

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				2 *****
				3 *
				4 *                  CMPSC -- Compression Call instruction test
				5 *
				6 *****
				7 *
				8 *  PLEASE NOTE that this test only performs the simplest most basic
				9 *  test of the CMPSC instruction.  It does NOT test all aspects of
				10 *  the instruction.  We have a separate much more thorough and much
				11 *  longer running test program for that.  This test only compresses
				12 *  a small amount of data and then expands it and verifies that what
				13 *  was expanded matches what it started with.  It does NOT check for
				14 *  a valid condition code or anything else.  It's designed to be run
				15 *  as part of "make test" after a build of Hercules and thus cannot
				16 *  run for a very long time (and besides, as I said, we already have
				17 *  a separate offline program that does a much better job of that).
				18 *
				19 *
				20 *                  -- Sample runtest script --
				21 *
				22 *
				23 *  *Testcase CMPSC (Compression Call)
				24 *  mainsize  2
				25 *  numcpu    1
				26 *  sysclear
				27 *  archlvl   z/Arch
				28 *  loadcore  "\$(testpath)/CMPSC.core"
				29 *  runtest   1
				30 *  *Compare
				31 *  r 500.1
				32 *  *Want "Result Flag"  FF
				33 *  *Done
				34 *
				35 *
				36 *****

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
			38	PRINT OFF
			3419	PRINT ON
			3420	PRINT DATA
			3422	*****
			3423	* SATK prolog stuff...
			3424	*****
			3426	ARCHLVL MNOTE=NO
			3428+\$AL	OPSYN AL
			3429+\$ALR	OPSYN ALR
			3430+\$B	OPSYN B
			3431+\$BAS	OPSYN BAS
			3432+\$BASR	OPSYN BASR
			3433+\$BC	OPSYN BC
			3434+\$BCTR	OPSYN BCTR
			3435+\$BE	OPSYN BE
			3436+\$BH	OPSYN BH
			3437+\$BL	OPSYN BL
			3438+\$BM	OPSYN BM
			3439+\$BNE	OPSYN BNE
			3440+\$BNH	OPSYN BNH
			3441+\$BNL	OPSYN BNL
			3442+\$BNM	OPSYN BNM
			3443+\$BNO	OPSYN BNO
			3444+\$BNP	OPSYN BNP
			3445+\$BNZ	OPSYN BNZ
			3446+\$BO	OPSYN BO
			3447+\$BP	OPSYN BP
			3448+\$BXLE	OPSYN BXLE
			3449+\$BZ	OPSYN BZ
			3450+\$CH	OPSYN CH
			3451+\$L	OPSYN L
			3452+\$LH	OPSYN LH
			3453+\$LM	OPSYN LM
			3454+\$LPSW	OPSYN LPSW
			3455+\$LR	OPSYN LR
			3456+\$LTR	OPSYN LTR
			3457+\$NR	OPSYN NR
			3458+\$SL	OPSYN SL
			3459+\$SLR	OPSYN SLR
			3460+\$SR	OPSYN SR
			3461+\$ST	OPSYN ST
			3462+\$STM	OPSYN STM
			3463+\$X	OPSYN X
			3464+\$AHI	OPSYN AHI
			3465+\$B	OPSYN J
			3466+\$BC	OPSYN BRC
			3467+\$BE	OPSYN JE
			3468+\$BH	OPSYN JH
			3469+\$BL	OPSYN JL
			3470+\$BM	OPSYN JM







LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3550 *****
				3551 * The actual CMPSC program itself...
				3552 *****
00000200		00000000		3554 USING CMPSC,R0 No base registers needed
00000200				3556 BEGIN DS 0H
				3557 *
				3558 ** COMPRESS the data...
				3559 *
00000200	E300 02D0 0004		000002D0	3560 LG R0,CMP_R0 R0 <== Compress
00000206	E310 02E0 0004		000002E0	3561 LG R1,CMP_R1 R1 <== Compress
0000020C	E320 02A0 0004		000002A0	3562 LG R2,=AD(CMPADDR) R2 --> Compression buffer
00000212	E330 02A8 0004		000002A8	3563 LG R3,=AD(1024) R3 <== Compression buffer size
00000218	E340 02B0 0004		000002B0	3564 LG R4,=AD(INADDR) R4 --> Input data
0000021E	E350 02B8 0004		000002B8	3565 LG R5,=AD(INSIZE) R5 <== Input size
00000224	B263 0024			3566 CMPSC R2,R4 Compress data
				3567 *
				3568 ** Calculate length of compressed data
				3569 *
00000228	E360 02A8 0004		000002A8	3570 LG R6,=AD(1024) R6 <== Original R3 value
0000022E	B909 0063			3571 SGR R6,R3 Subtract ending R3 value
00000232	E360 02C0 0008		000002C0	3572 AG R6,=AD(1) Plus +1 to get true length
				3573 *
				3574 ** EXPAND what we compressed...
				3575 *
00000238	E300 02D8 0004		000002D8	3576 LG R0,EXP_R0 R0 <== Expand
0000023E	E310 02E8 0004		000002E8	3577 LG R1,EXP_R1 R0 <== Expand
00000244	E320 02C8 0004		000002C8	3578 LG R2,=AD(EXPADDR) R2 --> Expansion buffer
0000024A	E330 02A8 0004		000002A8	3579 LG R3,=AD(1024) R3 <== Expansion vuffer size
00000250	E340 02A0 0004		000002A0	3580 LG R4,=AD(CMPADDR) R4 --> Input data
00000256	B904 0056			3581 LGR R5,R6 R5 <== Input size
0000025A	B263 0024			3582 CMPSC R2,R4 Expand data
				3583 *
				3584 ** VERIFY it matches original input data...
				3585 *
0000025E	E320 02B0 0004		000002B0	3586 LG R2,=AD(INADDR) R2 --> Original input data
00000264	E330 02B8 0004		000002B8	3587 LG R3,=AD(INSIZE) R3 <== Original input size
0000026A	E340 02C8 0004		000002C8	3588 LG R4,=AD(EXPADDR) R4 --> Expanded data
00000270	E350 02B8 0004		000002B8	3589 LG R5,=AD(INSIZE) R5 <== R3 (same size)
00000276	0F24			3590 CLCL R2,R4 Compare expanded data with original
00000278	4780 0280		00000280	3591 BE GOODEOJ If it's identical then all is well
0000027C	47F0 0290		00000290	3592 B FAILEOJ Otherwise something is VERY WRONG!



LOC	OBJECT CODE	ADDR1	ADDR2	STMT	
				3609	*****
				3610	* Working Storage
				3611	*****
000002A0				3613	LTORG , Literals pool
000002A0	00000000	00002000		3614	=AD(CMPADDR)
000002A8	00000000	00000400		3615	=AD(1024)
000002B0	00000000	00001000		3616	=AD(INADDR)
000002B8	00000000	00000140		3617	=AD(INSIZE)
000002C0	00000000	00000001		3618	=AD(1)
000002C8	00000000	00003000		3619	=AD(EXPADDR)
		00000500	00000001	3621	FLAGADDR EQU X'500' Fixed address of test results flag
				3622	
		00001000	00000001	3623	INADDR EQU X'1000' Address of input data
		00002000	00000001	3624	CMPADDR EQU X'2000' Address of compression buffer
		00003000	00000001	3625	EXPADDR EQU X'3000' Address of expansion buffer
		00020000	00000001	3626	CDICTADR EQU X'20000' Address of 64K compression dictionary
		00030000	00000001	3627	EDICTADR EQU X'30000' Address of 64K expansion dictionary
000002D0				3629	DC 0D'0' (alignment)
000002D0	00000000	00005200		3630	CMP_R0 DC XL8'0000000000005200' R0 Compression options
000002D8	00000000	00005300		3631	EXP_R0 DC XL8'0000000000005300' R0 Expansion options
000002E0	00000000	00020000		3632	CMP_R1 DC AD(CDICTADR) R1 addr Compression dictionary
000002E8	00000000	00030000		3633	EXP_R1 DC AD(EDICTADR) R1 addr Expansion dictionary
000002F0		000002F0	00000500	3635	ORG CMPSC+FLAGADDR Fixed address of result flag
00000500	00			3637	TESTFLAG DC X'00' Failing test number or X'FF' = good



LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3639 *****
				3640 * Input "File" (data)
				3641 *****
00000501		00000501	00001000	3643 ORG CMPSC+INADDR Fixed address of input buffer
		00001000	00000001	3645 INFILE EQU * Original input data
00001000	02C5E2C4	40404040		3646 DC X'02C5E2C44040404040400030404000014040404040400400000000000000'
00001008	40400030	40400001		
00001010	40404040	40404040		
00001018	04000000	00000000		
00001020	C9C7E6D3	C4E2E3C1		3647 DC X'C9C7E6D3C4E2E3C10000000006001B00C9C7E6D3D5D9C8C200001B0006000004'
00001028	00000000	06001B00		
00001030	C9C7E6D3	D5D9C8C2		
00001038	00001B00	06000004		
00001040	40404040	40404040		3648 DC X'4040404040404040F0F0F0F0F0F0F0F102E3E7E3400000004040003840400002'
00001048	F0F0F0F0	F0F0F0F1		
00001050	02E3E7E3	40000000		
00001058	40400038	40400002		
00001060	A7F40017	28C9C7E6		3649 DC X'A7F4001728C9C7E6D3C4E2E3C1F0F561F3F161F1F9C8C4E9F2F2F3F040E4C1F9'
00001068	D3C4E2E3	C1F0F561		
00001070	F3F161F1	F9C8C4E9		
00001078	F2F2F3F0	40E4C1F9		
00001080	F9F5F2F2	40F1F77A		3650 DC X'F9F5F2F240F1F77AF0F37AF1F0000BE0B24000E051C00000F0F0F0F0F0F0F0F2'
00001088	F0F37AF1	F0000BE0		
00001090	B24000E0	51C00000		
00001098	F0F0F0F0	F0F0F0F2		
000010A0	02E3E7E3	40000038		3651 DC X'02E3E7E340000038404000384040000218CFB91700CC51B0CFFFB91700BBC090'
000010A8	40400038	40400002		
000010B0	18CFB917	00CC51B0		
000010B8	CFFFB917	00BBC090		
000010C0	00000B75	B9170099		3652 DC X'00000B75B9170099B24D009C5800900441F00000B24D001C010D41100050010D'
000010C8	B24D009C	58009004		
000010D0	41F00000	B24D001C		
000010D8	010D4110	0050010D		
000010E0	18FD1BF1	58EF0040		3653 DC X'18FD1BF158EF0040F0F0F0F0F0F0F0F302C5D5C4404040404040404040404040'
000010E8	F0F0F0F0	F0F0F0F3		
000010F0	02C5D5C4	40404040		
000010F8	40404040	40404040		
00001100	40404040	40404040		3654 DC X'40404040404040404040404040404040F2F5F6F9F6F2F3F4F0F040F0F1F0F6F1'
00001108	40404040	40404040		
00001110	F2F5F6F9	F6F2F3F4		
00001118	F0F040F0	F1F0F6F1		
00001120	F9F1F5F1	D7D361E7		3655 DC X'F9F1F5F1D7D361E760F3F9F04040F0F2F0F4F1F9F1F5F140F0F0F0F0F0F1F3F6'
00001128	60F3F9F0	4040F0F2		
00001130	F0F4F1F9	F1F5F140		
00001138	F0F0F0F0	F0F1F3F6		
		00000140	00000001	3656 INSIZE EQU *-INFILE Size of input data

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3658 *****
				3659 * Compression dictionary
				3660 *****
00001140		00001140	00020000	3662 ORG CMPSC+CDICTADR Compression dictionary
		00020000	00000001	3664 CMPDICT EQU * Compression dictionary
00020000	DF810000	01385840		3665 DC X'DF81000001385840DF042A001C47500CDF847CE300C5D940DF4526D0D1D2D3F0'
00020008	DF042A00	1C47500C		
00020010	DF847CE3	00C5D940		
00020018	DF4526D0	D1D2D3F0		
00020020	DF057758	41500047		3666 DC X'DF05775841500047DC05B9EF00304B18D1061A40504160C5DC062400FF07D247'
00020028	DC05B9EF	00304B18		
00020030	D1061A40	504160C5		
00020038	DC062400	FF07D247		
00020040	DF064300	58474140		3667 DC X'DF0643005847414058067100FF000000B90675405000890520067B0000000000'
00020048	58067100	FF000000		
00020050	B9067540	50008905		
00020058	20067B00	00000000		
00020060	DF067C00	584147F0		3668 DC X'DF067C00584147F07C06AB0001040000B806C3400E004147D906D14010D05058'
00020068	7C06AB00	01040000		
00020070	B806C340	0E004147		
00020078	D906D140	10D05058		
00020080	DFC6DC00	D0F0D1D4		3669 DC X'DFC6DC00D0F0D1D47C07370043310000DB073C05FF9000440000000000000000'
00020088	7C073700	43310000		
00020090	DB073C05	FF900044		
00020098	00000000	00000000		
000200A0	DF075C18	12404100		3670 DC X'DF075C1812404100DD077C004B505818DA078A0547C94058D30797181258054B'
000200A8	DD077C00	4B505818		
000200B0	DA078A05	47C94058		
000200B8	D3079718	1258054B		
000200C0	DF079E12	581740D2		3671 DC X'DF079E12581740D26007F00058500000DC07F3F578F05875DF080600F0556678'
000200C8	6007F000	58500000		
000200D0	DC07F3F5	78F05875		
000200D8	DF080600	F0556678		
000200E0	DC082500	05475841		3672 DC X'DC0825000547584130083D0000000000AC083E47074041586008454B58FF0000'
000200E8	30083D00	00000000		
000200F0	AC083E47	07404158		
000200F8	6008454B	58FF0000		
				3673 PRINT OFF
				5713 PRINT ON
0002FFE0	00000000	00000000		5714 DC X'00000000000000000000000000000000201FFFF000000000000000000000000'
0002FFE8	00000000	00000000		
0002FFF0	201FFFF0	00000000		
0002FFF8	00000000	00000000		
		00010000	00000001	5715 CDICTSIZ EQU *-CMPDICT Compression dictionary size

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				5717 *****
				5718 * Expansion dictionary
				5719 *****
00030000		00030000	00030000	5721 ORG CMPSC+EDICTADR Expansion dictionary
		00030000	00000001	5723 EXPDICT EQU * Expansion dictionary
00030000	23700400	D3E9C4C8		5724 DC X'23700400D3E9C4C8000000000040000000200000001000FFFF000000001EDB'
00030008	00000000	00400000		
00030010	00020000	00010000		
00030018	FFFF0000	00001EDB		
00030020	00002000	00000020		5725 DC X'000020000000002000000000005300000052004654FD380000000000000000'
00030028	00000000	00005300		
00030030	00005200	4654FD38		
00030038	00000000	00000000		
00030040	00000000	00000000		5726 DC X'00'
00030048	00000000	00000000		
00030050	00000000	00000000		
00030058	00000000	00000000		
00030060	00000000	00000000		5727 DC X'00'
00030068	00000000	00000000		
00030070	00000000	00000000		
00030078	00000000	00000000		
00030080	00000000	00000000		5728 DC X'00'
00030088	00000000	00000000		
00030090	00000000	00000000		
00030098	00000000	00000000		
000300A0	00000000	00000000		5729 DC X'00'
000300A8	00000000	00000000		
000300B0	00000000	00000000		
000300B8	00000000	00000000		
000300C0	00000000	00000000		5730 DC X'00'
000300C8	00000000	00000000		
000300D0	00000000	00000000		
000300D8	00000000	00000000		
000300E0	00000000	00000000		5731 DC X'00'
000300E8	00000000	00000000		
000300F0	00000000	00000000		
000300F8	00000000	00000000		
				5732 PRINT OFF
				7772 PRINT ON
0003FFE0	03FF4780	00000000		7773 DC X'03FF4780000000000003FF47700000000003FFF0F0000000004FFF0F0F0000000'
0003FFE8	03FF4770	00000000		
0003FFF0	03FFF0F0	00000000		
0003FFF8	04FFF0F0	F0000000		
		00010000	00000001	7774 EDICTSIZ EQU *-EXPDICT Expansion dictionary size



SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
BEGIN	H	000200	2	3556	3546
CDICTADR	U	020000	1	3626	3662 3632
CDICTSIZ	U	010000	1	5715	
CMPADDR	U	002000	1	3624	3562
CMPDICT	U	020000	1	3664	5715
CMPSC	J	000000	262144	3510	3513 3520 3534 3545 3547 3635 3643 3662 5721 3554
CMP_R0	X	0002D0	8	3630	3560
CMP_R1	A	0002E0	8	3632	3561
CODE	2	000000	262144	3510	
DWAT0009	3	000288	8	3602	3601
DWAT0010	3	000298	8	3607	3606
EDICTADR	U	030000	1	3627	5721 3633
EDICTSIZ	U	010000	1	7774	
EXPADDR	U	003000	1	3625	3578
EXPDICT	U	030000	1	5723	7774
EXP_R0	X	0002D8	8	3631	3576
EXP_R1	A	0002E8	8	3633	3577
FAILEOJ	H	000290	2	3605	3592
FLAGADDR	U	000500	1	3621	3635
GOODEOJ	I	000280	4	3598	3591
IMAGE	1	000000	262144	0	
INADDR	U	001000	1	3623	3643 3564
INFILE	U	001000	1	3645	3656
INSIZE	U	000140	1	3656	3565
PREVORG	U	000200	1	3533	3537
R0	U	000000	1	7777	3554 3560 3576
R1	U	000001	1	7778	3561 3577
R10	U	00000A	1	7787	
R11	U	00000B	1	7788	
R12	U	00000C	1	7789	
R13	U	00000D	1	7790	
R14	U	00000E	1	7791	
R15	U	00000F	1	7792	
R2	U	000002	1	7779	3562 3566 3578 3582 3586 3590
R3	U	000003	1	7780	3563 3571 3579 3587
R4	U	000004	1	7781	3564 3566 3580 3582 3588 3590
R5	U	000005	1	7782	3565 3581 3589
R6	U	000006	1	7783	3570 3571 3572 3581
R7	U	000007	1	7784	
R8	U	000008	1	7785	
R9	U	000009	1	7786	
TESTFLAG	X	000500	1	3637	3598
=AD(1)	A	0002C0	8	3618	3572
=AD(1024)	A	0002A8	8	3615	3563 3570 3579
=AD(CMPADDR)	A	0002A0	8	3614	3562 3580
=AD(EXPADDR)	A	0002C8	8	3619	3578 3588
=AD(INADDR)	A	0002B0	8	3616	3564 3586
=AD(INSIZE)	A	0002B8	8	3617	3565 3587 3589



DESC	SYMBOL	SIZE	POS	ADDR
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Entry: 0

Image	IMAGE	262144	00000-3FFFF	00000-3FFFF
Region	CODE	262144	00000-3FFFF	00000-3FFFF
CSECT	CMPSC	262144	00000-3FFFF	00000-3FFFF

STMT

FILE NAME

```
1 c:\Users\Fish\Documents\Visual Studio 2008\Projects\MyProjects\ASMA-0\CMPSC\CMPSC.asm
2 C:\Users\Fish\Documents\Visual Studio 2008\Projects\Hercules\_Git\_Harold\SATK-0\srcasm\satk.mac
```

**\*\* NO ERRORS FOUND \*\***