

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				2 *****
				3 *
				4 * TRE instruction tests
				5 *
				6 * NOTE: This test is based the CLCL-et-al Test
				7 * modified to only test the TRE instruction.
				8 *
				9 * James Wekel August 2022
				10 *****
				11 *****
				12 *
				13 * TRE basic instruction tests
				14 *
				15 *****
				16 *
				17 * This program tests proper functioning of the TRE
				18 * instructions.
				19 *
				20 * PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
				21 * obvious coding errors. None of the tests are thorough. They are
				22 * NOT designed to test all aspects of any of the instructions.
				23 *
				24 *****
				25 *
				26 * Example Hercules Testcase:
				27 *
				28 *
				29 * *Testcase TRE-01-basic (Test TRE instructions)
				30 *
				31 * archlvl 390
				32 * mainsize 3
				33 * numcpu 1
				34 * sysclear
				35 *
				36 * loadcore "\$(testpath)/TRE-01-basic" 0x0
				37 *
				38 * runtest 1 # (NON-timing test duration)
				39 *
				40 * *Done
				41 *
				42 *
				43 *****

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
			45	PRINT OFF
			3426	PRINT ON
			3428	*****
			3429	* SATK prolog stuff...
			3430	*****
			3432	ARCHLVL ZARCH=NO,MNOTE=NO
			3434+\$AL	OPSYN AL
			3435+\$ALR	OPSYN ALR
			3436+\$B	OPSYN B
			3437+\$BAS	OPSYN BAS
			3438+\$BASR	OPSYN BASR
			3439+\$BC	OPSYN BC
			3440+\$BCTR	OPSYN BCTR
			3441+\$BE	OPSYN BE
			3442+\$BH	OPSYN BH
			3443+\$BL	OPSYN BL
			3444+\$BM	OPSYN BM
			3445+\$BNE	OPSYN BNE
			3446+\$BNH	OPSYN BNH
			3447+\$BNL	OPSYN BNL
			3448+\$BNM	OPSYN BNM
			3449+\$BNO	OPSYN BNO
			3450+\$BNP	OPSYN BNP
			3451+\$BNZ	OPSYN BNZ
			3452+\$BO	OPSYN BO
			3453+\$BP	OPSYN BP
			3454+\$BXLE	OPSYN BXLE
			3455+\$BZ	OPSYN BZ
			3456+\$CH	OPSYN CH
			3457+\$L	OPSYN L
			3458+\$LH	OPSYN LH
			3459+\$LM	OPSYN LM
			3460+\$LPSW	OPSYN LPSW
			3461+\$LR	OPSYN LR
			3462+\$LTR	OPSYN LTR
			3463+\$NR	OPSYN NR
			3464+\$SL	OPSYN SL
			3465+\$SLR	OPSYN SLR
			3466+\$SR	OPSYN SR
			3467+\$ST	OPSYN ST
			3468+\$STM	OPSYN STM
			3469+\$X	OPSYN X
			3470+\$AHI	OPSYN AHI
			3471+\$B	OPSYN J
			3472+\$BC	OPSYN BRC
			3473+\$BE	OPSYN JE
			3474+\$BH	OPSYN JH
			3475+\$BL	OPSYN JL
			3476+\$BM	OPSYN JM
			3477+\$BNE	OPSYN JNE

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3490 *****
				3491 * Initiate the TRE01TST CSECT in the CODE region
				3492 * with the location counter at 0
				3493 *****
				3495 TRE01TST ASALOAD REGION=CODE
		00000000	000021FF	3496+TRE01TST START 0, CODE
00000000	000A0000	00000008		3498+ PSW 0,0,2,0,X'008' 64-bit Restart ISR Trap New PSW
00000008		00000008	00000058	3499+ ORG TRE01TST+X'058'
00000058	000A0000	00000018		3501+ PSW 0,0,2,0,X'018' 64-bit External ISR Trap New PSW
00000060	000A0000	00000020		3502+ PSW 0,0,2,0,X'020' 64-bit Supervisor Call ISR Trap New PSW
00000068	000A0000	00000028		3503+ PSW 0,0,2,0,X'028' 64-bit Program ISR Trap New PSW
00000070	000A0000	00000030		3504+ PSW 0,0,2,0,X'030' 64-bit Machine Check Trap New PSW
00000078	000A0000	00000038		3505+ PSW 0,0,2,0,X'038' 64-bit Input/Output Trap New PSW
00000080		00000080	00000200	3506+ ORG TRE01TST+512
				3508 *****
				3509 * Create IPL (restart) PSW
				3510 *****
				3512 ASAIPL IA=BEGIN
		00000000	000021FF	3513+TRE01TST CSECT
00000200		00000200	00000000	3514+ ORG TRE01TST
00000000	00080000	00000200		3515+ PSW 0,0,0,0,BEGIN,24
00000008		00000008	00000200	3516+ ORG TRE01TST+512 Reset CSECT to end of assigned storage area
		00000000	000021FF	3517+TRE01TST CSECT

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	
				3570	*****
				3571	* TEST01 Test TRE instruction
				3572	*****
0000022C				3574	TEST01 DS 0F
				3575	
0000022C	5010 20C8		000002C8	3576	ST R1,SAVER1 Save register 1
00000230	18F2			3577	LR R15,R2 Save first base register
				3578	
00000232				3579	DROP R2 Temporarily drop addressability
00000232		00000200		3580	USING BEGIN,R15 Establish temporary addressability
				3581	*
00000232	4150 F12C		0000032C	3582	LA R5,TRECTL Point R5 --> testing control table
00000236		00000000		3583	USING TRETEST,R5 What each table entry looks like
				3584	*
		00000236	00000001	3585	TST1LOOP EQU *
				3586	*
00000236	4360 5000		00000000	3587	IC R6,TNUM Set test number
0000023A	4260 9FFE		000021FE	3588	STC r6,TESTNUM
				3589	*
				3590	** Initialize operand data (move data to testing address)
				3591	*
0000023E	58A0 500C		0000000C	3592	L R10,OP1WHERE Where to move operand-1 data to
00000242	58B0 5010		00000010	3593	L R11,OP1LEN operand-1 length
00000246	5860 5004		00000004	3594	L R6,OP1DATA Where op1 data is right now
0000024A	5870 5010		00000010	3595	L R7,OP1LEN How much of it there is
0000024E	0EA6			3596	MVCL R10,R6
				3597	*
00000250	58C0 5014		00000014	3598	L R12,OP2WHERE Where to move operand-2 data to
00000254	58D0 F120		00000320	3599	L R13,=A(OP2LEN) How much of it there is
00000258	5860 5008		00000008	3600	L R6,OP2DATA Where op2 data is right now
0000025C	5870 F120		00000320	3601	L R7,=A(OP2LEN) How much of it there is
00000260	0EC6			3602	MVCL R12,R6
				3603	*
00000262	4300 5001		00000001	3604	IC R0,TBYTE Set test byte
				3606	*
				3607	** Execute TRE instruction and check for expected condition code
				3608	*
00000266	9200 9FFF		000021FF	3609	MVI SUBTEST,X'00' (primary TRE)
				3610	
0000026A	5870 5018		00000018	3611	L R7,FAILMASK (failure CC)
0000026E	8970 0004		00000004	3612	SLL R7,4 (shift to BC instr CC position)
				3613	
00000272	98AC 500C		0000000C	3614	LM R10,R12,OPSWHERE get TRE operands
00000276	B2A5 00AC			3615	TREMORE TRE TRE...
0000027A	4470 F0C2		000002C2	3616	EX R7,TREBC fail if..not an expected cc?
0000027E	4710 F076		00000276	3617	BC B'0001',TREMORE not finished
				3618	
				3619	*
				3620	** Verify end conditions R10 and expected main store

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT			
					3621 *	(last 4 bytes)		
					3622 *			
00000282	5860	501C		0000001C	3623	L	R6,ENDREG	
					3624			
00000286	9201	9FFF		000021FF	3625	MVI	SUBTEST,X'01'	(R10 result)
0000028A	15A6				3626	CLR	R10,R6	R10 correct?
0000028C	4770	F0B6		000002B6	3627	BNE	TREFAIL	No, FAILTEST!
					3628			
00000290	9202	9FFF		000021FF	3629	MVI	SUBTEST,X'02'	(end store)
00000294	186A				3630	LR	R6,R10	
00000296	5B60	F124		00000324	3631	S	R6,=F'4'	
0000029A	D503	5020 6000	00000020	00000000	3632	CLC	ENDSTOR,0(R6)	end storage correct?
000002A0	4770	F0B6		000002B6	3633	BNE	TREFAIL	No, FAILTEST!
					3634			
					3635 *			
000002A4	4150	5024		00000024	3636	LA	R5,TRENEXT	Go on to next table entry
000002A8	D503	F128 5000	00000328	00000000	3637	CLC	=F'0',0(R5)	End of table?
000002AE	4770	F036		00000236	3638	BNE	TST1LOOP	No, loop...
000002B2	47F0	F0BA		000002BA	3639	B	TREDONE	Done! (success!)
					3640			
000002B6	41E0	F110		00000310	3641	TREFAIL	LA R14,FAILTEST	Unexpected results!
000002BA	5810	F0C8		000002C8	3642	TREDONE	L R1,SAVER1	Restore register 1
000002BE	182F				3643	LR	R2,R15	Restore first base register
000002C0	07FE				3644	BR	R14	Return to caller or FAILTEST
					3645			
000002C2	4700	F0B6		000002B6	3646	TREBC	BC 0,TREFAIL	(fail if unexpected condition code)
					3647			
000002C8	00000000				3648	SAVER1	DC F'0'	
000002CC	00000000				3649	SAVER2	DC F'0'	
000002D0	00000000				3650	SAVER5	DC F'0'	
000002D8	00000000 00000000				3651	SAVETRT	DC D'0'	(saved R1/R2 from TRT results)
					3652			
000002E0					3653	DROP	R5	
000002E0					3654	DROP	R15	
000002E0			00000200		3655	USING	BEGIN,R2	

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3657 *****
				3658 * Normal completion or Abnormal termination PSWs
				3659 *****
000002E0				3661 EOJ DWAITEND LOAD=YES Normal completion
000002E0	8200 20E8		000002E8	3663+EOJ DS 0H
000002E8	000A0000 00000000			3664+ LPSW DWAT0008
				3665+DWAT0008 PSW 0,0,2,0,X'000000'
000002F0				3667 FAILDEV DWAIT LOAD=YES, CODE=01 ENADEV failed
000002F0	8200 20F8		000002F8	3668+FAILDEV DS 0H
000002F8	000A0000 00010001			3669+ LPSW DWAT0009
				3670+DWAT0009 PSW 0,0,2,0,X'010001'
00000300				3672 FAILIO DWAIT LOAD=YES, CODE=02 RAWIO failed
00000300	8200 2108		00000308	3673+FAILIO DS 0H
00000308	000A0000 00010002			3674+ LPSW DWAT0010
				3675+DWAT0010 PSW 0,0,2,0,X'010002'
00000310				3677 FAILTEST DWAIT LOAD=YES, CODE=BAD Abnormal termination
00000310	8200 2118		00000318	3678+FAILTEST DS 0H
00000318	000A0000 00010BAD			3679+ LPSW DWAT0011
				3680+DWAT0011 PSW 0,0,2,0,X'010BAD'
				3682 *****
				3683 * Working Storage
				3684 *****
00000320				3686 LTORG , Literals pool
00000320	00000100			3687 =A(OP2LEN)
00000324	00000004			3688 =F'4'

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3698 *****
				3699 * TRETEST DSECT
				3700 *****
				3702 TRETEST DSECT ,
00000000	00			3704 TNUM DC X'00' TRE table Number
00000001	00			3705 TBYTE DC X'00' TRE Testbyte
00000002	00			3706 DC X'00'
00000003	00			3707 DC X'00'
00000004	00000000			3709 OP1DATA DC A(0) Pointer to Operand-1 data
00000008	00000000			3710 OP2DATA DC A(0) Pointer to Operand-2 data
				3711
		0000000C	00000001	3712 OPSWHERE EQU * Where TRE Operands are located
0000000C	00000000			3713 OP1WHERE DC A(0) Where Operand-1 data should be placed
00000010	00000000			3714 OP1LEN DC F'0' How much data is there - 1
00000014	00000000			3715 OP2WHERE DC A(0) Where Operand-2 data should be placed
		00000100	00000001	3716 OP2LEN EQU 256 Operand-2 is always 256
00000018	00000000			3718 FAILMASK DC A(0) Failure Branch on Condition mask
0000001C	00000000			3720 ENDREG DC A(0) Ending R10 register value
00000020	00000000			3721 ENDSTOR DC XL4'00' Ending TRE main store value
		00000024	00000001	3723 TRENEXT EQU * Start of next table entry...
		00000000	000021FF	3725 TRE01TST CSECT ,

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3727 *****
				3728 * TRE Testing Control tables (ref: TRETTEST DSECT)
				3729 *****
0000032C				3730 PRINT DATA
				3731 TRECTL DC 0A(0) start of table
				3732
0000032C				3734 TRE1 DS 0F
0000032C	01000000			3735 DC X'01',X'00',X'00',X'00'
00000330	0000049C	00001894		3736 DC A(TRTOP10),A(TRTOP20)
00000338	00010000	00000001		3737 DC A(00+(1*K64)),A(001),A(MB+(1*K64))
00000340	00110000			
00000344	00000007			3738 DC A(7) CC0
00000348	00010001	00000000		3739 DC A(00+(1*K64)+01),X'00000000'
00000350				3741 TRE2 DS 0F
00000350	02000000			3742 DC X'02',X'00',X'00',X'00'
00000354	0000049C	00001894		3743 DC A(TRTOP10),A(TRTOP20)
0000035C	00020000	00000002		3744 DC A(00+(2*K64)),A(002),A(MB+(2*K64))
00000364	00120000			
00000368	00000007			3745 DC A(7) CC0
0000036C	00020002	00000000		3746 DC A(00+(2*K64)+02),X'00000000'
00000374				3748 TRE4 DS 0F
00000374	03000000			3749 DC X'03',X'00',X'00',X'00'
00000378	0000049C	00001894		3750 DC A(TRTOP10),A(TRTOP20)
00000380	00030000	00000004		3751 DC A(00+(3*K64)),A(004),A(MB+(3*K64))
00000388	00130000			
0000038C	00000007			3752 DC A(7) CC0
00000390	00030004	00000000		3753 DC A(00+(3*K64)+04),X'00000000'
00000398				3755 TRE8 DS 0F
00000398	04000000			3756 DC X'04',X'00',X'00',X'00'
0000039C	0000049C	00001894		3757 DC A(TRTOP10),A(TRTOP20)
000003A4	00040000	00000008		3758 DC A(00+(4*K64)),A(008),A(MB+(4*K64))
000003AC	00140000			
000003B0	00000007			3759 DC A(7) CC0
000003B4	00040008	00000000		3760 DC A(00+(4*K64)+08),X'00000000'

LOC	OBJECT CODE	ADDR1	ADDR2	STMT		
000003BC				3762 TRE256	DS	0F
000003BC	05000000			3763	DC	X'05',X'00',X'00',X'00'
000003C0	0000049C	00001894		3764	DC	A(TRTOP10),A(TRTOP20)
000003C8	00050000	00000100		3765	DC	A(00+(5*K64)),A(256),A(MB+(5*K64))
000003D0	00150000					
000003D4	00000007			3766	DC	A(7) CC0
000003D8	00050100	00000000		3767	DC	A(00+(5*K64)+256),X'00000000'
000003E0				3769 TREBTH	DS	0F
000003E0	06110000			3770	DC	X'06',X'11',X'00',X'00'
000003E4	00001694	00001994		3771	DC	A(TRTOP111),A(TRTOP211)
000003EC	0005FFF4	00000100		3772	DC	A(00+(6*K64)-12),A(256),A(MB+(6*K64)-34) both cross page
000003F4	0015FFDE					
000003F8	0000000A			3773	DC	A(10) CC1 = stop, scan incomplete or CC=3
000003FC	00060005	00000000		3774	DC	A(00+(6*K64)-12+X'11'),X'00000000'
00000404				3776 TREOP1	DS	0F
00000404	07F00000			3777	DC	X'07',X'F0',X'00',X'00'
00000408	00001794	00001A94		3778	DC	A(TRTOP1F0),A(TRTOP2F0)
00000410	0006FFF4	00000100		3779	DC	A(00+(7*K64)-12),A(256),A(MB+(7*K64)) only op1 crosses
00000418	00170000					
0000041C	0000000A			3780	DC	A(10) CC1 = stopped on last byte or CC=3
00000420	000700F3	00000000		3781	DC	A(00+(7*K64)-12+255),X'00000000'
00000428				3783 TREOP2	DS	0F
00000428	08110000			3784	DC	X'08',X'11',X'00',X'00'
0000042C	00001694	00001994		3785	DC	A(TRTOP111),A(TRTOP211)
00000434	00080000	00000100		3786	DC	A(00+(8*K64)),A(256),A(MB+(8*K64)-34) only op2 crosses
0000043C	0017FFDE					
00000440	0000000A			3787	DC	A(10) CC1 = stop, scan incomplete or CC=3
00000444	00080011	00000000		3788	DC	A(00+(8*K64)+X'11'),X'00000000'
0000044C				3790 TRELOP1	DS	0F
0000044C	09000000			3791	DC	X'09',X'00',X'00',X'00'
00000450	0000049C	00001B94		3792	DC	A(TRTOP10),A(TRELOP20)
00000458	0008FFF4	00000200		3793	DC	A(00+(9*K64)-12),A(512),A(MB+(9*K64)) only op1 crosses
00000460	00190000					
00000464	00000006			3794	DC	A(6) CC0 or CC=3
00000468	000901F4	00000000		3795	DC	A(00+(9*K64)-12+512),X'00000000'

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
					3807 *****
					3808 * TRE op1 scan data...
					3809 *****
0000049C	78125634	78125634			3811 TRTOP10 DC 1150XL4'78125634'
000004A4	78125634	78125634			
000004AC	78125634	78125634			
000004B4	78125634	78125634			
000004BC	78125634	78125634			
000004C4	78125634	78125634			
000004CC	78125634	78125634			
000004D4	78125634	78125634			
000004DC	78125634	78125634			
000004E4	78125634	78125634			
000004EC	78125634	78125634			
000004F4	78125634	78125634			
000004FC	78125634	78125634			
00000504	78125634	78125634			
0000050C	78125634	78125634			
00000514	78125634	78125634			
0000051C	78125634	78125634			
00000524	78125634	78125634			
0000052C	78125634	78125634			
00000534	78125634	78125634			
0000053C	78125634	78125634			
00000544	78125634	78125634			
0000054C	78125634	78125634			
00000554	78125634	78125634			
0000055C	78125634	78125634			
00000564	78125634	78125634			
0000056C	78125634	78125634			
00000574	78125634	78125634			
0000057C	78125634	78125634			
00000584	78125634	78125634			
0000058C	78125634	78125634			
00000594	78125634	78125634			
0000059C	78125634	78125634			
000005A4	78125634	78125634			
000005AC	78125634	78125634			
000005B4	78125634	78125634			
000005BC	78125634	78125634			
000005C4	78125634	78125634			
000005CC	78125634	78125634			
000005D4	78125634	78125634			
000005DC	78125634	78125634			
000005E4	78125634	78125634			
000005EC	78125634	78125634			
000005F4	78125634	78125634			
000005FC	78125634	78125634			
00000604	78125634	78125634			
0000060C	78125634	78125634			
00000614	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
0000061C	78125634	78125634			
00000624	78125634	78125634			
0000062C	78125634	78125634			
00000634	78125634	78125634			
0000063C	78125634	78125634			
00000644	78125634	78125634			
0000064C	78125634	78125634			
00000654	78125634	78125634			
0000065C	78125634	78125634			
00000664	78125634	78125634			
0000066C	78125634	78125634			
00000674	78125634	78125634			
0000067C	78125634	78125634			
00000684	78125634	78125634			
0000068C	78125634	78125634			
00000694	78125634	78125634			
0000069C	78125634	78125634			
000006A4	78125634	78125634			
000006AC	78125634	78125634			
000006B4	78125634	78125634			
000006BC	78125634	78125634			
000006C4	78125634	78125634			
000006CC	78125634	78125634			
000006D4	78125634	78125634			
000006DC	78125634	78125634			
000006E4	78125634	78125634			
000006EC	78125634	78125634			
000006F4	78125634	78125634			
000006FC	78125634	78125634			
00000704	78125634	78125634			
0000070C	78125634	78125634			
00000714	78125634	78125634			
0000071C	78125634	78125634			
00000724	78125634	78125634			
0000072C	78125634	78125634			
00000734	78125634	78125634			
0000073C	78125634	78125634			
00000744	78125634	78125634			
0000074C	78125634	78125634			
00000754	78125634	78125634			
0000075C	78125634	78125634			
00000764	78125634	78125634			
0000076C	78125634	78125634			
00000774	78125634	78125634			
0000077C	78125634	78125634			
00000784	78125634	78125634			
0000078C	78125634	78125634			
00000794	78125634	78125634			
0000079C	78125634	78125634			
000007A4	78125634	78125634			
000007AC	78125634	78125634			
000007B4	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
000007BC	78125634	78125634			
000007C4	78125634	78125634			
000007CC	78125634	78125634			
000007D4	78125634	78125634			
000007DC	78125634	78125634			
000007E4	78125634	78125634			
000007EC	78125634	78125634			
000007F4	78125634	78125634			
000007FC	78125634	78125634			
00000804	78125634	78125634			
0000080C	78125634	78125634			
00000814	78125634	78125634			
0000081C	78125634	78125634			
00000824	78125634	78125634			
0000082C	78125634	78125634			
00000834	78125634	78125634			
0000083C	78125634	78125634			
00000844	78125634	78125634			
0000084C	78125634	78125634			
00000854	78125634	78125634			
0000085C	78125634	78125634			
00000864	78125634	78125634			
0000086C	78125634	78125634			
00000874	78125634	78125634			
0000087C	78125634	78125634			
00000884	78125634	78125634			
0000088C	78125634	78125634			
00000894	78125634	78125634			
0000089C	78125634	78125634			
000008A4	78125634	78125634			
000008AC	78125634	78125634			
000008B4	78125634	78125634			
000008BC	78125634	78125634			
000008C4	78125634	78125634			
000008CC	78125634	78125634			
000008D4	78125634	78125634			
000008DC	78125634	78125634			
000008E4	78125634	78125634			
000008EC	78125634	78125634			
000008F4	78125634	78125634			
000008FC	78125634	78125634			
00000904	78125634	78125634			
0000090C	78125634	78125634			
00000914	78125634	78125634			
0000091C	78125634	78125634			
00000924	78125634	78125634			
0000092C	78125634	78125634			
00000934	78125634	78125634			
0000093C	78125634	78125634			
00000944	78125634	78125634			
0000094C	78125634	78125634			
00000954	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
0000095C	78125634	78125634			
00000964	78125634	78125634			
0000096C	78125634	78125634			
00000974	78125634	78125634			
0000097C	78125634	78125634			
00000984	78125634	78125634			
0000098C	78125634	78125634			
00000994	78125634	78125634			
0000099C	78125634	78125634			
000009A4	78125634	78125634			
000009AC	78125634	78125634			
000009B4	78125634	78125634			
000009BC	78125634	78125634			
000009C4	78125634	78125634			
000009CC	78125634	78125634			
000009D4	78125634	78125634			
000009DC	78125634	78125634			
000009E4	78125634	78125634			
000009EC	78125634	78125634			
000009F4	78125634	78125634			
000009FC	78125634	78125634			
00000A04	78125634	78125634			
00000A0C	78125634	78125634			
00000A14	78125634	78125634			
00000A1C	78125634	78125634			
00000A24	78125634	78125634			
00000A2C	78125634	78125634			
00000A34	78125634	78125634			
00000A3C	78125634	78125634			
00000A44	78125634	78125634			
00000A4C	78125634	78125634			
00000A54	78125634	78125634			
00000A5C	78125634	78125634			
00000A64	78125634	78125634			
00000A6C	78125634	78125634			
00000A74	78125634	78125634			
00000A7C	78125634	78125634			
00000A84	78125634	78125634			
00000A8C	78125634	78125634			
00000A94	78125634	78125634			
00000A9C	78125634	78125634			
00000AA4	78125634	78125634			
00000AAC	78125634	78125634			
00000AB4	78125634	78125634			
00000ABC	78125634	78125634			
00000AC4	78125634	78125634			
00000ACC	78125634	78125634			
00000AD4	78125634	78125634			
00000ADC	78125634	78125634			
00000AE4	78125634	78125634			
00000AEC	78125634	78125634			
00000AF4	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00000AFC	78125634	78125634			
00000B04	78125634	78125634			
00000B0C	78125634	78125634			
00000B14	78125634	78125634			
00000B1C	78125634	78125634			
00000B24	78125634	78125634			
00000B2C	78125634	78125634			
00000B34	78125634	78125634			
00000B3C	78125634	78125634			
00000B44	78125634	78125634			
00000B4C	78125634	78125634			
00000B54	78125634	78125634			
00000B5C	78125634	78125634			
00000B64	78125634	78125634			
00000B6C	78125634	78125634			
00000B74	78125634	78125634			
00000B7C	78125634	78125634			
00000B84	78125634	78125634			
00000B8C	78125634	78125634			
00000B94	78125634	78125634			
00000B9C	78125634	78125634			
00000BA4	78125634	78125634			
00000BAC	78125634	78125634			
00000BB4	78125634	78125634			
00000BBC	78125634	78125634			
00000BC4	78125634	78125634			
00000BCC	78125634	78125634			
00000BD4	78125634	78125634			
00000BDC	78125634	78125634			
00000BE4	78125634	78125634			
00000BEC	78125634	78125634			
00000BF4	78125634	78125634			
00000BFC	78125634	78125634			
00000C04	78125634	78125634			
00000C0C	78125634	78125634			
00000C14	78125634	78125634			
00000C1C	78125634	78125634			
00000C24	78125634	78125634			
00000C2C	78125634	78125634			
00000C34	78125634	78125634			
00000C3C	78125634	78125634			
00000C44	78125634	78125634			
00000C4C	78125634	78125634			
00000C54	78125634	78125634			
00000C5C	78125634	78125634			
00000C64	78125634	78125634			
00000C6C	78125634	78125634			
00000C74	78125634	78125634			
00000C7C	78125634	78125634			
00000C84	78125634	78125634			
00000C8C	78125634	78125634			
00000C94	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00000C9C	78125634	78125634			
00000CA4	78125634	78125634			
00000CAC	78125634	78125634			
00000CB4	78125634	78125634			
00000CBC	78125634	78125634			
00000CC4	78125634	78125634			
00000CCC	78125634	78125634			
00000CD4	78125634	78125634			
00000CDC	78125634	78125634			
00000CE4	78125634	78125634			
00000CEC	78125634	78125634			
00000CF4	78125634	78125634			
00000CFC	78125634	78125634			
00000D04	78125634	78125634			
00000D0C	78125634	78125634			
00000D14	78125634	78125634			
00000D1C	78125634	78125634			
00000D24	78125634	78125634			
00000D2C	78125634	78125634			
00000D34	78125634	78125634			
00000D3C	78125634	78125634			
00000D44	78125634	78125634			
00000D4C	78125634	78125634			
00000D54	78125634	78125634			
00000D5C	78125634	78125634			
00000D64	78125634	78125634			
00000D6C	78125634	78125634			
00000D74	78125634	78125634			
00000D7C	78125634	78125634			
00000D84	78125634	78125634			
00000D8C	78125634	78125634			
00000D94	78125634	78125634			
00000D9C	78125634	78125634			
00000DA4	78125634	78125634			
00000DAC	78125634	78125634			
00000DB4	78125634	78125634			
00000DBC	78125634	78125634			
00000DC4	78125634	78125634			
00000DCC	78125634	78125634			
00000DD4	78125634	78125634			
00000DDC	78125634	78125634			
00000DE4	78125634	78125634			
00000DEC	78125634	78125634			
00000DF4	78125634	78125634			
00000DFC	78125634	78125634			
00000E04	78125634	78125634			
00000E0C	78125634	78125634			
00000E14	78125634	78125634			
00000E1C	78125634	78125634			
00000E24	78125634	78125634			
00000E2C	78125634	78125634			
00000E34	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00000E3C	78125634	78125634			
00000E44	78125634	78125634			
00000E4C	78125634	78125634			
00000E54	78125634	78125634			
00000E5C	78125634	78125634			
00000E64	78125634	78125634			
00000E6C	78125634	78125634			
00000E74	78125634	78125634			
00000E7C	78125634	78125634			
00000E84	78125634	78125634			
00000E8C	78125634	78125634			
00000E94	78125634	78125634			
00000E9C	78125634	78125634			
00000EA4	78125634	78125634			
00000EAC	78125634	78125634			
00000EB4	78125634	78125634			
00000EBC	78125634	78125634			
00000EC4	78125634	78125634			
00000ECC	78125634	78125634			
00000ED4	78125634	78125634			
00000EDC	78125634	78125634			
00000EE4	78125634	78125634			
00000EEC	78125634	78125634			
00000EF4	78125634	78125634			
00000EFC	78125634	78125634			
00000F04	78125634	78125634			
00000F0C	78125634	78125634			
00000F14	78125634	78125634			
00000F1C	78125634	78125634			
00000F24	78125634	78125634			
00000F2C	78125634	78125634			
00000F34	78125634	78125634			
00000F3C	78125634	78125634			
00000F44	78125634	78125634			
00000F4C	78125634	78125634			
00000F54	78125634	78125634			
00000F5C	78125634	78125634			
00000F64	78125634	78125634			
00000F6C	78125634	78125634			
00000F74	78125634	78125634			
00000F7C	78125634	78125634			
00000F84	78125634	78125634			
00000F8C	78125634	78125634			
00000F94	78125634	78125634			
00000F9C	78125634	78125634			
00000FA4	78125634	78125634			
00000FAC	78125634	78125634			
00000FB4	78125634	78125634			
00000FBC	78125634	78125634			
00000FC4	78125634	78125634			
00000FCC	78125634	78125634			
00000FD4	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00000FDC	78125634	78125634			
00000FE4	78125634	78125634			
00000FEC	78125634	78125634			
00000FF4	78125634	78125634			
00000FFC	78125634	78125634			
00001004	78125634	78125634			
0000100C	78125634	78125634			
00001014	78125634	78125634			
0000101C	78125634	78125634			
00001024	78125634	78125634			
0000102C	78125634	78125634			
00001034	78125634	78125634			
0000103C	78125634	78125634			
00001044	78125634	78125634			
0000104C	78125634	78125634			
00001054	78125634	78125634			
0000105C	78125634	78125634			
00001064	78125634	78125634			
0000106C	78125634	78125634			
00001074	78125634	78125634			
0000107C	78125634	78125634			
00001084	78125634	78125634			
0000108C	78125634	78125634			
00001094	78125634	78125634			
0000109C	78125634	78125634			
000010A4	78125634	78125634			
000010AC	78125634	78125634			
000010B4	78125634	78125634			
000010BC	78125634	78125634			
000010C4	78125634	78125634			
000010CC	78125634	78125634			
000010D4	78125634	78125634			
000010DC	78125634	78125634			
000010E4	78125634	78125634			
000010EC	78125634	78125634			
000010F4	78125634	78125634			
000010FC	78125634	78125634			
00001104	78125634	78125634			
0000110C	78125634	78125634			
00001114	78125634	78125634			
0000111C	78125634	78125634			
00001124	78125634	78125634			
0000112C	78125634	78125634			
00001134	78125634	78125634			
0000113C	78125634	78125634			
00001144	78125634	78125634			
0000114C	78125634	78125634			
00001154	78125634	78125634			
0000115C	78125634	78125634			
00001164	78125634	78125634			
0000116C	78125634	78125634			
00001174	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
0000117C	78125634	78125634			
00001184	78125634	78125634			
0000118C	78125634	78125634			
00001194	78125634	78125634			
0000119C	78125634	78125634			
000011A4	78125634	78125634			
000011AC	78125634	78125634			
000011B4	78125634	78125634			
000011BC	78125634	78125634			
000011C4	78125634	78125634			
000011CC	78125634	78125634			
000011D4	78125634	78125634			
000011DC	78125634	78125634			
000011E4	78125634	78125634			
000011EC	78125634	78125634			
000011F4	78125634	78125634			
000011FC	78125634	78125634			
00001204	78125634	78125634			
0000120C	78125634	78125634			
00001214	78125634	78125634			
0000121C	78125634	78125634			
00001224	78125634	78125634			
0000122C	78125634	78125634			
00001234	78125634	78125634			
0000123C	78125634	78125634			
00001244	78125634	78125634			
0000124C	78125634	78125634			
00001254	78125634	78125634			
0000125C	78125634	78125634			
00001264	78125634	78125634			
0000126C	78125634	78125634			
00001274	78125634	78125634			
0000127C	78125634	78125634			
00001284	78125634	78125634			
0000128C	78125634	78125634			
00001294	78125634	78125634			
0000129C	78125634	78125634			
000012A4	78125634	78125634			
000012AC	78125634	78125634			
000012B4	78125634	78125634			
000012BC	78125634	78125634			
000012C4	78125634	78125634			
000012CC	78125634	78125634			
000012D4	78125634	78125634			
000012DC	78125634	78125634			
000012E4	78125634	78125634			
000012EC	78125634	78125634			
000012F4	78125634	78125634			
000012FC	78125634	78125634			
00001304	78125634	78125634			
0000130C	78125634	78125634			
00001314	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
0000131C	78125634	78125634			
00001324	78125634	78125634			
0000132C	78125634	78125634			
00001334	78125634	78125634			
0000133C	78125634	78125634			
00001344	78125634	78125634			
0000134C	78125634	78125634			
00001354	78125634	78125634			
0000135C	78125634	78125634			
00001364	78125634	78125634			
0000136C	78125634	78125634			
00001374	78125634	78125634			
0000137C	78125634	78125634			
00001384	78125634	78125634			
0000138C	78125634	78125634			
00001394	78125634	78125634			
0000139C	78125634	78125634			
000013A4	78125634	78125634			
000013AC	78125634	78125634			
000013B4	78125634	78125634			
000013BC	78125634	78125634			
000013C4	78125634	78125634			
000013CC	78125634	78125634			
000013D4	78125634	78125634			
000013DC	78125634	78125634			
000013E4	78125634	78125634			
000013EC	78125634	78125634			
000013F4	78125634	78125634			
000013FC	78125634	78125634			
00001404	78125634	78125634			
0000140C	78125634	78125634			
00001414	78125634	78125634			
0000141C	78125634	78125634			
00001424	78125634	78125634			
0000142C	78125634	78125634			
00001434	78125634	78125634			
0000143C	78125634	78125634			
00001444	78125634	78125634			
0000144C	78125634	78125634			
00001454	78125634	78125634			
0000145C	78125634	78125634			
00001464	78125634	78125634			
0000146C	78125634	78125634			
00001474	78125634	78125634			
0000147C	78125634	78125634			
00001484	78125634	78125634			
0000148C	78125634	78125634			
00001494	78125634	78125634			
0000149C	78125634	78125634			
000014A4	78125634	78125634			
000014AC	78125634	78125634			
000014B4	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
000014BC	78125634	78125634			
000014C4	78125634	78125634			
000014CC	78125634	78125634			
000014D4	78125634	78125634			
000014DC	78125634	78125634			
000014E4	78125634	78125634			
000014EC	78125634	78125634			
000014F4	78125634	78125634			
000014FC	78125634	78125634			
00001504	78125634	78125634			
0000150C	78125634	78125634			
00001514	78125634	78125634			
0000151C	78125634	78125634			
00001524	78125634	78125634			
0000152C	78125634	78125634			
00001534	78125634	78125634			
0000153C	78125634	78125634			
00001544	78125634	78125634			
0000154C	78125634	78125634			
00001554	78125634	78125634			
0000155C	78125634	78125634			
00001564	78125634	78125634			
0000156C	78125634	78125634			
00001574	78125634	78125634			
0000157C	78125634	78125634			
00001584	78125634	78125634			
0000158C	78125634	78125634			
00001594	78125634	78125634			
0000159C	78125634	78125634			
000015A4	78125634	78125634			
000015AC	78125634	78125634			
000015B4	78125634	78125634			
000015BC	78125634	78125634			
000015C4	78125634	78125634			
000015CC	78125634	78125634			
000015D4	78125634	78125634			
000015DC	78125634	78125634			
000015E4	78125634	78125634			
000015EC	78125634	78125634			
000015F4	78125634	78125634			
000015FC	78125634	78125634			
00001604	78125634	78125634			
0000160C	78125634	78125634			
00001614	78125634	78125634			
0000161C	78125634	78125634			
00001624	78125634	78125634			
0000162C	78125634	78125634			
00001634	78125634	78125634			
0000163C	78125634	78125634			
00001644	78125634	78125634			
0000164C	78125634	78125634			
00001654	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
0000165C	78125634	78125634			
00001664	78125634	78125634			
0000166C	78125634	78125634			
00001674	78125634	78125634			
0000167C	78125634	78125634			
00001684	78125634	78125634			
0000168C	78125634	78125634			
00001694	78125634	78125634			3813 TRTOP111 DC 04XL4'78125634',X'00110000',59XL4'78125634' (CC1)
0000169C	78125634	78125634			
000016A4	00110000	78125634			
000016AC	78125634	78125634			
000016B4	78125634	78125634			
000016BC	78125634	78125634			
000016C4	78125634	78125634			
000016CC	78125634	78125634			
000016D4	78125634	78125634			
000016DC	78125634	78125634			
000016E4	78125634	78125634			
000016EC	78125634	78125634			
000016F4	78125634	78125634			
000016FC	78125634	78125634			
00001704	78125634	78125634			
0000170C	78125634	78125634			
00001714	78125634	78125634			
0000171C	78125634	78125634			
00001724	78125634	78125634			
0000172C	78125634	78125634			
00001734	78125634	78125634			
0000173C	78125634	78125634			
00001744	78125634	78125634			
0000174C	78125634	78125634			
00001754	78125634	78125634			
0000175C	78125634	78125634			
00001764	78125634	78125634			
0000176C	78125634	78125634			
00001774	78125634	78125634			
0000177C	78125634	78125634			
00001784	78125634	78125634			
0000178C	78125634	78125634			
00001794	78125634	78125634			3815 TRTOP1F0 DC 63XL4'78125634',X'000000F0' (CC1)
0000179C	78125634	78125634			
000017A4	78125634	78125634			
000017AC	78125634	78125634			
000017B4	78125634	78125634			
000017BC	78125634	78125634			
000017C4	78125634	78125634			
000017CC	78125634	78125634			
000017D4	78125634	78125634			
000017DC	78125634	78125634			
000017E4	78125634	78125634			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
					3819 *****
					3820 * TRE op2 stop tables...
					3821 *****
00001894	00000000	00000000			3823 TRTOP20 DC 256X'00' no stop
0000189C	00000000	00000000			
000018A4	00000000	00000000			
000018AC	00000000	00000000			
000018B4	00000000	00000000			
000018BC	00000000	00000000			
000018C4	00000000	00000000			
000018CC	00000000	00000000			
000018D4	00000000	00000000			
000018DC	00000000	00000000			
000018E4	00000000	00000000			
000018EC	00000000	00000000			
000018F4	00000000	00000000			
000018FC	00000000	00000000			
00001904	00000000	00000000			
0000190C	00000000	00000000			
00001914	00000000	00000000			
0000191C	00000000	00000000			
00001924	00000000	00000000			
0000192C	00000000	00000000			
00001934	00000000	00000000			
0000193C	00000000	00000000			
00001944	00000000	00000000			
0000194C	00000000	00000000			
00001954	00000000	00000000			
0000195C	00000000	00000000			
00001964	00000000	00000000			
0000196C	00000000	00000000			
00001974	00000000	00000000			
0000197C	00000000	00000000			
00001984	00000000	00000000			
0000198C	00000000	00000000			
00001994	00000000	00000000			3825 TRTOP211 DC 17X'00',X'11',238X'00' stop on X'11'
0000199C	00000000	00000000			
000019A4	00110000	00000000			
000019AC	00000000	00000000			
000019B4	00000000	00000000			
000019BC	00000000	00000000			
000019C4	00000000	00000000			
000019CC	00000000	00000000			
000019D4	00000000	00000000			
000019DC	00000000	00000000			
000019E4	00000000	00000000			
000019EC	00000000	00000000			
000019F4	00000000	00000000			
000019FC	00000000	00000000			
00001A04	00000000	00000000			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00001A0C	00000000	00000000			
00001A14	00000000	00000000			
00001A1C	00000000	00000000			
00001A24	00000000	00000000			
00001A2C	00000000	00000000			
00001A34	00000000	00000000			
00001A3C	00000000	00000000			
00001A44	00000000	00000000			
00001A4C	00000000	00000000			
00001A54	00000000	00000000			
00001A5C	00000000	00000000			
00001A64	00000000	00000000			
00001A6C	00000000	00000000			
00001A74	00000000	00000000			
00001A7C	00000000	00000000			
00001A84	00000000	00000000			
00001A8C	00000000	00000000			
00001A94	00000000	00000000			
00001A9C	00000000	00000000			
00001AA4	00000000	00000000			
00001AAC	00000000	00000000			
00001AB4	00000000	00000000			
00001ABC	00000000	00000000			
00001AC4	00000000	00000000			
00001ACC	00000000	00000000			
00001AD4	00000000	00000000			
00001ADC	00000000	00000000			
00001AE4	00000000	00000000			
00001AEC	00000000	00000000			
00001AF4	00000000	00000000			
00001AFC	00000000	00000000			
00001B04	00000000	00000000			
00001B0C	00000000	00000000			
00001B14	00000000	00000000			
00001B1C	00000000	00000000			
00001B24	00000000	00000000			
00001B2C	00000000	00000000			
00001B34	00000000	00000000			
00001B3C	00000000	00000000			
00001B44	00000000	00000000			
00001B4C	00000000	00000000			
00001B54	00000000	00000000			
00001B5C	00000000	00000000			
00001B64	00000000	00000000			
00001B6C	00000000	00000000			
00001B74	00000000	00000000			
00001B7C	00000000	00000000			
00001B84	F0000000	00000000			
00001B8C	00000000	00000000			
00001B94	FF000000	00000000			

LOC	OBJECT	CODE	ADDR1	ADDR2	STMT
00001B9C	00000000	00000000			
00001BA4	00000000	00000000			
00001BAC	00000000	00000000			
00001BB4	00000000	00000000			
00001BBC	00000000	00000000			
00001BC4	00000000	00000000			
00001BCC	00000000	00000000			
00001BD4	00000000	00000000			
00001BDC	00000000	00000000			
00001BE4	00000000	00000000			
00001BEC	00000000	00000000			
00001BF4	00000000	00000000			
00001BFC	00000000	00000000			
00001C04	00000000	00000000			
00001C0C	00000000	00000000			
00001C14	00000000	00000000			
00001C1C	00000000	00000000			
00001C24	00000000	00000000			
00001C2C	00000000	00000000			
00001C34	00000000	00000000			
00001C3C	00000000	00000000			
00001C44	00000000	00000000			
00001C4C	00000000	00000000			
00001C54	00000000	00000000			
00001C5C	00000000	00000000			
00001C64	00000000	00000000			
00001C6C	00000000	00000000			
00001C74	00000000	00000000			
00001C7C	00000000	00000000			
00001C84	00000000	00000000			
00001C8C	00000000	00000000			
00001C94	FFFFFFFF	FFFFFFFF			3830
00001C9C	FFFFFFFF	FFFFFFFF			3831 TRELOP21 DC 256X'FF'
00001CA4	FFFFFFFF	FFFFFFFF			
00001CAC	FFFFFFFF	FFFFFFFF			
00001CB4	FFFFFFFF	FFFFFFFF			
00001CBC	FFFFFFFF	FFFFFFFF			
00001CC4	FFFFFFFF	FFFFFFFF			
00001CCC	FFFFFFFF	FFFFFFFF			
00001CD4	FFFFFFFF	FFFFFFFF			
00001CDC	FFFFFFFF	FFFFFFFF			
00001CE4	FFFFFFFF	FFFFFFFF			
00001CEC	FFFFFFFF	FFFFFFFF			
00001CF4	FFFFFFFF	FFFFFFFF			
00001CFC	FFFFFFFF	FFFFFFFF			
00001D04	FFFFFFFF	FFFFFFFF			
00001D0C	FFFFFFFF	FFFFFFFF			
00001D14	FFFFFFFF	FFFFFFFF			
00001D1C	FFFFFFFF	FFFFFFFF			
00001D24	FFFFFFFF	FFFFFFFF			
00001D2C	FFFFFFFF	FFFFFFFF			

LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				3833 *****
				3834 * Fixed storage locations
				3835 *****
00001D94		00001D94	000021FE	3837 ORG TRE01TST+TESTADDR (s/b @ X'21FE', X'21FF')
000021FE	00			3839 TESTNUM DC X'00' Test number of active test
000021FF	00			3840 SUBTEST DC X'00' Active test sub-test number
				3842 *****
				3843 * (other DSECTS needed by SATK)
				3844 *****
				3846 DSECTS PRINT=OFF,NAME=(ASA,SCHIB,CCW0,CCW1,CSW)
				4122 PRINT ON
				4124 *****
				4125 * Register equates
				4126 *****
		00000000	00000001	4128 R0 EQU 0
		00000001	00000001	4129 R1 EQU 1
		00000002	00000001	4130 R2 EQU 2
		00000003	00000001	4131 R3 EQU 3
		00000004	00000001	4132 R4 EQU 4
		00000005	00000001	4133 R5 EQU 5

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
ASA	4	000000	512	3850	3541
ASBEGIN	U	000000	1	3851	3856 3898 3934 3943 3961 3968 3974 3978 3982 3988 4005
ASEND	U	000200	1	4004	4005
ASLENGTH	U	000200	1	4005	
BCEXTCOD	H	00001A	2	3868	
BCIOCOD	H	00003A	2	3876	
BCMCKCOD	H	000032	2	3874	
BCPGMCOD	H	00002A	2	3872	
BCSVCCOD	H	000022	2	3870	
BEGIN	I	000200	2	3545	3515 3542 3543 3580 3655
CAW	F	000048	4	3880	
CAWADDR	R	000049	3	3883	
CAWKEY	X	000048	1	3881	
CAWSUSP	U	000008	1	3882	
CCW0	4	000000	8	4009	4015
CCW0ADDR	R	000001	3	4011	
CCW0CNT	H	000006	2	4014	
CCW0CODE	X	000000	1	4010	
CCW0FLGS	X	000004	1	4012	
CCW0L	U	000008	1	4015	
CCW1	4	000000	8	4027	4032
CCW1ADDR	A	000004	4	4031	
CCW1CNT	H	000002	2	4030	
CCW1CODE	X	000000	1	4028	
CCW1FLGS	X	000001	1	4029	
CCW1L	U	000008	1	4032	
CCWCC	U	000040	1	4019	
CCWCD	U	000080	1	4018	
CCWIDA	U	000004	1	4023	
CCWPCI	U	000008	1	4022	
CCWSKIP	U	000010	1	4021	
CCWSLI	U	000020	1	4020	
CCWSUSP	U	000002	1	4024	
CHANID	F	0000A8	4	3935	
CODE	2	000000	8704	3496	
CPUID	U	00031B	1	4007	
CSW	F	000040	8	3879	
CSWATTN	U	000080	1	4049	
CSWBUSY	U	000010	1	4052	
CSWCCTL	U	000004	1	4064	
CSWCCW	R	000001	3	4046	
CSWCDAT	U	000008	1	4063	
CSWCE	U	000008	1	4053	
CSWCHNG	U	000001	1	4066	
CSWCNT	H	000006	2	4068	
CSWCS	X	000005	1	4058	
CSWCUE	U	000020	1	4051	
CSWDCC0	U	000000	1	4042	
CSWDCC1	U	000001	1	4043	
CSWDCC3	U	000003	1	4044	
CSWDCCM	U	000003	1	4041	
CSWDE	U	000004	1	4054	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
CSWFLAG	X	000000	1	4036	
CSWFMT	4	000000	8	4035	4069
CSWFMTL	U	000008	1	4069	
CSWICTL	U	000002	1	4065	
CSWIL	U	000040	1	4060	
CSWKEYM	U	0000F0	1	4037	
CSWLOG	U	000004	1	4040	
CSWPCI	U	000080	1	4059	
CSWPRGM	U	000020	1	4061	
CSWPROT	U	000010	1	4062	
CSWSM	U	000040	1	4050	
CSWSUSP	U	000008	1	4039	
CSWUC	U	000002	1	4055	
CSWUS	X	000004	1	4048	
CSWUX	U	000001	1	4056	
DWAT0008	3	0002E8	8	3665	3664
DWAT0009	3	0002F8	8	3670	3669
DWAT0010	3	000308	8	3675	3674
DWAT0011	3	000318	8	3680	3679
ENDREG	A	00001C	4	3720	3623
ENDSTOR	X	000020	4	3721	3632
EOJ	H	0002E0	2	3663	3568
EXTCPUAD	H	000084	2	3900	
EXTICODE	H	000086	2	3901	
EXTIPARM	F	000080	4	3899	
EXTNPSW	F	000058	8	3889	
EXTOPSW	F	000018	8	3861	3867
FAILDEV	H	0002F0	2	3668	
FAILIO	H	000300	2	3673	
FAILMASK	A	000018	4	3718	3611
FAILTEST	H	000310	2	3678	3563 3566 3641
IMAGE	1	000000	8704	0	
IOELADDR	F	0000AC	4	3936	
IOICODE	H	0000BA	2	3941	
IOIID	F	0000C0	4	3946	
IOIPARM	F	0000BC	4	3945	
IONPSW	F	000078	8	3893	
IOOPSW	F	000038	8	3865	3875
IOSSID	F	0000B8	4	3944	
IPLCCW1	F	000008	8	3853	
IPLCCW2	F	000010	8	3854	
IPLPSW	F	000000	8	3852	
K	U	000400	1	3691	3692 3693 3694
K64	U	010000	1	3693	3737 3739 3744 3746 3751 3753 3758 3760 3765 3767 3772 3774 3779 3781 3786 3788 3793 3795 3800 3802
LCHANLOG	F	0000B0	4	3937	
MB	U	100000	1	3694	3737 3744 3751 3758 3765 3772 3779 3786 3793 3800
MCKLOG	F	000100	4	3969	
MCKNPSW	F	000070	8	3892	
MCKOPSW	F	000030	8	3864	3873
MEASUREB	X	0000B9	1	3940	
MKARCHMD	X	0000A3	1	3928	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
MKARS	F	000120	4	3967	
MKCLKCMP	F	0000E0	8	3953	
MKCPUTIM	F	0000D8	8	3952	
MKCRS	F	0001C0	4	3972	
MKDMGCODE	F	0000F4	4	3956	
MKFAILA	F	0000F8	4	3958	
MKFPRS	D	000160	8	3970	
MKICODE	F	0000E8	4	3954	
MKLOGOUT	F	000100	4	3960	
MKMODEL	F	0000FC	4	3959	
MKXSAA	F	0000D4	4	3951	
MONCLS	H	000094	2	3916	
MONCODE	F	00009C	4	3923	
MONNUMBR	X	000095	1	3918	
MPGACCID	X	0000A2	1	3926	
NKGRS	F	000180	4	3971	
OP1DATA	A	000004	4	3709	3594
OP1LEN	F	000010	4	3714	3593 3595
OP1WHERE	A	00000C	4	3713	3592
OP2DATA	A	000008	4	3710	3600
OP2LEN	U	000100	1	3716	3599
OP2WHERE	A	000014	4	3715	3598
OPSWHERE	U	00000C	1	3712	3614
PAGE	U	001000	1	3692	3696
PCFETO	A	0000C4	4	3947	
PERACCID	X	0000A1	1	3925	
PERADDR	F	000098	4	3922	
PERCODE	X	000096	1	3919	
PERCODMK	U	0000F0	1	3920	
PGMACCID	X	0000A0	1	3924	
PGMDXC	F	000090	4	3914	
PGMICODE	H	00008E	2	3913	
PGMIID	F	00008C	4	3909	
PGMIILC	X	00008D	1	3911	
PGMIILCM	U	00000C	1	3912	
PGMNPSW	F	000068	8	3891	
PGMOPSW	F	000028	8	3863	3871
PGMTRX	F	000090	4	3915	
PMCW1_0	X	000004	1	4076	
PMCW1_8	X	000005	1	4079	
PMCW1	U	000004	1	4111	
PMCWCHP0	X	000010	1	4100	
PMCWCHP1	X	000011	1	4101	
PMCWCHP2	X	000012	1	4102	
PMCWCHP3	X	000013	1	4103	
PMCWCHP4	X	000014	1	4104	
PMCWCHP5	X	000015	1	4105	
PMCWCHP6	X	000016	1	4106	
PMCWCHP7	X	000017	1	4107	
PMCWNUM	H	000006	2	4091	
PMCWE	U	000080	1	4080	
PMCWEXC	X	00001B	1	4110	

SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES
SCHSCSW	X	00001C	12	4115	
SSARCHMD	X	0000A3	1	3927	
SSARS	F	000120	4	3983	
SSCLKCMP	F	0000E0	8	3977	
SSCPUTIM	F	0000D8	8	3976	
SSCRS	F	0001C0	4	3986	
SSFPRS	D	000160	8	3984	
SSGRS	F	000180	4	3985	
SSMODEL	F	00010C	4	3981	
SSPREFIX	F	000108	4	3980	
SSPSW	F	000100	8	3979	
SSXSAA	A	0000D4	4	3975	
STFLDATA	F	0000C8	4	3948	
SUBTEST	X	0021FF	1	3840	3565 3609 3625 3629
SVCICODE	H	00008A	2	3907	
SVCIID	F	000088	4	3903	
SVCIILC	X	000089	1	3905	
SVCIILCM	U	00000C	1	3906	
SVCNPSW	F	000060	8	3890	
SVCOPSW	F	000020	8	3862	3869
TBYTE	X	000001	1	3705	3604
TEST01	F	00022C	4	3574	3555
TESTADDR	U	0021FE	1	3696	3837
TESTNUM	X	0021FE	1	3839	3562 3588
TIMER	F	000050	4	3886	
TNUM	X	000000	1	3704	3587
TRE01TST	J	000000	8704	3496	3499 3506 3514 3516 3837
TRE1	F	00032C	4	3734	
TRE2	F	000350	4	3741	
TRE256	F	0003BC	4	3762	
TRE4	F	000374	4	3748	
TRE8	F	000398	4	3755	
TREBC	I	0002C2	4	3646	3616
TREBTH	F	0003E0	4	3769	
TRECTL	A	00032C	4	3731	3582
TREDONE	I	0002BA	4	3642	3639
TREFAIL	I	0002B6	4	3641	3627 3633 3646
TRELOP1	F	00044C	4	3790	
TRELOP2	F	000470	4	3797	
TRELOP20	X	001B94	1	3829	3792
TRELOP21	X	001C94	1	3831	3799
TREMORE	I	000276	4	3615	3617
TRENEXT	U	000024	1	3723	3636
TREOP1	F	000404	4	3776	
TREOP2	F	000428	4	3783	
TRETEST	4	000000	36	3702	3583
TRTOP10	X	00049C	4	3811	3736 3743 3750 3757 3764 3792 3799
TRTOP111	X	001694	4	3813	3771 3785
TRTOP1F0	X	001794	4	3815	3778
TRTOP20	X	001894	1	3823	3736 3743 3750 3757 3764
TRTOP211	X	001994	1	3825	3771 3785
TRTOP2F0	X	001A94	1	3827	3778

DESC	SYMBOL	SIZE	POS	ADDR
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Entry: 0

Image	IMAGE	8704	0000-21FF	0000-21FF
Region	CODE	8704	0000-21FF	0000-21FF
CSECT	TRE01TST	8704	0000-21FF	0000-21FF

STMT

FILE NAME

```
1 /devstor/dev/satk/samples/tests/TRE-01-basic.asm
2 /home/tn529/dev/satk/srcasm/satk.mac
```

**** NO ERRORS FOUND ****