

LOC	OBJECT CODE	ADDR1	ADDR2	STMT	
				2 *****	
				3 *	
				4 *****	
				5 *	
				6 *	This program verifies proper handling of the 370 BC mode PSW
				7 *	ILC field. The ILC field in a 370 BC mode PSW is in the high-
				8 *	order 2 bits of the second word of the PSW (bits 32 and 33).
				9 *	An ILC value of 00 (binary) indicates an ILC of 0 (zero). An
				10 *	ILC value of 01 indicates an ILC of 2 (two). An ILC value of
				11 *	10 indicates an ILC of 4 (four). An ILC value of 11 indicates
				12 *	an ILC of 6 (six).
				13 *	
				14 *	The technique used is to force a program check interruption
				15 *	on instructions of different lengths (a 2 byte instruction,
				16 *	a 4 byte instruction and a 6 byte instruction), copying the
				17 *	high-order byte of the second word of the resulting Program
				18 *	Old PSW from the Program Check, and then comparing it with
				19 *	our expected value. For ILC 0, we use a LPSW of an invalid
				20 *	EC mode PSW, thus causing an early Specification exception.
				21 *	For ILCs 2, 4 and 6 we use a CLCL, CLI and MVC instruction
				22 *	with a base register value causing an Addressing Exception.
				23 *	
				24 *****	
				26 *****	
				27 *	
				28 *****	
00000000		00000000	00000303	30 TEST	START 0
		00000000		31	USING TEST,0
					Use absolute addressing
00000000		00000000	00000000	33	ORG TEST+X'00'
00000000	00000000	00000200		34	DC XL4'00000000',A(BEGIN)
					S/370 Restart New PSW
00000008		00000008	00000028	36	ORG TEST+X'28'
00000028	00000000	00000000		37	PGMOLD DC XL4'00000000',A(0)
					S/370 Program Old PSW
00000030		00000030	00000068	39	ORG TEST+X'68'
00000068	00000000	00000000		40	PGMNEW DC XL4'00000000',A(0)
					S/370 Program New PSW
00000070		00000070	00000090	42	ORG TEST+X'90'
00000090	00000000			43	TEA_DXC DC XL4'00000000'
					S/370 TEA (*not* 390/zArch DXC!)











[illegible]





SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERENCES											
BADECPSW	D	0002C8	8	134	138	69										
BADPACK	U	0002CD	3	142	118											
BEGIN	I	000200	4	51	34											
FAIL	I	000214	4	57	123											
FAILPSW	D	000220	8	60	57	75	92	108	126							
GOODPSW	D	000218	8	59	56											
ILC0ACT	X	000300	1	154	71	72	73									
ILC0CONT	I	000234	6	71	66											
ILC0EXP	X	0002D0	1	146	73											
ILC0TEST	I	000228	4	66	51											
ILC2ACT	X	000301	1	155	88	89	90									
ILC2CONT	I	00025A	6	88	81											
ILC2EXP	X	0002D1	1	147	90											
ILC2TEST	I	00024A	4	81	52											
ILC4ACT	X	000302	1	156	104	105	106									
ILC4CONT	I	000280	6	104	98											
ILC4EXP	X	0002D2	1	148	106											
ILC4TEST	I	000270	4	98	53											
ILC6ACT	X	000303	1	157	120	121	122									
ILC6CONT	I	0002A8	6	120	114											
ILC6EXP	X	0002D3	1	149	122											
ILC6TEST	I	000296	4	114	54											
IMAGE	1	000000	772	0												
MAXADDR	U	0002CC	4	138	142	83	100	116								
PGMNEW	X	000068	4	40	67	82	99	115								
PGMOLD	X	000028	4	37	71	88	104	120								
R0	U	000000	1	163	66	67	81	82	98	99	114	115				
R1	U	000001	1	164												
R10	U	00000A	1	173												
R11	U	00000B	1	174												
R12	U	00000C	1	175	83	84	86	100	102	116						
R13	U	00000D	1	176	84											
R14	U	00000E	1	177	51	52	53	54	74	91	107	125				
R15	U	00000F	1	178												
R2	U	000002	1	165												
R3	U	000003	1	166												
R4	U	000004	1	167												
R5	U	000005	1	168												
R6	U	000006	1	169												
R7	U	000007	1	170	124											
R8	U	000008	1	171												
R9	U	000009	1	172												
TEA_DXC	X	000090	4	43	124											
TEST	J	000000	772	30	33	36	39	42	49	152	31	180				

MACRO DEFN REFERENCES

No defined macros

DESC	SYMBOL	SIZE	POS	ADDR
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Entry: 0

Image	IMAGE	772	000-303	000-303
Region		772	000-303	000-303
CSECT	TEST	772	000-303	000-303

## STMT

FILE NAME

```
1 c:\Users\Fish\Documents\Visual Studio 2008\Projects\MyProjects\ASMA-0\bc-ilc\bc-ilc.asm
```

```
** NO ERRORS FOUND **
```