EOPCT1 ,WORD 1      ;
7959 033266 033250          $EOPCT1          ;
7960 033270 012777 002000 145040 BIT      $BWB0,$BWB  ; BEG ON PASS AND 1
7961 033276 001002          BNE     $GET42      ; NO
7962 033300 104401 001314          TYPE   ,$BELL      ; YES
7963
7964 033304 013700 000042          $GET42: MOV     $42,$0 ; GET MONITOR ADDRESS
7965 033310 001405          BCU     $DOAGH      ; NO MONITOR
7966 033312 000005          RESET          ; CLEAR WORLD
7967
7968 033314 004710          $ENDAD: JBR    PC,(R0) ; GO TO MONITOR
7969 033316 000240          NOP
7970 033320 000240          NOP
7971 033322 000240          NOP
7972
7973 033324 000137 003034          $DOAGH: JMP    $ENEMPAD ; RETURN
7974
7975

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7956
7957
7958 033330 012700 000007          $MUTL  SUBR TO TEST THE CMPF INSTRUCTION
7959 033334 014001          CMPFI:  MOV     $7,$0 ; LOAD STMP=6
7960 033336 012702 001230          MOV     R0,R1      ; WITH TEST DATA SETS
7961 033340 012702 001230          MOV     $TMP0,R2   ; FOR DISPLAY LATER
7962 033342 012122          MOV     (R1)+,(R2)+ ;
7963 033344 017002          SUB     R0,#2      ;
7964 033346 012737 033354 001112          MOV     $CMPFL,$LPERA ; ERROR LOOPING ADDRESS
7965
7966 033354 170001          CMPFL:  SETF   (R0),AC0 ; F MODE
7967 033356 172710          LDF    (R0),AC0   ; INITIAL AC FLOAT NUMBER
7968 033360 170165 000010          LDFPS (R0)        ; INITIAL FPS
7969
7970 033364 173765 000004          CMPFI:  CMPF   4(R0),AC0 ; (MEM)-(AC)
7971
7972 033370 170237 002000          STPS  FPS        ; STORE FPS AFTER
7973 033374 170237 002002          STF   FEC        ; STORE FEC/FEA AFTER
7974 033380 174337 001170          STF   AC0,$REG0  ; STORE AC NUMBER
7975
7976 033404 023760 002000 000012          CMP    FPS,12(R0) ; CHECK FPS
7977 033412 001401          BEQ   $ERR      ; FPS IS OK
7978 033414 104002          ERROR 2         ; FPS BAD
7979 033416 000765 000014          $ERR:  EST    14(R0) ; DOES FEC/FEA APPLY
7980 033422 100014          BPL   $ERR      ; NO - SKIP TEST
7981 033424 012737 033364 002014          MOV     $CMPFI,$EXPPA ; GET EXPECTED FEA
7982 033432 143765 002002 000014          CNPR  FEC,14(R0)  ; COMPARE FEC=6
7983 033440 001004          BNE   $ERR      ; NOT EQUAL
7984 033442 023737 002004 002014          CMP   FEA,$EXPPA ; COMPARE FEA=6
7985 033450 001401          BEQ   $ERR      ; FEC, FEA OK
7986 033452 104012          $ERR:  ERROR 12  ; FEC OR FEA ARE BAD
7987 033454 000000
7988
7989 033454 023715 001170          CMP    $REG0,(R0) ; 1ST WORD OF RESULT CHECK?
7990 033460 001004          BNE   $ERR      ; NO
7991 033462 023765 001172 000002          CMP    $REG1,2(R0) ; 2ND WORD OF RESULT CHECK?
7992 033470 001401          BEQ   $ERR      ; ALL WORDS OK
7993 033472 104021          $ERR:  ERROR 21  ; NUMBERS NOT EQUAL
7994 033474
7995
7996 033474 000201          RTS    PC        ; RETURN TO TEST CALLER
7997
7998
7999
8000
8001
8002
8003 033476 012700 000013          $MUTL  SUBR TO TEST THE CMPD INSTRUCTION
8004 033480 010001          CMPDI:  MOV     $12,$0 ; LOAD STMP=12
8005 033482 012702 001230          MOV     R0,R1      ; WITH TEST DATA SETS
8006 033484 012702 001230          MOV     $TMP0,R2   ; FOR DISPLAY LATER
8007 033486 012122          MOV     (R1)+,(R2)+ ;
8008 033488 017402          SUB     R0,#2      ;
8009 033490 012737 033522 001112          MOV     $CMPDI,$LPERA ; ERROR LOOPING ADDRESS
8010
8011 033522 170011          CMPDI:  SETD   (R0),AC0 ; D MODE
8012 033524 172015          LOD   (R0),AC0   ; INITIAL AC FLOAT NUMBER

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0012 033526 170165 000020          LOPFB 20(RB)          ; INITIAL FFS
0013
0014 033532 173665 000010          CMPD11 CMPD 10(RB),AC2 ; (MEM)-(AC2)
0015
0016 033536 170237 002000          STFPS FFS            ; STORE FFS AFTER
0017 033542 170337 002002          STST  FEC            ; STORE FEC/FEA AFTER
0018 033546 174217 001170          STD   AC2,0REG0      ; STORE AC AFTER
0019
0020 033552 023765 002000 000022          CMP   FFS,22(RB)     ; CHECK FFS
0021 033560 001401          BEQ   650             ; FFS IS OK
0022 033562 104000          ERROR 5              ; FFS BAD
0023 033564 005765 000024          0501  TST  24(RB)     ; DOES FEC/FEA APPLY?
0024 033570 100014          BPL   660             ; NO - SKIP TEST
0025 033572 012737 033532 002014          MOV   0ADDF1,EXPFEA ; GET EXPECTED FEA
0026 033600 123765 002002 000024          CMPB  FEC,24(RB)     ; COMPARE FEC-B
0027 033606 001004          BNE   640             ; NOT EQUAL
0028 033610 023737 002004 002014          CMP   FEA,EXPFEA    ; COMPARE FEA-B
0029 033616 001401          BEQ   660             ; FEC, FEA OK
0030 033620 104010          0401  ERROR 15       ; FEC OR FEA ARE BAD
0031 033622
0032
0033 033622 023715 001170          CMP   0REG0,(R5)     ; 1ST WORD OF RESULT CHECK?
0034 033626 001014          BNE   670             ; NO
0035 033630 023765 001172 000002          CMP   0REG1,2(R5)   ; 2ND WORD OF RESULT CHECK?
0036 033636 001010          BNE   670             ; NO
0037 033640 023765 001174 000004          CMP   0REG2,4(R5)   ; 3RD WORD OF RESULT CHECK?
0038 033646 001004          BNE   670             ; NO
0039 033650 023765 001176 000006          CMP   0REG3,6(R5)   ; 4TH WORD OF RESULT CHECK?
0040 033656 001401          BEQ   680             ; ALL WORDS OK
0041 033660 104022          0701  ERROR 22       ; NUMBERS NOT EQUAL
0042 033662
0043
0044 033662 000207          RTS   PC              ; RETURN TO TEST CALLER
0045

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0046          .SBTTL  SUBR TO TEST THE ADDF INSTRUCTION
0047
0048          ADDF11
0049 033664          MOV   R1,R0          ; LOAD SIMPO-10
0050 033670 010001          MOV   R5,R1          ; WITH TEST DATA SETS
0051 033672 012702 001230          MOV   0STMP0,R2     ; FOR DISPLAY LATER
0052 033676 012122          MOV   (R1)+,(R2)+   ;
0053 033700 077002          SOB   R0,-2         ;
0054 033702 012737 033710 001112          MOV   0ADDF1,0LPE0R ; ERROR LOOPING ADDRESS
0055
0056 033710 170001          ADDF11 SETF          ; F MODE
0057 033712 172515          LOF   (R5),AC1      ; INITIAL AC FLOAT NUMBER
0058 033714 170165 000014          LOPFB 14(RB)        ; INITIAL FFS
0059
0060 033720 172165 000004          ADDF11 ADDF 4(R5),AC1 ; (AC1)+(MEM)->PAC1
0061
0062 033726 170237 002000          STFPS FFS            ; STORE FFS AFTER
0063 033730 170337 002002          STST  FEC            ; STORE FEC/FEA AFTER
0064 033734 174217 001170          STD   AC1,0REG0      ; RESULT OF ADDF
0065
0066 033740 023765 002000 000016          CMP   FFS,16(R5)     ; CHECK FFS
0067 033746 001401          BEQ   690             ; FFS IS OK
0068 033750 104004          ERROR 4              ; FFS BAD
0069 033752 005765 000020          0501  TST  20(RB)     ; DOES FEC/FEA APPLY?
0070 033756 100014          BPL   680             ; NO - SKIP TEST
0071 033760 012737 033720 002014          MOV   0ADDF1,EXPFEA ; GET EXPECTED FEA
0072 033766 123765 002002 000020          CMPB  FEC,20(RB)     ; COMPARE FEC-B
0073 033774 001004          BNE   640             ; NOT EQUAL
0074 033776 023737 002004 002014          CMP   FEA,EXPFEA    ; COMPARE FEA-B
0075 034004 001401          BEQ   680             ; FEC, FEA OK
0076 034006 104014          0401  ERROR 14       ; FEC OR FEA ARE BAD
0077 034010
0078
0079 034010 023765 001170 000010          CMP   0REG0,0(R5)   ; 1ST WORD OF RESULT CHECK?
0080 034016 001004          BNE   670             ; NO
0081 034020 023765 001172 000012          CMP   0REG1,12(R5)  ; 2ND WORD OF RESULT CHECK?
0082 034026 001401          BEQ   680             ; ALL WORDS OK
0083 034030 104022          0701  ERROR 21       ; NUMBERS NOT EQUAL
0084 034032
0085
0086 034032 000207          RTS   PC              ; RETURN TO TEST CALLER
0087
0088          *****
0089          .SBTTL  SUBR TO TEST THE ADDD INSTRUCTION
0090
0091          ADDD11
0092 034034          MOV   R1,R0          ; LOAD SIMPO-10
0093 034040 010001          MOV   R5,R1          ; WITH TEST DATA SETS
0094 034042 012702 001230          MOV   0STMP0,R2     ; FOR DISPLAY LATER
0095 034046 012122          MOV   (R1)+,(R2)+   ;
0096 034050 077002          SOB   R0,-2         ;
0097 034052 012737 034060 001112          MOV   0ADDD1,0LPE0R ; ERROR LOOPING ADDRESS
0098
0099 034060 170011          ADDD11 SETD          ; D MODE
0100 034062 172415          LOD   (R5),AC0      ; INITIAL AC FLOAT NUMBER
0101 034064 170165 000010          LOPFB 10(RB)        ; INITIAL FFS

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SUBR TO TEST THE ADD INSTRUCTION

0101 034070 172065 000010 ADDD1: ADD 10(RS),AC0 ; (AC0)+(MEM)->AC0
0102 034074 170237 002000 STFP: FFS ; STORE FFS AFTER
0103 034100 170337 002002 STST: FEC ; STORE FEC/FEA AFTER
0104 034104 174037 001170 STD: AC0,BREG0 ; RESULT OF ADD0
0105 034110 023765 002000 000032 CMP: FFS,32(RS) ; CHECK FFS
0106 034114 001401 BEQ: 650 ; FFS IS OK
0107 034120 104007 ERROR: 7 ; FFS BAD
0108 034122 005765 000034 650: TST 34(RS) ; DOES FEC/FEA APPLY?
0109 034126 100014 SFL: 660 ; NU = SKIP TEST
0110 034130 012737 034070 002014 MOV: 0ADD1,EXPFEA ; GET EXPECTED FEA
0111 034136 123765 002002 000034 CMPB: FEC,34(RS) ; COMPARE FEC-S
0112 034144 001004 BNE: 640 ; NOT EQUAL
0113 034146 023737 002004 002014 CMP: FEA,EXPFEA ; COMPARE FEA-S
0114 034154 001401 BEQ: 660 ; FEC, FEA OK
0115 034156 104017 040: ERROR: 17 ; FEC OR FEA ARE BAD
0116 034160 060: 660:
0121 034164 023765 001170 000020 CMP: BREG0,20(RS) ; 1ST WORD OF RESULT CHECK
0122 034166 001014 BNE: 670 ; NO
0123 034170 023765 001172 000022 CMP: BREG1,22(RS) ; 2ND WORD OF RESULT CHECK
0124 034176 001010 BNE: 670 ; NO
0125 034200 023765 001174 000024 CMP: BREG2,24(RS) ; 3RD WORD OF RESULT CHECK
0126 034206 001004 BNE: 670 ; NO
0127 034210 023765 001176 000026 CMP: BREG3,26(RS) ; 4TH WORD OF RESULT CHECK
0128 034216 001401 BEQ: 660 ; ALL WORDS OK
0129 034220 104024 070: ERROR: 24 ; NUMBERS NOT EQUAL
0130 034222 060: 660:
0131 034224 000027 RTS: PC ; RETURN TO TEST CALLER
0132 034226 000027
0133 034228 000027
0134 034230 000027

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SUBR TO TEST THE SUBF INSTRUCTION

0135 034224 012700 000011 SUBFT: MOV R1,R0 ; LOAD SIMPO-10
0136 034230 010501 MOV: R0,R1 ; WITH TEST DATA SETS
0137 034232 012702 001230 MOV: 0STMP0,R2 ; FOR DISPLAY LATER
0138 034236 012122 MOV: (R1)+(R2)+ ;
0139 034240 017002 SOB: R0,-2 ;
0140 034242 012737 034230 001112 MOV: 0SUBTL,0LPCNR ; ERROR LOOPING ADDRESS
0141 034250 170001 SUBFL: SETF ; F MODE
0142 034252 172415 LDF: (RS),AC0 ; INITIAL AC FLOAT NUMBER
0143 034254 170100 000014 LOFPS: 14(RS) ; INITIAL FPS
0144 034260 173065 000004 SUBFI: SUBF 4(RS),AC0 ; (AC0)-(MEM)->AC0
0145 034264 170237 002000 STFP: FFS ; STORE FFS AFTER
0146 034270 170337 002002 STST: FEC ; STORE FEC/FEA AFTER
0147 034274 174037 001170 STD: AC0,BREG0 ; RESULT OF SUBF
0148 034300 023765 002000 000010 CMP: FFS,16(RS) ; CHECK FFS
0149 034306 001401 BEQ: 650 ; FFS IS OK
0150 034310 104004 ERROR: 4 ; FFS BAD
0151 034312 005765 000020 650: TST 20(RS) ; DOES FEC/FEA APPLY?
0152 034316 100014 SFL: 660 ; NU = SKIP TEST
0153 034320 012737 034260 002014 MOV: 0SUBFI,EXPFEA ; GET EXPECTED FEA
0154 034326 123765 002002 000020 CMPB: FEC,20(RS) ; COMPARE FEC-S
0155 034330 001004 BNE: 640 ; NOT EQUAL
0156 034336 023737 002004 002014 CMP: FEA,EXPFEA ; COMPARE FEA-S
0157 034340 001401 BEQ: 660 ; FEC, FEA OK
0158 034346 104014 040: ERROR: 14 ; FEC OR FEA ARE BAD
0159 034350 060: 660:
0160 034354 023765 001170 000010 CMP: BREG0,10(RS) ; 1ST WORD OF RESULT CHECK
0161 034356 001004 BNE: 670 ; NO
0162 034360 023765 001172 000012 CMP: BREG1,12(RS) ; 2ND WORD OF RESULT CHECK
0163 034366 001401 BEQ: 660 ; ALL WORDS OK
0164 034370 104023 070: ERROR: 23 ; NUMBERS NOT EQUAL
0165 034372 000027 RTS: PC ; RETURN TO TEST CALLER
0166 034374 000027
0167 034376 000027
0168 034378 000027
0169 034380 000027
0170 034382 000027
0171 034384 000027
0172 034386 000027
0173 034388 000027
0174 034390 000027
0175 034392 000027
0176 034394 000027
0177 034396 000027
0178 034398 000027
0179 034400 000027
0180 034402 012730 000017 SUBDT: MOV R1,R0 ; LOAD SIMPO-16
0181 034404 010501 MOV: R0,R1 ; WITH TEST DATA SETS
0182 034406 012702 001230 MOV: 0STMP0,R2 ; FOR DISPLAY LATER
0183 034408 012122 MOV: (R1)+(R2)+ ;
0184 034410 017002 SOB: R0,-2 ;
0185 034412 012737 034400 001112 MOV: 0SUBDL,0LPCNR ; ERROR LOOPING ADDRESS
0186 034420 170011 SUBDL: SETD ; D MODE
0187 034422 172715 LOD: (RS),AC1 ; INITIAL AC FLOAT NUMBER
0188 034424 170105 000010 LOFPS: 30(RS) ; INITIAL FPS

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0191
0192 034430 171165 000010 SUBDI: SUBD 10(R5),AC3 ; (AC3)-(MEM)->AC3
0193
0194 034434 170237 002000 STFPS FFS ; STORE FFS AFTER
0195 034440 170337 002002 STBT FEC ; STORE FEC/FEA AFTER
0196 034444 170337 001170 STD AC3,ERR00 ; RESULT OF SUBD
0197
0198 034450 023765 002000 000032 CMP FFS,32(R5) ; CHECK FFS
0199 034456 001401 BEQ 656 ; FFS IS OK
0200 034460 100007 LRROR 7 ; FFS BAD
0201 034462 005765 000034 658) TBT 34(R5) ; DOES FEC/FEA APPLI?
0202 034466 100014 BPL 668 ; NO - SKIP TEST
0203 034470 012737 034430 002014 MOV #SUBDI,EXPFEA ; GET EXPECTED FEA
0204 034476 123765 002002 000034 CMPB FEC,34(R5) ; COMPARE FEC-S
0205 034504 001004 BNE 648 ; NOT EQUAL
0206 034506 023737 002004 002014 CMP FEA,EXPFEA ; COMPARE FEA-S
0207 034514 001401 BEQ 668 ; FEC, FEA OK
0208 034516 100017 648) ERNOR 17 ; FEC OR FEA ARE BAD
0209 034520 668)
0210
0211 034520 023765 001170 000020 CMP #REG0,20(R5) ; 1ST WORD OF RESULT CHECK?
0212 034526 001014 BNE 678 ; NO
0213 034530 023765 001172 000022 CMP #REG1,22(R5) ; 2ND WORD OF RESULT CHECK?
0214 034536 001010 BNE 678 ; NO
0215 034540 023765 001174 000024 CMP #REG2,24(R5) ; 3RD WORD OF RESULT CHECK?
0216 034546 001004 BNE 678 ; NO
0217 034550 023765 001176 000026 CMP #REG3,26(R5) ; 4TH WORD OF RESULT CHECK?
0218 034556 001401 BEQ 688 ; ALL WORDS OK
0219 034560 100024 678) ERNOR 24 ; NUMBERS NOT EQUAL
0220 034562 688)
0221
0222 034562 000207 RTS PC ; RETURN TO TEST CALLER
0223
    
```

```

0224
0225
0226 034564 012700 000011 MULFI: MOV #17,R0 ; LOAD SIMPO-10
0227 034566 010501 MOV R5,R1 ; WITH TEST DATA SETS
0228 034570 012702 001230 MOV #SIMPO,R2 ; FOR DISPLAY LATER
0229 034576 012122 MOV (R1),R2+ ;
0230 034600 012737 SUB #0,-2 ;
0231 034602 012737 034610 001112 MOV #MULFI,6LPEMR ; ERROR LOOPING ADDRESS
0232
0233
0234 034610 170001 MULFI: SETD ; F MODE
0235 034612 172715 LDF (R5),AC3 ; INITIAL AC FLOOR NUMBER
0236 034614 170165 000014 LOFPS 14(R5) ; INITIAL FFS
0237
0238 034620 171165 000004 MULFI: MULF 4(R5),AC3 ; (AC3)-(MEM)->AC3
0239
0240 034624 170237 002000 STFPS FFS ; STORE FFS AFTER
0241 034630 170337 002002 STBT FEC ; STORE FEC/FEA AFTER
0242 034634 170337 001170 STD AC3,ERR00 ; RESULT OF MULF
0243
0244 034640 023765 002000 000016 CMP FFS,16(R5) ; CHECK FFS
0245 034646 001401 BEQ 658 ; FFS IS OK
0246 034650 100004 LRROR 4 ; FFS BAD
0247 034652 005765 000020 658) TBT 20(R5) ; DOES FEC/FEA APPLI?
0248 034656 100014 BPL 668 ; NO - SKIP TEST
0249 034660 012737 034620 002014 MOV #MULFI,EXPFEA ; GET EXPECTED FEA
0250 034666 123765 002002 000020 CMPB FEC,20(R5) ; COMPARE FEC-S
0251 034674 001004 BNE 648 ; NOT EQUAL
0252 034676 023737 002004 002014 CMP FEA,EXPFEA ; COMPARE FEA-S
0253 034704 001401 BEQ 668 ; FEC, FEA OK
0254 034706 100016 648) ERNOR 16 ; FEC OR FEA ARE BAD
0255 034710 668)
0256
0257 034710 023765 001170 000010 CMP #REG0,10(R5) ; 1ST WORD OF RESULT CHECK?
0258 034716 001004 BNE 678 ; NO
0259 034720 023765 001172 000012 CMP #REG1,12(R5) ; 2ND WORD OF RESULT CHECK?
0260 034726 001401 BEQ 688 ; ALL WORDS OK
0261 034730 100025 678) ERNOR 25 ; NUMBERS NOT EQUAL
0262 034732 688)
0263
0264 034732 000207 RTS PC ; RETURN TO TEST CALLER
0265
0266
0267
0268
0269 034734 012700 000017 MULDI: MOV #17,R0 ; LOAD SIMPO-10
0270 034736 010501 MOV R5,R1 ; WITH TEST DATA SETS
0271 034740 012702 001230 MOV #SIMPO,R2 ; FOR DISPLAY LATER
0272 034746 012122 MOV (R1),R2+ ;
0273 034750 012737 SUB #0,-2 ;
0274 034752 012737 034740 001112 MOV #MULDI,6LPEMR ; ERROR LOOPING ADDRESS
0275
0276
0277 034760 170001 MULDI: SETD ; F MODE
0278 034762 172715 LDF (R5),AC3 ; INITIAL AC FLOOR NUMBER
0279 034764 170165 000010 LOFPS 10(R5) ; INITIAL FFS
    
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0309
0370 035330 174565 000010 DIVD1: DIVO 1P(R5),AC1 ; (AC1)/(MEM)->AC1
0371
0372 035334 174237 002000 STFPB FFB ; STORE FFB AFTER
0373 035340 174237 002002 STST FEC ; STORE FEC/FLA AFTER
0374 035344 174137 001170 STD AC1,BREG0 ; RESULT OF DIVO
0375
0376 035350 023765 002000 000032 CMP FFB,32(R5) ; CHECK FFB
0377 035356 001401 BEQ 050 ; FFB IS OK
0378 035360 104007 ERROR 7 ; FFB BAD
0379 035362 005765 000034 050: TST 34(R5) ; DOES FEC/FLA APPLY?
0380 035364 100014 BPL 060 ; NO - SKIP TEST
0381 035370 112737 035330 002014 MOV #DIVDI,EXPPFA ; GET EXPECTED FLA
0382 035376 123765 002002 000034 CMPB FEC,34(R5) ; COMPARE FEC=S
0383 035384 001004 BNE 048 ; NOT EQUAL
0384 035386 023737 002004 002014 CMP FFA,EXPPFA ; COMPARE FFA=S
0385 035394 001401 BEQ 060 ; FEC, FFA OK
0386 035410 104017 048: ERROR 17 ; FEC OR FFA ARE BAD
0387 035420 060:
0388
0389 035420 023765 001170 000020 CMP BREG0,20(R6) ; 1ST WORD OF RESULT CHECK?
0390 035426 001014 BNE 070 ; NO
0391 035430 023765 001172 000022 CMP BREG1,22(R6) ; 2ND WORD OF RESULT CHECK?
0392 035436 001014 BNE 070 ; NO
0393 035440 023765 001174 000024 CMP BREG2,24(R6) ; 3RD WORD OF RESULT CHECK?
0394 035446 001014 BNE 070 ; NO
0395 035450 023765 001176 000026 CMP BREG3,26(R6) ; 4TH WORD OF RESULT CHECK?
0396 035456 001401 BEQ 080 ; ALL WORDS OK
0397 035460 104020 070: ERROR 20 ; NUMBERS NOT EQUAL
0398 035462
0399
0400 035462 000207 RTS PC ; RETURN TO TEST CALLER
0401
0402

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```

0403
0404
0405 035464 112700 000013 MODF1: MOV #13,R0 ; LOAD STMP0=12
0406 035470 010501 MOV R5,R1 ; WITH TEST DATA WORDS
0407 035472 112702 001230 MOV #STMP0,R2 ; FOR DISPLAY LATER
0408 035476 012122 MOV (R1),R2 ;
0409 035500 077002 SOB R0,-2 ;
0410 035502 012737 035510 001112 MOV #MODF1,BLPEMR ; ERROR LOOKING AHEAD=S
0411
0412
0413 035510 170001 MODF1: SETF ; F MODE
0414 035512 172015 LDF (R5),AC2 ; INITIAL AC FLUA1 NUMBER
0415 035514 172737 002036 LDF #PREVAC,AC3 ; FOR FEC=14 TEST
0416 035520 170100 000020 LDFPB 20(R5) ; INITIAL FFB
0417
0418 035524 171065 000004 MODF1: MOVF 4(R5),AC2 ; FRAC((AC2)*(MEM))>AC2
0419 ; INT((AC2)*(MEM))>AC3
0420
0421 035530 170237 002000 STFPB FFB ; STORE FFB AFTER
0422 035534 170237 002002 STST FEC ; STORE FEC/FLA AFTER
0423 035540 174237 001170 STF AC2,BREG0 ; STORE FRAC PART
0424 035544 174237 001174 STF AC3,BREG2 ; STORE INT PART
0425
0426 035550 023765 002000 000422 CMP FFB,22(R5) ; CHECK FFB
0427 035556 001401 BEQ 050 ; FFB IS OK
0428 035560 104007 ERROR 5 ; FFB BAD
0429 035562 005765 000024 050: TST 24(R5) ; DOES FEC/FLA APPLY?
0430 035566 100014 BPL 060 ; NO - SKIP TEST
0431 035570 012737 035524 002414 MOV #MODF1,EXPPFA ; GET EXPECTED FLA
0432 035576 123765 002002 000024 CMPB FEC,24(R5) ; COMPARE FEC=S
0433 035600 001004 BNE 048 ; NOT EQUAL
0434 035606 023737 002004 002014 CMP FFA,EXPPFA ; COMPARE FFA=S
0435 035614 001401 BEQ 060 ; FEC, FFA OK
0436 035616 104015 048: ERROR 15 ; FEC OR FFA ARE BAD
0437 035620 060:
0438
0439 ; CHECK FRACTION PART
0440 035620 023765 001170 000010 CMP BREG0,10(R5) ; 1ST WORD OF RESULT CHECK?
0441 035626 001014 BNE 070 ; NO
0442 035630 023765 001172 000012 CMP BREG1,12(R5) ; 2ND WORD OF RESULT CHECK?
0443 035636 001401 BEQ 080 ; ALL WORDS OK
0444 035640 104027 060: ERROR 27 ; NUMBERS NOT EQUAL
0445 035642
0446
0447 ; CHECK INTEGER PART
0448 035642 023765 001174 000014 CMP BREG2,14(R5) ; 1ST WORD OF RESULT CHECK?
0449 035650 001014 BNE 070 ; NO
0450 035652 023765 001176 000016 CMP BREG3,16(R5) ; 2ND WORD OF RESULT CHECK?
0451 035660 001401 BEQ 080 ; ALL WORDS OK
0452 035662 104030 070: ERROR 30 ; NUMBERS NOT EQUAL
0453 035664
0454
0455 035664 000207 RTS PC ; RETURN TO TEST CALLER
0456
0457
0458

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0528          .SBTTL SUBR TO TEST THE MODD INSTRUCTION, USING 1 ACCUMULATOR
0529          MDI1T1
0530          MOV     R13,R0          ; LOAD STMP0=12
0531          MOV     R5,R1          ; WITH TEST DATA BITS
0532          MOV     @STMP0,R2     ; FOR DISPLAY LATER
0533          MOV     (R1),R2+      ;
0534          SOB     R0,-2         ;
0535          MOV     @MD1FL,@LPERM ; ERROR LOOPING ADDRESS
0536
0537          MDIFL1 SETF     (R5),AC1 ; I F MODD
0538          LDF     PREVAC,AC2    ; INITIAL AC FLOAT NUMBER
0539          LDFPB  Z0CR0         ; AC2 SHOULD NOT CHANGE
0540          LDFPB  Z0CR0         ; INITIAL FFS
0541
0542          MDIFI1 MODF     4(R5),AC3 ; FRAC((AC3)*(MEM1))->PAC1
0543          ; INT((AC3)*(MEM1))->L0B1
0544
0545          STFPB  FFB          ; STORE FFB AFTER
0546          STST  FEC          ; STORE FEC/FEA AFTER
0547          STF   AC3,@REG0     ; STORE FRAC PART
0548          STF   AC2,@REG2     ; STORE UNCHANGED AC3
0549
0550          CMP     FFB,22(R5)    ; CHECK FFB
0551          BEQ   @64          ; FFB IS OK
0552          ERROR  5           ; FFB BAD
0553          TST   Z0(R5)        ; DOES FEC/FEA APPLY?
0554          BPL   @66          ; NO - SKIP TEST
0555          MOV   @MD1FI,EXPFEA ; GET EXPECTED FEA
0556          CMPB  FEC,24(R5)    ; COMPARE FEC-B
0557          BNE   @68          ; NOT EQUAL
0558          CMP   FEA,EXPFEA    ; COMPARE FEA-B
0559          BEQ   @68          ; FEC, FEA OK
0560          ERROR  15          ; FEC OR FEA ARE BAD
0561
0562          ; CHECK FRACTION PART
0563          CMP   @REG0,10(R5)   ; 1ST WORD OF RESULT CHECK?
0564          BNE   @78          ; NO
0565          CMP   @REG1,12(R5)   ; 2ND WORD OF RESULT CHECK?
0566          BEQ   @68          ; ALL WORDS OK
0567          ERROR  27          ; NUMBERS NOT EQUAL
0568
0569          ; CHECK UNCHANGED PART
0570          CMP   @REG2,14(R5)   ; 1ST WORD OF RESULT CHECK?
0571          BNE   @68          ; NO
0572          CMP   @REG3,16(R5)   ; 2ND WORD OF RESULT CHECK?
0573          BEQ   @68          ; ALL WORDS OK
0574          ERROR  30          ; NUMBERS NOT EQUAL
0575
0576          STS   PC            ; RETURN TO TEST CALLER
0577
0578          ;*****

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0576          .SBTTL SUBR TO TEST THE MODD INSTRUCTION, USING 1 ACCUMULATOR
0577          MDI0T1
0578          MOV     R23,R0          ; LOAD STMP0=22
0579          MOV     R5,R1          ; WITH TEST DATA BITS
0580          MOV     @STMP0,R2     ; FOR DISPLAY LATER
0581          MOV     (R1),R2+      ;
0582          SOB     R0,-2         ;
0583          MOV     @MD1DL,@LPERM ; ERROR LOOPING ADDRESS
0584
0585          MDI0L1 SETD     (R5),AC1 ; D MODE
0586          LDD     PREVAC,AC0    ; INITIAL AC FLOAT NUMBER
0587          LDDPB  Z0CR0         ; AC0 SHOULD NOT CHANGE
0588          LDDPB  Z0CR0         ; INITIAL FFS
0589
0590          MDI0I1 MODD     10(R5),AC1 ; FRAC((AC1)*(MEM1))->PAC1
0591          ; INT((AC1)*(MEM1))->L0B1
0592
0593          STFPB  FFB          ; STORE FFB AFTER
0594          STST  FEC          ; STORE FEC/FEA AFTER
0595          STD   AC1,@REG0     ; STORE FRAC PART
0596          STD   AC0,@REG4     ; STORE UNCHANGED ACW
0597
0598          CMP     FFB,42(R5)    ; CHECK FFB
0599          BEQ   @66          ; FFB IS OK
0600          ERROR  10          ; FFB BAD
0601          TST   Z0(R5)        ; DOES FEC/FEA APPLY?
0602          BPL   @68          ; NO - SKIP TEST
0603          MOV   @MD1DI,EXPFEA ; GET EXPECTED FEA
0604          CMPB  FEC,44(R5)    ; COMPARE FEC-B
0605          BNE   @68          ; NOT EQUAL
0606          CMP   FEA,EXPFEA    ; COMPARE FEA-B
0607          BEQ   @68          ; FEC, FEA OK
0608          ERROR  20          ; FEC OR FEA ARE BAD
0609
0610          ; CHECK FRACTION PART OF RESULT
0611          CMP   @REG0,20(R5)   ; 1ST WORD OF RESULT CHECK?
0612          BNE   @78          ; NO
0613          CMP   @REG1,22(R5)   ; 2ND WORD OF RESULT CHECK?
0614          BNE   @78          ; NO
0615          CMP   @REG2,24(R5)   ; 3RD WORD OF RESULT CHECK?
0616          BNE   @78          ; NO
0617          CMP   @REG3,26(R5)   ; 4TH WORD OF RESULT CHECK?
0618          BEQ   @68          ; ALL WORDS OK
0619          ERROR  31          ; NUMBERS NOT EQUAL
0620
0621          ; CHECK UNCHANGED PART
0622          CMP   @REG4,30(R5)   ; 1ST WORD OF RESULT CHECK?
0623          BNE   @78          ; NO
0624          CMP   @REG5,32(R5)   ; 2ND WORD OF RESULT CHECK?
0625          BNE   @68          ; NO
0626          CMP   @REG6,34(R5)   ; 3RD WORD OF RESULT CHECK?
0627          BPL   @68          ; NO
0628          CMP   @REG7,36(R5)   ; 4TH WORD OF RESULT CHECK?
0629
0630          ;*****

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0693 037075 170165 000014          LDPS  14(R5)      ; INITIAL FPS
0694                                ;
0695 037002 177015          LCFDI  LDCFD  (R5),AC2  ; FIOD(CHMM)->AC4
0696                                ;
0697 037004 170237 002000          STFPS  FPS        ; STORE FPS AFTER
0698 037010 170237 002002          STST  FIC        ; STORE FIC/FEA AFTER
0699 037014 170237 001170          STD   AC2,0R160    ; STORE RESULT
0700                                ;
0701 037020 023765 002000 000015    CMP   FPS,16(R5)    ; CHECK FPS
0702 037026 001401          BEQ   656         ; FPS IS OK
0703 037030 100004          BRUR  4           ; FPS BAD
0704 037032 005705 000020          IST  20(R5)       ; DONE FIC/FEA APPLIC
0705 037036 100014          BPL  000         ; NU = SKIP TEST
0706 037040 012737 017002 002014    MOV  %LDCFDI,EXPPFA ; GET EXPECTED FEA
0707 037046 123765 002002 000020    CMPB FIC,20(R5)    ; COMPARE FIC=0
0708 037054 001004          BNE  648         ; NOT EQUAL
0709 037054 023737 002004 002014    CMP  FEA,EXPPFA    ; COMPARE FEA=0
0710 037064 001401          BEQ   660         ; FIC, FEA OK
0711 037066 100014          BNE  660         ; FIC OR FEA ARE BAD
0712 037070                                ;
0713                                ;
0714 037070 023765 001170 000004    CMP  $REG0,4(R5)   ; 1ST WORD OF RESULT CHECK?
0715 037076 001014          BNE  678         ; NO
0716 037100 023765 001172 000006    CMP  $REG1,6(R5)   ; 2ND WORD OF RESULT CHECK?
0717 037106 001010          BNE  678         ; NO
0718 037110 023765 001174 000010    CMP  $REG2,10(R5)  ; 3RD WORD OF RESULT CHECK?
0719 037116 001004          BNE  678         ; NO
0720 037120 023765 001176 000012    CMP  $REG3,12(R5)  ; 4TH WORD OF RESULT CHECK?
0721 037120 001401          BEQ   680         ; ALL WORDS OK
0722 037130 100014          BNE  680         ; NUMBERS NOT EQUAL
0723 037132                                ;
0724                                ;
0725 037132 000207          RTS   PC          ; RETURN TO TEST CALLER
0726

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0727                                ;
0728                                ;
0729 037134 172700 000011          SCDFI  SUBR TO TEST THE STCDF INSTRUCTION
0730 037140 170501          MOV   R11,R0      ; LOAD STMP0=10
0731 037144 172704 001230          MOV   R5,R1       ; WITH TEST DATA SETS
0732 037148 172722          MOV  $STMP0,R2    ; FOR DISPLAY LATER
0733 037150 172722          MOV  (R1)+,(R2)+  ;
0734 037150 077002          SOB  R0,-2        ;
0735 037152 172737 037160 001112    MOV  %SCDFI,%LPEFH ; ERROR LOOPING ADDRESS
0736                                ;
0737 037160 170011          SCDFI  SETD      (R5),AC3  ; D MODE
0738 037162 172715          LDD   14(R5)      ; INITIAL AC FLOAT NUMBER
0739 037164 170165 000014          LDPS  14(R5)      ; INITIAL FPS
0740                                ;
0741 037170 170337 001170          SCDFI  STCDF  AC3,0REGH  ; DIOF[AC3]->MEM
0742                                ;
0743 037171 170237 002000          STFPS  FPS        ; STORE FPS AFTER
0744 037200 170337 002002          STST  FIC        ; STORE FIC/FEA AFTER
0745                                ;
0746 037204 023765 002000 000016    CMP   FPS,16(R5)    ; CHECK FPS
0747 037212 001401          BEQ   656         ; FPS IS OK
0748 037214 100004          BRUR  4           ; FPS BAD
0749 037216 005705 000020          IST  20(R5)       ; DONE FIC/FEA APPLIC
0750 037222 100014          BPL  000         ; NU = SKIP TEST
0751 037224 012737 037170 002014    MOV  %SCDFI,EXPPFA ; GET EXPECTED FEA
0752 037232 123765 002002 000020    CMPB FIC,20(R5)    ; COMPARE FIC=0
0753 037240 001004          BNE  648         ; NOT EQUAL
0754 037242 023737 002004 002014    CMP  FEA,EXPPFA    ; COMPARE FEA=0
0755 037250 001401          BEQ   660         ; FIC, FEA OK
0756 037252 100014          BNE  660         ; FIC OR FEA ARE BAD
0757 037254                                ;
0758                                ;
0759 037254 173765 001170 000010    CMP  $REG0,10(R5)  ; 1ST WORD OF RESULT CHECK?
0760 037262 001004          BNE  678         ; NO
0761 037264 173765 001172 000012    CMP  $REG1,12(R5)  ; 2ND WORD OF RESULT CHECK?
0762 037272 001401          BEQ   680         ; ALL WORDS OK
0763 037274 100014          BNE  680         ; NUMBERS NOT EQUAL
0764 037276                                ;
0765                                ;
0766 037276 000207          RTS   PC          ; RETURN TO TEST CALLER
0767
0768
0769
0770 ;*****
0771 ;SUBR TO TEST THE STCDF INSTRUCTION
0772                                ;
0773 037300          SCDFI  MOV   R12,R0      ; LOAD STMP0=11
0774 037304 172700 000012          MOV   R5,R1       ; WITH TEST DATA SETS
0775 037306 172704 001230          MOV  $STMP0,R2    ; FOR DISPLAY LATER
0776 037312 172722          MOV  (R1)+,(R2)+  ;
0777 037314 172722          SOB  R0,-2        ;
0778 037316 172737 037324 001114    MOV  %SCDFI,%LPEFH ; ERROR LOOPING ADDRESS
0779                                ;
0780                                ;
0781 037324 170011          SCDFI  SETD      (R5),AC3  ; USE D MODE
0782 037326 172715          LDD   14(R5)      ; INITIAL F FLOAT NUM, FILLUP #/DUNE
0783 037330 170165 000014          LDPS  20(R5)      ; INITIAL FPS

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00704 017134 110117 001170 STCFD AC0,0REG0 ; FIOD(AC0)->PMEM
 0705 017140 110217 002008 STIPE IFS ; STORE IFS AFTER
 0708 017144 023765 002000 000022 CMP FFS,12(R5) ; CHECK IFS OK
 0709 017152 001401 ; OR, BRANCH
 0790 017154 104003 ; FFS BAD
 0791 017156 6401
 0792
 0793 017150 023765 001170 000010 CMP 0REG0,10(R5) ; 1ST WORD OF RESULT CHECK?
 0794 017164 001014 ; NO
 0795 017166 023765 001172 000012 CMP 0REG1,12(R5) ; 2ND WORD OF RESULT CHECK?
 0796 017174 001010 ; NO
 0797 017176 023765 001174 000014 CMP 0REG2,14(R5) ; 3RD WORD OF RESULT CHECK?
 0798 017184 001010 ; NO
 0799 017186 023765 001176 000016 CMP 0REG3,16(R5) ; 4TH WORD OF RESULT CHECK?
 0800 017114 001401 ; ALL WORDS OK
 0801 017116 104003 6501 EPROR 35 ; NUMBERS NOT EQUAL
 0802 017120 6501
 0803
 0804 017120 000107 RTS PC ; RETURN TO TEST LABEL

00005 017422 110117 001170 .SBTTL SUBR TO TEST THE LDCIF INSTRUCTION
 00006 017422 012700 000005 LDCIF1 MOV R5,R0 ; LOAD 0TMP0=4
 00007 017426 010501 ; WITH TEST DATA SETS
 00008 017430 012702 001230 MOV 0TMP0,R2 ; FOR DISPLAY LATER
 00009 017434 012122 MOV (R1)+,(R2)+ ;
 00010 017436 012002 SUB R0,=2 ;
 00011 017440 012737 017446 001112 MOV 0LCIF0,0LPE0K ; ERROR LOOPING ADDRESS
 00012
 00013 017446 110165 000006 LDCIF0 LDFPS 6(R5) ; INITIAL IFS
 00014
 00015 017452 117215 LDCIF (R5),AC2 ; F(L(EM))->AC2
 00016
 00017 017454 110237 002000 STIPE FFS ; STORE IFS AFTER
 00018 017460 110237 001170 STI AC2,0REG0 ; STORE RESULT
 00019
 00020 017464 023765 002000 000010 CMP FFS,10(R5) ; CHECK IFS OK
 00021 017472 001401 ; OR, BRANCH
 00022 017474 104001 ; FFS BAD
 00023 017476 6401
 00024
 00025 017476 023765 001170 000004 CMP 0REG0,2(R5) ; 1ST WORD OF RESULT CHECK?
 00026 017504 001004 ; NO
 00027 017506 023765 001172 000004 CMP 0REG1,4(R5) ; 2ND WORD OF RESULT CHECK?
 00028 017514 001401 ; ALL WORDS OK
 00029 017516 104003 6501 EPROR 35 ; NUMBERS NOT EQUAL
 00030 017520 6501
 00031
 00032 017520 000207 RTS PC ; RETURN TO TEST LABEL
 00033
 00034
 00035
 00036
 00037
 00038
 00039 017522 110117 001170 .SBTTL SUBR TO TEST THE LDCIO INSTRUCTION
 00040 017522 012700 000007 LDCIO1 MOV R5,R0 ; LOAD 0TMP0=6
 00041 017526 010501 ; WITH TEST DATA SETS
 00042 017530 012702 001230 MOV 0TMP0,R2 ; FOR DISPLAY LATER
 00043 017534 012122 MOV (R1)+,(R2)+ ;
 00044 017536 012002 SUB R0,=2 ;
 00045 017540 012737 017546 001112 MOV 0LDCIO0,0LPE0K ; ERROR LOOPING ADDRESS
 00046
 00047 017546 110165 000012 LDCIO0 LDFPS 12(R5) ; INITIAL IFS
 00048
 00049 017552 117315 LDCIO (R5),AC3 ; D(L(EM))->AC3
 00050
 00051 017554 110237 002000 STIPE FFS ; STORE IFS AFTER
 00052 017560 110237 001170 STI AC3,0REG0 ; STORE RESULT
 00053
 00054 017564 023765 002000 000014 CMP FFS,14(R5) ; CHECK IFS OK
 00055 017572 001401 ; OR, BRANCH
 00056 017574 104003 ; FFS BAD
 00057 017576 6401
 00058
 00059 017576 023765 001170 000004 CMP 0REG0,2(R5) ; 1ST WORD OF RESULT CHECK?

```

0001 037004 001014
0002 037006 023705 001172 000004 BNE 654 ; NO
0003 037014 001010 CMP BRG1,4(R5) ; 2ND WORD OF RESULT CHECK?
0004 037016 023705 001174 000006 BNE 658 ; NO
0005 037024 001008 CMP BRG2,6(R5) ; 3RD WORD OF RESULT CHECK?
0006 037026 001008 BNE 658 ; NO
0007 037034 023705 001176 000010 CMP BRG3,10(R5) ; 4TH WORD OF RESULT CHECK?
0008 037036 001001 BEQ 668 ; ALL WORDS OK
0009 037040 000037 0581 ERROR 37 ; NUMBERS NOT EQUAL
0010
0011 037040 000207 RTS PC ; RETURN TO TEST CALLER
0012
0013
0014
0015 *****
0016 .SBTTL SUBR TO TEST THE LDCLF INSTRUCTION
0017
0018 037042
0019 037042 012700 000006 LCLF1: MOV R6,R0 ; LOAD STMPW-6
0020 037046 010501 MOV R5,R1 ; WITH TEST DATA BITS
0021 037050 012702 001230 MOV STMPW,R2 ; FOR DISPLAY LATER
0022 037054 012122 MOV (R1)+(R2)+ ;
0023 037056 077002 SOB R0,-2 ;
0024 037060 012737 037006 001112 MOV BCLCLF,6LPEPR ; ERROR LOOPING ADDRESS
0025
0026 037066 170165 000010 LCLF1: LDFFS 1(R5) ; INITIAL FPS
0027 047072 177015 LDCLF (R5),AC0 ; D[(MEM)(MEM)]->AC0
0028
0029 037074 170237 002000 STFPS FPS ; STORE FPS AFTER
0030 047700 170037 001170 STF AC0,BREGW ; STORE RESULT
0031
0032 037704 023705 002000 000012 CMP FPS,12(R5) ; CHECK FPS OR
0033 037712 001001 BEQ 648 ; OK, BRANCH
0034 037714 100002 ERROR 2 ; FPS BAD
0035
0036 037716 023705 001170 000004 CMP BRG0,4(R5) ; 1ST WORD OF RESULT CHECK?
0037 037724 001004 BNE 658 ; NO
0038 037726 023705 001172 000006 CMP BRG1,6(R5) ; 2ND WORD OF RESULT CHECK?
0039 037734 001001 BEQ 668 ; ALL WORDS OK
0040 037736 100040 0581 ERROR 40 ; NUMBERS NOT EQUAL
0041
0042 037740 000207 RTS PC ; RETURN TO TEST CALLER
0043
0044
0045 *****
0046 .SBTTL SUBR TO TEST THE LDCLD INSTRUCTION
0047
0048 037742
0049 037742 012700 000010 LCLD1: MOV R6,R0 ; LOAD STMPW-7
0050 037746 010501 MOV R5,R1 ; WITH TEST DATA BITS
0051 037750 012702 001230 MOV STMPW,R2 ; FOR DISPLAY LATER
0052 037754 012122 MOV (R1)+(R2)+ ;
0053 037756 077002 SOB R0,-2 ;
0054 037760 012737 037706 001112 MOV BCLCLD,6LPEPR ; ERROR LOOPING ADDRESS
    
```

```

0017 037766 170165 000014 LCLD1: LDFFS 1(R5) ; INITIAL FPS
0018 037772 177115 LDCLD (R5),AC1 ; D[(MEM)(MEM)]->AC1
0019
0020 037774 170237 002000 STFPS FPS ; STORE FPS AFTER
0021 040000 170037 001170 STD AC1,BREGW ; STORE RESULT
0022
0023 040004 023705 002000 000016 CMP FPS,16(R5) ; CHECK FPS OR
0024 040012 001001 BEQ 648 ; OK, BRANCH
0025 040014 100004 ERROR 4 ; FPS BAD
0026
0027 040016 023705 001170 000004 CMP BRG0,4(R5) ; 1ST WORD OF RESULT CHECK?
0028 040024 001004 BNE 658 ; NO
0029 040026 023705 001172 000006 CMP BRG1,6(R5) ; 2ND WORD OF RESULT CHECK?
0030 040034 001001 BEQ 668 ; NO
0031 040036 023705 001174 000010 CMP BRG2,10(R5) ; 3RD WORD OF RESULT CHECK?
0032 040044 001004 BNE 658 ; NO
0033 040046 023705 001176 000012 CMP BRG3,12(R5) ; 4TH WORD OF RESULT CHECK?
0034 040054 001001 BEQ 668 ; ALL WORDS OK
0035 040056 100041 0581 ERROR 41 ; NUMBERS NOT EQUAL
0036
0037 040060 000207 RTS PC ; RETURN TO TEST CALLER
0038
0039
0040
0041
    
```

```

0942          .SBTTL SUBR TO TEST THE STCFI INSTRUCTION
0943
0944          SCFIT:
0945          MOV     R0,R0          ; LOAD STMP0=0
0946          MOV     R5,R1          ; WITH TEST DATA SETS
0947          MOV     STMP0,R2       ; FOR DISPLAY LATER
0948          MOV     (R1)+(R2)+    ;
0949          SOB     R0,-2          ;
0950          MOV     STCFIL,SLPERR  ; ERROR LOOPING ADDRESS
0951
0952          SCFII: SETF          ; F MODE
0953          LOF   (R0),AC1        ; INITIAL AC FLOAT NUMBER
0954          LOFPS 6(R0)          ; INITIAL FPS
0955
0956          SCFII: STCFI AC0,REG0  ; I((AC0))-PMEN
0957
0958          MOV     STMP0,REG1     ; SAVE CC=0
0959          STFPS  FPS            ; STORE FPS AFTER
0960          STST  FEC            ; STORE FEC/FEA AFTER
0961
0962          CMP     FPS,16(R0)     ; CHECK FPS
0963          BEQ     000           ; FPS IS OK
0964          LRROR  1             ; FPS BAD
0965          TST    12(R0)         ; DOES FEC/FEA APPLY?
0966          HPL    000           ; NO - SKIP TEST
0967          MOV     STCFII,EXPFEA ; GET EXPECTED FEA
0968          CMPB   FEC,15(R0)     ; COMPARE FEC=0
0969          BNE    040           ; NOT EQUAL
0970          CMP    FEA,EXPFEA     ; COMPARE FEA=0
0971          BEQ    000           ; FEC, FEA OK
0972          LRROR  11           ; FEC OR FEA ARE BAD
0973          000:
0974
0975          MOV     FPS,REG2       ; GET FPS, PS CC BITS ONLY
0976          BIC    %CCONLY,REG01  ;
0977          BIC    %CCONLY,REG02  ;
0978          CMP    REG01,REG02    ; CC=0 COPIED?
0979          BEQ    070           ;
0980          LRROR  04           ; NOT EQUAL, SIGNAL ERROR
0981          070:
0982
0983          CMP     REG0,4(R0)     ; INTEGER RESULT CHECK?
0984          BEQ     000           ;
0985          LRROR  42           ; NOT EQUAL, SIGNAL ERROR
0986          000:
0987
0988          RTS     PC            ; RETURN TO TEST CALLER
0989
0990
0991          ;*****
0992          .SBTTL SUBR TO TEST THE STCFI INSTRUCTION
0993
0994          SCFIT:
0995          MOV     R0,R0          ; LOAD STMP0=0
0996          MOV     R5,R1          ; WITH TEST DATA SETS
0997          MOV     STMP0,R2       ; FOR DISPLAY LATER

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0998          MOV     (R1)+(R2)+    ;
0999          SOB     R0,-2          ;
1000          MOV     STCFIL,SLPERR  ; ERROR LOOPING ADDRESS
1001
1002          SCDFI: SETD          ; D MODE
1003          LOD   (R0),AC0        ; INITIAL AC FLOAT NUMBER
1004          LOFPS 12(R0)         ; INITIAL FPS
1005
1006          SCDFI: STCFI AC0,REG0  ; I((AC0))-PMEN
1007
1008          MOV     STMP0,REG1     ; SAVE CC=0
1009          STFPS  FPS            ; STORE FPS AFTER
1010          STST  FEC            ; STORE FEC/FEA AFTER
1011
1012          CMP     FPS,16(R0)     ; CHECK FPS
1013          BEQ     000           ; FPS IS OK
1014          LRROR  2             ; FPS BAD
1015          TST    16(R0)         ; DOES FEC/FEA APPLY?
1016          HPL    000           ; NO - SKIP TEST
1017          MOV     STCFII,EXPFEA ; GET EXPECTED FEA
1018          CMPB   FEC,16(R0)     ; COMPARE FEC=0
1019          BNE    040           ; NOT EQUAL
1020          CMP    FEA,EXPFEA     ; COMPARE FEA=0
1021          BEQ    000           ; FEC, FEA OK
1022          LRROR  13           ; FEC OR FEA ARE BAD
1023          000:
1024
1025          MOV     FPS,REG2       ; GET FPS, PS CC BITS ONLY
1026          BIC    %CCONLY,REG01  ;
1027          BIC    %CCONLY,REG02  ;
1028          CMP    REG01,REG02    ; CC=0 COPIED?
1029          BEQ    070           ;
1030          LRROR  04           ; NOT EQUAL, SIGNAL ERROR
1031          070:
1032
1033          CMP     REG0,10(R0)    ; INTEGER RESULT CHECK?
1034          BEQ     000           ;
1035          LRROR  43           ; NOT EQUAL, SIGNAL ERROR
1036          000:
1037
1038          RTS     PC            ; RETURN TO TEST CALLER
1039
1040
1041          ;*****
1042          .SBTTL SUBR TO TEST THE STCFI INSTRUCTION
1043
1044          SCFIT:
1045          MOV     R0,R0          ; LOAD STMP0=0
1046          MOV     R5,R1          ; WITH TEST DATA SETS
1047          MOV     STMP0,R2       ; FOR DISPLAY LATER
1048          MOV     (R1)+(R2)+    ;
1049          SOB     R0,-2          ;
1050          MOV     STCFIL,SLPERR  ; ERROR LOOPING ADDRESS
1051
1052          SCFII: SETF          ; F MODE
1053          LOF   (R0),AC1        ; INITIAL AC FLOAT NUMBER

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9163          .SBTTL SUBR TO TEST THE LUNAP INSTRUCTION, F MODE
9164
9165          LEAFT1
9166          MOV     R10,R0          ; LOAD STMP0=7
9167          MOV     R0,R1          ; WITH TEST DATA SETS
9168          MOV     STMP0,R2       ; FOR DISPLAY LATER
9169          MOV     (R1)+,(R2)+    ;
9170          SUB     R0,R0          ;
9171          MOV     R0,R2          ; ERROR LOOPING ADDRESS
9172
9173          LEXFL1 SETF          ; F MODE
9174          LDF     (R0),AC1       ; INITIAL FLOAT NUMBER
9175          LDFPB  12(R0)         ; INITIAL FPS
9176
9177          LEXFI1 LDEXP         ; EXPI MEM => AC1
9178          STPFS  FPS           ; STORE FPS AFTER
9179          STBT   FEC           ; STORE FEC/FEA AFTER
9180
9181          CMP     FPS,14(R0)     ; CHECK FPS
9182          BEQ    650           ; FPS IS OK
9183          BROR   3            ; FPS BAD
9184          TST    16(R0)         ; DOES FEC/FEA APPLY?
9185          BPL    660           ; NO - SKIP TEST
9186          MOV     REXFI,EXPFSA  ; GET EXPECTED FEA
9187          CMPEB  FEC,16(R0)     ; COMPARE FEC-S
9188          BNE   640           ; NOT EQUAL
9189          CMP     FEA,EXPFSA    ; COMPARE FEA-S
9190          BEQ    600           ; FEC, FEA OK
9191          ERROR  10           ; FEC OR FEA ARE BAD
9192
9193          STD     AC0,REG0       ; STORE RESULTANT FLOAT NUMBER
9194          CMPEB  RREG0,4(R0)    ; 1ST WORD OF RESULT CHECK?
9195          BNE   670           ; NO
9196          CMP     RREG1,8(R0)   ; 2ND WORD OF RESULT CHECK?
9197          BNE   670           ; NO
9198          CMP     RREG2,16(R0)  ; 3RD WORD OF RESULT CHECK?
9199          BNE   670           ; NO
9200          CMP     RREG3,16(R0)  ; 4TH WORD OF RESULT CHECK?
9201          BEQ    600           ; ALL WORDS OK
9202          ERROR  40           ; NUMBERS NOT EQUAL
9203
9204          RTS     PC            ; RETURN TO TEST CALLER
9205
9206          ;*****
9207          .SBTTL SUBR TO TEST THE LDEXP INSTRUCTION, D MODE
9208
9209          LEADT1
9210          MOV     R14,R0          ; LOAD STMP0=13
9211          MOV     R0,R1          ; WITH TEST DATA SETS
9212          MOV     STMP0,R2       ; FOR DISPLAY LATER
9213          MOV     (R1)+,(R2)+    ;
9214          SUB     R0,R0          ;
9215          MOV     R0,R2          ; ERROR LOOPING ADDRESS
9216
9217          LEXDL1 SETD          ; D MODE
9218          LDD     (R0),AC0       ; INITIAL FLOAT NUMBER
9219          LDFPB  22(R0)         ; INITIAL FPS
9220
9221          LEXDI1 LDEXP         ; EXPI MEM => AC0
9222          STPFS  FPS           ; STORE FPS AFTER
9223          STBT   FEC           ; STORE FEC/FEA AFTER
9224
9225          CMP     FPS,24(R0)     ; CHECK FPS
9226          BEQ    650           ; FPS IS OK
9227          BROR   6            ; FPS BAD
9228          TST    28(R0)         ; DOES FEC/FEA APPLY?
9229          BPL    660           ; NO - SKIP TEST
9230          MOV     REXDI,EXPFSA  ; GET EXPECTED FEA
9231          CMPEB  FEC,28(R0)     ; COMPARE FEC-S
9232          BNE   640           ; NOT EQUAL
9233          CMP     FEA,EXPFSA    ; COMPARE FEA-S
9234          BEQ    600           ; FEC, FEA OK
9235          ERROR  10           ; FEC OR FEA ARE BAD
9236
9237          STD     AC0,REG0       ; STORE RESULTANT FLOAT NUMBER
9238          CMPEB  RREG0,10(R0)   ; 1ST WORD OF RESULT CHECK?
9239          BNE   670           ; NO
9240          CMP     RREG1,12(R0)  ; 2ND WORD OF RESULT CHECK?
9241          BNE   670           ; NO
9242          CMP     RREG2,14(R0)  ; 3RD WORD OF RESULT CHECK?
9243          BNE   670           ; NO
9244          CMP     RREG3,16(R0)  ; 4TH WORD OF RESULT CHECK?
9245          BEQ    600           ; ALL WORDS OK
9246          ERROR  47           ; NUMBERS NOT EQUAL
9247
9248          RTS     PC            ; RETURN TO TEST CALLER
9249
9250          ;*****

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9251          .SBTTL SUBR TO TEST THE LDEXP INSTRUCTION, D MODE
9252
9253          LEADT1
9254          MOV     R14,R0          ; LOAD STMP0=13
9255          MOV     R0,R1          ; WITH TEST DATA SETS
9256          MOV     STMP0,R2       ; FOR DISPLAY LATER
9257          MOV     (R1)+,(R2)+    ;
9258          SUB     R0,R0          ;
9259          MOV     R0,R2          ; ERROR LOOPING ADDRESS
9260
9261          LEXDL1 SETD          ; D MODE
9262          LDD     (R0),AC0       ; INITIAL FLOAT NUMBER
9263          LDFPB  22(R0)         ; INITIAL FPS
9264
9265          LEXDI1 LDEXP         ; EXPI MEM => AC0
9266          STPFS  FPS           ; STORE FPS AFTER
9267          STBT   FEC           ; STORE FEC/FEA AFTER
9268
9269          CMP     FPS,24(R0)     ; CHECK FPS
9270          BEQ    650           ; FPS IS OK
9271          BROR   6            ; FPS BAD
9272          TST    28(R0)         ; DOES FEC/FEA APPLY?
9273          BPL    660           ; NO - SKIP TEST
9274          MOV     REXDI,EXPFSA  ; GET EXPECTED FEA
9275          CMPEB  FEC,28(R0)     ; COMPARE FEC-S
9276          BNE   640           ; NOT EQUAL
9277          CMP     FEA,EXPFSA    ; COMPARE FEA-S
9278          BEQ    600           ; FEC, FEA OK
9279          ERROR  10           ; FEC OR FEA ARE BAD
9280
9281          STD     AC0,REG0       ; STORE RESULTANT FLOAT NUMBER
9282          CMPEB  RREG0,10(R0)   ; 1ST WORD OF RESULT CHECK?
9283          BNE   670           ; NO
9284          CMP     RREG1,12(R0)  ; 2ND WORD OF RESULT CHECK?
9285          BNE   670           ; NO
9286          CMP     RREG2,14(R0)  ; 3RD WORD OF RESULT CHECK?
9287          BNE   670           ; NO
9288          CMP     RREG3,16(R0)  ; 4TH WORD OF RESULT CHECK?
9289          BEQ    600           ; ALL WORDS OK
9290          ERROR  47           ; NUMBERS NOT EQUAL
9291
9292          RTS     PC            ; RETURN TO TEST CALLER
9293
9294          ;*****

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9232          ,SMTTL SUBR TO TEST THE STEAP INSTRUCTION, F MODE
9233
9234 041432          SEXPT1
9235 041432 012700 000005      MOV     R5,R0          ; LOAD STMP0=4
9236 041436 010501          MOV     R5,R1          ; WITH TEST DATA SETS
9237 041440 012702 001230      MOV     $STMP0,R2     ; FOR DISPLAY LATER
9238 041444 012122          MOV     (R1)+,(R2)+   ;
9239 041446 077002          SOB     R0,-#2        ;
9240 041450 012737 041456 001112  MOV     $SEXPL,$LPERR ; ERROR LOOPING ADDRESS
9241
9242 041456 170001          SEXPL1 SETF          ; F MODE
9243 041460 172015          LDF     (R5),AC3     ; INITIAL FLOAT NUMBER
9244 041462 170165 000006      LDPPS  6(R5)         ; INITIAL FPS
9245
9246 041466 175237 001170      SEXPI1 STXKP  AC3,$REG0 ; EXP: AC3 -> MEM
9247
9248 041472 013737 177776 001172  MOV     $FPS,$REG1    ; GET PS RIGHT AWAY, FOR CC BITS
9249 041500 170237 002000      STFPS  FPS           ; STORE FPS AFTER
9250
9251 041504 023765 002000 000010  CMP     FPS,10(R5)    ; CHECK FPS OK
9252 041512 001401          BEQ     644           ; OK, BRANCH
9253 041514 104001          ERROR  1            ; FPS BAD
9254 041516
9255
9256 041516 013737 002000 001174  MOV     FPS,$REG2     ; GET FPS, PS CC BITS ONLY
9257 041524 042737 177760 001172  BIC     $CCONLY,$REG1 ;
9258 041532 042737 177760 001174  BIC     $CCONLY,$REG2 ;
9259 041540 023737 001172 001174  CMP     $REG1,$REG2   ; CC=8 COPIED?
9260 041546 001401          BEQ     650           ;
9261 041550 104054          ERROR  54           ; NOT EQUAL, SIGNAL ERROR
9262 041552
9263
9264 041552 023765 001170 000004  CMP     $REG0,4(R5)   ; EXP CHECK?
9265 041560 001401          BEQ     660           ;
9266 041562 104050          ERROR  50           ; NOT EQUAL, SIGNAL ERROR
9267 041564
9268
9269 041564 000207          RTS     PC           ; RETURN TO TEST CALLER
9270
9271
9272          ;*****
9273          ,SMTTL SUBR TO TEST THE STEAP INSTRUCTION, D MODE
9274
9275 041566          SLXDT1
9276 041572 012700 000007      MOV     R7,R0          ; LOAD STMP0=6
9277 041574 010501          MOV     R5,R1          ; WITH TEST DATA SETS
9278 041600 012122          MOV     $STMP0,R2     ; FOR DISPLAY LATER
9279 041602 077002          SOB     R0,-#2        ;
9280 041604 012737 041612 001112  MOV     $SEXDL,$LPERR ; ERROR LOOPING ADDRESS
9281
9282 041612 170011          SEXDL1 SETD          ; D MODE
9283 041614 172115          LOD     (R5),AC3     ; INITIAL FLOAT NUMBER
9284 041616 170165 000012      LDPPS  12(R5)        ; INITIAL FPS
9285
9286 041622 175337 001170      SEXDI1 STXKP  AC3,$REG0 ; EXP: AC3 -> MEM
9287

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9288 041626 013737 177776 001172  MOV     $FPS,$REG1    ; GET PS RIGHT AWAY
9289 041634 170237 002000      STFPS  FPS           ; STORE FPS AFTER
9290
9291 041640 023765 002000 000014  CMP     FPS,14(R5)    ; CHECK FPS OK
9292 041646 001401          BEQ     640           ; OK, BRANCH
9293 041650 104001          ERROR  3            ; FPS BAD
9294 041652
9295
9296 041652 013737 002000 001174  MOV     FPS,$REG2     ; GET FPS, PS CC BITS ONLY
9297 041660 042737 177760 001172  BIC     $CCONLY,$REG1 ;
9298 041666 042737 177760 001174  BIC     $CCONLY,$REG2 ;
9299 041674 023737 001172 001174  CMP     $REG1,$REG2   ; CC=8 COPIED?
9300 041702 001401          BEQ     650           ;
9301 041704 104054          ERROR  54           ; NOT EQUAL, SIGNAL ERROR
9302 041706
9303
9304 041706 023765 001170 000010  CMP     $REG0,10(R5)  ; EXP CHECK?
9305 041714 001401          BEQ     660           ;
9306 041716 104051          ERROR  51           ; NOT EQUAL, SIGNAL ERROR
9307 041720
9308
9309 041720 000207          RTS     PC           ; RETURN TO TEST CALLER

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9310          .SBTTL FPP UNEXPECTED TRAP CATCHER
9311
9312 041722 010037 002012 FPPILT) MOV SP,FPPOSP ; SP AFTER TRAP
9313 041726 012037 002006 MOV (SP)+,FPPOPC ; POP OLD PC FOR DISPLAY
9314 041732 012037 002010 MOV (SP)+,FPPOPB ; POP OLD PB FOR DISPLAY
9315 041736 170237 002000 STPFB FPA ; GET FPA
9316 041742 170237 002007 STBT FEC ; GET FEC/FEA
9317 041746 104050 002010 EPROR 56 ; SIGNAL UNEXPECTED FPP TRAP
9318 041750 013746 002010 MOV FPPOPS,(SP) ; PUSH PS
9319 041754 013746 002006 MOV FPPOPC,(SP) ; PUSH PC
9320 041760 000000 RTI ; CONTINUE, RECOVER AT LAST TRAP ONLY

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9321          .SBTTL SCOPE HANDLER ROUTINE
9322
9323          ;*****
9324          ;THIS ROUTINE CONTROLS THE LOOPING OF SUBTESTS, IT WILL INCREMENT
9325          ;AND LOAD THE TEST NUMBER(STSTM) INTO THE DISPLAY REG.(DISPLAY<510>)
9326          ;THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:
9327          ;S=1401 LOOP ON TEST
9328          ;S=1101 INHIBIT ITERATIONS
9329          ;S=0001 LOOP ON ERROR
9330          ;S=0001 LOOP ON TEST IN "SLPTST"
9331          ;CALL
9332          ;* SCOPE ;:SCOPE=IOT
9333
9334 041762          ESCOPE:
9335 041762          640:
9336 041762 032777 040000 137154 101 BIT $BIT14,$SWR ;LOOP ON PRESENT TEST?
9337 041770 011154          BNE $OVER ;YES IF S=1401
9338          ;*****START OF CODE FOR THE XOR TESTER*****
9339 041772 000410          EXTSTN: BR 00 ;IF RUNNING ON THE "XOR" TESTER CHANGE
9340          ;THIS INSTRUCTION TO A "NOP" (NOP=J40)
9341 041774 013746 000000 MOV $ERRVEC,-(SP) ;SAVE THE CONTENTS OF THE ERROR VECTOR
9342 042000 012737 042020 000004 MOV $0,$ERRVEC ;SET FOR TIMEOUT
9343 042006 005737 170000 TBT $177000 ;TIME OUT ON XOR?
9344 042012 012037 000004 MOV (SP)+,$ERRVEC ;RESTORE THE ERROR VECTOR
9345 042016 000463          SP $VLDAD ;GO TO THE NEXT TEST
9346 042020 012026          SBI CMP (SP)+,(SP)+ ;CLEAR THE STACK AFTER A TIME OUT
9347 042022 012037 000004 MOV (SP)+,$ERRVEC ;RESTORE THE ERROR VECTOR
9348 042026 000423          BR 70 ;LOOP ON THE PRESENT TEST
9349          ;*****END OF CODE FOR THE XOR TESTER*****
9350 042030 032777 000400 137100 101 BIT $BIT00,$SWR ;LOOP ON SPEC. TEST?
9351 042036 001404          BEQ 20 ;BR IF NO
9352 042040 023737 001150 001102 CMP SLPTST,$ISTM ;ON THE RIGHT TEST?
9353 042046 001405          BEQ $OVER ;BR IF YES
9354 042050 005737 001104 201 TBT $ERRFLG ;HAS AN ERROR OCCURRED?
9355 042054 001421          BEQ 30 ;BR IF NO
9356 042056 023737 001120 001104 CMP $RMAX,$ERRFLG ;MAX. ERRORS FOR THIS TEST OCCURRED?
9357 042064 121015          SBI 30 ;BR IF NO
9358 042066 032777 001000 137450 BIT $BIT00,$SWR ;LOOP ON ERROR?
9359 042074 001404          BEQ 40 ;BR IF NO
9360 042076 013737 001112 001110 701 MOV $LPRRN,$LPADR ;SET LOOP ADDRESS TO LAST SCOPE
9361 042104 000446          BR $OVER
9362 042106 000437 001104 401 CLR $ERRFLG ;ZERO THE ERROR FLAG
9363 042112 005037 001110 CLR $TIMES ;CLEAR THE NUMBER OF ITERATIONS TO MAKE
9364 042116 000415          BR 10 ;ESCAPE TO THE NEXT TEST
9365 042120 013777 000400 137010 301 BIT $BIT11,$SWR ;INHIBIT ITERATIONS?
9366 042126 001011          BNE 10 ;BR IF YES
9367 042130 005737 001332          TST $PASS ;IF FIRST PASS OF PROGRAM
9368 042136 001406          BEQ 10 ; INHIBIT ITERATIONS
9369 042142 005237 001106 INC $CNT ;INCREMENT ITERATION COUNT
9370 042146 023737 001310 001106 CMP $TIMES,$CNT ;CHECK THE NUMBER OF ITERATIONS MADE
9371 042150 002024          BGE $OVER ;BR IF MORE ITERATION REQUIRED
9372 042154 013737 000001 001100 101 MOV $1,$CNT ;REINITIALIZE THE ITERATION COUNTER
9373 042160 013737 042234 001310 MOV $MAXCNT,$TIMES ;SET NUMBER OF ITERATIONS TO DO
9374 042166 005237 001102 001102 $VLDAD: INC $STSTM ;COUNT TEST NUMBERS
9375 042172 013737 001102 001330 MOV $STSTM,$TESTN ;SET TEST NUMBER IN APT MAILBOX
9376 042200 011037 001110 MOV (SP),$LPADR ;SAVE SCOPE LOOP ADDRESS

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9377	042204	011637	001112	MOV	(SP),BLVERR	;;SAVE ERROR LOOP ADDRESS
9378	042219	005037	001312	CLR	0ESCAPE	;;CLEAR THE ESCAPE FROM ERROR ADDRESS
9379	042214	012737	000001	MOV	R1,0ERMAX	;;ONLY ALLOW ONE(1) ERROR ON NEXT TEST
9380	042222	013777	001102	MOV	0TSTNM,0DISPLAY	;;DISPLAY TEST NUMBER
9381	042230	013716	001110	MOV	0LWADR,(SP)	;;FUDGE RETURN ADDRESS
9382	042234	000002		RTI		;;FIXED PS
9383	042236	003720		SMXCHT: 2000.		;;MAX. NUMBER OF ITERATIONS

```

      .SBTTL ERROR HANDLER ROUTINE
      ;;*****
      ;;THIS ROUTINE WILL INCREMENT THE ERROR FLAG AND THE ERROR COUNT,
      ;;SAVE THE ERROR ITEM NUMBER AND THE ADDRESS OF THE ERROR CALL
      ;;AND GO TO $TYPERR ON ERROR
      ;;THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:
      ;;=0W15=1 HALT ON ERROR
      ;;=0W13=1 INHIBIT ERROR TIMEOUTS
      ;;=0W10=1 BELL ON ERROR
      ;;=0W09=1 LOOP ON ERROR
      ;;CALL
      ;; ERROR N ;;ERRORCNT AND N=ERROR ITEM NUMBER

9384      .SBTTL ERROR HANDLER ROUTINE
9385
9386      ;;*****
9387      ;;THIS ROUTINE WILL INCREMENT THE ERROR FLAG AND THE ERROR COUNT,
9388      ;;SAVE THE ERROR ITEM NUMBER AND THE ADDRESS OF THE ERROR CALL
9389      ;;AND GO TO $TYPERR ON ERROR
9390      ;;THE SWITCH OPTIONS PROVIDED BY THIS ROUTINE ARE:
9391      ;;=0W15=1 HALT ON ERROR
9392      ;;=0W13=1 INHIBIT ERROR TIMEOUTS
9393      ;;=0W10=1 BELL ON ERROR
9394      ;;=0W09=1 LOOP ON ERROR
9395      ;;CALL
9396      ;; ERROR N ;;ERRORCNT AND N=ERROR ITEM NUMBER
9397
9398      .SBTTL ERROR HANDLER ROUTINE
9399      .SBTTL ERROR HANDLER ROUTINE
9400      .SBTTL ERROR HANDLER ROUTINE
9401      .SBTTL ERROR HANDLER ROUTINE
9402      .SBTTL ERROR HANDLER ROUTINE
9403      .SBTTL ERROR HANDLER ROUTINE
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9409      .SBTTL ERROR HANDLER ROUTINE
9410      .SBTTL ERROR HANDLER ROUTINE
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9412      .SBTTL ERROR HANDLER ROUTINE
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9415      .SBTTL ERROR HANDLER ROUTINE
9416      .SBTTL ERROR HANDLER ROUTINE
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9430      .SBTTL ERROR HANDLER ROUTINE
9431      .SBTTL ERROR HANDLER ROUTINE
9432      .SBTTL ERROR HANDLER ROUTINE
9433      .SBTTL ERROR HANDLER ROUTINE
9434      .SBTTL ERROR HANDLER ROUTINE
9435      .SBTTL ERROR HANDLER ROUTINE
9436      .SBTTL ERROR HANDLER ROUTINE
9437      .SBTTL ERROR HANDLER ROUTINE
9438      .SBTTL ERROR HANDLER ROUTINE
9439      .SBTTL ERROR HANDLER ROUTINE

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9440 042456 022737 033314 000042      CMP      #ENDAD,0042      ;FACT=11 AUTO=ACCLP17
9441 042474 001001              BNE      68              ;BRANCH IF NO
9442 042476 000000              HALT                    ;IEND
9443 042500              68:
9444 042500 000002              64B: RTI                ;RETURN

```

```

9445 ;*****
9446 ;BTTL ERROR MESSAGE TYPEOUT ROUTINE (MODIFIED SIGMAC)
9447
9448 ;THIS ROUTINE USES THE "ITEM CONTROL BYTE" (ITEMB) TO DETERMINE WHICH
9449 ;ERROR IS TO BE REPORTED, IT THEN OBTAINS, FROM THE "ERROR TABLE",
9450 ;($ERRTB) THE ERROR MESSAGE, DATA HEADER, AND DATA VALUES TO PRINT.
9451 ;THIS ROUTINE IS IDENTICAL TO THE SIGMAC ROUTINE $ERRTIP, EXCEPT THIS
9452 ;ROUTINE PUTS A <HT> BETWEEN OCTAL TYPED DATA VALUES, SO THAT EACH
9453 ;VALUE STARTS AT A HORIZONTAL TAB STOP. ALSO, THE DATA FORMAT
9454 ;POINTER HAS BEEN ELIMINATED FROM THE ERROR VECTOR. THIS ROUTINE
9455 ;ALSO ALWAYS PRINTS $ERRTB AND $ERRPC AS THE FIRST TWO DATA ELEMENTS
9456 ;(WITH APPROPRIATE HEADERS).
9457
9458
9459 STYPEPR;
9460 042502 104401      ; TYPE "NOT" OR "AHHN"
9461 042504 001321      ; PTR TO MESSAGE
9462 042506 010046      MOV      R0,-($P)      ; SAVE PC
9463 042510 010146      MOV      R1,-($P)      ; SAVE R1
9464 042512 005000      CLW      R0            ; PICKUP ITEM INDLX
9465 042514 153700      BISS    #ITEMB,R0      ;
9466 042520 001004      BNE     10            ; IF ITEM NUMBER FROM ERROR 0,
9467 ; JUST TYPE PC OF ERROR
9468 042522 013746      MOV      $ERRPC,-($P)  ; GET ERROR PC FOR TYPEOUT
9469 042526 104402      TYP0C   ; TYPE OCTAL, ALL DIGITS
9470 042530 100042      BR      70            ; EXIT
9471 042532 005100      10: DEC      R0          ; ADJUST ERROR # FOR TABLE INDEX
9472 042534 006300      ASL     R0           ; OF 5 BYTES/ENTRY
9473 042536 010001      MOV     R0,R1        ;
9474 042540 006300      ASL     R0           ;
9475 042542 000100      ADD     R1,R0        ;
9476 042544 002700      ADD     $ERRTB,R0    ; FORM TABLE PTR
9477 042550 012037      MOV     (R0)+,20     ; PICKUP "ERROR MESSAGE" PTR
9478 042554 001404      BEQ    30           ; SKIP TYPEOUT IF NULL
9479 042556 104401      TYPE   ; TYPE "ERROR MESSAGE"
9480 042560 006000      .WORD  ; "ERROR MESSAGE" PTR HERE
9481 042562 104401      20:  ,WORD  ; CR & LF
9482 042564 104401      TYPE  ,SCRLF      ;
9483 042566 104401      30:  TYPE  ; TYPE "ERR PC" HEADER
9484 042568 001402      MOV   (R0)+,46     ; PICKUP "DATA HEADER" PTR
9485 042570 006300      BEQ   50           ; SKIP TYPEOUT IF NULL
9486 042572 104401      TYPE  ; TYPE "DATA HEADER"
9487 042574 104401      .WORD  ; "DATA HEADER" PTR HERE
9488 042576 000000      40:  ,WORD  ; CR & LF
9489 042578 104401      TYPE  ; TYPE "LEADING ZEROS"
9490 042580 104401      TYP0C ; OCTAL W/ LEADING ZEROS
9491 042582 104401      MOV   #100         ; <HT>
9492 042584 104402      TYP0C ; ($ERRPC)
9493 042586 104401      MOV   #100         ; OCTAL W/ LEADING ZEROS
9494 042588 104401      TYPE  ; <HT>
9495 042590 104401      MOV   (R0)+,00     ; PICKUP "DATA TABLE" PTR
9496 042592 104401      BEQ   60           ; EXIT IF NULL
9497 042594 104401      MOV   0(R0)+,-($P) ; SAVE ... FOR TYPEOUT
9498 042596 104401      TYP0C ; TYPE OCTAL, ALL DIGITS
9499 042598 104401      TST   (R0)         ; ANOTHER NUMBER ?
9500 042600 104401      BEQ   70           ; NO - EXIT
9501 042602 104401      TYP   ; TAB BETWEEN ELEMENTS

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9501 042654 000771          BR      58          ; LOOP ON DATA TABLE VECTOR
9502 042656 012601          MOV     (SP)+,R1      ; RESTORE R1
9503 042660 012600          MOV     (SP)+,R0      ; RESTORE R0
9504 042662 144401 001321  TYPE    ,SCLRF      ; CR & LF
9505 042666 000207          RTS     PC           ; RETURN
9506 042670 001130          001    .WORD 0TESTM  ;
9507 042672 001122          001    .WORD 0ERRPC  ;
9508 042674 000011          100:   .ASCII '<1>'  ; <MT>
9509 042676 042924 052123 021140 110:   .ASCII '*TEST & ERR PC' ;
9510 042704 042411 051122 050040          ;
9511 042712 004503 000          ;
9512          042716          ,EVEN

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9513          .SBTTL TYPE ROUTINE
9514
9515          ;*****
9516          ;ROUTINE TO TYPE ASCII MESSAGE. MESSAGE MUST TERMINATE WITH A 0 BYTE.
9517          ;THE ROUTINE WILL INSERT A NUMBER OF NULL CHARACTERS AFTER A LINE FEED.
9518          ;NOTE1: 0NULL CONTAINS THE CHARACTER TO BE USED AS THE FILLER CHARACTER.
9519          ;NOTE2: 0FILLC CONTAINS THE NUMBER OF FILLER CHARACTERS REQUIRED.
9520          ;NOTE3: 0FILLC CONTAINS THE CHARACTER TO FILL AFTER.
9521          ;
9522          ;CALLI
9523          ;* USING A TRAP INSTRUCTION
9524          ;* TYPE ,MESADR          ;MESADR IS FIRST ADDRESS OF AN ASCII STRING
9525          ;*
9526          ;* TYPE
9527          ;* MESADR
9528          ;*
9529
9530 042716 105737 001165 0TYPE: 070B 0TFFLG          ;IS THERE A TERMINAL?
9531 042722 100002          0PL 10          ;BR IF YES
9532 042724 000000          0R 00          ;HALT HERE IF NO TERMINAL
9533 042726 000430          0R 30          ;SAVE R0
9534 042730 010040          101  MOV     R0,-(SP)  ;SAVE R0
9535 042732 017000 000002          MOV     02(SP),R0  ;GET ADDRESS OF ASCII STRING
9536 042736 122737 000001 041344 0MPB 0PTENV,0ENV  ;RUNNING IN APT MODE
9537 042744 001011          0R 02          ;NO, GO CHECK FOR APT CONSOLE
9538 042746 132737 000100 001345 0R 02          ;POOL MESSAGE TO APT
9539 042754 001400          0R 02          ;NO, GO CHECK FOR CONSOLE
9540 042756 010037 042760 042760 0R 010          ;SETUP MESSAGE ADDRESS FOR APT
9541 042762 004737 043200 0R 010          ;POOL MESSAGE TO APT
9542 042766 000000          0R 01          ;MESSAGE ADDRESS
9543 042770 132737 000000 001345 620: 0R 01          ;APT CONSOLE SUPPRESSED
9544 042774 001003          0R 00          ;YES, CRIP TYPE OUT
9545 043000 112046          201  MOV     (R0)+,-(SP)  ;PUSH CHARACTER TO BE TYPED ONTO STACK
9546 043002 001000          0R 40          ;BR IF IT ISN'T THE TERMINATOR
9547 043004 005726          TST    (SP)+        ;IF TERMINATOR POP IT OFF THE STACK
9548 043006 012000          000:  MOV     (SP)+,R0  ;RESTORE R0
9549 043010 002716 000002          ADD    02,(SP)      ;ADJUST RETURN PC
9550 043014 000002          RTI                    ;RETURN
9551 043016 122716 000011          401  CMPB   0HT,(SP)   ;BRANCH IF <MT>
9552 043022 001430          0R 00          ;
9553 043024 122716 000200          0R 00          ;BRANCH IF NOT <CRUF>
9554 043030 001000          0R 00          ;
9555 043032 005726          TST    (SP)+        ;DUP <CR><LF> EQUIV
9556 043034 104401          TYPE  ;TYPE A CR AND LF
9557 043036 001321          SCLRF ;
9558 043040 105037 043174          CLR   0CHARCNT      ;CLEAR CHARACTER COUNT
9559 043044 000755          RR     20          ;GET NEXT CHARACTER
9560 043046 004737 043130          501  PC,0TYPEC          ;GO TYPE THIS CHARACTER
9561 043052 123726 001004          601  CMPB   0FILLC,(SP)+ ;IS IT TIME FOR FILLER CHAR.?
9562 043056 001350          0R 20          ;IF NO GO GET NEXT CHAR.
9563 043060 013746 001102          0R 01          ;GET # OF FILLER CHAR. NEEDED
9564          ;AND THE NULL CHAR.
9565 043064 105360 000001          701  DECB   1(0P)     ;DOES A NULL NEED TO BE TYPED?
9566 043070 002770          0R 00          ;BR IF NO--GO POP THE NULL OFF OF STACK
9567 043072 104737 043130          0R 00          ;GO TYPE A NULL
9568 043076 105337 043174          DECB   0CHARCNT     ;DO NOT COUNT AS A COUNT

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9569 043102 000778          BR      78          ;;LOOP
9570
9571          HORIZONTAL TAB PROCESSOR
9572
9573 043104 112716 000040 001  MOVB  1' ,(SP)  ;;REPLACE TAB WITH SPACE
9574 043110 044737 043130 001  JSR   PC,STYPC  ;;TYPE A SPACE
9575 043114 112737 000007 043174 001  BITB  47,4CHARCNT ;;BRANCH IF NOT AT
9576 043122 001372          BNE   00          ;;TAB STOP
9577 043124 005724          TST  (SP)+      ;;POP SPACE OFF STACK
9578 043126 000724          BR   00          ;;GET NEXT CHARACTER
9579 043130 105777 136022 001  JSR   04T96,STYPC ;;WAIT UNTIL PRINTER IS READY
9580 043134 100375          BPL  00          ;;LOAD CHAR TO BE PIPED INTO DATA REG.
9581 043136 110077 000002 136014 001  MOVB  2(SP),0ATPB ;;IS CHARACTER A CARRIAGE RETURN?
9582 043144 127766 000015 000002 001  CMPB  0CR,2(SP)  ;;BRANCH IF NO
9583 043152 001003          BNE   00          ;;YES--CLEAR CHARACTER COUNT
9584 043154 105037 043174          CLRB  4CHARCNT  ;;EXIT
9585 043160 000000          BR   00          ;;IS CHARACTER A LINE FEED?
9586 043162 127766 000012 000002 101  CMPB  0LF,2(SP)  ;;BRANCH IF YES
9587 043170 001402          BEQ  00          ;;COUNT THE CHARACTER
9588 043172 105227          INCB  4TYPE+   ;;CHARACTER COUNT STORAGE
9589 043174 000000          SCHARCNT,WORD 0
9590 043176 000207 4TYPE) RTS      PC
9591

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9592          .SBTTL APT COMMUNICATIONS ROUTINE
9593
9594          ;;*****
9595 043200 112737 000001 043444 001  MOVB  01,0FFLG  ;;TO REPORT FATAL ERROR
9596 043206 112737 000001 043442 001  MOVB  01,0MFLG  ;;TO TYPE A MESSAGE
9597 043214 000003          BR   00          ;;
9598 043216 112737 000001 043444 001  MOVB  01,0FFLG  ;;TO ONLY REPORT FATAL ERROR
9599 043224 000003 000046          BNE  00          ;;PUSH R0 ON STACK
9600 043226 010146          MOV  R1,-(SP)  ;;PUSH R1 ON STACK
9601 043230 105737 043442          TSTB 0MFLG    ;;SHOULD TYPE A MESSAGE?
9602 043234 001450          BNE  00          ;;IF NOT: BR
9603 043236 127737 000001 001344 001  CMPB  0APTRNV,0ENV ;;OPERATING UNDER APT?
9604 043244 001031          BNE  00          ;;IF NOT: BR
9605 043246 132737 000100 001345 001  BITB  0APTRPOOL,0ENVM ;;SHOULD SPOOL MESSAGE?
9606 043254 001425          BEQ  00          ;;IF NOT: BR
9607 043256 017600 000004          MOV  04(SP),R0 ;;GET MESSAGE ADDR.
9608 043262 002766 000002 000004 001  ADD  02,4(SP)  ;;BUMP RETURN ADDR.
9609 043270 005737 001324 101  TST  0MSGTYPE  ;;SEE IF DONE W/ LAST MISSION?
9610 043274 001375          BNE  00          ;;IF NOT: WAIT
9611 043276 010037 001340 201  MOV  R0,0MSGADR ;;PUT ADDR IN MAILBOX
9612 043282 105720          TSTB (R0)+    ;;FIND END OF MESSAGE
9613 043284 001376          BNE  00          ;;SUB START OF MESSAGE
9614 043286 002700          SUB  0MSGADR,R0 ;;GET MESSAGE LENGTH IN WORDS
9615 043292 001037 001342 001324 001  MOV  R0,0MSGLEN ;;PUT LENGTH IN MAILBOX
9616 043294 000043          MOV  04,0MSGTYPE ;;TELL APT TO TAKE MSG.
9617 043296 000043          BR   00          ;;
9618 043300 107637 000004 043354 301  MOV  04(SP),40 ;;PUT MSG ADDR IN JSR LINKAGE
9619 043306 102766 000002 000004 001  ADD  02,4(SP)  ;;BUMP RETURN ADDRESS
9620 043314 113740 177776 000004 001  MOV  177776,-(SP) ;;PUSH 177776 ON STACK
9621 043316 000737 043716 401  JSR  PC,4TYPE  ;;CALL TYPE MACRO
9622 043318 000000          WORD 0
9623 043318 000000          WORD 0
9624 043318 105737 043444 1001  TSTB 0FFLG    ;;SHOULD REPORT FATAL ERROR?
9625 043322 001416          BNE  00          ;;IF NOT: BR
9626 043324 005737 001344          TST  0ENV     ;;RUNNING UNDER APT?
9627 043326 001413          BEQ  00          ;;IF NOT: BR
9628 043328 005737 001324 1101  TST  0MSGTYPE  ;;FINISHED LAST MESSAGE?
9629 043330 001413          BNE  00          ;;IF NOT: WAIT
9630 043332 005737 000004 001326 001  MOV  04(SP),0FATAL ;;GET ERROR #
9631 043334 102766 000002 000004 001  ADD  02,4(RP)  ;;BUMP RETURN ADDR.
9632 043336 005737 001324 1201  INC  0MSGTYPE  ;;TELL APT TO TAKE ERROR
9633 043338 105037 043444          CLRB 0FFLG    ;;CLEAR FATAL FLAG
9634 043340 105037 043443          CLRB 0LEFLG   ;;CLEAR LOG FLAG
9635 043342 105037 043442          CLRB 0MFLG   ;;CLEAR MESSAGE FLAG
9636 043344 012000          MOV  (SP)+,R1  ;;POP STACK INTO R1
9637 043346 012000          MOV  (SP)+,R0  ;;POP STACK INTO R0
9638 043348 000000          RTS          ;;RETURN
9639 043350 000000          WORD 0
9640 043352 000000          WORD 0
9641 043354 000000          WORD 0
9642 043356 000000          WORD 0
9643 043358 000000          WORD 0
9644 043360 000000          WORD 0
9645 043362 000000          WORD 0
9646 043364 000000          WORD 0
9647 043366 000000          WORD 0

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9648 608040

ADTCUP=040

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```
.SBTTL BINARY TO OCTAL (ASCII) AND TYPE  
;*****  
;THIS ROUTINE IS USED TO CHANGE A 16-BIT BINARY NUMBER TO A 6-DIGIT  
;OCTAL (ASCII) NUMBER AND TYPE IT.  
;BTYP0---ENTER HERE TO SETUP SUPPRESS ZEROS AND NUMBER OF DIGITS TO TYPE  
;CALLI  
;* MOV NUM,=(BP) ;NUMBER TO BE TYPED  
;* TYP05 ;CALL FOR TYPEOUT  
;* ,BYTE N ;NO. TO 6 FOR NUMBER OF DIGITS TO TYPE  
;* ,BYTE M ;NO. ON 0  
;* ;TYPE LEADING ZEROS  
;* ;SUPPRESS LEADING ZEROS  
;*  
;BTYPN---ENTER HERE TO TYPE OUT WITH THE SAME PARAMETERS AS THE LAST  
;BTYP05 OR BTYP0C  
;CALLI  
;* MOV NUM,=(BP) ;NUMBER TO BE TYPED  
;* TYPON ;CALL FOR TYPEOUT  
;*  
;BTYP0C---ENTER HERE FOR TYPEOUT OF A 16 BIT NUMBER  
;CALLI  
;* MOV NUM,=(BP) ;NUMBER TO BE TYPED  
;* TYP0C ;CALL FOR TYPEOUT  
;*  
BTYP05: MOV 0(BP),-(BP) ;PICKUP THE MODE  
MOV 1(BP),@WFLD ;LOAD ZERO FILL SWITCH  
MOV 2(BP),@MODE+1 ;NUMBER OF DIGITS TO TYPE  
ADD 2,(BP) ;ADJUST RETURN ADDRESS  
BR BTYPON  
BTYP0C: MOV 1,@WFLD ;SET THE ZERO FILL SWITCH  
MOV 2,@MODE+1 ;SET FOR SIX(6) DIGITS  
MOV 3,@CNT ;SET THE ITERATION COUNT  
MOV R3,=(BP) ;SAVE R3  
MOV R4,=(BP) ;SAVE R4  
MOV R5,=(BP) ;SAVE R5  
MOV @MODE+1,R4 ;GET THE NUMBER OF DIGITS TO TYPE  
NEG R4  
ADD @R4,R4 ;SUBTRACT IT FOR MAX. ALLOWED  
MOV R4,@MODE ;SAVE IT FOR USE  
MOV @WFLD,R4 ;GET THE ZERO FILL SWITCH  
MOV 12(BP),R5 ;PICKUP THE INPUT NUMBER  
CLF R3 ;CLEAR THE OUTPUT WORD  
MUL R5 ;MULTIPLY INTO *C*  
DIF R5 ;DO DO R5*  
MOV R4,R5 ;FROM THIS DIGIT  
MOV R4,R4  
MUL R3,R4 ;GET LSB OF THIS DIGIT  
DECH @MODE ;TYPE THIS DIGIT  
BPL R4 ;IF NO  
DIF R4 ;GET RID OF JUNK  
BNE R4 ;TEST FOR 0  
TST R4 ;SUPPRESS THIS IF  
MOV 55 ;IF 1 IF YES
```


9866	044564	051127	041505	000124			
9867	044572	047515	024104	027500	EMH	.ASCIZ	"MOD(F/D) OPERATION - FRACTIONAL RESULT INCORRECT"
9868	044600	024504	047440	042520			
9869	044626	040522	044524	047117			
9870	044614	026440	041040	040522			
9871	044622	052103	047511	040510			
9872	044630	020114	042522	052523			
9873	044636	052114	044440	041516			
9874	044644	051117	042522	052103			
9875	044652	000					
9876	044653	115	042117	043050	EMH	.ASCIZ	"MOD(F/D) OPERATION - INTEGER RESULT INCORRECT"
9877	044660	042057	020051	050117			
9878	044666	051105	052101	047511			
9879	044674	020116	020055	047111			
9880	044702	042524	042507	020122			
9881	044710	042522	052523	052114			
9882	044716	044440	041516	051117			
9883	044721	042522	052103	000			
9884	044731	106	047514	052101	EMH	.ASCIZ	"FLOAT-TO-DOUBLE CONVERSION - RESULT INCORRECT"
9885	044736	052055	026517	047504			
9886	044744	041125	042514	041440			
9887	044752	047117	042026	051522			
9888	044760	047511	020116	020055			
9889	044766	042522	052523	052114			
9890	044774	044440	041516	051117			
9891	045002	042522	052103	000			
9892	045007	104	052517	046102	EMH	.ASCIZ	"DOUBLE-TO-FLOAT CONVERSION - RESULT INCORRECT"
9893	045014	026505	047524	043053			
9894	045022	047514	052101	041440			
9895	045030	047117	042026	051522			
9896	045036	047511	020116	020055			
9897	045044	042522	052523	052114			
9898	045052	044440	041516	051117			
9899	045060	042522	052103	000			
9900	045065	106	050111	042105	EMH	.ASCIZ	"FIXED-TO-FLOATING CONVERSION - RESULT INCORRECT"
9901	045072	052055	026517	046106			
9902	045100	040517	044524	043510			
9903	045106	041440	047117	042526			
9904	045114	051522	047511	020116			
9905	045122	020055	042522	052523			
9906	045130	052114	044440	041516			
9907	045136	051117	042522	052103			
9908	045144	000					
9909	045145	106	047514	052101	EMH	.ASCIZ	"FLOATING-TO-FIXED CONVERSION - RESULT INCORRECT"
9910	045152	047111	026507	047524			
9911	045160	043055	054111	042105			
9912	045166	041440	047117	042526			
9913	045174	051522	047511	020116			
9914	045202	020055	042522	052523			
9915	045210	052114	044440	041516			
9916	045218	051117	042522	052103			
9917	045224	000					
9918	045225	114	040317	020104	EMH	.ASCIZ	"LOAD EXPONENT(F/D) OPERATION - RESULT INCORRECT"
9919	045232	054105	047520	042516			
9920	045240	052110	043050	042057			
9921	045246	020031	050117	051105			

9922	045254	052101	047511	020116			
9923	045262	020055	042522	052523			
9924	045270	052114	044440	041516			
9925	045276	051117	042522	052103			
9926	045304	000					
9927	045305	123	047524	042522	EMH	.ASCIZ	"STORE EXPONENT(F/D) OPERATION - RESULT INCORRECT"
9928	045312	042440	050130	047117			
9929	045320	047105	024124	027500			
9930	045326	024504	047440	042520			
9931	045334	040522	044524	047117			
9932	045342	026440	051040	051505			
9933	045350	040125	020124	047111			
9934	045356	047501	051122	041505			
9935	045364	000124					


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10023 040260 001170 001172 001174 .WORD $REG0,$REG1,$REG2,$REG3,0
10024 040266 001176 000000
10025 040272 001260 001262 001264 DTAC1 .WORD $TMP14,$TMP15,$TMP16,$TMP17
10026 040300 001266
10027 040302 001200 001202 001204 .WORD $REG4,$REG5,$REG6,$REG7,0
10028 040310 001206 000000
10029 040314 001174 001172 000000 DTAD1 .WORD $REG2,$REG1,0
10030 040322 001176 001174 000000 DTAE1 .WORD $REG3,$REG2,0
10031 040330 002006 002010 002012 DTAK1 .WORD FPP0PC,FPP0PS,FPP0SP,FPS,FLC,FLA,0
10032 040336 002008 002002 002004
10033 040344 000000
10034
10035
10036
10037
PP0001 ; THE END
.END
  
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ACD01 000000 330
ACD02 000000 330
ACPUOP 000000 330 345
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ADD0L 034060 0097 00950
ADD0T 034031 1426 1440 1470 1492 1514 1536 1558 1580 1602 1624 1646 1668 1690
      1712 1734 1756 1778 1800 1822 80914
ADD04 005624 1425 1440#
ADD0L0 006272 1579 1544#
ADD0L1 006364 1601 1606#
ADD0L2 006416 1623 1628#
ADD0L3 006470 1645 1650#
ADD0L4 006522 1667 1672#
ADD0L5 006574 1689 1694#
ADD0L6 006626 1711 1716#
ADD0L7 006678 1733 1738#
ADD0L8 006730 1755 1760#
ADD0L9 006782 1777 1782#
ADD0L10 006834 1799 1804#
ADD0L11 006886 1821 1826#
ADD0L12 006938 1843 1848#
ADD0L13 006990 1865 1870#
ADD0L14 007042 1887 1892#
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ADD0L16 007146 1931 1936#
ADD0L17 007198 1953 1958#
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Table with 13 columns of numerical data and labels on the left such as M2, MA, NLPAS, NWPAS1, PING, etc.

Table with 13 columns of numerical data and labels on the left such as PNHVLC, P13, R3SVEC, etc.

TST102	007490	1885	19080
TST103	007490	1885	19190
TST104	007490	1923	19380
TST105	007572	1942	19570
TST106	007570	1961	19760
TST107	007626	1950	19550
TST108	003516	735	7490
TST109	007661	1999	20140
TST110	007722	2018	20330
TST111	007760	2037	20520
TST112	010010	2056	20710
TST113	010054	2075	20900
TST114	010112	2094	21100
TST115	010168	2114	21320
TST116	010236	2136	21540
TST117	003950	753	7670
TST118	010310	2158	21760
TST119	010362	2180	21980
TST120	010434	2202	22200
TST121	010506	2224	22420
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TST123	010632	2268	22860
TST124	010704	2290	23080
TST125	010756	2312	23300
TST126	003002	771	7850
TST127	011030	2334	23520
TST128	011102	2356	23740
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TST130	011226	2400	24180
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TST132	011322	2441	24560
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TST134	011416	2479	24940
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TST139	011606	2555	25700
TST140	011644	2574	25890
TST141	011702	2593	26080
TST142	011740	2612	26270
TST143	011776	2631	26460
TST144	003066	807	8220
TST145	012034	2650	26650
TST146	012072	2669	26840
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TST148	012166	2707	27220
TST149	012240	2727	27410
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TST152	012436	2793	28110
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TST154	012510	2815	28330
TST155	012562	2837	28550
TST156	012634	2859	28770
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TST165	013032	2925	29430
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T8T25	004306	3966	3928
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T8T284	021004	4608	46168
T8T285	021046	4628	46368
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T8T288	004516	3946	39628
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T8T293	021362	4748	47568
T8T294	021424	4768	47778
T8T295	021506	4791	48018
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T8T297	021652	4829	48498
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T8T302	022100	4901	49218
T8T303	022162	4925	49468
T8T304	022244	4949	49698
T8T305	022326	4973	49938

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T8T307	022472	5021	50418
T8T308	004612	3985	39008
T8T309	022554	5045	50658
T8T310	022636	5069	50898
T8T311	022720	5093	51138
T8T312	021002	5117	51378
T8T313	023064	5141	51618
T8T314	023122	5165	51808
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T8T320	023350	5260	52758
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T8T323	023502	5317	53328
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T8T325	023576	5355	53708
T8T326	004706	3983	39188
T8T327	023634	5374	53938
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T8T330	023766	5432	54478
T8T331	024024	5451	54668
T8T332	024062	5470	54858
T8T333	024120	5489	55048
T8T334	024156	5508	55238
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T8T336	024214	5527	55428
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T8T341	024442	5623	56388
T8T342	024500	5642	56578
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T8T353	005040	3980	39158
T8T354	025160	5833	58488
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Table with 12 columns of numerical data, likely representing a cross-reference table for user symbols.

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ESTETH 001330
ETMALS 001310
ETKS 001155
ETMS 001152
ETMPW 001230

ETMP1 001232
ETMP10 001250
ETMP11 001252
ETMP12 001254
ETMP13 001256
ETMP14 001246
ETMP15 001262
ETMP16 001264
ETMP17 001246
ETMP2 001234
ETMP20 001270
ETMP21 001272
ETMP22 001274
ETMP23 001276
ETMP24 001300
ETMP25 001302
ETMP26 001304
ETMP27 001306
ETMP3 001236
ETMP4 001240
ETMP5 001242
ETMP6 001244
ETMP7 001246
ETM 001254

Table with 12 columns of numerical data, continuing the cross-reference table.

Table with 12 columns of numerical data, continuing the cross-reference table.

