



| LOC | OBJECT CODE | ADDR1 | ADDR2 | STMT                           |
|-----|-------------|-------|-------|--------------------------------|
|     |             |       |       | 37 PRINT OFF                   |
|     |             |       |       | 3418 PRINT ON                  |
|     |             |       |       | 3420 *****                     |
|     |             |       |       | 3421 * SATK prolog stuff...    |
|     |             |       |       | 3422 *****                     |
|     |             |       |       | 3424 ARCHLVL ZARCH=NO,MNOTE=NO |
|     |             |       |       | 3426+\$AL OPSYN AL             |
|     |             |       |       | 3427+\$ALR OPSYN ALR           |
|     |             |       |       | 3428+\$B OPSYN B               |
|     |             |       |       | 3429+\$BAS OPSYN BAS           |
|     |             |       |       | 3430+\$BASR OPSYN BASR         |
|     |             |       |       | 3431+\$BC OPSYN BC             |
|     |             |       |       | 3432+\$BCTR OPSYN BCTR         |
|     |             |       |       | 3433+\$BE OPSYN BE             |
|     |             |       |       | 3434+\$BH OPSYN BH             |
|     |             |       |       | 3435+\$BL OPSYN BL             |
|     |             |       |       | 3436+\$BM OPSYN BM             |
|     |             |       |       | 3437+\$BNE OPSYN BNE           |
|     |             |       |       | 3438+\$BNH OPSYN BNH           |
|     |             |       |       | 3439+\$BNL OPSYN BNL           |
|     |             |       |       | 3440+\$BNM OPSYN BNM           |
|     |             |       |       | 3441+\$BNO OPSYN BNO           |
|     |             |       |       | 3442+\$BNP OPSYN BNP           |
|     |             |       |       | 3443+\$BNZ OPSYN BNZ           |
|     |             |       |       | 3444+\$BO OPSYN BO             |
|     |             |       |       | 3445+\$BP OPSYN BP             |
|     |             |       |       | 3446+\$BXLE OPSYN BXLE         |
|     |             |       |       | 3447+\$BZ OPSYN BZ             |
|     |             |       |       | 3448+\$CH OPSYN CH             |
|     |             |       |       | 3449+\$L OPSYN L               |
|     |             |       |       | 3450+\$LH OPSYN LH             |
|     |             |       |       | 3451+\$LM OPSYN LM             |
|     |             |       |       | 3452+\$LPSW OPSYN LPSW         |
|     |             |       |       | 3453+\$LR OPSYN LR             |
|     |             |       |       | 3454+\$LTR OPSYN LTR           |
|     |             |       |       | 3455+\$NR OPSYN NR             |
|     |             |       |       | 3456+\$SL OPSYN SL             |
|     |             |       |       | 3457+\$SLR OPSYN SLR           |
|     |             |       |       | 3458+\$SR OPSYN SR             |
|     |             |       |       | 3459+\$ST OPSYN ST             |
|     |             |       |       | 3460+\$STM OPSYN STM           |
|     |             |       |       | 3461+\$X OPSYN X               |
|     |             |       |       | 3462+\$AHI OPSYN AHI           |
|     |             |       |       | 3463+\$B OPSYN J               |
|     |             |       |       | 3464+\$BC OPSYN BRC            |
|     |             |       |       | 3465+\$BE OPSYN JE             |
|     |             |       |       | 3466+\$BH OPSYN JH             |
|     |             |       |       | 3467+\$BL OPSYN JL             |
|     |             |       |       | 3468+\$BM OPSYN JM             |
|     |             |       |       | 3469+\$BNE OPSYN JNE           |





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|----------|-------------|----------|----------|---|
|          |             |          |          | 3511 *****  |
|          |             |          |          | 3512 * The actual "CLCLE04" program itself...           |
|          |             |          |          | 3513 *****  |
|          |             |          |          | 3514 *  |
|          |             |          |          | 3515 * Architecture Mode: 390                           |
|          |             |          |          | 3516 * Addressing Mode: 31-bit                          |
|          |             |          |          | 3517 * Register Usage:                                  |
|          |             |          |          | 3518 *  |
|          |             |          |          | 3519 * R0 (work)  |
|          |             |          |          | 3520 * R1 I/O device used by ENADEV and RAWIO macros    |
|          |             |          |          | 3521 * R2 First base register                           |
|          |             |          |          | 3522 * R3 IOCB pointer for ENADEV and RAWIO macros      |
|          |             |          |          | 3523 * R4 IO work register used by ENADEV and RAWIO     |
|          |             |          |          | 3524 * R5-R7 (work)                                     |
|          |             |          |          | 3525 * R8 ORB pointer                                   |
|          |             |          |          | 3526 * R9 Second base register                          |
|          |             |          |          | 3527 * R10-R13 (work)                                   |
|          |             |          |          | 3528 * R14 Subroutine call                              |
|          |             |          |          | 3529 * R15 Secondary Subroutine call or work            |
|          |             |          |          | 3530 *  |
|          |             |          |          | 3531 *****  |
| 00000200 |             | 00000000 |          | 3533 USING ASA,R0 Low core addressability               |
| 00000200 |             | 00000200 |          | 3534 USING BEGIN,R2 FIRST Base Register                 |
| 00000200 |             | 00001200 |          | 3535 USING BEGIN+4096,R9 SECOND Base Register           |
| 00000200 |             | 00000000 |          | 3536 USING IOCB,R3 SATK Device I/O Control Block        |
| 00000200 |             | 00000000 |          | 3537 USING ORB,R8 ESA/390 Operation Request Block       |
| 00000200 | 0520        |          |          | 3539 BEGIN BALR R2,0 Initalize FIRST base register      |
| 00000202 | 0620        |          |          | 3540 BCTR R2,0 Initalize FIRST base register            |
| 00000204 | 0620        |          |          | 3541 BCTR R2,0 Initalize FIRST base register            |
| 00000206 | 5020 203C   |          | 0000023C | 3542 ST R2,SAVER2                                       |
| 0000020A | 4190 2800   |          | 00000800 | 3544 LA R9,2048(,R2) Initalize SECOND base register     |
| 0000020E | 4190 9800   |          | 00000800 | 3545 LA R9,2048(,R9) Initalize SECOND base register     |
| 00000212 | 45E0 2A20   |          | 00000C20 | 3547 BAL R14,INIT Initalize Program                     |
|          |             |          |          | 3548 *  |
|          |             |          |          | 3549 ** Run the test...                                 |
|          |             |          |          | 3550 *  |
| 00000216 | 45E0 2044   |          | 00000244 | 3551 BAL R14,TEST91 Time CLCLE instruction (speed test) |
|          |             |          |          | 3552 *  |



| LOC      | OBJECT CODE | ADDR1    | ADDR2    | STMT   |
|----------|-------------|----------|----------|--|
|          |             |          |          | 3573 *****   |
|          |             |          |          | 3574 * TEST91 Time CLCLE instruction (speed test)              |
|          |             |          |          | 3575 *****   |
| 00000244 | 91FF 9FFD   |          | 000021FD | 3577 TEST91 TM TIMEOPT,X'FF' Is timing tests option enabled?   |
| 00000248 | 078E        |          |          | 3578 BZR R14 No, skip timing tests                             |
| 0000024A | 4150 2C00   |          | 00000E00 | 3580 LA R5,CLEPERF Point R5 --> testing control table          |
| 0000024E |             | 00000000 |          | 3581 USING CLETEST,R5 What each table entry looks like         |
|          |             |          |          | 3582 *   |
|          |             | 0000024E | 00000001 | 3583 TST91LOP EQU * save current pref table base               |
| 0000024E | 5050 2040   |          | 00000240 | 3584 ST R5,SAVER5  |
|          |             |          |          | 3585 *   |
| 00000252 | 4360 5000   |          | 00000000 | 3586 IC R6,TNUM Set test number                                |
| 00000256 | 4260 9FFE   |          | 000021FE | 3587 STC R6,TESTNUM  |
| 0000025A | 4360 5001   |          | 00000001 | 3588 IC R6,TSUBNUM Set sub test number                         |
| 0000025E | 4260 9FFF   |          | 000021FF | 3589 STC R6,SUBTEST  |
|          |             |          |          | 3591   |
|          |             |          |          | 3592 ** First, make sure we start clean!                       |
|          |             |          |          | 3593 ** Initialize operand data (move data to testing address) |
|          |             |          |          | 3594 *   |
| 00000262 | 58A0 5014   |          | 00000014 | 3595 L R10,OP1WHERE Where to move operand-1 data to            |
| 00000266 | 58B0 5008   |          | 00000008 | 3596 L R11,OP1LEN operand-1 length                             |
| 0000026A | 5860 5004   |          | 00000004 | 3597 L R6,OP1DATA Where op1 data is right now                  |
| 0000026E | 5870 5008   |          | 00000008 | 3598 L R7,OP1LEN How much of it there is                       |
| 00000272 | 0EA6        |          |          | 3599 MVCL R10,R6   |
|          |             |          |          | 3600 *   |
| 00000274 | 58C0 501C   |          | 0000001C | 3601 L R12,OP2WHERE Where to move operand-2 data to            |
| 00000278 | 58D0 5010   |          | 00000010 | 3602 L R13,OP2LEN How much of it there is                      |
| 0000027C | 5860 500C   |          | 0000000C | 3603 L R6,OP2DATA Where op2 data is right now                  |
| 00000280 | 5870 5010   |          | 00000010 | 3604 L R7,OP2LEN How much of it there is                       |
| 00000284 | 0EC6        |          |          | 3605 MVCL R12,R6   |
|          |             |          |          | 3606   |
|          |             |          |          | 3607 *   |
|          |             |          |          | 3608 ** Next, time the overhead...                             |
|          |             |          |          | 3609 *   |
| 00000286 | 5870 2B68   |          | 00000D68 | 3610 L R7,NUMLOOPS   |
| 0000028A | B205 2B70   |          | 00000D70 | 3611 STCK BEGCLOCK   |
| 0000028E | 0560        |          |          | 3612 BALR R6,0   |
|          |             |          |          | 3613   |
| 00000290 | 98AD 5014   |          | 00000014 | 3614 LM R10,R13,OPSWHERE                                       |
| 00000294 | 4710 2098   |          | 00000298 | 3615 BC B'0001',*+4 include not finished                       |
| 00000298 | 98AD 5014   |          | 00000014 | 3616 LM R10,R13,OPSWHERE                                       |
| 0000029C | 4710 20A0   |          | 000002A0 | 3617 BC B'0001',*+4 include not finished                       |
|          |             |          |          | 3618 * .....ETC.....   |
|          |             |          |          | 3619 PRINT OFF   |
|          |             |          |          | 3816 PRINT ON  |
|          |             |          |          | 3817 *   |
| 000005A8 | 98AD 5014   |          | 00000014 | 3818 LM R10,R13,OPSWHERE                                       |
| 000005AC | 4710 23B0   |          | 000005B0 | 3819 BC B'0001',*+4 include not finished                       |
| 000005B0 | 98AD 5014   |          | 00000014 | 3820 LM R10,R13,OPSWHERE                                       |

| LOC      | OBJECT CODE    | ADDR1    | ADDR2    | STMT    |       |                                 |                                   |
|----------|----------------|----------|----------|---------|-------|---------------------------------|-----------------------------------|
| 000005B4 | 4710 23B8      |          | 000005B8 | 3821    | BC    | B'0001',*+4                     | include not finished              |
|          |                |          |          | 3822    |       |                                 |                                   |
| 000005B8 | 0676           |          |          | 3823    | BCTR  | R7,R6                           |                                   |
| 000005BA | B205 2B78      |          | 00000D78 | 3824    | STCK  | ENDCLOCK                        |                                   |
| 000005BE | 45F0 2994      |          | 00000B94 | 3825    | BAL   | R15,CALCDUR                     |                                   |
| 000005C2 | D207 2B88 2B80 | 00000D88 | 00000D80 | 3826    | MVC   | OVERHEAD,DURATION               |                                   |
|          |                |          |          | 3827 *  |       |                                 |                                   |
|          |                |          |          | 3828 ** |       | Now do the actual timing run... |                                   |
|          |                |          |          | 3829 *  |       |                                 |                                   |
| 000005C8 | 5870 2B68      |          | 00000D68 | 3830    | L     | R7,NUMLOOPS                     |                                   |
| 000005CC | B205 2B70      |          | 00000D70 | 3831    | STCK  | BEGCLOCK                        |                                   |
| 000005D0 | 0560           |          |          | 3832    | BALR  | R6,0                            |                                   |
| 000005D2 | 98AD 5014      |          | 00000014 | 3833    | LM    | R10,R13,OPSWHERE                |                                   |
| 000005D6 | A9AC 0000      |          | 00000000 | 3834    | CLCLE | R10,R12,0                       |                                   |
| 000005DA | 4710 23D6      |          | 000005D6 | 3835    | BC    | B'0001',*-4                     | not finished?                     |
| 000005DE | 98AD 5014      |          | 00000014 | 3836    | LM    | R10,R13,OPSWHERE                |                                   |
| 000005E2 | A9AC 0000      |          | 00000000 | 3837    | CLCLE | R10,R12,0                       |                                   |
| 000005E6 | 4710 23E2      |          | 000005E2 | 3838    | BC    | B'0001',*-4                     | not finished?                     |
|          |                |          |          | 3839 *  |       | .....ETC.....                   |                                   |
|          |                |          |          | 3840 *  | PRINT | OFF                             |                                   |
|          |                |          |          | 3841 *  |       |                                 | 96 LM; CLCLE; BC instruction sets |
| 000005EA | 98AD 5014      |          | 00000014 | 3842    | LM    | R10,R13,OPSWHERE                |                                   |
| 000005EE | A9AC 0000      |          | 00000000 | 3843    | CLCLE | R10,R12,0                       |                                   |
| 000005F2 | 4710 23EE      |          | 000005EE | 3844    | BC    | B'0001',*-4                     |                                   |
| 000005F6 | 98AD 5014      |          | 00000014 | 3845    | LM    | R10,R13,OPSWHERE                |                                   |
| 000005FA | A9AC 0000      |          | 00000000 | 3846    | CLCLE | R10,R12,0                       |                                   |
| 000005FE | 4710 23FA      |          | 000005FA | 3847    | BC    | B'0001',*-4                     |                                   |
| 00000602 | 98AD 5014      |          | 00000014 | 3848    | LM    | R10,R13,OPSWHERE                |                                   |
| 00000606 | A9AC 0000      |          | 00000000 | 3849    | CLCLE | R10,R12,0                       |                                   |
| 0000060A | 4710 2406      |          | 00000606 | 3850    | BC    | B'0001',*-4                     |                                   |
| 0000060E | 98AD 5014      |          | 00000014 | 3851    | LM    | R10,R13,OPSWHERE                |                                   |
| 00000612 | A9AC 0000      |          | 00000000 | 3852    | CLCLE | R10,R12,0                       |                                   |
| 00000616 | 4710 2412      |          | 00000612 | 3853    | BC    | B'0001',*-4                     |                                   |
| 0000061A | 98AD 5014      |          | 00000014 | 3854    | LM    | R10,R13,OPSWHERE                |                                   |
| 0000061E | A9AC 0000      |          | 00000000 | 3855    | CLCLE | R10,R12,0                       |                                   |
| 00000622 | 4710 241E      |          | 0000061E | 3856    | BC    | B'0001',*-4                     |                                   |
| 00000626 | 98AD 5014      |          | 00000014 | 3857    | LM    | R10,R13,OPSWHERE                |                                   |
| 0000062A | A9AC 0000      |          | 00000000 | 3858    | CLCLE | R10,R12,0                       |                                   |
| 0000062E | 4710 242A      |          | 0000062A | 3859    | BC    | B'0001',*-4                     |                                   |
| 00000632 | 98AD 5014      |          | 00000014 | 3860    | LM    | R10,R13,OPSWHERE                |                                   |
| 00000636 | A9AC 0000      |          | 00000000 | 3861    | CLCLE | R10,R12,0                       |                                   |
| 0000063A | 4710 2436      |          | 00000636 | 3862    | BC    | B'0001',*-4                     |                                   |
| 0000063E | 98AD 5014      |          | 00000014 | 3863    | LM    | R10,R13,OPSWHERE                |                                   |
| 00000642 | A9AC 0000      |          | 00000000 | 3864    | CLCLE | R10,R12,0                       |                                   |
| 00000646 | 4710 2442      |          | 00000642 | 3865    | BC    | B'0001',*-4                     |                                   |
| 0000064A | 98AD 5014      |          | 00000014 | 3866    | LM    | R10,R13,OPSWHERE                |                                   |
| 0000064E | A9AC 0000      |          | 00000000 | 3867    | CLCLE | R10,R12,0                       |                                   |
| 00000652 | 4710 244E      |          | 0000064E | 3868    | BC    | B'0001',*-4                     |                                   |
| 00000656 | 98AD 5014      |          | 00000014 | 3869    | LM    | R10,R13,OPSWHERE                |                                   |
| 0000065A | A9AC 0000      |          | 00000000 | 3870    | CLCLE | R10,R12,0                       |                                   |
| 0000065E | 4710 245A      |          | 0000065A | 3871    | BC    | B'0001',*-4                     |                                   |
| 00000662 | 98AD 5014      |          | 00000014 | 3872    | LM    | R10,R13,OPSWHERE                |                                   |



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|----------|--------|------|-------|----------|--------------------------|
| 00000666 | A9AC   | 0000 |       | 00000000 | 3873 CLCLE R10,R12,0     |
| 0000066A | 4710   | 2466 |       | 00000666 | 3874 BC B'0001',*-4      |
| 0000066E | 98AD   | 5014 |       | 00000014 | 3875 LM R10,R13,OPSWHERE |
| 00000672 | A9AC   | 0000 |       | 00000000 | 3876 CLCLE R10,R12,0     |
| 00000676 | 4710   | 2472 |       | 00000672 | 3877 BC B'0001',*-4      |
| 0000067A | 98AD   | 5014 |       | 00000014 | 3878 LM R10,R13,OPSWHERE |
| 0000067E | A9AC   | 0000 |       | 00000000 | 3879 CLCLE R10,R12,0     |
| 00000682 | 4710   | 247E |       | 0000067E | 3880 BC B'0001',*-4      |
| 00000686 | 98AD   | 5014 |       | 00000014 | 3881 LM R10,R13,OPSWHERE |
| 0000068A | A9AC   | 0000 |       | 00000000 | 3882 CLCLE R10,R12,0     |
| 0000068E | 4710   | 248A |       | 0000068A | 3883 BC B'0001',*-4      |
| 00000692 | 98AD   | 5014 |       | 00000014 | 3884 LM R10,R13,OPSWHERE |
| 00000696 | A9AC   | 0000 |       | 00000000 | 3885 CLCLE R10,R12,0     |
| 0000069A | 4710   | 2496 |       | 00000696 | 3886 BC B'0001',*-4      |
| 0000069E | 98AD   | 5014 |       | 00000014 | 3887 LM R10,R13,OPSWHERE |
| 000006A2 | A9AC   | 0000 |       | 00000000 | 3888 CLCLE R10,R12,0     |
| 000006A6 | 4710   | 24A2 |       | 000006A2 | 3889 BC B'0001',*-4      |
| 000006AA | 98AD   | 5014 |       | 00000014 | 3890 LM R10,R13,OPSWHERE |
| 000006AE | A9AC   | 0000 |       | 00000000 | 3891 CLCLE R10,R12,0     |
| 000006B2 | 4710   | 24AE |       | 000006AE | 3892 BC B'0001',*-4      |
| 000006B6 | 98AD   | 5014 |       | 00000014 | 3893 LM R10,R13,OPSWHERE |
| 000006BA | A9AC   | 0000 |       | 00000000 | 3894 CLCLE R10,R12,0     |
| 000006BE | 4710   | 24BA |       | 000006BA | 3895 BC B'0001',*-4      |
| 000006C2 | 98AD   | 5014 |       | 00000014 | 3896 LM R10,R13,OPSWHERE |
| 000006C6 | A9AC   | 0000 |       | 00000000 | 3897 CLCLE R10,R12,0     |
| 000006CA | 4710   | 24C6 |       | 000006C6 | 3898 BC B'0001',*-4      |
| 000006CE | 98AD   | 5014 |       | 00000014 | 3899 LM R10,R13,OPSWHERE |
| 000006D2 | A9AC   | 0000 |       | 00000000 | 3900 CLCLE R10,R12,0     |
| 000006D6 | 4710   | 24D2 |       | 000006D2 | 3901 BC B'0001',*-4      |
| 000006DA | 98AD   | 5014 |       | 00000014 | 3902 LM R10,R13,OPSWHERE |
| 000006DE | A9AC   | 0000 |       | 00000000 | 3903 CLCLE R10,R12,0     |
| 000006E2 | 4710   | 24DE |       | 000006DE | 3904 BC B'0001',*-4      |
| 000006E6 | 98AD   | 5014 |       | 00000014 | 3905 LM R10,R13,OPSWHERE |
| 000006EA | A9AC   | 0000 |       | 00000000 | 3906 CLCLE R10,R12,0     |
| 000006EE | 4710   | 24EA |       | 000006EA | 3907 BC B'0001',*-4      |
| 000006F2 | 98AD   | 5014 |       | 00000014 | 3908 LM R10,R13,OPSWHERE |
| 000006F6 | A9AC   | 0000 |       | 00000000 | 3909 CLCLE R10,R12,0     |
| 000006FA | 4710   | 24F6 |       | 000006F6 | 3910 BC B'0001',*-4      |
| 000006FE | 98AD   | 5014 |       | 00000014 | 3911 LM R10,R13,OPSWHERE |
| 00000702 | A9AC   | 0000 |       | 00000000 | 3912 CLCLE R10,R12,0     |
| 00000706 | 4710   | 2502 |       | 00000702 | 3913 BC B'0001',*-4      |
| 0000070A | 98AD   | 5014 |       | 00000014 | 3914 LM R10,R13,OPSWHERE |
| 0000070E | A9AC   | 0000 |       | 00000000 | 3915 CLCLE R10,R12,0     |
| 00000712 | 4710   | 250E |       | 0000070E | 3916 BC B'0001',*-4      |
| 00000716 | 98AD   | 5014 |       | 00000014 | 3917 LM R10,R13,OPSWHERE |
| 0000071A | A9AC   | 0000 |       | 00000000 | 3918 CLCLE R10,R12,0     |
| 0000071E | 4710   | 251A |       | 0000071A | 3919 BC B'0001',*-4      |
| 00000722 | 98AD   | 5014 |       | 00000014 | 3920 LM R10,R13,OPSWHERE |
| 00000726 | A9AC   | 0000 |       | 00000000 | 3921 CLCLE R10,R12,0     |
| 0000072A | 4710   | 2526 |       | 00000726 | 3922 BC B'0001',*-4      |
| 0000072E | 98AD   | 5014 |       | 00000014 | 3923 LM R10,R13,OPSWHERE |
| 00000732 | A9AC   | 0000 |       | 00000000 | 3924 CLCLE R10,R12,0     |

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|----------|--------|------|-------|----------|--------------------------|
| 00000736 | 4710   | 2532 |       | 00000732 | 3925 BC B'0001',*-4      |
| 0000073A | 98AD   | 5014 |       | 00000014 | 3926 LM R10,R13,OPSWHERE |
| 0000073E | A9AC   | 0000 |       | 00000000 | 3927 CLCLE R10,R12,0     |
| 00000742 | 4710   | 253E |       | 0000073E | 3928 BC B'0001',*-4      |
| 00000746 | 98AD   | 5014 |       | 00000014 | 3929 LM R10,R13,OPSWHERE |
| 0000074A | A9AC   | 0000 |       | 00000000 | 3930 CLCLE R10,R12,0     |
| 0000074E | 4710   | 254A |       | 0000074A | 3931 BC B'0001',*-4      |
| 00000752 | 98AD   | 5014 |       | 00000014 | 3932 LM R10,R13,OPSWHERE |
| 00000756 | A9AC   | 0000 |       | 00000000 | 3933 CLCLE R10,R12,0     |
| 0000075A | 4710   | 2556 |       | 00000756 | 3934 BC B'0001',*-4      |
| 0000075E | 98AD   | 5014 |       | 00000014 | 3935 LM R10,R13,OPSWHERE |
| 00000762 | A9AC   | 0000 |       | 00000000 | 3936 CLCLE R10,R12,0     |
| 00000766 | 4710   | 2562 |       | 00000762 | 3937 BC B'0001',*-4      |
| 0000076A | 98AD   | 5014 |       | 00000014 | 3938 LM R10,R13,OPSWHERE |
| 0000076E | A9AC   | 0000 |       | 00000000 | 3939 CLCLE R10,R12,0     |
| 00000772 | 4710   | 256E |       | 0000076E | 3940 BC B'0001',*-4      |
| 00000776 | 98AD   | 5014 |       | 00000014 | 3941 LM R10,R13,OPSWHERE |
| 0000077A | A9AC   | 0000 |       | 00000000 | 3942 CLCLE R10,R12,0     |
| 0000077E | 4710   | 257A |       | 0000077A | 3943 BC B'0001',*-4      |
| 00000782 | 98AD   | 5014 |       | 00000014 | 3944 LM R10,R13,OPSWHERE |
| 00000786 | A9AC   | 0000 |       | 00000000 | 3945 CLCLE R10,R12,0     |
| 0000078A | 4710   | 2586 |       | 00000786 | 3946 BC B'0001',*-4      |
| 0000078E | 98AD   | 5014 |       | 00000014 | 3947 LM R10,R13,OPSWHERE |
| 00000792 | A9AC   | 0000 |       | 00000000 | 3948 CLCLE R10,R12,0     |
| 00000796 | 4710   | 2592 |       | 00000792 | 3949 BC B'0001',*-4      |
| 0000079A | 98AD   | 5014 |       | 00000014 | 3950 LM R10,R13,OPSWHERE |
| 0000079E | A9AC   | 0000 |       | 00000000 | 3951 CLCLE R10,R12,0     |
| 000007A2 | 4710   | 259E |       | 0000079E | 3952 BC B'0001',*-4      |
| 000007A6 | 98AD   | 5014 |       | 00000014 | 3953 LM R10,R13,OPSWHERE |
| 000007AA | A9AC   | 0000 |       | 00000000 | 3954 CLCLE R10,R12,0     |
| 000007AE | 4710   | 25AA |       | 000007AA | 3955 BC B'0001',*-4      |
| 000007B2 | 98AD   | 5014 |       | 00000014 | 3956 LM R10,R13,OPSWHERE |
| 000007B6 | A9AC   | 0000 |       | 00000000 | 3957 CLCLE R10,R12,0     |
| 000007BA | 4710   | 25B6 |       | 000007B6 | 3958 BC B'0001',*-4      |
| 000007BE | 98AD   | 5014 |       | 00000014 | 3959 LM R10,R13,OPSWHERE |
| 000007C2 | A9AC   | 0000 |       | 00000000 | 3960 CLCLE R10,R12,0     |
| 000007C6 | 4710   | 25C2 |       | 000007C2 | 3961 BC B'0001',*-4      |
| 000007CA | 98AD   | 5014 |       | 00000014 | 3962 LM R10,R13,OPSWHERE |
| 000007CE | A9AC   | 0000 |       | 00000000 | 3963 CLCLE R10,R12,0     |
| 000007D2 | 4710   | 25CE |       | 000007CE | 3964 BC B'0001',*-4      |
| 000007D6 | 98AD   | 5014 |       | 00000014 | 3965 LM R10,R13,OPSWHERE |
| 000007DA | A9AC   | 0000 |       | 00000000 | 3966 CLCLE R10,R12,0     |
| 000007DE | 4710   | 25DA |       | 000007DA | 3967 BC B'0001',*-4      |
| 000007E2 | 98AD   | 5014 |       | 00000014 | 3968 LM R10,R13,OPSWHERE |
| 000007E6 | A9AC   | 0000 |       | 00000000 | 3969 CLCLE R10,R12,0     |
| 000007EA | 4710   | 25E6 |       | 000007E6 | 3970 BC B'0001',*-4      |
| 000007EE | 98AD   | 5014 |       | 00000014 | 3971 LM R10,R13,OPSWHERE |
| 000007F2 | A9AC   | 0000 |       | 00000000 | 3972 CLCLE R10,R12,0     |
| 000007F6 | 4710   | 25F2 |       | 000007F2 | 3973 BC B'0001',*-4      |
| 000007FA | 98AD   | 5014 |       | 00000014 | 3974 LM R10,R13,OPSWHERE |
| 000007FE | A9AC   | 0000 |       | 00000000 | 3975 CLCLE R10,R12,0     |
| 00000802 | 4710   | 25FE |       | 000007FE | 3976 BC B'0001',*-4      |

| LOC      | OBJECT CODE | ADDR1 | ADDR2    | STMT                     |
|----------|-------------|-------|----------|--------------------------|
| 00000806 | 98AD 5014   |       | 00000014 | 3977 LM R10,R13,OPSWHERE |
| 0000080A | A9AC 0000   |       | 00000000 | 3978 CLCLE R10,R12,0     |
| 0000080E | 4710 260A   |       | 0000080A | 3979 BC B'0001',*-4      |
| 00000812 | 98AD 5014   |       | 00000014 | 3980 LM R10,R13,OPSWHERE |
| 00000816 | A9AC 0000   |       | 00000000 | 3981 CLCLE R10,R12,0     |
| 0000081A | 4710 2616   |       | 00000816 | 3982 BC B'0001',*-4      |
| 0000081E | 98AD 5014   |       | 00000014 | 3983 LM R10,R13,OPSWHERE |
| 00000822 | A9AC 0000   |       | 00000000 | 3984 CLCLE R10,R12,0     |
| 00000826 | 4710 2622   |       | 00000822 | 3985 BC B'0001',*-4      |
| 0000082A | 98AD 5014   |       | 00000014 | 3986 LM R10,R13,OPSWHERE |
| 0000082E | A9AC 0000   |       | 00000000 | 3987 CLCLE R10,R12,0     |
| 00000832 | 4710 262E   |       | 0000082E | 3988 BC B'0001',*-4      |
| 00000836 | 98AD 5014   |       | 00000014 | 3989 LM R10,R13,OPSWHERE |
| 0000083A | A9AC 0000   |       | 00000000 | 3990 CLCLE R10,R12,0     |
| 0000083E | 4710 263A   |       | 0000083A | 3991 BC B'0001',*-4      |
| 00000842 | 98AD 5014   |       | 00000014 | 3992 LM R10,R13,OPSWHERE |
| 00000846 | A9AC 0000   |       | 00000000 | 3993 CLCLE R10,R12,0     |
| 0000084A | 4710 2646   |       | 00000846 | 3994 BC B'0001',*-4      |
| 0000084E | 98AD 5014   |       | 00000014 | 3995 LM R10,R13,OPSWHERE |
| 00000852 | A9AC 0000   |       | 00000000 | 3996 CLCLE R10,R12,0     |
| 00000856 | 4710 2652   |       | 00000852 | 3997 BC B'0001',*-4      |
| 0000085A | 98AD 5014   |       | 00000014 | 3998 LM R10,R13,OPSWHERE |
| 0000085E | A9AC 0000   |       | 00000000 | 3999 CLCLE R10,R12,0     |
| 00000862 | 4710 265E   |       | 0000085E | 4000 BC B'0001',*-4      |
| 00000866 | 98AD 5014   |       | 00000014 | 4001 LM R10,R13,OPSWHERE |
| 0000086A | A9AC 0000   |       | 00000000 | 4002 CLCLE R10,R12,0     |
| 0000086E | 4710 266A   |       | 0000086A | 4003 BC B'0001',*-4      |
| 00000872 | 98AD 5014   |       | 00000014 | 4004 LM R10,R13,OPSWHERE |
| 00000876 | A9AC 0000   |       | 00000000 | 4005 CLCLE R10,R12,0     |
| 0000087A | 4710 2676   |       | 00000876 | 4006 BC B'0001',*-4      |
| 0000087E | 98AD 5014   |       | 00000014 | 4007 LM R10,R13,OPSWHERE |
| 00000882 | A9AC 0000   |       | 00000000 | 4008 CLCLE R10,R12,0     |
| 00000886 | 4710 2682   |       | 00000882 | 4009 BC B'0001',*-4      |
| 0000088A | 98AD 5014   |       | 00000014 | 4010 LM R10,R13,OPSWHERE |
| 0000088E | A9AC 0000   |       | 00000000 | 4011 CLCLE R10,R12,0     |
| 00000892 | 4710 268E   |       | 0000088E | 4012 BC B'0001',*-4      |
| 00000896 | 98AD 5014   |       | 00000014 | 4013 LM R10,R13,OPSWHERE |
| 0000089A | A9AC 0000   |       | 00000000 | 4014 CLCLE R10,R12,0     |
| 0000089E | 4710 269A   |       | 0000089A | 4015 BC B'0001',*-4      |
| 000008A2 | 98AD 5014   |       | 00000014 | 4016 LM R10,R13,OPSWHERE |
| 000008A6 | A9AC 0000   |       | 00000000 | 4017 CLCLE R10,R12,0     |
| 000008AA | 4710 26A6   |       | 000008A6 | 4018 BC B'0001',*-4      |
| 000008AE | 98AD 5014   |       | 00000014 | 4019 LM R10,R13,OPSWHERE |
| 000008B2 | A9AC 0000   |       | 00000000 | 4020 CLCLE R10,R12,0     |
| 000008B6 | 4710 26B2   |       | 000008B2 | 4021 BC B'0001',*-4      |
| 000008BA | 98AD 5014   |       | 00000014 | 4022 LM R10,R13,OPSWHERE |
| 000008BE | A9AC 0000   |       | 00000000 | 4023 CLCLE R10,R12,0     |
| 000008C2 | 4710 26BE   |       | 000008BE | 4024 BC B'0001',*-4      |
| 000008C6 | 98AD 5014   |       | 00000014 | 4025 LM R10,R13,OPSWHERE |
| 000008CA | A9AC 0000   |       | 00000000 | 4026 CLCLE R10,R12,0     |
| 000008CE | 4710 26CA   |       | 000008CA | 4027 BC B'0001',*-4      |
| 000008D2 | 98AD 5014   |       | 00000014 | 4028 LM R10,R13,OPSWHERE |

| LOC      | OBJECT CODE | ADDR1 | ADDR2    | STMT                     |
|----------|-------------|-------|----------|--------------------------|
| 000008D6 | A9AC 0000   |       | 00000000 | 4029 CLCLE R10,R12,0     |
| 000008DA | 4710 26D6   |       | 000008D6 | 4030 BC B'0001',*-4      |
| 000008DE | 98AD 5014   |       | 00000014 | 4031 LM R10,R13,OPSWHERE |
| 000008E2 | A9AC 0000   |       | 00000000 | 4032 CLCLE R10,R12,0     |
| 000008E6 | 4710 26E2   |       | 000008E2 | 4033 BC B'0001',*-4      |
| 000008EA | 98AD 5014   |       | 00000014 | 4034 LM R10,R13,OPSWHERE |
| 000008EE | A9AC 0000   |       | 00000000 | 4035 CLCLE R10,R12,0     |
| 000008F2 | 4710 26EE   |       | 000008EE | 4036 BC B'0001',*-4      |
| 000008F6 | 98AD 5014   |       | 00000014 | 4037 LM R10,R13,OPSWHERE |
| 000008FA | A9AC 0000   |       | 00000000 | 4038 CLCLE R10,R12,0     |
| 000008FE | 4710 26FA   |       | 000008FA | 4039 BC B'0001',*-4      |
| 00000902 | 98AD 5014   |       | 00000014 | 4040 LM R10,R13,OPSWHERE |
| 00000906 | A9AC 0000   |       | 00000000 | 4041 CLCLE R10,R12,0     |
| 0000090A | 4710 2706   |       | 00000906 | 4042 BC B'0001',*-4      |
| 0000090E | 98AD 5014   |       | 00000014 | 4043 LM R10,R13,OPSWHERE |
| 00000912 | A9AC 0000   |       | 00000000 | 4044 CLCLE R10,R12,0     |
| 00000916 | 4710 2712   |       | 00000912 | 4045 BC B'0001',*-4      |
| 0000091A | 98AD 5014   |       | 00000014 | 4046 LM R10,R13,OPSWHERE |
| 0000091E | A9AC 0000   |       | 00000000 | 4047 CLCLE R10,R12,0     |
| 00000922 | 4710 271E   |       | 0000091E | 4048 BC B'0001',*-4      |
| 00000926 | 98AD 5014   |       | 00000014 | 4049 LM R10,R13,OPSWHERE |
| 0000092A | A9AC 0000   |       | 00000000 | 4050 CLCLE R10,R12,0     |
| 0000092E | 4710 272A   |       | 0000092A | 4051 BC B'0001',*-4      |
| 00000932 | 98AD 5014   |       | 00000014 | 4052 LM R10,R13,OPSWHERE |
| 00000936 | A9AC 0000   |       | 00000000 | 4053 CLCLE R10,R12,0     |
| 0000093A | 4710 2736   |       | 00000936 | 4054 BC B'0001',*-4      |
| 0000093E | 98AD 5014   |       | 00000014 | 4055 LM R10,R13,OPSWHERE |
| 00000942 | A9AC 0000   |       | 00000000 | 4056 CLCLE R10,R12,0     |
| 00000946 | 4710 2742   |       | 00000942 | 4057 BC B'0001',*-4      |
| 0000094A | 98AD 5014   |       | 00000014 | 4058 LM R10,R13,OPSWHERE |
| 0000094E | A9AC 0000   |       | 00000000 | 4059 CLCLE R10,R12,0     |
| 00000952 | 4710 274E   |       | 0000094E | 4060 BC B'0001',*-4      |
| 00000956 | 98AD 5014   |       | 00000014 | 4061 LM R10,R13,OPSWHERE |
| 0000095A | A9AC 0000   |       | 00000000 | 4062 CLCLE R10,R12,0     |
| 0000095E | 4710 275A   |       | 0000095A | 4063 BC B'0001',*-4      |
| 00000962 | 98AD 5014   |       | 00000014 | 4064 LM R10,R13,OPSWHERE |
| 00000966 | A9AC 0000   |       | 00000000 | 4065 CLCLE R10,R12,0     |
| 0000096A | 4710 2766   |       | 00000966 | 4066 BC B'0001',*-4      |
| 0000096E | 98AD 5014   |       | 00000014 | 4067 LM R10,R13,OPSWHERE |
| 00000972 | A9AC 0000   |       | 00000000 | 4068 CLCLE R10,R12,0     |
| 00000976 | 4710 2772   |       | 00000972 | 4069 BC B'0001',*-4      |
| 0000097A | 98AD 5014   |       | 00000014 | 4070 LM R10,R13,OPSWHERE |
| 0000097E | A9AC 0000   |       | 00000000 | 4071 CLCLE R10,R12,0     |
| 00000982 | 4710 277E   |       | 0000097E | 4072 BC B'0001',*-4      |
| 00000986 | 98AD 5014   |       | 00000014 | 4073 LM R10,R13,OPSWHERE |
| 0000098A | A9AC 0000   |       | 00000000 | 4074 CLCLE R10,R12,0     |
| 0000098E | 4710 278A   |       | 0000098A | 4075 BC B'0001',*-4      |
| 00000992 | 98AD 5014   |       | 00000014 | 4076 LM R10,R13,OPSWHERE |
| 00000996 | A9AC 0000   |       | 00000000 | 4077 CLCLE R10,R12,0     |
| 0000099A | 4710 2796   |       | 00000996 | 4078 BC B'0001',*-4      |
| 0000099E | 98AD 5014   |       | 00000014 | 4079 LM R10,R13,OPSWHERE |
| 000009A2 | A9AC 0000   |       | 00000000 | 4080 CLCLE R10,R12,0     |

| LOC      | OBJECT | CODE | ADDR1 | ADDR2    | STMT                     |
|----------|--------|------|-------|----------|--------------------------|
| 000009A6 | 4710   | 27A2 |       | 000009A2 | 4081 BC B'0001',*-4      |
| 000009AA | 98AD   | 5014 |       | 00000014 | 4082 LM R10,R13,OPSWHERE |
| 000009AE | A9AC   | 0000 |       | 00000000 | 4083 CLCLE R10,R12,0     |
| 000009B2 | 4710   | 27AE |       | 000009AE | 4084 BC B'0001',*-4      |
| 000009B6 | 98AD   | 5014 |       | 00000014 | 4085 LM R10,R13,OPSWHERE |
| 000009BA | A9AC   | 0000 |       | 00000000 | 4086 CLCLE R10,R12,0     |
| 000009BE | 4710   | 27BA |       | 000009BA | 4087 BC B'0001',*-4      |
| 000009C2 | 98AD   | 5014 |       | 00000014 | 4088 LM R10,R13,OPSWHERE |
| 000009C6 | A9AC   | 0000 |       | 00000000 | 4089 CLCLE R10,R12,0     |
| 000009CA | 4710   | 27C6 |       | 000009C6 | 4090 BC B'0001',*-4      |
| 000009CE | 98AD   | 5014 |       | 00000014 | 4091 LM R10,R13,OPSWHERE |
| 000009D2 | A9AC   | 0000 |       | 00000000 | 4092 CLCLE R10,R12,0     |
| 000009D6 | 4710   | 27D2 |       | 000009D2 | 4093 BC B'0001',*-4      |
| 000009DA | 98AD   | 5014 |       | 00000014 | 4094 LM R10,R13,OPSWHERE |
| 000009DE | A9AC   | 0000 |       | 00000000 | 4095 CLCLE R10,R12,0     |
| 000009E2 | 4710   | 27DE |       | 000009DE | 4096 BC B'0001',*-4      |
| 000009E6 | 98AD   | 5014 |       | 00000014 | 4097 LM R10,R13,OPSWHERE |
| 000009EA | A9AC   | 0000 |       | 00000000 | 4098 CLCLE R10,R12,0     |
| 000009EE | 4710   | 27EA |       | 000009EA | 4099 BC B'0001',*-4      |
| 000009F2 | 98AD   | 5014 |       | 00000014 | 4100 LM R10,R13,OPSWHERE |
| 000009F6 | A9AC   | 0000 |       | 00000000 | 4101 CLCLE R10,R12,0     |
| 000009FA | 4710   | 27F6 |       | 000009F6 | 4102 BC B'0001',*-4      |
| 000009FE | 98AD   | 5014 |       | 00000014 | 4103 LM R10,R13,OPSWHERE |
| 00000A02 | A9AC   | 0000 |       | 00000000 | 4104 CLCLE R10,R12,0     |
| 00000A06 | 4710   | 2802 |       | 00000A02 | 4105 BC B'0001',*-4      |
| 00000A0A | 98AD   | 5014 |       | 00000014 | 4106 LM R10,R13,OPSWHERE |
| 00000A0E | A9AC   | 0000 |       | 00000000 | 4107 CLCLE R10,R12,0     |
| 00000A12 | 4710   | 280E |       | 00000A0E | 4108 BC B'0001',*-4      |
| 00000A16 | 98AD   | 5014 |       | 00000014 | 4109 LM R10,R13,OPSWHERE |
| 00000A1A | A9AC   | 0000 |       | 00000000 | 4110 CLCLE R10,R12,0     |
| 00000A1E | 4710   | 281A |       | 00000A1A | 4111 BC B'0001',*-4      |
| 00000A22 | 98AD   | 5014 |       | 00000014 | 4112 LM R10,R13,OPSWHERE |
| 00000A26 | A9AC   | 0000 |       | 00000000 | 4113 CLCLE R10,R12,0     |
| 00000A2A | 4710   | 2826 |       | 00000A26 | 4114 BC B'0001',*-4      |
| 00000A2E | 98AD   | 5014 |       | 00000014 | 4115 LM R10,R13,OPSWHERE |
| 00000A32 | A9AC   | 0000 |       | 00000000 | 4116 CLCLE R10,R12,0     |
| 00000A36 | 4710   | 2832 |       | 00000A32 | 4117 BC B'0001',*-4      |
| 00000A3A | 98AD   | 5014 |       | 00000014 | 4118 LM R10,R13,OPSWHERE |
| 00000A3E | A9AC   | 0000 |       | 00000000 | 4119 CLCLE R10,R12,0     |
| 00000A42 | 4710   | 283E |       | 00000A3E | 4120 BC B'0001',*-4      |
| 00000A46 | 98AD   | 5014 |       | 00000014 | 4121 LM R10,R13,OPSWHERE |
| 00000A4A | A9AC   | 0000 |       | 00000000 | 4122 CLCLE R10,R12,0     |
| 00000A4E | 4710   | 284A |       | 00000A4A | 4123 BC B'0001',*-4      |
| 00000A52 | 98AD   | 5014 |       | 00000014 | 4124 LM R10,R13,OPSWHERE |
| 00000A56 | A9AC   | 0000 |       | 00000000 | 4125 CLCLE R10,R12,0     |
| 00000A5A | 4710   | 2856 |       | 00000A56 | 4126 BC B'0001',*-4      |
| 00000A5E | 98AD   | 5014 |       | 00000014 | 4127 LM R10,R13,OPSWHERE |
| 00000A62 | A9AC   | 0000 |       | 00000000 | 4128 CLCLE R10,R12,0     |
| 00000A66 | 4710   | 2862 |       | 00000A62 | 4129 BC B'0001',*-4      |
| 00000A6A | 98AD   | 5014 |       | 00000014 | 4130 LM R10,R13,OPSWHERE |
| 00000A6E | A9AC   | 0000 |       | 00000000 | 4131 CLCLE R10,R12,0     |
| 00000A72 | 4710   | 286E |       | 00000A6E | 4132 BC B'0001',*-4      |





| LOC      | OBJECT   | CODE      | ADDR1    | ADDR2    | STMT             |  |
|----------|----------|-----------|----------|----------|------------------|--|
|          |          |           |          |          | 4165 *****       |  |
|          |          |           |          |          | 4166 * RPTSPEED  | Report instruction speed                                     |
|          |          |           |          |          | 4167 *****       |  |
| 00000ABA | 50F0     | 2990      |          | 00000B90 | 4169 RPTSPEED ST | Save return address  |
| 00000ABE | 45F0     | 2994      |          | 00000B94 | 4170 BAL         | Calculate duration   |
|          |          |           |          |          | 4171 *           |  |
| 00000AC2 | 4150     | 2B88      |          | 00000D88 | 4172 LA          | Subtract overhead  |
| 00000AC6 | 4160     | 2B80      |          | 00000D80 | 4173 LA          | From raw timing  |
| 00000ACA | 4170     | 2B80      |          | 00000D80 | 4174 LA          | Yielding true instruction timing                             |
| 00000ACE | 45F0     | 29E8      |          | 00000BE8 | 4175 BAL         | Do it  |
|          |          |           |          |          | 4176 *           |  |
| 00000AD2 | 98CD     | 2B80      |          | 00000D80 | 4177 LM          | Convert to...  |
| 00000AD6 | 8CC0     | 000C      |          | 0000000C | 4178 SRDL        | ... microseconds   |
|          |          |           |          |          | 4179 *           |  |
| 00000ADA | 4EC0     | 2B90      |          | 00000D90 | 4180 CVD         | convert HIGH part to decimal                                 |
| 00000ADE | 4ED0     | 2B98      |          | 00000D98 | 4181 CVD         | convert LOW part to decimal                                  |
|          |          |           |          |          | 4182 *           |  |
| 00000AE2 | F877     | 2BA0 2B90 | 00000DA0 | 00000D90 | 4183 ZAP         | Calculate...   |
| 00000AE8 | FC75     | 2BA0 2B5A | 00000DA0 | 00000D5A | 4184 MP          | ...decimal...  |
| 00000AEE | FA77     | 2BA0 2B98 | 00000DA0 | 00000D98 | 4185 AP          | ...microseconds  |
|          |          |           |          |          | 4186 *           |  |
| 00000AF4 | D20B     | 2BDB 2BF4 | 00000DDB | 00000DF4 | 4187 MVC         | (edit into...  |
| 00000AFA | DE0B     | 2BDB 2BA3 | 00000DDB | 00000DA3 | 4188 ED          | ...print line)   |
|          |          |           |          |          |                  |  |
|          |          |           |          |          | 4190             | RAWIO 4,FAIL=FAILIO Print elapsed time on console            |
| 00000B00 | 9200     | 300E      |          | 0000000E | 4191+ MVI        | Clear SC information   |
| 00000B04 | D201     | 300A 3006 | 0000000A | 00000006 | 4192+ MVC        | Clear accumulated status                                     |
| 00000B0A | 5810     | 3000      |          | 00000000 | 4193+ L          | Remember the device ID with which I am working               |
|          |          |           |          |          | 4194+*           | Initiate Subchannel-based input/output operation             |
| 00000B0E | 5840     | 3018      |          | 00000018 | 4195+ \$L        | Locate the ORB for the channel subsystem                     |
| 00000B12 | B233     | 4000      |          | 00000000 | 4196+ SSCH       | Initiate the I/O operation                                   |
| 00000B16 | A774     | 009D      |          | 00000C50 | 4197+ \$BC       | ..Start function failed, report/handle the error             |
| 00000B1A | 5840     | 3020      |          | 00000020 | 4198+ \$L        | Locate the IRB storage area                                  |
| 00000B1E |          |           | 00000000 |          | 4199+ USING      | Make it addressable  |
|          |          |           |          |          |                  |  |
|          |          |           |          |          | 4201+*           | Wait for I/O operation to present status via an interruption |
| 00000B1E |          |           |          |          | 4202+IOWT0007    | DS 0H Wait for I/O to complete                               |
| 00000B1E | D207     | 2940 0078 | 00000B40 | 00000078 | 4204+ MVC        | Save Input/Output new PSW                                    |
| 00000B24 | D207     | 0078 2938 | 00000078 | 00000B38 | 4205+ MVC        | Establish Input/Output new PSW                               |
| 00000B2A | 8200     | 2930      |          | 00000B30 | 4206+ \$LPSW     | Wait for event   |
| 00000B30 | 020A0000 | 00000000  |          |          | 4207+WPSW0008    | Wait for event   |
| 00000B38 | 00082000 | 00000B48  |          |          | 4208+ION0008     | I/O New PSW: cc==2   |
| 00000B40 | 00000000 | 00000000  |          |          | 4209+IOS0008     |  |
|          |          |           |          |          | 4210+*           | Handle input/output interruption                             |
| 00000B48 |          |           |          |          | 4211+IRST0008    | DS 0H  |
| 00000B48 | D207     | 0078 2940 | 00000078 | 00000B40 | 4212+ MVC        | Restore input/output new PSW                                 |

| LOC      | OBJECT   | CODE | ADDR1 | ADDR2    | STMT   |  |
|----------|----------|------|-------|----------|--|--|
|          |          |      |       |          | 4213+* Process the interruption...   |  |
|          |          |      |       |          | 4214+* Validate interruption is for the expected subchannel                |  |
| 00000B4E | 5510     | 00B8 |       | 000000B8 | 4215+ CL 1,IOSSID Is this the device for which I am waiting?               |  |
| 00000B52 | A774     | FFE6 |       | 00000B1E | 4216+ \$BNE IOWT0007 ..No, continue waiting for it                         |  |
|          |          |      |       |          | 4217+* Accumulate interruption information from IRB                        |  |
| 00000B56 | B235     | 4000 |       | 00000000 | 4218+ TSCH 0(4) Retrive interrupt information                              |  |
| 00000B5A | A744     | FFE2 |       | 00000B1E | 4219+ \$BC B'0100',IOWT0007 CC1 (not status pending), wait for it to arriv |  |
| 00000B5E | A714     | 0079 |       | 00000C50 | 4220+ \$BC B'0001',FAILIO CC3 (not operational), an error then             |  |
|          |          |      |       |          | 4221+* CC0 (status was pending), accumulate the status                     |  |
| 00000B62 | D600     | 300E | 4003  | 0000000E | 00000003   | 4222+ OC IOCBSC,IRBSCSW+SCSW2 Accumulate status control                  |
| 00000B68 | D601     | 300A | 4008  | 0000000A | 00000008   | 4223+ OC IOCBST,IRBSCSW+SCSWUS Accumulate device and channel status      |
| 00000B6E | 9104     | 300E |       | 0000000E |  | 4224+ TM IOCBSC,SCSWSPRI Primary subchannel status?                      |
| 00000B72 | A7E4     | FFD6 |       | 00000B1E |  | 4225+ \$BNO IOWT0007 ..No, wait for primary status                       |
| 00000B76 | D203     | 3010 | 4004  | 00000010 | 00000004   | 4226+ MVC IOCBSCCW,IRBSCSW+SCSWCCW CCW address                           |
| 00000B7C | D201     | 3016 | 400A  | 00000016 | 0000000A   | 4227+ MVC IOCBRCNT,IRBSCSW+SCSWCNT Residual count                        |
|          |          |      |       |          |  | 4228+* Test for errors as specified in the IOCB                          |
| 00000B82 | 910C     | 300A |       | 0000000A |  | 4229+ TM IOCBUS,CSWCE+CSWDE Channel end and device end both accumulated? |
| 00000B86 | A7E4     | 0065 |       | 00000C50 |  | 4230+ \$BNO FAILIO Hunh? No CE and DE but do have primary status!        |
|          |          |      |       |          |  | 4231+* Input/Output operation successful                                 |
|          |          |      |       |          |  |  |
| 00000B8A | 58F0     | 2990 |       | 00000B90 | 4233   | L R15,RPTSAVE Restore return address                                     |
| 00000B8E | 07FF     |      |       |          | 4234   | BR R15 Return to caller  |
| 00000B90 | 00000000 |      |       |          | 4236   | RPTSAVE DC F'0' R15 save area  |



| LOC      | OBJECT CODE       | ADDR1 | ADDR2    | STMT |  |
|----------|-------------------|-------|----------|------|--|
|          |                   |       |          | 4238 | *****  |
|          |                   |       |          | 4239 | *           CALCDUR           Calculate DURATION             |
|          |                   |       |          | 4240 | *****  |
| 00000B94 | 50F0 29D8         |       | 00000BD8 | 4242 | CALCDUR ST   R15,CALCRET   Save return address               |
| 00000B98 | 9057 29DC         |       | 00000BDC | 4243 | STM   R5,R7,CALCWORK   Save work registers                   |
|          |                   |       |          | 4244 | *  |
| 00000B9C | 9867 2B70         |       | 00000D70 | 4245 | LM   R6,R7,BEGCLOCK   Remove CPU number from clock value     |
| 00000BA0 | 8C60 0006         |       | 00000006 | 4246 | SRDL R6,6   "  |
| 00000BA4 | 8D60 0006         |       | 00000006 | 4247 | SLDL R6,6   "  |
| 00000BA8 | 9067 2B70         |       | 00000D70 | 4248 | STM   R6,R7,BEGCLOCK   "                                     |
|          |                   |       |          | 4249 | *  |
| 00000BAC | 9867 2B78         |       | 00000D78 | 4250 | LM   R6,R7,ENDCLOCK   Remove CPU number from clock value     |
| 00000BB0 | 8C60 0006         |       | 00000006 | 4251 | SRDL R6,6   "  |
| 00000BB4 | 8D60 0006         |       | 00000006 | 4252 | SLDL R6,6   "  |
| 00000BB8 | 9067 2B78         |       | 00000D78 | 4253 | STM   R6,R7,ENDCLOCK   "                                     |
|          |                   |       |          | 4254 | *  |
| 00000BBC | 4150 2B70         |       | 00000D70 | 4255 | LA   R5,BEGCLOCK   Starting time                             |
| 00000BC0 | 4160 2B78         |       | 00000D78 | 4256 | LA   R6,ENDCLOCK   Ending time                               |
| 00000BC4 | 4170 2B80         |       | 00000D80 | 4257 | LA   R7,DURATION   Difference                                |
| 00000BC8 | 45F0 29E8         |       | 00000BE8 | 4258 | BAL R15,SUBDWORD   Calculate duration                        |
|          |                   |       |          | 4259 | *  |
| 00000BCC | 9857 29DC         |       | 00000BDC | 4260 | LM   R5,R7,CALCWORK   Restore work registers                 |
| 00000BD0 | 58F0 29D8         |       | 00000BD8 | 4261 | L   R15,CALCRET   Restore return address                     |
| 00000BD4 | 07FF              |       |          | 4262 | BR   R15   Return to caller                                  |
| 00000BD8 | 00000000          |       |          | 4264 | CALCRET DC   F'0'   R15 save area                            |
| 00000BDC | 00000000 00000000 |       |          | 4265 | CALCWORK DC   3F'0'   R5-R7 save area                        |
|          |                   |       |          | 4267 | *****  |
|          |                   |       |          | 4268 | *           SUBDWORD           Subtract two doublewords      |
|          |                   |       |          | 4269 | *           R5 --> subtrahend, R6 --> minuend, R7 --> result |
|          |                   |       |          | 4270 | *****  |
| 00000BE8 | 90AD 2A10         |       | 00000C10 | 4272 | SUBDWORD STM   R10,R13,SUBDWSAV   Save registers             |
|          |                   |       |          | 4273 | *  |
| 00000BEC | 98AB 5000         |       | 00000000 | 4274 | LM   R10,R11,0(R5)   Subtrahend (value to subtract)          |
| 00000BF0 | 98CD 6000         |       | 00000000 | 4275 | LM   R12,R13,0(R6)   Minuend (what to subtract FROM)         |
| 00000BF4 | 1FDB              |       |          | 4276 | SLR   R13,R11   Subtract LOW part                            |
| 00000BF6 | 47B0 29FE         |       | 00000BFE | 4277 | BNM   *+4+4   (branch if no borrow)                          |
| 00000BFA | 5FC0 2B50         |       | 00000D50 | 4278 | SL   R12,=F'1'   (otherwise do borrow)                       |
| 00000BFE | 1FCA              |       |          | 4279 | SLR   R12,R10   Subtract HIGH part                           |
| 00000C00 | 90CD 7000         |       | 00000000 | 4280 | STM   R12,R13,0(R7)   Store results                          |
|          |                   |       |          | 4281 | *  |
| 00000C04 | 98AD 2A10         |       | 00000C10 | 4282 | LM   R10,R13,SUBDWSAV   Restore registers                    |
| 00000C08 | 07FF              |       |          | 4283 | BR   R15   Return to caller                                  |
| 00000C10 | 00000000 00000000 |       |          | 4285 | SUBDWSAV DC   2D'0'   R10-R13 save area                      |

| LOC      | OBJECT | CODE | ADDR1 | ADDR2    | STMT   |
|----------|--------|------|-------|----------|--|
|          |        |      |       |          | 4287 *****   |
|          |        |      |       |          | 4288 * Program Initialization                              |
|          |        |      |       |          | 4289 *****   |
| 00000C20 |        |      |       |          | 4291 INIT DS 0H Program Initialization                     |
| 00000C20 | 4130   | 2AD0 |       | 00000CD0 | 4293 LA R3,IOCB_009 Point to IOCB                          |
| 00000C24 | 5880   | 3018 |       | 00000018 | 4294 L R8,IOCB_0RB Point to ORB                            |
| 00000C28 | 45F0   | 2A70 |       | 00000C70 | 4296 BAL R15,IOINIT Initialize the CPU for I/O operations  |
| 00000C2C | 45F0   | 2A7E |       | 00000C7E | 4297 BAL R15,ENADEV Enable our device making ready for use |
| 00000C30 | 07FE   |      |       |          | 4298 BR R14 Return to caller                               |

[illegible]

| LOC      | OBJECT CODE    | ADDR1    | ADDR2    | STMT  |   |
|----------|----------------|----------|----------|---|---|
|          |                |          |          | 4326 *****  |   |
|          |                |          |          | 4327 * Initialize the CPU for I/O operations      |   |
|          |                |          |          | 4328 *****  |   |
| 00000C70 | B766 2A78      |          | 00000C78 | 4330 IOINIT IOINIT ,                              |   |
| 00000C74 | 47F0 2A7C      |          | 00000C7C | 4331+IOINIT LCTL 6,6,IOMK0014                     | Enable subchannel subclasses for interruptions                  |
| 00000C78 |                |          |          | 4332+ B IOMK0014+4                                |   |
| 00000C78 | FF000000       |          |          | 4333+IOMK0014 DS 0F                               |   |
|          |                |          |          | 4334+ DC XL4'FF000000'                            | All subchannel subclasses enabled                               |
| 00000C7C | 07FF           |          |          | 4336 BR R15                                       | Return to caller  |
|          |                |          |          |   |   |
|          |                |          |          | 4338 *****  |   |
|          |                |          |          | 4339 * Enable the device, making it ready for use |   |
|          |                |          |          | 4340 *****  |   |
| 00000C7E | 5810 2AC4      |          | 00000CC4 | 4342 ENADEV ENADEV ENAOKAY,FAILDEV,REG=4          |   |
| 00000C82 | 5840 3028      |          | 00000028 | 4343+ENADEV L 1,FIND0015                          |   |
| 00000C86 |                | 00000000 |          | 4344+ \$L 4,IOCBSIB                               | Locate where the SCHIB is to be stored                          |
| 00000C86 |                |          |          | 4345+ USING SCHIB,4                               |   |
| 00000C86 | B234 4000      |          | 00000000 | 4346+FINL0015 DS 0H                               | Retrieve Subchannel Information Block for desired device number |
| 00000C8A | A774 FFDB      |          | 00000C40 | 4347+ STSCH 0(4)                                  | Store the SCHIB for first subchannel                            |
| 00000C8E | 9101 4005      |          | 00000005 | 4348+ \$BC B'0111',FAILDEV                        | Subchannel does not exist and device number not found           |
| 00000C92 | A784 0011      |          | 00000CB4 | 4349+ TM PMCW1_8,PMCWV                            | Is the subchannel device number valid?                          |
| 00000C96 | D501 4006 3004 | 00000006 | 00000004 | 4350+ \$BZ FINN0015                               | ..No, check the next subchannel                                 |
| 00000C9C | A774 000C      |          | 00000CB4 | 4351+ CLC PMCWDNUM,IOCBDEV                        | Is this the device number being sought?                         |
|          |                |          |          | 4352+ \$BNE FINN0015                              | ..No, check the next subchannel                                 |
|          |                |          |          | 4353+* Subchannel found!                          |   |
| 00000CA0 | 5010 3000      |          | 00000000 | 4354+ ST 1,IOCBDID                                | Remember the subchannel so I/O can be done to it.               |
| 00000CA4 | 9680 4005      |          | 00000005 | 4355+ OI PMCW1_8,PMCWE                            | Make sure it is enabled so I/O requests accepted                |
| 00000CA8 | B232 4000      |          | 00000000 | 4356+ MSCH 0(4)                                   | Enable the subchannel to the channel sub-system                 |
| 00000CAC | A784 0010      |          | 00000CCC | 4357+ \$BC B'1000',ENAOKAY                        | CC0 (SCHIB updated), device is ready.                           |
| 00000CB0 | A7F4 FFC8      |          | 00000C40 | 4358+ \$B FAILDEV                                 | CC1,CC2,CC3 (SCHIB update failed), quit                         |
| 00000CB4 |                |          |          | 4359+FINN0015 DS 0H                               | Advance to next subchannel                                      |
| 00000CB4 | 4110 1001      |          | 00000001 | 4360+ LA 1,1(0,1)                                 | Advance to next subchannel                                      |
| 00000CB8 | 5510 2AC8      |          | 00000CC8 | 4361+ CL 1,FINM0015                               | Beyond maximum subchannel                                       |
| 00000CBC | A7D4 FFE5      |          | 00000C86 | 4362+ \$BNH FINL0015                              | ..No, examine the next subchannel                               |
| 00000CC0 | A724 FFC0      |          | 00000C40 | 4363+ \$BH FAILDEV                                | ..Yes, failed to enable the device                              |
| 00000CC4 |                |          |          | 4364+ DROP 4                                      | Forget SCHIB addressing   |
| 00000CC4 | 00010000       |          |          | 4365+FIND0015 DC A(X'00010000')                   | First subchannel subsystem ID                                   |
| 00000CC8 | 0001FFFF       |          |          | 4366+FINM0015 DC A(X'0001FFFF')                   | Last subchannel subsystem ID                                    |
| 00000CCC | 07FF           |          |          | 4368 ENAOKAY BR R15                               | Return to caller  |

| LOC      | OBJECT CODE       | ADDR1 | ADDR2 | STMT   |
|----------|-------------------|-------|-------|--|
|          |                   |       |       | 4370 *****   |
|          |                   |       |       | 4371 *           Structure used by RAWIO identifying                                 |
|          |                   |       |       | 4372 *           the device and operation being performed                            |
|          |                   |       |       | 4373 *****   |
|          |                   |       |       | 4375 IOCB_009 IOCB X'009',CCW=CONPGM   |
| 00000CD0 | 00000000          |       |       | 4376+IOCB_009 DC A(0)           +0 Device Identifier (supplied by ENADEV macro)      |
| 00000CD4 | 0009              |       |       | 4377+           DC AL2(X'009')       +4 Device address or device number              |
| 00000CD6 | 0000              |       |       | 4378+           DC H'0'           +6 Must be zeros                                   |
| 00000CD8 | D3                |       |       | 4379+           DC AL1(X'D3')       +8 Default detected unit errors                  |
| 00000CD9 | 3F                |       |       | 4380+           DC AL1(X'3F')       +9 Default detected channel errors               |
| 00000CDA | 0000              |       |       | 4381+           DC HL2'0'          +10 Accumulated unit and channel errors           |
| 00000CDC | 0000              |       |       | 4382+           DC HL2'0'          +12 Tested unit and channel status                |
| 00000CDE | 00                |       |       | 4383+           DC XL1'00'       +14 Accumulated subchannel status control from SCSW |
| 00000CDF | 80                |       |       | 4384+           DC XL1'80'       +15 Default unsolicited wait condition              |
| 00000CE0 | 00000000          |       |       | 4385+           DC F'0'           +16 I/O status CCW address                         |
| 00000CE4 | 00000000          |       |       | 4386+           DC F'0'           +20 residual count                                 |
| 00000CE8 | 00000D40          |       |       | 4387+           DC A(IORB0016)   +24 Address where ORB is located                    |
| 00000CEC | 00000000          |       |       | 4388+           DC A(0)           +28 reserved                                       |
| 00000CF0 | 00000D00          |       |       | 4389+           DC A(IIRB0016)   +32 Address where IRB stored                        |
| 00000CF4 | 00000000          |       |       | 4390+           DC A(0)           +36 reserved                                       |
| 00000CF8 | 00000D00          |       |       | 4391+           DC A(IIRB0016)   +40 Address where SCHIB stored                      |
| 00000CFC | 00000000          |       |       | 4392+           DC A(0)           +44 reserved                                       |
| 00000D00 | 00000000 00000000 |       |       | 4393+IIRB0016 DC 16F'0'       Embedded shared IRB and SCHIB area                     |
| 00000D40 |                   |       |       | 4395+IORB0016 DS 0XL12   |
| 00000D40 | 00000000          |       |       | 4396+           DC A(0)           Word 0 - Interruption Parameter                    |
| 00000D44 | 00                |       |       | 4397+           DC AL1((0)*16+B'0000')   Word 1, bits 0-7                            |
| 00000D45 | 80                |       |       | 4398+           DC BL1'10000000'   Word 1, bits 8-15                                 |
| 00000D46 | FF                |       |       | 4399+           DC AL1(255)       Word 1, bits 16-23                                 |
| 00000D47 | 00                |       |       | 4400+           DC BL1'00000000'   Word 1, bits 24-31                                |
| 00000D48 | 00000DA8          |       |       | 4401+           DC AL4(CONPGM)       Word 2 - CCW address                            |

| LOC      | OBJECT CODE          | ADDR1    | ADDR2    | STMT   |
|----------|----------------------|----------|----------|--|
|          |                      |          |          | 4403 *****   |
|          |                      |          |          | 4404 * Working Storage   |
|          |                      |          |          | 4405 *****   |
| 00000D4C |                      |          |          | 4407 LTORG , Literals pool   |
| 00000D4C | 00000000             |          |          | 4408 =F'0'   |
| 00000D50 | 00000001             |          |          | 4409 =F'1'   |
| 00000D54 | C3D3C3D3 C540        |          |          | 4410 =CL6'CLCLE'   |
| 00000D5A | 04294967 296C        |          |          | 4411 =P'4294967296'  |
|          |                      | 00000400 | 00000001 | 4413 K EQU 1024 One KB   |
|          |                      | 00001000 | 00000001 | 4414 PAGE EQU (4*K) Size of one page                                   |
|          |                      | 00010000 | 00000001 | 4415 K64 EQU (64*K) 64 KB  |
|          |                      | 00100000 | 00000001 | 4416 MB EQU (K*K) 1 MB   |
|          |                      | 000021FE | 00000001 | 4418 TESTADDR EQU (2*PAGE+X'200'-2) Where test/subtest numbers will go |
|          |                      | 000021FD | 00000001 | 4419 TIMEADDR EQU (TESTADDR-1) Address of timing tests option flag     |
|          |                      | 00200000 | 00000001 | 4421 MAINSIZE EQU (2*MB) Minimum required storage size                 |
|          |                      | 00000020 | 00000001 | 4422 NUMPGTBS EQU ((MAINSIZE+K64-1)/K64) Number of Page Tables needed  |
|          |                      | 00000002 | 00000001 | 4423 NUMSEGTB EQU ((NUMPGTBS*4)/(16*4)) Number of Segment Tables       |
|          |                      | 00003000 | 00000001 | 4424 SEGTABLES EQU (3*PAGE) Segment Tables Origin                      |
|          |                      | 00003080 | 00000001 | 4425 PAGETABS EQU (SEGTABLES+(NUMPGTBS*4)) Page Tables Origin          |
| 00000D60 | 00B00060             |          |          | 4426 CRLREG0 DC 0A(0),XL4'00B00060' Control Register 0                 |
| 00000D64 | 00003002             |          |          | 4427 CTLREG1 DC A(SEGTABLES+NUMSEGTB) Control Register 1               |
| 00000D68 | 00002710             |          |          | 4429 NUMLOOPS DC F'10000' 10,000 * 100 = 1,000,000                     |
| 00000D70 | BBBBBBBBB BBBBBBBBB  |          |          | 4431 BEGCLOCK DC 0D'0',8X'BB' Begin                                    |
| 00000D78 | EEEEEEEEEE EEEEEEEEE |          |          | 4432 ENDCLOCK DC 0D'0',8X'EE' End                                      |
| 00000D80 | DDDDDDDDD DDDDDDDDD  |          |          | 4433 DURATION DC 0D'0',8X'DD' Diff                                     |
| 00000D88 | FFFFFFFFF FFFFFFFFF  |          |          | 4434 OVERHEAD DC 0D'0',8X'FF' Overhead                                 |
| 00000D90 | 00000000 0000000C    |          |          | 4436 TICKSAAA DC PL8'0' Clock ticks high part                          |
| 00000D98 | 00000000 0000000C    |          |          | 4437 TICKSBBB DC PL8'0' Clock ticks low part                           |
| 00000DA0 | 00000000 0000000C    |          |          | 4438 TICKSTOT DC PL8'0' Total clock ticks                              |
| 00000DA8 | 09000044 00000DB0    |          |          | 4440 CONPGM CCW1 X'09',PRTLINE,0,PRTLNG                                |
| 00000DB0 | 40404040 40404040    |          |          | 4441 PRTLINE DC C' 1,000,000 iterations of XXXXX'                      |
| 00000DD6 | 40A39696 9240F9F9    |          |          | 4442 DC C' took 999,999,999 microseconds'                              |
|          |                      | 00000044 | 00000001 | 4443 PRTLNG EQU *-PRTLINE  |
| 00000DF4 | 40202020 6B202020    |          |          | 4444 EDIT DC X'402020206B2020206B202120'                               |

| LOC      | OBJECT CODE | ADDR1    | ADDR2    | STMT  |
|----------|-------------|----------|----------|---|
|          |             |          |          | 4447 *****  |
|          |             |          |          | 4448 * CLETEST DSECT  |
|          |             |          |          | 4449 *****  |
|          |             |          |          | 4451 CLETEST DSECT ,  |
| 00000000 | 00          |          |          | 4453 TNUM DC X'00' CLCLE table Number                       |
| 00000001 | 00          |          |          | 4454 TSUBNUM DC X'00' sub table number                      |
| 00000002 | 00          |          |          | 4455 DC X'00'   |
| 00000003 | 00          |          |          | 4456 DC X'00'   |
| 00000004 | 00000000    |          |          | 4458 OP1DATA DC A(0) Pointer to Operand-1 data              |
| 00000008 | 00000000    |          |          | 4459 OP1LEN DC A(0) Operand-1 data length                   |
| 0000000C | 00000000    |          |          | 4460 OP2DATA DC A(0) Pointer to Operand-2 data              |
| 00000010 | 00000000    |          |          | 4461 OP2LEN DC A(0) Operand-2 data length                   |
|          |             |          |          | 4462  |
|          |             | 00000014 | 00000001 | 4463 OPSWHERE EQU * Where CLCLE Operands are located        |
| 00000014 | 00000000    |          |          | 4464 OP1WHERE DC A(0) Where Operand-1 data should be placed |
| 00000018 | 00000000    |          |          | 4465 OP1WLEN DC F'0' How much data is there - 1             |
| 0000001C | 00000000    |          |          | 4466 OP2WHERE DC A(0) Where Operand-2 data should be placed |
| 00000020 | 00000000    |          |          | 4467 OP2WLEN DC F'0' How much data is there - 2             |
| 00000024 | 00000000    |          |          | 4469 FAILMASK DC A(0) not used in performance test          |
| 00000028 | 00000000    |          |          | 4471 ENDREG DC A(0) not used in performance test            |
| 0000002C | 00000000    |          |          | 4472 ENDSTOR DC A(0) not used in performance test           |
|          |             | 00000030 | 00000001 | 4474 CLENEXT EQU * Start of next table entry...             |
|          |             |          |          |   |
|          |             |          |          |   |
|          |             | 00000000 | 00003000 | 4476 CLCLE04 CSECT ,  |
|          |             |          |          |   |
|          |             |          |          | 4478 *****  |
|          |             |          |          | 4479 * CLCLE Performace Test data...                        |
|          |             |          |          | 4480 *  |
|          |             |          |          | 4481 * Note: The test CLCLE pad byte is always X'00'.       |
|          |             |          |          | 4482 *  |

| LOC      | OBJECT CODE | ADDR1    | ADDR2 | STMT                  |  |
|----------|-------------|----------|-------|-----------------------|--|
|          |             |          |       | 4483 *                | Note: These timing test do not generate a CC=3 as the operands are less than 3,840 bytes in length.<br>The test loop does test for CC=3 for any future tests introduced to this table. |
|          |             |          |       | 4484 *                |  |
|          |             |          |       | 4485 *                |  |
|          |             |          |       | 4486 *                |  |
|          |             |          |       | 4487 *****            |  |
| 00000E00 |             |          |       | 4488 CLEPERF DC 0A(0) | start of table   |
| 00000E00 | 91000000    |          |       | 4490 CLEPOP1 DC       | X'91',X'00',X'00',X'00'  |
| 00000E04 | 00000EF8    | 00000200 |       | 4491 DC               | A(CLEOP10),A(512)  |
| 00000E0C | 00000EF8    | 00000200 |       | 4492 DC               | A(CLEOP10),A(512)  |
| 00000E14 | 00010000    | 00000200 |       | 4493 DC               | A(00+(01*K64)),A(512)  |
| 00000E1C | 00110000    | 00000200 |       | 4494 DC               | A(MB+(01*K64)),A(512) no crosses   |
| 00000E24 | 00000007    |          |       | 4495 DC               | A(7) CC0   |
| 00000E28 | 00010200    | AABBCCDD |       | 4496 DC               | A(00+(01*K64)+512),A(REG2PATT)   |
| 00000E30 | 92000000    |          |       | 4498 CLEPOP2 DC       | X'92',X'00',X'00',X'00'  |
| 00000E34 | 00000EF8    | 00000200 |       | 4499 DC               | A(CLEOP10),A(512)  |
| 00000E3C | 00000EF8    | 00000200 |       | 4500 DC               | A(CLEOP10),A(512)  |
| 00000E44 | 0001FFF4    | 00000200 |       | 4501 DC               | A(00+(02*K64)-12),A(512) op1 crosses   |
| 00000E4C | 00120000    | 00000200 |       | 4502 DC               | A(MB+(02*K64)),A(512)  |
| 00000E54 | 00000007    |          |       | 4503 DC               | A(7) CC0   |
| 00000E58 | 000201F4    | AABBCCDD |       | 4504 DC               | A(00+(02*K64)-12+512),A(REG2PATT)  |
| 00000E60 | 93000000    |          |       | 4506 CLEPOP3 DC       | X'93',X'00',X'00',X'00'  |
| 00000E64 | 00000EF8    | 00000800 |       | 4507 DC               | A(CLEOP10),A(2048)   |
| 00000E6C | 00000EF8    | 00000800 |       | 4508 DC               | A(CLEOP10),A(2048)   |
| 00000E74 | 00030000    | 00000800 |       | 4509 DC               | A(00+(03*K64)),A(2048)   |
| 00000E7C | 00130000    | 00000800 |       | 4510 DC               | A(MB+(03*K64)),A(2048) no crosses  |
| 00000E84 | 00000007    |          |       | 4511 DC               | A(7) CC0   |
| 00000E88 | 00030200    | AABBCCDD |       | 4512 DC               | A(00+(03*K64)+512),A(REG2PATT)   |
| 00000E90 | 94000000    |          |       | 4514 CLEPOP4 DC       | X'94',X'00',X'00',X'00'  |
| 00000E94 | 00000EF8    | 00000800 |       | 4515 DC               | A(CLEOP10),A(2048)   |
| 00000E9C | 00000EF8    | 00000800 |       | 4516 DC               | A(CLEOP10),A(2048)   |
| 00000EA4 | 00040000    | 00000800 |       | 4517 DC               | A(00+(04*K64)),A(2048)   |
| 00000EAC | 0013FFF4    | 00000800 |       | 4518 DC               | A(MB+(04*K64)-12),A(2048) op2 crosses  |
| 00000EB4 | 00000007    |          |       | 4519 DC               | A(7) CC0   |
| 00000EB8 | 00040200    | AABBCCDD |       | 4520 DC               | A(00+(04*K64)+512),A(REG2PATT)   |





| LOC | OBJECT | CODE | ADDR1 | ADDR2 | STMT                           |
|-----|--------|------|-------|-------|--------------------------------|
|     |        |      |       |       | 4542 *****                     |
|     |        |      |       |       | 4543 * Fixed storage locations |
|     |        |      |       |       | 4544 *****                     |

|          |          |          |      |         |                  |   |
|----------|----------|----------|------|---------|------------------|---|
| 000016F8 | 000016F8 | 000021FD | 4546 | ORG     | CLCLE04+TIMEADDR | (s/b @ X'21FD')                           |
| 000021FD | 00       |          | 4548 | TIMEOPT | DC               | X'00' Set to non-zero to run timing tests |
|          |          |          | 4549 |         |                  |   |

|          |    |          |          |      |         |                  |                          |                             |
|----------|----|----------|----------|------|---------|------------------|--------------------------|-----------------------------|
| 000021FE |    | 000021FE | 000021FE | 4551 | ORG     | CLCLE04+TESTADDR | (s/b @ X'21FE', X'21FF') |                             |
| 000021FE | 00 |          |          | 4553 | TESTNUM | DC               | X'00'                    | Test number of active test  |
| 000021FF | 00 |          |          | 4554 | SUBTEST | DC               | X'00'                    | Active test sub-test number |

|          |          |          |      |         |                  |   |
|----------|----------|----------|------|---------|------------------|---|
| 00002200 | 00002200 | 00003000 | 4556 | ORG     | CLCLE04+SEGTABLS | (s/b @ X'3000')                               |
| 00003000 | 00       |          | 4558 | DATTABS | DC               | X'00' Segment and Page Tables will go here... |

| LOC      | OBJECT CODE       | ADDR1    | ADDR2    | STMT   |
|----------|-------------------|----------|----------|--|
|          |                   |          |          | 4560 *****   |
|          |                   |          |          | 4561 * IOCB DSECT  |
|          |                   |          |          | 4562 *****   |
|          |                   |          |          | 4564 DSECTS NAME=IOCB  |
|          |                   |          |          | 4566+IOCB DSECT  |
|          |                   |          |          | 4567+* Field usage by: CH SC Description (R->program read-only, X->program read/write) |
| 00000000 |                   |          |          | 4568+IOCBID DS 0F +0 R Device Identifier - Subsystem ID for channel subsystem          |
| 00000000 | 0000              |          |          | 4569+ DS H +0 R reserved - must be zeros   |
| 00000002 | 0000              |          |          | 4570+IOCBDEV DS H +2 R Channel Unit Device address of I/O operation                    |
| 00000004 | 0000              |          |          | 4571+IOCBDEV DS H +4 X X Device address or device number (R after ENADEV)              |
| 00000006 | 0000              |          |          | 4572+IOCBZERO DS H +6 R R Must be zeros  |
| 00000008 | 00                |          |          | 4573+IOCBUM DS X +8 X X Unit status test mask  |
| 00000009 | 00                |          |          | 4574+IOCBCM DS X +9 X X Channel status test mask                                       |
| 0000000A |                   |          |          | 4575+IOCBST DS 0H +10 X X Input/Output unit and channel status accumulation            |
| 0000000A | 00                |          |          | 4576+IOCBUS DS X +10 R R Accumulated unit status                                       |
| 0000000B | 00                |          |          | 4577+IOCBCS DS X +11 R R Accumulated channel status                                    |
| 0000000C | 00                |          |          | 4578+IOCBUT DS X +14 R R Used to test unit status                                      |
| 0000000D | 00                |          |          | 4579+IOCBCT DS X +13 R R Used to test channel status                                   |
| 0000000E | 00                |          |          | 4580+IOCBSC DS X +14 R Accumulted subchannel status control                            |
| 0000000F | 00                |          |          | 4581+IOCBWAIT DS X +15 X X Recognized unsolicited interruption unit status events      |
| 00000010 | 00000000          |          |          | 4582+IOCBSCCW DS A +16 R R I/O status CCW address                                      |
| 00000014 |                   |          |          | 4583+IOCBSCNT DS 0F +20 R R I/O status residual count as a positive full word          |
| 00000014 | 0000              |          |          | 4584+ DS H +20 R reserved must be zeros  |
| 00000016 | 0000              |          |          | 4585+IOCBRCNT DS H +22 R I/O status residual count as an unsigned halfword             |
| 00000018 |                   |          |          | 4586+IOCBCAW DS 0A +24 X Channel Address word  |
| 00000018 | 00000000 00000000 |          |          | 4587+IOCBORB DS AD +24 X Address of the ORB for channel subsystem I/O                  |
| 00000020 | 00000000 00000000 |          |          | 4588+IOCBIRB DS AD +32 X Channel subsystem IRB address                                 |
| 00000028 | 00000000 00000000 |          |          | 4589+IOCBSIB DS AD +40 X Channel subsystem SCHIB address                               |
|          |                   | 00000030 | 00000001 | 4590+IOCBL EQU *-IOCB Length of IOCB control block (48) without embedded structures    |

| LOC      | OBJECT CODE       | ADDR1    | ADDR2    | STMT          |                     |                              |                    |   |  |
|----------|-------------------|----------|----------|---------------|---------------------|------------------------------|--------------------|---|--|
|          |                   |          |          | 4592          | *****               |                              |                    |   |  |
|          |                   |          |          | 4593          | *                   | ORB DSECT                    |                    |   |  |
|          |                   |          |          | 4594          | *****               |                              |                    |   |  |
|          |                   |          |          | 4596          | DSECTS NAME=ORB     |                              |                    |   |  |
|          |                   |          |          | 4598+ORB      | DSECT               |                              |                    |   |  |
| 00000000 | 00000000          |          |          | 4599+ORBPARM  | DC                  | F'0'                         | Word 0, bits 0-31  |   |  |
| 00000004 | 00                |          |          | 4601+ORB1_0   | DC                  | X'00'                        | Word 1, bits 0-7   |   |  |
|          |                   | 000000F0 | 00000001 | 4602+ORBKEYM  | EQU                 | X'F0'                        | Word 1, bits 0-3   | - Storage Key Mask                        |  |
|          |                   | 00000008 | 00000001 | 4603+ORBS     | EQU                 | X'08'                        | Word 1, bit 4      | - Suspend Control                         |  |
|          |                   | 00000004 | 00000001 | 4604+ORBC     | EQU                 | X'04'                        | Word 1, bit 5      | - Streaming Mode Control                  |  |
|          |                   | 00000002 | 00000001 | 4605+ORBM     | EQU                 | X'02'                        | Word 1, bit 6      | - Modification Control                    |  |
|          |                   | 00000001 | 00000001 | 4606+ORBY     | EQU                 | X'01'                        | Word 1, bit 7      | - Synchronization Control                 |  |
| 00000005 | 00                |          |          | 4608+ORB1_8   | DC                  | X'00'                        | Word 1, bits 8-15  |   |  |
|          |                   | 00000080 | 00000001 | 4609+ORBF     | EQU                 | X'80'                        | Word 1, bit 8      | - CCW Format-Control                      |  |
|          |                   | 00000040 | 00000001 | 4610+ORBP     | EQU                 | X'40'                        | Word 1, bit 9      | - Pre-fetch control                       |  |
|          |                   | 00000020 | 00000001 | 4611+ORBI     | EQU                 | X'20'                        | Word 1, bit 10     | - Initial-status Interruption Control     |  |
|          |                   | 00000010 | 00000001 | 4612+ORBA     | EQU                 | X'10'                        | Word 1, bit 11     | - Address Limit Checking Control          |  |
|          |                   | 00000008 | 00000001 | 4613+ORBU     | EQU                 | X'08'                        | Word 1, bit 12     | - Suppress-suspended-interruption control |  |
|          |                   | 00000004 | 00000001 | 4614+ORBB     | EQU                 | X'04'                        | Word 1, bit 13     | - Channel-Program-Type Control            |  |
|          |                   | 00000002 | 00000001 | 4615+ORBH     | EQU                 | X'02'                        | Word 1, bit 14     | - Format 2-IDAW Control                   |  |
|          |                   | 00000001 | 00000001 | 4616+ORBT     | EQU                 | X'01'                        | Word 1, bit 15     | - 2K-IDAW control                         |  |
| 00000006 | 00                |          |          | 4617+ORBLPM   | DC                  | X'00'                        | Word 1, bits 16-23 | - Logical Path Mask                       |  |
| 00000007 | 00                |          |          | 4618+ORRB1_24 | DC                  | X'00'                        | Word 1, bits 24-31 |   |  |
|          |                   | 00000080 | 00000001 | 4619+ORBL     | EQU                 | X'80'                        | Word 1, bit 24     | - Incorrect Length Suppression Mode       |  |
|          |                   | 0000007F | 00000001 | 4620+ORBRSV3  | EQU                 | X'7F'                        | Word 1, bits 25-31 | - reserved must be zeros                  |  |
|          |                   | 00000040 | 00000001 | 4621+ORBD     | EQU                 | X'40'                        | Word 1, bit 25     | - MIDAW Addressing Control                |  |
|          |                   | 0000003E | 00000001 | 4622+ORBRSV26 | EQU                 | X'3E'                        | Word 1, bits 26-30 | - reserved must be zeros                  |  |
|          |                   | 0000007E | 00000001 | 4623+ORBRSV25 | EQU                 | X'7E'                        | Word 1, bits 25-30 | - reserved must be zeros                  |  |
|          |                   | 00000001 | 00000001 | 4624+ORBX     | EQU                 | X'01'                        | Word 1, bit 31     | - ORB-extension control                   |  |
| 00000008 | 00000000          |          |          | 4626+ORBCCW   | DC                  | A(0)                         | Word 2, bits 1-31  | - Channel Program Address                 |  |
|          |                   | 00000080 | 00000001 | 4627+ORBRSV4  | EQU                 | X'80'                        | Word 2, bit 0      | - reserved must be zero                   |  |
|          |                   | 0000000C | 00000001 | 4628+ORBLEN   | EQU                 | *-ORB Length of standard ORB |                    |   |  |
|          |                   |          |          | 4629+*        | Extended ORB fields |                              |                    |   |  |
| 0000000C | 00                |          |          | 4630+ORBCSS   | DC                  | X'00'                        | Word 3, bits 0-7   | - Channel Subsystem Priority              |  |
| 0000000D | 00                |          |          | 4631+ORBRSV5  | DC                  | X'00'                        | Word 3, bits 8-15  | - reserved must be zeros                  |  |
| 0000000E |                   |          |          | 4632+ORBPGM   | DC                  | 0X'00'                       | Word 3, bits 16-23 | - Transport mode reserves for program use |  |
| 0000000E | 00                |          |          | 4633+ORBCU    | DC                  | X'00'                        | Word 3, bits 16-23 | - Control Unit Priority                   |  |
| 0000000F | 00                |          |          | 4634+ORBRSV6  | DC                  | X'00'                        | Word 3, bits 24-31 | - reserved must be zeros                  |  |
| 00000010 | 00000000 00000000 |          |          | 4635+ORBRSV7  | DC                  | XL16'00'                     | Words 4-7          | - reserved must be zeros                  |  |
|          |                   | 00000020 | 00000001 | 4636+ORBXLEN  | EQU                 | *-ORB Length of extended ORB |                    |   |  |



| LOC      | OBJECT CODE | ADDR1    | ADDR2    | STMT   |
|----------|-------------|----------|----------|--|
|          |             |          |          | 4654 *****   |
|          |             |          |          | 4655 *           SCSW DSECT  |
|          |             |          |          | 4656 *****   |
|          |             |          |          | 4658           DSECTS NAME=SCSW  |
| 00000000 | 00          |          |          | 4660+SCSW   DSECT Subchannel           Status Word                     |
|          |             | 000000F0 | 00000001 | 4661+SCSWFLAG DC   X'00'   Flags                                       |
|          |             | 00000008 | 00000001 | 4662+SCSWKEYM EQU   X'F0'   Storage Key Mask of subchannel storage key |
|          |             | 00000004 | 00000001 | 4663+SCSWUSC EQU   X'08'   Suspend Control                             |
|          |             | 00000003 | 00000001 | 4664+SCSWESWF EQU   X'04'   Extended Status Word Format                |
|          |             | 00000000 | 00000001 | 4665+SCSWDCCM EQU   X'03'   Deferred condiont code mask                |
|          |             | 00000001 | 00000001 | 4666+SCSWDCC0 EQU   X'00'   Normal I/O interruption                    |
|          |             | 00000003 | 00000001 | 4667+SCSWDCC1 EQU   X'01'   Deferred condition code is 1               |
|          |             |          |          | 4668+SCSWDCC3 EQU   X'03'   Deferred condition code is 3               |
| 00000001 | 00          |          |          | 4670+SCSWCTLS DC   X'00'   General Controls                            |
|          |             | 00000080 | 00000001 | 4671+SCSWCCWF EQU   X'80'   CCW Format control when ...                |
|          |             | 00000040 | 00000001 | 4672+SCSWCCWP EQU   X'40'   CCW Prefetch Control                       |
|          |             | 00000020 | 00000001 | 4673+SCSWISIC EQU   X'20'   Initial-Status-Interruption Control        |
|          |             | 00000010 | 00000001 | 4674+SCSWALKC EQU   X'10'   Address-Limit-Checking Control             |
|          |             | 00000008 | 00000001 | 4675+SCSWSSIC EQU   X'08'   Suppress suspended interruption            |
|          |             | 00000004 | 00000001 | 4676+SCSW0CC EQU   X'04'   Zero-Condition Code                         |
|          |             | 00000002 | 00000001 | 4677+SCSWECWC EQU   X'02'   Extended Control Word control              |
|          |             | 00000001 | 00000001 | 4678+SCSWPNOP EQU   X'01'   Path Not Operational                       |
| 00000002 | 00          |          |          | 4680+SCSW1   DC   X'00'   Control Byte 1                               |
|          |             | 00000070 | 00000001 | 4681+SCSWFM EQU   X'70'   Functional Control Mask                      |
|          |             | 00000040 | 00000001 | 4682+SCSWFS EQU   X'40'   Function Control - Start Function            |
|          |             | 00000020 | 00000001 | 4683+SCSWFH EQU   X'20'   Function Control - Halt Function             |
|          |             | 00000010 | 00000001 | 4684+SCSWFC EQU   X'10'   Function Control - Clear Function            |
|          |             | 00000008 | 00000001 | 4685+SCSWARP EQU   X'08'   Activity Control - Resume pending           |
|          |             | 00000004 | 00000001 | 4686+SCSWASP EQU   X'04'   Activity Control - Start pending            |
|          |             | 00000002 | 00000001 | 4687+SCSWAHP EQU   X'02'   Activity Control - Halt pending             |
|          |             | 00000001 | 00000001 | 4688+SCSWACP EQU   X'01'   Activity Control - Clear pending            |
| 00000003 | 00          |          |          | 4689+SCSW2   DC   X'00'   Control Byte 2                               |
|          |             | 00000080 | 00000001 | 4690+SCSWASA EQU   X'80'   Activity Control - Subchannel Active        |
|          |             | 00000040 | 00000001 | 4691+SCSWADA EQU   X'40'   Activity Control - Device Active            |
|          |             | 00000020 | 00000001 | 4692+SCSWASUS EQU   X'20'   Activity Control - Suspended               |
|          |             | 00000010 | 00000001 | 4693+SCSWSAS EQU   X'10'   Status Control - Alert Status               |
|          |             | 00000008 | 00000001 | 4694+SCSWSINT EQU   X'08'   Status Control - Intermediate Status       |
|          |             | 00000004 | 00000001 | 4695+SCSWSPRI EQU   X'04'   Status Control - Primary Status            |
|          |             | 00000002 | 00000001 | 4696+SCSWSSEC EQU   X'02'   Status Control - Secondary Status          |
|          |             | 00000001 | 00000001 | 4697+SCSWSPEN EQU   X'01'   Status Control - Status Pending            |
| 00000004 | 00000000    |          |          | 4699+SCSWCCW DC   A(0)   CCW Address                                   |
| 00000008 | 00          |          |          | 4701+SCSWUS   DC   X'00'   Unit Status                                 |
|          |             | 00000080 | 00000001 | 4702+SCSWATTN EQU   X'80'   Attention                                  |
|          |             | 00000040 | 00000001 | 4703+SCSWSM EQU   X'40'   Status modifier                              |
|          |             | 00000020 | 00000001 | 4704+SCSWCUE EQU   X'20'   Control-unit end                            |
|          |             | 00000010 | 00000001 | 4705+SCSWBUSY EQU   X'10'   Busy                                       |
|          |             | 00000008 | 00000001 | 4706+SCSWCE EQU   X'08'   Channel end                                  |



| LOC | OBJECT CODE | ADDR1    | ADDR2    | STMT   |
|-----|-------------|----------|----------|--|
|     |             |          |          | 4725 *****   |
|     |             |          |          | 4726 * (other DSECTS needed by SATK)                 |
|     |             |          |          | 4727 *****   |
|     |             |          |          | 4729 DSECTS PRINT=OFF,NAME=(ASA,SCHIB,CCW0,CCW1,CSW) |
|     |             |          |          |  |
|     |             |          |          |  |
|     |             |          |          |  |
|     |             |          |          |  |
|     |             |          |          | 5005 PRINT ON  |
|     |             |          |          | 5007 *****   |
|     |             |          |          | 5008 * Register equates                              |
|     |             |          |          | 5009 *****   |
|     |             |          |          |  |
|     |             | 00000000 | 00000001 | 5011 R0 EQU 0  |
|     |             | 00000001 | 00000001 | 5012 R1 EQU 1  |
|     |             | 00000002 | 00000001 | 5013 R2 EQU 2  |
|     |             | 00000003 | 00000001 | 5014 R3 EQU 3  |
|     |             | 00000004 | 00000001 | 5015 R4 EQU 4  |
|     |             | 00000005 | 00000001 | 5016 R5 EQU 5  |
|     |             | 00000006 | 00000001 | 5017 R6 EQU 6  |
|     |             | 00000007 | 00000001 | 5018 R7 EQU 7  |
|     |             | 00000008 | 00000001 | 5019 R8 EQU 8  |
|     |             | 00000009 | 00000001 | 5020 R9 EQU 9  |
|     |             | 0000000A | 00000001 | 5021 R10 EQU 10                                      |
|     |             | 0000000B | 00000001 | 5022 R11 EQU 11                                      |
|     |             | 0000000C | 00000001 | 5023 R12 EQU 12                                      |
|     |             | 0000000D | 00000001 | 5024 R13 EQU 13                                      |
|     |             | 0000000E | 00000001 | 5025 R14 EQU 14                                      |
|     |             | 0000000F | 00000001 | 5026 R15 EQU 15                                      |
|     |             |          |          |  |
|     |             |          |          |  |
|     |             |          |          |  |
|     |             |          |          | 5028 END   |
|     |             |          |          |  |
|     |             |          |          |  |





| SYMBOL   | TYPE | VALUE    | LENGTH | DEFN | REFERENCES               |
|----------|------|----------|--------|------|--------------------------|
| CSW      | F    | 00000040 | 8      | 4762 |                          |
| CSWATTN  | U    | 00000080 | 1      | 4932 |                          |
| CSWBUSY  | U    | 00000010 | 1      | 4935 |                          |
| CSWCCTL  | U    | 00000004 | 1      | 4947 |                          |
| CSWCCW   | R    | 00000001 | 3      | 4929 |                          |
| CSWCDAT  | U    | 00000008 | 1      | 4946 |                          |
| CSWCE    | U    | 00000008 | 1      | 4936 | 4229                     |
| CSWCHNG  | U    | 00000001 | 1      | 4949 |                          |
| CSWCNT   | H    | 00000006 | 2      | 4951 |                          |
| CSWCS    | X    | 00000005 | 1      | 4941 |                          |
| CSWCUE   | U    | 00000020 | 1      | 4934 |                          |
| CSWDCC0  | U    | 00000000 | 1      | 4925 |                          |
| CSWDCC1  | U    | 00000001 | 1      | 4926 |                          |
| CSWDCC3  | U    | 00000003 | 1      | 4927 |                          |
| CSWDCCM  | U    | 00000003 | 1      | 4924 |                          |
| CSWDE    | U    | 00000004 | 1      | 4937 | 4229                     |
| CSWFLAG  | X    | 00000000 | 1      | 4919 |                          |
| CSWFMT   | 4    | 00000000 | 8      | 4918 | 4952                     |
| CSWFMTL  | U    | 00000008 | 1      | 4952 |                          |
| CSWICTL  | U    | 00000002 | 1      | 4948 |                          |
| CSWIL    | U    | 00000040 | 1      | 4943 |                          |
| CSWKEYM  | U    | 000000F0 | 1      | 4920 |                          |
| CSWLOG   | U    | 00000004 | 1      | 4923 |                          |
| CSWPCI   | U    | 00000080 | 1      | 4942 |                          |
| CSWPRGM  | U    | 00000020 | 1      | 4944 |                          |
| CSWPROT  | U    | 00000010 | 1      | 4945 |                          |
| CSWSM    | U    | 00000040 | 1      | 4933 |                          |
| CSWSUSP  | U    | 00000008 | 1      | 4922 |                          |
| CSWUC    | U    | 00000002 | 1      | 4938 |                          |
| CSWUS    | X    | 00000004 | 1      | 4931 |                          |
| CSWUX    | U    | 00000001 | 1      | 4939 |                          |
| CTLREG1  | A    | 00000D64 | 4      | 4427 |                          |
| DATTABS  | X    | 00003000 | 1      | 4558 |                          |
| DURATION | D    | 00000D80 | 8      | 4433 | 3826 4173 4174 4177 4257 |
| DWAT0010 | 3    | 00000C38 | 8      | 4309 | 4308                     |
| DWAT0011 | 3    | 00000C48 | 8      | 4314 | 4313                     |
| DWAT0012 | 3    | 00000C58 | 8      | 4319 | 4318                     |
| DWAT0013 | 3    | 00000C68 | 8      | 4324 | 4323                     |
| EDIT     | X    | 00000DF4 | 12     | 4444 | 4187 4188                |
| ENADEV   | I    | 00000C7E | 4      | 4343 | 4297                     |
| ENAOKAY  | I    | 00000CCC | 2      | 4368 | 4357                     |
| ENDCLOCK | D    | 00000D78 | 8      | 4432 | 3824 4143 4250 4253 4256 |
| ENDREG   | A    | 00000028 | 4      | 4471 |                          |
| ENDSTOR  | A    | 0000002C | 4      | 4472 |                          |
| EOJ      | H    | 00000C32 | 2      | 4307 | 3559 3567                |
| EXTCPUAD | H    | 00000084 | 2      | 4783 |                          |
| EXTICODE | H    | 00000086 | 2      | 4784 |                          |
| EXTIPARM | F    | 00000080 | 4      | 4782 |                          |
| EXTNPSW  | F    | 00000058 | 8      | 4772 |                          |
| EXTOPSW  | F    | 00000018 | 8      | 4744 | 4750                     |
| FAILDEV  | H    | 00000C40 | 2      | 4312 | 4348 4358 4363           |
| FAILIO   | H    | 00000C50 | 2      | 4317 | 4197 4220 4230           |

| SYMBOL   | TYPE | VALUE    | LENGTH | DEFN | REFERENCES |      |      |
|----------|------|----------|--------|------|------------|------|------|
| FAILMASK | A    | 00000024 | 4      | 4469 |            |      |      |
| FAILTEST | H    | 00000C60 | 2      | 4322 | 3562       | 3565 |      |
| FIND0015 | A    | 00000CC4 | 4      | 4365 | 4343       |      |      |
| FINL0015 | H    | 00000C86 | 2      | 4346 | 4362       |      |      |
| FINM0015 | A    | 00000CC8 | 4      | 4366 | 4361       |      |      |
| FINN0015 | H    | 00000CB4 | 2      | 4359 | 4350       | 4352 |      |
| IIRB0016 | F    | 00000D00 | 4      | 4393 | 4389       | 4391 |      |
| IMAGE    | 1    | 00000000 | 12289  | 0    |            |      |      |
| INIT     | H    | 00000C20 | 2      | 4291 | 3547       |      |      |
| IOCB     | 4    | 00000000 | 48     | 4566 | 4590       | 3536 |      |
| IOCBCAW  | A    | 00000018 | 4      | 4586 |            |      |      |
| IOCBM    | X    | 00000009 | 1      | 4574 |            |      |      |
| IOCBM    | X    | 0000000B | 1      | 4577 |            |      |      |
| IOCBCT   | X    | 0000000D | 1      | 4579 |            |      |      |
| IOCBDEV  | H    | 00000004 | 2      | 4571 | 4351       |      |      |
| IOCBDID  | F    | 00000000 | 4      | 4568 | 4193       | 4354 |      |
| IOCBDV   | H    | 00000002 | 2      | 4570 |            |      |      |
| IOCBIRB  | A    | 00000020 | 8      | 4588 | 4198       |      |      |
| IOCBM    | U    | 00000030 | 1      | 4590 |            |      |      |
| IOCBORB  | A    | 00000018 | 8      | 4587 | 4195       | 4294 |      |
| IOCBRCNT | H    | 00000016 | 2      | 4585 | 4227       |      |      |
| IOCBSC   | X    | 0000000E | 1      | 4580 | 4191       | 4222 | 4224 |
| IOCBSCCW | A    | 00000010 | 4      | 4582 | 4226       |      |      |
| IOCBSCNT | F    | 00000014 | 4      | 4583 |            |      |      |
| IOCBSIB  | A    | 00000028 | 8      | 4589 | 4344       |      |      |
| IOCBST   | H    | 0000000A | 2      | 4575 | 4192       | 4223 |      |
| IOCBUM   | X    | 00000008 | 1      | 4573 |            |      |      |
| IOCBUS   | X    | 0000000A | 1      | 4576 | 4229       |      |      |
| IOCBUT   | X    | 0000000C | 1      | 4578 |            |      |      |
| IOCBWAIT | X    | 0000000F | 1      | 4581 |            |      |      |
| IOCBZERO | H    | 00000006 | 2      | 4572 | 4192       |      |      |
| IOCB_009 | A    | 00000CD0 | 4      | 4376 | 4293       |      |      |
| IOELADDR | F    | 000000AC | 4      | 4819 |            |      |      |
| IOICODE  | H    | 000000BA | 2      | 4824 |            |      |      |
| IOIID    | F    | 000000C0 | 4      | 4829 |            |      |      |
| IOINIT   | I    | 00000C70 | 4      | 4331 | 4296       |      |      |
| IOIPARM  | F    | 000000BC | 4      | 4828 |            |      |      |
| IOMK0014 | F    | 00000C78 | 4      | 4333 | 4331       | 4332 |      |
| ION0008  | 3    | 00000B38 | 8      | 4208 | 4205       |      |      |
| IONPSW   | F    | 00000078 | 8      | 4776 |            |      |      |
| IOOPSW   | F    | 00000038 | 8      | 4748 | 4758       |      |      |
| IORB0016 | X    | 00000D40 | 12     | 4395 | 4387       |      |      |
| IOS0008  | X    | 00000B40 | 8      | 4209 | 4204       | 4212 |      |
| IOSSID   | F    | 000000B8 | 4      | 4827 | 4215       |      |      |
| IOWT0007 | H    | 00000B1E | 2      | 4202 | 4216       | 4219 | 4225 |
| IPLCCW1  | F    | 00000008 | 8      | 4736 |            |      |      |
| IPLCCW2  | F    | 00000010 | 8      | 4737 |            |      |      |
| IPLPSW   | F    | 00000000 | 8      | 4735 |            |      |      |
| IRB      | 4    | 00000000 | 96     | 4645 | 4649       | 4651 | 4199 |
| IRBECW   | X    | 00000020 | 32     | 4648 |            |      |      |
| IRBEMW   | X    | 00000040 | 32     | 4650 |            |      |      |
| IRBESW   | X    | 0000000C | 20     | 4647 |            |      |      |

| SYMBOL   | TYPE | VALUE    | LENGTH | DEFN | REFERENCES |      |      |      |      |      |      |      |      |      |      |      |      |  |
|----------|------|----------|--------|------|------------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| IRBL     | U    | 00000040 | 1      | 4649 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| IRBSCSW  | X    | 00000000 | 12     | 4646 | 4222       | 4223 | 4226 | 4227 |      |      |      |      |      |      |      |      |      |  |
| IRBXL    | U    | 00000060 | 1      | 4651 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| IRST0008 | H    | 00000B48 | 2      | 4211 | 4208       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| K        | U    | 00000400 | 1      | 4413 | 4414       | 4415 | 4416 |      |      |      |      |      |      |      |      |      |      |  |
| K64      | U    | 00010000 | 1      | 4415 | 4422       | 4493 | 4494 | 4496 | 4501 | 4502 | 4504 | 4509 | 4510 | 4512 | 4517 | 4518 | 4520 |  |
|          |      |          |        |      | 4525       | 4526 | 4528 |      |      |      |      |      |      |      |      |      |      |  |
| LCHANLOG | F    | 000000B0 | 4      | 4820 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MAINSIZE | U    | 00200000 | 1      | 4421 | 4422       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MB       | U    | 00100000 | 1      | 4416 | 4421       | 4494 | 4502 | 4510 | 4518 | 4526 |      |      |      |      |      |      |      |  |
| MCKLOG   | F    | 00000100 | 4      | 4852 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MCKNPSW  | F    | 00000070 | 8      | 4775 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MCKOPSW  | F    | 00000030 | 8      | 4747 | 4756       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MEASUREB | X    | 000000B9 | 1      | 4823 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKARCHMD | X    | 000000A3 | 1      | 4811 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKARS    | F    | 00000120 | 4      | 4850 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKCLKCMP | F    | 000000E0 | 8      | 4836 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKCPUTIM | F    | 000000D8 | 8      | 4835 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKCRS    | F    | 000001C0 | 4      | 4855 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKDMGCOD | F    | 000000F4 | 4      | 4839 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKFAILA  | F    | 000000F8 | 4      | 4841 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKFPRS   | D    | 00000160 | 8      | 4853 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKICODE  | F    | 000000E8 | 4      | 4837 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKLOGOUT | F    | 00000100 | 4      | 4843 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKMODEL  | F    | 000000FC | 4      | 4842 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MKXSAA   | F    | 000000D4 | 4      | 4834 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MONCLS   | H    | 00000094 | 2      | 4799 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MONCODE  | F    | 0000009C | 4      | 4806 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MONNUMBR | X    | 00000095 | 1      | 4801 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| MPGACCID | X    | 000000A2 | 1      | 4809 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| NKGRS    | F    | 00000180 | 4      | 4854 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| NUMLOOPS | F    | 00000D68 | 4      | 4429 | 3610       | 3830 |      |      |      |      |      |      |      |      |      |      |      |  |
| NUMPGTBS | U    | 00000020 | 1      | 4422 | 4423       | 4425 |      |      |      |      |      |      |      |      |      |      |      |  |
| NUMSEGTB | U    | 00000002 | 1      | 4423 | 4427       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP1DATA  | A    | 00000004 | 4      | 4458 | 3597       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP1LEN   | A    | 00000008 | 4      | 4459 | 3596       | 3598 |      |      |      |      |      |      |      |      |      |      |      |  |
| OP1WHERE | A    | 00000014 | 4      | 4464 | 3595       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP1WLEN  | F    | 00000018 | 4      | 4465 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP2DATA  | A    | 0000000C | 4      | 4460 | 3603       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP2LEN   | A    | 00000010 | 4      | 4461 | 3602       | 3604 |      |      |      |      |      |      |      |      |      |      |      |  |
| OP2WHERE | A    | 0000001C | 4      | 4466 | 3601       |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OP2WLEN  | F    | 00000020 | 4      | 4467 |            |      |      |      |      |      |      |      |      |      |      |      |      |  |
| OPSWHERE | U    | 00000014 | 1      | 4463 | 3614       | 3616 | 3621 | 3623 | 3625 | 3627 | 3629 | 3631 | 3633 | 3635 | 3637 | 3639 | 3641 |  |
|          |      |          |        |      | 3643       | 3645 | 3647 | 3649 | 3651 | 3653 | 3655 | 3657 | 3659 | 3661 | 3663 | 3665 | 3667 |  |
|          |      |          |        |      | 3669       | 3671 | 3673 | 3675 | 3677 | 3679 | 3681 | 3683 | 3685 | 3687 | 3689 | 3691 | 3693 |  |
|          |      |          |        |      | 3695       | 3697 | 3699 | 3701 | 3703 | 3705 | 3707 | 3709 | 3711 | 3713 | 3715 | 3717 | 3719 |  |
|          |      |          |        |      | 3721       | 3723 | 3725 | 3727 | 3729 | 3731 | 3733 | 3735 | 3737 | 3739 | 3741 | 3743 | 3745 |  |
|          |      |          |        |      | 3747       | 3749 | 3751 | 3753 | 3755 | 3757 | 3759 | 3761 | 3763 | 3765 | 3767 | 3769 | 3771 |  |
|          |      |          |        |      | 3773       | 3775 | 3777 | 3779 | 3781 | 3783 | 3785 | 3787 | 3789 | 3791 | 3793 | 3795 | 3797 |  |
|          |      |          |        |      | 3799       | 3801 | 3803 | 3805 | 3807 | 3809 | 3811 | 3813 | 3818 | 3820 | 3833 | 3836 | 3842 |  |
|          |      |          |        |      | 3845       | 3848 | 3851 | 3854 | 3857 | 3860 | 3863 | 3866 | 3869 | 3872 | 3875 | 3878 | 3881 |  |
|          |      |          |        |      | 3884       | 3887 | 3890 | 3893 | 3896 | 3899 | 3902 | 3905 | 3908 | 3911 | 3914 | 3917 | 3920 |  |
|          |      |          |        |      |            |      |      |      |      |      |      |      |      |      |      |      |      |  |



|                 |  |   |          |        |      |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
|-----------------|--|---|----------|--------|------|------------|------|------|------|------|------|----------------------|------|------|------|------|------|------|--|--|--|------|--|----|--|
| ASMA Ver. 0.2.1 |  | CLCE-04-performance (Test CLCLE instructions) |          |        |      |            |      |      |      |      |      | 22 Sep 2022 12:06:32 |      |      |      |      |      |      |  |  |  | Page |  | 38 |  |
| SYMBOL          |  | TYPE  | VALUE    | LENGTH | DEFN | REFERENCES |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMIID          |  | F   | 0000008C | 4      | 4792 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMIILC         |  | X   | 0000008D | 1      | 4794 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMIILCM        |  | U   | 0000000C | 1      | 4795 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMNPSW         |  | F   | 00000068 | 8      | 4774 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMOPSW         |  | F   | 00000028 | 8      | 4746 | 4754       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PGMTRX          |  | F   | 00000090 | 4      | 4798 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW1_0         |  | X   | 00000004 | 1      | 4959 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW1_8         |  | X   | 00000005 | 1      | 4962 | 4349       |      | 4355 |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWB           |  | U   | 00000004 | 1      | 4994 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP0        |  | X   | 00000010 | 1      | 4983 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP1        |  | X   | 00000011 | 1      | 4984 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP2        |  | X   | 00000012 | 1      | 4985 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP3        |  | X   | 00000013 | 1      | 4986 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP4        |  | X   | 00000014 | 1      | 4987 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP5        |  | X   | 00000015 | 1      | 4988 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP6        |  | X   | 00000016 | 1      | 4989 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWCHP7        |  | X   | 00000017 | 1      | 4990 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWDNUM        |  | H   | 00000006 | 2      | 4974 | 4351       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWE           |  | U   | 00000080 | 1      | 4963 | 4355       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWEXC         |  | X   | 0000001B | 1      | 4993 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWIP          |  | F   | 00000000 | 4      | 4958 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWISCM        |  | U   | 00000038 | 1      | 4960 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWLM          |  | U   | 00000060 | 1      | 4964 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWLMG         |  | U   | 00000020 | 1      | 4965 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWLML         |  | U   | 00000040 | 1      | 4966 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWLP          |  | X   | 00000008 | 1      | 4976 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWLPUM        |  | X   | 0000000A | 1      | 4978 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW            |  | U   | 00000004 | 1      | 4970 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWMBI         |  | H   | 0000000C | 2      | 4980 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWMM          |  | U   | 00000018 | 1      | 4967 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWMMC         |  | U   | 00000008 | 1      | 4969 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWME          |  | U   | 00000010 | 1      | 4968 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWPA          |  | X   | 0000000F | 1      | 4982 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWPI          |  | X   | 0000000B | 1      | 4979 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWPNOM        |  | X   | 00000009 | 1      | 4977 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWPO          |  | X   | 0000000E | 1      | 4981 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWRES1        |  | X   | 00000018 | 4      | 4991 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWRES2        |  | X   | 00000018 | 3      | 4992 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW            |  | U   | 00000001 | 1      | 4996 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW            |  | U   | 00000002 | 1      | 4971 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCWV           |  | U   | 00000001 | 1      | 4972 | 4349       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PMCW            |  | U   | 00000002 | 1      | 4995 |            |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PRTLNE          |  | C   | 00000DB0 | 38     | 4441 | 4443       | 4147 | 4187 | 4188 | 4440 |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| PRTLNG          |  | U   | 00000044 | 1      | 4443 | 4440       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| R0              |  | U   | 00000000 | 1      | 5011 | 3533       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| R1              |  | U   | 00000001 | 1      | 5012 | 4159       |      |      |      |      |      |                      |      |      |      |      |      |      |  |  |  |      |  |    |  |
| R10             |  | U   | 0000000A | 1      | 5021 | 3595       | 3599 | 3614 | 3616 | 3621 | 3623 | 3625                 | 3627 | 3629 | 3631 | 3633 | 3635 | 3637 |  |  |  |      |  |    |  |
|                 |  |   |          |        |      | 3639       | 3641 | 3643 | 3645 | 3647 | 3649 | 3651                 | 3653 | 3655 | 3657 | 3659 | 3661 | 3663 |  |  |  |      |  |    |  |
|                 |  |   |          |        |      | 3665       | 3667 | 3669 | 3671 | 3673 | 3675 | 3677                 | 3679 | 3681 | 3683 | 3685 | 3687 | 3689 |  |  |  |      |  |    |  |
|                 |  |   |          |        |      | 3691       | 3693 | 3695 | 3697 | 3699 | 3701 | 3703                 | 3705 | 3707 | 3709 | 3711 | 3713 | 3715 |  |  |  |      |  |    |  |
|                 |  |   |          |        |      | 3717       | 3719 | 3721 | 3723 | 3725 | 3727 | 3729                 | 3731 | 3733 | 3735 | 3737 | 3739 | 3741 |  |  |  |      |  |    |  |
|                 |  |   |          |        |      | 3743       | 3745 | 3747 | 3749 | 3751 | 3753 | 3755                 | 3757 | 3759 | 3761 | 3763 | 3765 | 3767 |  |  |  |      |  |    |  |











| SYMBOL           | TYPE | VALUE    | LENGTH | DEFN | REFERENCES |      |           |
|------------------|------|----------|--------|------|------------|------|-----------|
| TEST91           | I    | 00000244 | 4      | 3577 | 3551       |      |           |
| TESTADDR         | U    | 000021FE | 1      | 4418 | 4419       | 4551 |           |
| TESTNUM          | X    | 000021FE | 1      | 4553 | 3561       | 3587 |           |
| TICKSAAA         | P    | 00000D90 | 8      | 4436 | 4180       | 4183 |           |
| TICKSBBB         | P    | 00000D98 | 8      | 4437 | 4181       | 4185 |           |
| TICKSTOT         | P    | 00000DA0 | 8      | 4438 | 4183       | 4184 | 4185 4188 |
| TIMEADDR         | U    | 000021FD | 1      | 4419 | 4546       |      |           |
| TIMEOPT          | X    | 000021FD | 1      | 4548 | 3558       | 3577 |           |
| TIMER            | F    | 00000050 | 4      | 4769 |            |      |           |
| TNUM             | X    | 00000000 | 1      | 4453 | 3586       |      |           |
| TST91LOP         | U    | 0000024E | 1      | 3583 | 4157       |      |           |
| TSUBNUM          | X    | 00000001 | 1      | 4454 | 3588       |      |           |
| TTDES            | F    | 00000054 | 4      | 4770 |            |      |           |
| UA0              | F    | 00000010 | 8      | 4742 |            |      |           |
| UA1              | F    | 0000004C | 4      | 4767 |            |      |           |
| UA2              | F    | 000000A4 | 4      | 4812 |            |      |           |
| UA3              | F    | 000000B4 | 4      | 4821 |            |      |           |
| UA4              | X    | 000000B8 | 1      | 4822 |            |      |           |
| UA5              | X    | 000000CC | 8      | 4832 |            |      |           |
| UA6              | X    | 000000EC | 8      | 4838 |            |      |           |
| UA7              | F    | 00000118 | 8      | 4849 |            |      |           |
| UA8              | X    | 00000180 | 32     | 4878 |            |      |           |
| WPSW0008         | 3    | 00000B30 | 8      | 4207 | 4206       |      |           |
| ZBRKADDR         | A    | 00000110 | 8      | 4848 |            |      |           |
| ZEMONCNT         | F    | 0000010C | 4      | 4847 |            |      |           |
| ZEMONCTR         | A    | 00000100 | 8      | 4845 |            |      |           |
| ZEMONSIZ         | F    | 00000108 | 4      | 4846 |            |      |           |
| ZEXTNPSW         | X    | 000001B0 | 16     | 4881 |            |      |           |
| ZEXTOPSW         | X    | 00000130 | 16     | 4873 |            |      |           |
| ZIONPSW          | X    | 000001F0 | 16     | 4885 |            |      |           |
| ZIOOPSW          | X    | 00000170 | 16     | 4877 |            |      |           |
| ZMCKNPSW         | X    | 000001E0 | 16     | 4884 |            |      |           |
| ZMCKOPSW         | X    | 00000160 | 16     | 4876 |            |      |           |
| ZMKFAILA         | F    | 000000F8 | 8      | 4840 |            |      |           |
| ZMONCODE         | F    | 000000B0 | 8      | 4815 |            |      |           |
| ZPGMNPSW         | X    | 000001D0 | 16     | 4883 |            |      |           |
| ZPGMOPSW         | X    | 00000150 | 16     | 4875 |            |      |           |
| ZPGMTRX          | F    | 000000A8 | 8      | 4814 |            |      |           |
| ZRSTNPSW         | X    | 000001A0 | 16     | 4880 |            |      |           |
| ZRSTOPSW         | X    | 00000120 | 16     | 4872 |            |      |           |
| ZSASDISP         | U    | 000011C0 | 1      | 4886 |            |      |           |
| ZSVCNPSW         | X    | 000001C0 | 16     | 4882 |            |      |           |
| ZSVCOPSW         | X    | 00000140 | 16     | 4874 |            |      |           |
| =CL6 'CLCLE '    | C    | 00000D54 | 6      | 4410 | 4147       |      |           |
| =F '0 '          | F    | 00000D4C | 4      | 4408 | 4156       |      |           |
| =F '1 '          | F    | 00000D50 | 4      | 4409 | 4278       |      |           |
| =P '4294967296 ' | P    | 00000D5A | 6      | 4411 | 4184       |      |           |



| DESC | SYMBOL | SIZE | POS | ADDR |
|------|--------|------|-----|------|
|------|--------|------|-----|------|

Entry: 0

|        |         |       |           |           |
|--------|---------|-------|-----------|-----------|
| Image  | IMAGE   | 12289 | 0000-3000 | 0000-3000 |
| Region | CODE    | 12289 | 0000-3000 | 0000-3000 |
| CSECT  | CLCLE04 | 12289 | 0000-3000 | 0000-3000 |

| STMT | FILE NAME |
|------|-----------|
|------|-----------|

```
1 /devstor/dev/satk/samples/tests/CLCLE-04-performance.asm
2 /home/tn529/dev/satk/srcasm/satk.mac
```

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