

## ACCESS NAMES TABLE

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SOURCE ACCESS NAME= PPC2.P359.SRC.CIF  
OBJECT ACCESS NAME= PPC2.P359.OBJ.CIFS  
LISTING ACCESS NAME= PPC2.P359.LST.CIFS  
ERROR ACCESS NAME=  
OPTIONS= XREF  
MACRO LIBRARY PATHNAME=

LINE	KEY	NAME
0002	A	VERSION =>PPC2.P359.SRC.P359

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IDT 'CIF'

```
*****  
*  
*          CCCCC      IIIIII      FFFFFFFF  
*          C          C          I          F  
*          C          C          I          F  
*          C          C          I          FFFF  
*          C          C          I          F  
*          C          C          I          F  
*          CCCCC      IIIIII      F  
*  
*          PPPP      3333      555555      9999  
*          P P      3      3      5          9 9  
*          P P      3      3      5          9 9  
*          PPPP      3333      55555      99999  
*          P          3      3      5          9  
*          P          3 3      5 5      9 9  
*          P          3333      5555      9999  
*****
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0056          DEF  CIF
0057          REF  FAC,R0LB,R1LB,R3LB
0058          REF  C100
0059          *****
0060          *
0061          *      CIF - Convert integer to floating          *
0062          *      Assumes that the value in the FAC is      *
0063          *      an integer and converts it into an 8-byte  *
0064          *      floating point value                        *
0065          *
0066          *****
0067 0000 0204  CIF  LI  R4,FAC          Will convert into the FAC
          0002 0000
0068 0004 C014      MOV  *R4,R0          Get integer into register
0069 0006 C184      MOV  R4,R6          Copy ptr to FAC to clear it
0070 0008 04F6      CLR  *R6+          Clear FAC,FAC+1
0071 000A 04F6      CLR  *R6+          IN CASE HAD A STRING IN FAC
0072 000C C140      MOV  R0,R5          IS INTEGER EQUAL TO ZERO?
0073 000E 1323      JEQ  CIFRT          YES - ZERO RESULT AND RETURN
0074 0010 0740      ABS  R0          GET ABS VALUE OF ARG
0075 0012 0203      LI   R3,>40        GET EXPONENT BIAS
          0014 0040
0076 0016 04F6      CLR  *R6+          CLEAR WORDS IN RESULT THAT
0077 0018 04D6      CLR  *R6          MIGHT NOT GET A VALUE
0078 001A 0280      CI   R0,100        IS INTEGER < 100?
          001C 0064
0079 001E 1A13      JL   CIF02          YES-JUST PUT IN 1ST FRACTION
0080          *          PART
0081 0020 0280      CI   R0,10000      NO-IS ARG < 100^2?
          0022 2710
0082 0024 1A08      JL   CIF01          YES-JUST 1 DIVISION NECESSARY
0083          *          NO - 2 DIVISIONS ARE NECESSARY
0084 0026 0583      INC  R3          ADD 1 TO EXPONENT FOR 1ST DIV
0085 0028 C040      MOV  R0,R1          PUT # IN LOW ORDER WORD FOR
0086          *          THE DIVIDE
0087 002A 04C0      CLR  R0          CLEAR HIGH ORDER WORD FOR THE
0088          *          DIVIDE
0089 002C 3C20      DIV  @C100,R0        DIVIDE BY THE RADIX
          002E 0000
0090 0030 D920      MOVB @R1LB,3(R4)      MOVE THE RADIX DIGIT IN
          0032 0000
          0034 0003
0091 0036          CIF01
0092 0036 0583      INC  R3          ADD 1 TO EXPONENT FOR DIVIDE
0093 0038 C040      MOV  R0,R1          PUT IN LOW ORDER FOR DIVIDE
0094 003A 04C0      CLR  R0          CLEAR HIGH ORDER FOR DIVIDE
0095 003C 3C20      DIV  @C100,R0        DIVIDE BY THE RADIX
          003E 002E
0096 0040 D920      MOVB @R1LB,2(R4)      PUT NEXT RADIX DIGIT IN
          0042 0032
          0044 0002
0097 0046          CIF02
0098 0046 D920      MOVB @R0LB,1(R4)      PUT HIGHEST ORDER RADIX DIGIT
          0048 0000
          004A 0001
0099          *          IN
0100 004C D520      MOVB @R3LB,*R4          PUT EXPONENT IN
          004E 0000
0101 0050 0545      INV  R5          IS RESULT POSITIVE?
0102 0052 1101      JLT  CIFRT          YES - SIGN IS CORRECT

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CIF SDSMAC 3.3.0 79.312 16:48:02 MONDAY, JUN 23, 1980.  
----- CONVERT INTEGER TO FLOATING -----

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0103 0054 0514 NEG \*R4  
0104 0056 045B CIFRT RT  
0105 END  
NO ERRORS, NO WARNINGS

NO - MAKE IT NEGATIVE

LABEL	VALUE	DEFN	REFERENCES
C100	R 003E'	0058	0089 0095
CIF	D 0000'	0067	0056
CIF01	0036'	0091	0082
CIF02	0046'	0097	0079
CIFRT	0056'	0104	0073 0102
DX10	0001	0003	0004
FAC	R 0002'	0057	0067
P359	0000	0003	0003
RO	0000		0068 0072 0074 0078 0081 0085 0087 0089 0093
			0094 0095
ROLB	R 0048'	0057	0098
R1	0001		0085 0093
R1LB	R 0042'	0057	0090 0096
R3	0003		0075 0084 0092
R3LB	R 004E'	0057	0100
R4	0004		0067 0068 0069 0090 0096 0098 0100 0103
R5	0005		0072 0101
R6	0006		0069 0070 0071 0076 0077
VERMAC	M	A0001	0003
VERS	0000	0003	0004