SMA Ver.	0. 7. 0 zvector-e7-	15-Shi ftByl	Byte	03 Apr 2025 15: 38: 33 Page
LOC	OBJECT CODE	ADDR1	ADDR2	STMT
				2 ********************
				3 *
				4 * Zvector E7 instruction tests for VRR-c encoded: 5 *
				6 * E775 VSLB - Vector Shift Left By Byte
				7 * E77D VSRLB - Vector Shift Right Logical By Byte 8 * E77F VSRAB - Vector Shift Right Arithmetic By Byte
				8 * E77F VSRAB - Vector Shift Right Arithmetic By Byte 9 *
				10 * James Wekel March 2025
				11 ********************
				13 ********************
				14 *
				15 * basic instruction tests 16 *
				17 **********************
				18 * This program tests proper functioning of the z/arch E7 VRR-c vector
				19 * Shift by Byte (left, right logical, right arithmetic) instructions. 20 *
				21 * Exceptions are not tested.
				22 * 23 * PLEASE NOTE that the tests are very SIMPLE TESTS designed to catch
				24 * obvious coding errors. None of the tests are thorough. They are
				25 * NOT designed to test all aspects of any of the instructions.
				26 * 27 **********************************
				28 *
				29 * *Testcase zvector-e7-15-ShiftByByte 30 * *
				31 * * Zvector E7 instruction tests for VRR-c encoded:
				32 * * 33 * * E775 VSLB - Vector Shift Left By Byte
				33 * * E775 VSLB - Vector Shift Left By Byte 34 * * E77D VSRLB - Vector Shift Right Logical By Byte
				35 * * E77F VSRAB - Vector Shift Right Arithmetic By Byte
				36 * * 37 * * #
				38 * * # This tests only the basic function of the instructions.
				39 * * # Exceptions are NOT tested. 40 * * #
				40 * * * 41 * *
				42 * mainsize 2
				43 * numcpu 1 44 * sysclear
				45 * archl vl z/Arch
				46 * 47 * loadcore "\$(testpath)/zvector-e7-15-ShiftByByte.core" 0x0
				47 * loadcore "\$(testpath)/zvector-e7-15-ShiftByByte.core" 0x0 48 *
				49 * diag8cmd enable # (needed for messages to Hercules console)
				50 * runtest 5 51 * diag8cmd disable # (reset back to default)
				52 *
				53 * *Done
				$egin{array}{cccccccccccccccccccccccccccccccccccc$

WA Ver.	0. 7. 0 zvector- e7-	- 15- Shi ftBy	Byte		03 Apr 2025	15: 38: 33 Page
.OC	OBJECT CODE	ADDR1	ADDR2	STM		
				57 ****	**************	*****
				58 *	FCHECK Macro - Is a Facility Bit set?	
				59 * 60 *	If the facility bit is NOT set, an message is is	sued and
				61 *	the test is skipped.	
				62 * 63 *	Fcheck uses RO, R1 and R2	
				64 *	rcheck uses ku, ki ahu kz	
				65 * eg.	FCHECK 134, 'vector-packed-decimal'	ale
				66 ***** 67	MACRO	* * * * * * * * * * * * * * * *
				68	FCHECK &BITNO, &NOTSETMSG	
				69 .*	&BITNO: facility bit number to	check
				70 · * 71	&NOTSETMSG: 'facility name' LCLA &FBBYTE Facility bit in Byte	
				72	LCLA &FBBIT Facility bit within Byte	
				73 74	LCLA &L(8)	
				75 &L(1)	Set A 128, 64, 32, 16, 8, 4, 2, 1 bit positions within	byte
				76		
				77 &FBBY 78 &FBBI	SETA &BITNO/8 SETA &L((&BITNO-(&FBBYTE*8))+1)	
				79 . *	MNOTE O, 'checking Bit=&BITNO: FBBYTE=&FBBYTE, FB	BIT=&FBBIT'
				80 81	B X&SYSNDX	
				82 *	Fcheck data area	
				83 *	ski p messgae	
				84 SKT&S 85	NDX DC C' Skipping tests: ' DC C&NOTSETMSG	
				86	DC C' (bit &BITNO) is not installed.'	
				87 SKL&S	NDX EQU *-SKT&SYSNDX	
				88 * 89	DS FD gap	
				90 FB&SY	DX DS 4FD	
				91 92 *	DS FD gap	
				93 X&SYS	₹ EQU *	
				94	LA RO, ((X&SYSNDX-FB&SYSNDX)/8)-1	
				95 96	STFLE FB&SYSNDX get facility bits	
				97	XGR RO, RO	
				98 99	IC RO, FB&SYSNDX+&FBBYTE get fbit byte N RO, =F' &FBBIT' is bit set?	
				100	N RO, =F' &FBBIT' is bit set? BNZ XC&SYSNDX	
				101 *		
				102 * fac 103 *	ty bit not set, issue message and exit	
				104	LA RO, SKL&SYSNDX message length	
				105	LA R1, SKT&SYSNDX message address	
				106 107	BAL R2, MSG	
				108	в ЕОЈ	
				109 XC&SY		
				110	MEND	

LOC	ASMA Ver.	0. 7. 0 zvector-e7-1	5-Shi ftByB	yte				03 Apr 2025 15: 38: 33 Page	3
113 Low core PSWs	LOC	OBJECT CODE	ADDR1	ADDR2	STMI				
00000000					113 *			**********	
00000000	00000000			000019E3	115 ZVE7TST 116		C7TST, RO	Low core addressability	
121 DC			00000140	00000000		EQU ZVE	27TST+X' 140'	z/Arch Supervisor call old PSW	
000001B0	000001A0		00000000	000001A0	121	DC X' O	00000018000000		
00000100 00000000 125 DC AD(X'DEAD')	000001A8	00000000 00000200			122	DC AD(BEGIN)		
130	000001D0		000001B0	000001D0	125	DC X' O	00200018000000		
130									
130 * The actual "ZVETST" program itself 132 * 133 * 134 * 135 * Register Usage: 136 * 137 * Register Usage: 136 * 137 * Register Usage: 138 * 137 * Register Usage: 138 * R1-4 (work) 138 * R1-4 (work) 138 * R1-4 (work) 141 * R8 R1-4 (work) 142 * R9 Second base register 142 * R9 Second base register 143 * R10 Third base register 144 * R11 ETEST call return 145 * R12 ETTEST call return 145 * R12 ETTEST register (work) 147 * R14 Subroutine call Subroutine call 148 * R15 Secondary Subroutine call or work 149 * 150 Secondary Subroutine call SECOND base Register 150 SECOND base Register 150 SECOND base register 157 SCR R8 0 Initalize FIRST base register 158 SCR R8 0 Initalize SECOND base register 158 SCR R8 SCR SCR R8 SCR SCR SCR SCR SCR SCR SCR SCR SCR	000001E0		000001E0	00000200	128	ORG ZVE	27TST+X' 200'	Start of actual test program	
134 * Architecture Mode: z/Arch 135 * Register Usage: 136 *					131 * 132 ******	**************************************	**************************************		
137 * R0					134 * Archi 135 * Regis				
140 * R6-R7 (work)					137 * R0 138 * R1-4	(work	(x		
142 * R9					140 * R6-R'	7 (work	()		
145 * R12					142 * R9 143 * R10	Secon Thi rd	ld base registe I base register	r	
148 * R15 Secondary Subroutine call or work 149 * 150 ***********************************					145 * R12 146 * R13	E7TES (work	TS register		
00000200 00001200 153 USING BEGIN+4096, R9 USING BEGIN+8192, R10 SECOND Base Register 00000200 0580 156 BEGIN BALR R8, 0 Initalize FIRST base register 00000202 0680 O0000204 0680 157 BCTR R8, 0 Initalize FIRST base register 00000204 0680 158 BCTR R8, 0 Initalize FIRST base register 00000206 4190 8800 O0000204 4190 9800 00000800 160 LA R9, 2048(, R8) Initalize SECOND base register 0000020A 4190 9800 00000800 161 LA R9, 2048(, R9) Initalize SECOND base register					148 * R15 149 *	Secon	dary Subroutin		
00000200 0580 156 BEGIN BALR R8, 0 Initalize FIRST base register 00000202 0680 157 BCTR R8, 0 Initalize FIRST base register 00000204 0680 158 BCTR R8, 0 Initalize FIRST base register 00000206 4190 8800 00000800 160 LA R9, 2048(, R8) Initalize SECOND base register 0000020A 4190 9800 00000800 161 LA R9, 2048(, R9) Initalize SECOND base register	00000200		00001200		152 153	USING BE	EGI N+4096, R9	SECOND Base Register	
00000206 4190 8800 00000800 160 LA R9, 2048(, R8) Initalize SECOND base register 0000020A 4190 9800 00000800 161 LA R9, 2048(, R9) Initalize SECOND base register	00000202	0680			157	BALR R8, BCTR R8,	0	Initalize FIRST base register Initalize FIRST base register	
162	00000206	4190 8800			160 161	LA R9,	2048(, R8)	Initalize SECOND base register	

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT			
				204 ******	*****	*************	**********
				205 *	4. 4. 4. 4. 4. 4.		
				206 ******	*****	Do tests in the **********	E/1E515
				207			
000002D0	58C0 8280		00000480	208	L	R12, = $A(E7TESTS)$	get table of test addresses
				209			
		000002D4	00000001	210 NEXTE7	EQU	*	
000002D4	5850 C000		00000000	211	L	R5, 0(0, R12)	get test address
000002D8	1255			212	LTR	<u>R5, R5</u>	have a test?
000002DA	4780 811E		0000031E	213 214	BZ	ENDTEST	done?
000002DE		00000000		215	HETNE	E7TEST, R5	
OOOOO&DE		0000000		216	USING	E/TESI, RS	
000002DE	4800 5004		0000004	217	LH	RO, TNUM	save current test number
000002E2	5000 8E04		00001004	218	ST	RO, TESTING	for easy reference
				219			
000002E6	E710 8E88 0006		00001088	220	VL	V1, V1FUDGE	
000002EC	58B0 5000		00000000	221	L	R11, TSUB	get address of test routine
000002F0	05BB			222	BALR	R11, R11	do test
000000E0	E010 F01C 0014		00000016	223	LCE	D1 DEADDD	art allower of competal morals
000002F2	E310 501C 0014	00000028	0000001C	224 225	LGF	R1, READDR	get address of expected result
000002F8 000002FE	D50F 5028 1000 4770 810A	00000028	0000000 000030A	226	CLC BNE	V10UTPUT, O(R1) FAILMSG	valid? no, issue failed message
UUUUULI E	4770 010A		UUUUUUA	227	DNE	I'AI LIIDU	no, issue tarreu message
00000302	41C0 C004		0000004	228	LA	R12, 4(0, R12)	next test address
00000306	47F0 80D4		000002D4	229	B	NEXTE7	none cost unui oss
					-		

RO-R2 save area for MSG call

288 RPTDWSAV DC

2D' 0'

00000380

ASMA Ver.	0. 7. 0 zvector-e7-1	5-Shi ftByB	yte				03 Apr 2025 15: 38: 33 Page 8
LOC	OBJECT CODE	ADDR1	ADDR2	STMI			
				290 ******* 291 * 292 * 293 *****	Issue	HERCULES MESSAGE poi R2 = return address	**************************************
00000390 00000394	4900 8288 07D2		00000488	295 MSG 296	CH BNHR	RO, =H' O' R2	Do we even HAVE a message? No, ignore
0000396	9002 81CC		000003CC	298	STM	RO, R2, MSGSAVE	Save registers
0000039A 0000039E 000003A2	4900 828A 47D0 81A6 4100 005F		0000048A 000003A6 000005F	300 301 302	CH BNH LA	RO, =AL2(L' MSGMSG) MSGOK RO, L' MSGMSG	Message length within limits? Yes, continue No, set to maximum
000003A6 000003A8 000003AA	1820 0620 4420 81D8		000003D8	304 MSGOK 305 306	LR BCTR EX	R2, R0 R2, 0 R2, MSGMVC	Copy length to work register Minus-1 for execute Copy message to O/P buffer
00003AE 00003B2	4120 200A 4110 81DE		0000000A 000003DE	308 309	LA LA	R2, 1+L' MSGCMD(, R2) R1, MSGCMD	Calculate true command length Point to true command
00003B6 00003BA	83120008 4780 81C6		000003C6	311 312	DC BZ	X' 83', X' 12', X' 0008' MSGRET	Issue Hercules Diagnose X'008' Return if successful
000003BE	1222 4780 81C6		000003C6	313 314 315	LTR BZ	R2, R2 M5GRET	Is Diag8 Ry (R2) 0? an error occurred but coninue
00003C4	0000			316 317	DC	Н' О'	CRASH for debugging purposes
000003C6 000003CA	9802 81CC 07F2		000003CC	319 MSGRET 320	LM BR	RO, R2, MSGSAVE R2	Restore registers Return to caller
	00000000 00000000 D200 81E7 1000	000003E7	00000000	322 MSGSAVE 323 MSGMVC	DC MVC	3F' 0' MSGMSG(0), 0(R1)	Registers save area Executed instruction
	D4E2C7D5 D6C8405C 40404040 40404040			325 MSGCMD 326 MSGMSG 327	DC DC	C' MSGNOH * ' CL95' '	*** HERCULES MESSAGE COMMAND *** The message text to be displayed

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT				
				329 ******* 330 * 331 ******	******* Normal *****	************ completion or ************	**************************************	
00000448	00020001 80000000			333 EOJPSW	DC	OD' O' , X' 000200	018000000', AD(0)	
00000458	B2B2 8248		00000448	335 E0J	LPSWE	EOJPSW	Normal completion	
00000460	00020001 80000000			337 FAILPSW	DC	OD' O' , X' 000200	018000000', AD(X'BAD')	
00000470	B2B2 8260		00000460	339 FAILTEST	LPSWE	FAILPSW	Abnormal termination	
				341 ******* 342 * 343 ******	******* Worki n ******	**************************************	********************************	
00000474 00000478	00000000			345 CTLR0 346	DS DS	F F	CRO	
	0000000							
0000047C 0000047C	0000040			348 349	LTORG	, =F' 64'	Literals pool	
00000480	00001998			350		=A(E7TESTS) =F' 1'		
00000484 00000488 0000048A	00000001 0000 005F			351 352 353 354		=F 1 =H'0' =AL2(L'MSGMSG)		
				355 *	some c	onstants		
		00000400	0000001	356 357 K	EQU	1024	One KB	
		00001000 00010000 00100000	00000001 00000001 00000001	358 PAGE 359 K64 360 MB	EQU EQU	(4*K) (64*K) (K*K)	Size of one page 64 KB 1 MB	
		AABBCCDD 000000DD	00000001 00000001	361 362 REG2PATT 363 REG2LOW	EQU	X' AABBCCDD' X' DD'	Polluted Register pattern (last byte above)	

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT				
				404			Γ DSECT	************
00000000 00000004	00000000			408 ' 409 '	TSUB TNUM	DSECT DC DC	A(0) H' 00'	pointer to test Test Number
00000006 00000007	00			410 411 412		DC DC	X' 00' HL1' 00'	m field - not used
00000008 00000010 00000014 00000018 0000001C 00000020 00000028 00000038	40404040 40404040 00000000 00000000 00000000			414 415 416 417 418 419 420	V2ADDR V3ADDR RELEN READDR V1OUTPUT	DC DC DC DC DC DC DS DS	CL8' ' A(0) A(0) A(0) A(0) FD XL16 FD	E7 name address of v2 source address of v3 source RESULT LENGTH result (expected) address gap V1 Output gap
				421 422 423 424 425	* *		routine will b wed by EXPECTED RESU	pe here (from VRR-c macro)
000010A8		00000000	000019E3	427 428	ZVE7TST	CSECT DS	о́F	
				431	* Mac	cros to	o help build t	**************************************
				434 435 436	* macro t	to gen	erate individu	ıal test
				437 438		MACRO VRR_C	&I NST	
				439 440 441				&INST - VRR-c instruction under test no m fields
				442			&TNUM &TNUM+1	
				445 446 447		DS USI NG	OFD *, R5	base for test data and test routine
				448 449 450		DC DC DC	A(X&TNUM) H' &TNUM X' 00'	address of test routine test number
				451 452 453		DC DC DC	HL1' 00' CL8' &I NST' A(RE&TNUM+16)	m field instruction name address of v2 source

use v23 to test decoder

save v1 output

xl16 expected result

return

test instruction (dest is a source)

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ADDR1

000011D8

0000000

00001200

600+

601+

602+

603+

604+RE3

VL

VSLB

VST

BR

DC

v23, 0(R1)

V22, V103

R11

0F

V22, V22, V23

OBJECT CODE

E5E2D3C2 40404040

0000000 00000000

0000000 00000000

0000000 00000000

0000000 00000000

E310 5010 0014

E761 0000 0806

E310 5014 0014

E771 0000 0806

E766 7000 0E75

E760 5028 080E

FFFFFFF FFFFFFF

09FFFFFF FFFFF00

FFFFFFF FFFFFFF

FF09FFFF FFFFFFFF

E5E2D3C2 40404040

0000000 00000000

0000000 00000000

0000000 00000000

0000000 00000000

E310 5010 0014

E771 0000 0806

E766 7000 0E75

E760 9000 080E

07FB

000011C8 FFFFFFF FFFFF08

000011D0 FFFFFFF FFFFFFF

00001218

00001250

00001260

0000010

00001240

0000121E E761 0000 0806

00001224 E310 5014 0014

07FB

0003

00

00

0002

000011B8

000011C8

0000010

000011A8

00

00

L_OC

00001144

00001146

00001147

00001148

00001150

00001154

00001158

0000115C

00001160

00001168

00001170

00001178

00001180 00001180

00001186

0000118C

00001192

00001198

0000119E

000011A4

000011A8

000011A8

000011A8

000011B0 000011B8

000011C0

000011D8

000011D8

000011D8

000011DC

000011DE

000011DF

000011E0

000011E8

000011EC

000011F0

000011F4

000011F8

00001200

00001208

00001210

00001218

00001218

0000122A

00001230 00001236

0000123C

DS

653+V105

00001330

0000000 00000000

XL16

LGF

VL

R1, V2ADDR

v22, 0(R1)

load v2 source

use v22 to test decoder

00001510

00001516

E310 5010 0014

E761 0000 0806

0000010

0000000

751+

752 +

DC

801 +

CL8' VSRLB'

instruction name

00001608

E5E2D9D3 C2404040

DC

852+RE11

00001700

0F

xl16 expected result

DS

901+V1013

000017F0

0000000 00000000

XL16

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT						
000017F8	0000000 00000000									
00001800	0000000 00000000			902+	DS	FD	gap			
				903+*						
00001808				904+X13	DS	OF				
00001808	E310 5010 0014		00000010	905+	LGF	R1, V2ADDR	load v2 source			
0000180E	E761 0000 0806		00000000	906+	VL LCE	v22, 0(R1)	use v22 to test decoder			
00001814 0000181A	E310 5014 0014 E771 0000 0806		00000014 00000000	907+ 908+	LGF VL	R1, V3ADDR v23, O(R1)	load v3 source use v23 to test decoder			
0000181A	E766 7000 0E7F		0000000	909+	V L VSRAR	V23, U(K1) V22, V22, V23	test instruction (dest	is a source	e)	
00001826	E760 5028 080E		000017F0	910+	VST	V22, V1013	save v1 output	.s a source	-)	
0000182C	07FB		00001110	911+	BR	R11	return			
00001830				912+RE13	DC	OF	xl16 expected result			
00001830				913+	DROP	R5		_		
00001830	FFFFFFF FFFFFFF			914	DC	XL16' FFFFFFFFFFF	FFFF FFFFFFFFFFF60'	resul t		
00001838	FFFFFFF FFFFF80 80010203 04050607			915	DC	VI 16! 900109020405	0607 08090A0B0C0D0E0F'	v2		
00001840 00001848	08090A0B 0C0D0E0F			913	DC	AL10 8001020304030	UOU7 UOUSUAUBUCUDUEUF	٧Z		
00001848	FFFFFFF FFFFFFF			916	DC	XL16' FFFFFFFFFFF	FFFF FFFFFFFFFFFF	v3		
00001858	FFFFFFF FFFFFFF			010	20			••		
				917						
				918		VSRAB				
00001860		00001000		919+	DS	OFD				
00001860 00001860	000018A0	00001860		920+ 921+T14	USING		base for test data and to	test routin	1 e	
00001864	000E			921+114 922+	DC DC	A(X14) H' 14'	address of test routine test number			
00001866	00			923+	DC	X' 00'	cese number			
00001867	00			924+	DC	HL1' 00'	m field			
00001868	E5E2D9C1 C2404040			925+	DC	CL8' VSRAB'	instruction name			
00001870	000018D8			926+	DC	A(RE14+16)	address of v2 source			
00001874	000018E8			927+	DC	A(RE14+32)	address of v3 source			
00001878 0000187C	00000010 000018C8			928+ 929+REA14	DC DC	A(16) A(DE14)	result length result address			
00001870	00001868			929+REA14 930+	DS	A(RE14) FD				
00001888	0000000 0000000			931+V1014	DS DS	XL16	gap V1 output			
	00000000 00000000			001.11011	20	11110	vi ouepue			
00001898	00000000 00000000			932+	DS	FD	gap			
00001010				933+*	D.C	O.F.				
000018A0	E010 7010 0014		00000010	934+X14	DS	OF	1 - 1 - 0			
000018A0	E310 5010 0014 E761 0000 0806		00000010 00000000	935+ 936+	LGF VI	R1, V2ADDR	load v2 source			
000018A6 000018AC	E310 5014 0014		0000000	936+ 937+	VL LGF	v22, 0(R1) R1, V3ADDR	use v22 to test decoder load v3 source			
000018AC	E771 0000 0806		00000014	938+	VL	v23, 0(R1)	use v23 to test decoder			
000018B8	E766 7000 0E7F			939+		V22, V22, V23	test instruction (dest	s a source	e)	
000018BE	E760 5028 080E		00001888	940+	VST	V22, V1014	save v1 output			
000018C4	07FB			941+	BR	R11	return			
000018C8				942+RE14	DC	OF	xl16 expected result			
000018C8 000018C8	000040FF FFFFFFFF			943+ 944	DROP DC	R5	FFFF FFFFFFFFFFFFF	result		
000018C8	FFFFFFFF FFFFFFFF			J 44	DC	ALIU UUUU4UFFFFF	TELE FEFFEFFFFFFFF	1 esul t		
000018D8	40FFFFFF FFFFFFF			945	DC	XL16' 40FFFFFFFFF	FFFF FFFFFFFFFFFF	$\mathbf{v2}$		
000018E0	FFFFFFF FFFFFFF				_ •					
000018E8 000018F0	F0E0D0C0 B0A09010 70605040 30201000			946	DC	XL16' FOEODOCOBOAO	9010 7060504030201000'	v 3		
				947						
00001070				948		VSRAB				
000018F8				949+	DS	OFD				

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LOC	OBJECT CODE	ADDR1	ADDR2	STMT			
00018F8		000018F8		950+	USING		base for test data and test routine
00018F8				951+T15	DC	A(X15)	address of test routine
00018FC	000F			952+	DC	H' 15'	test number
00018FE	00			953+	DC	X' 00'	0. 1.1
00018FF	00			954+	DC	HL1' 00'	m field
0001900 0001908				955+ 956+	DC DC	CL8' VSRAB'	instruction name
0001908 000190C	00001970 00001980			950+ 957+	DC DC	A(RE15+16) A(RE15+32)	address of v2 source address of v3 source
0001900				957+ 958+	DC	A(16)	result length
0001310				959+REA15	DC	A(RE15)	result address
0001918				960+	DS	FD	
0001920				961+V1015	DS	XL16	gap V1 output
0001928							1
0001930	0000000 00000000			962+	DS	FD	gap
				963+*			
0001938				964+X15	DS_	0F	
0001938			00000010	965+	LGF	R1, V2ADDR	load v2 source
0000193E	E761 0000 0806		00000000	966+	VL	v22, 0(R1)	use v22 to test decoder
0001944			00000014	967+	LGF	R1, V3ADDR	load v3 source
000194A 0001950	E771 0000 0806 E766 7000 0E7F		00000000	968+ 969+	VL VSDAR	v23, 0(R1) V22, V22, V23	use v23 to test decoder
0001956	E760 5028 080E		00001920	970+	VSKAD VST	V22, V22, V23 V22, V1015	test instruction (dest is a source) save v1 output
000195C			00001320	970+ 971+	BR	R11	return
0001960	0712			972+RE15	DC	0F	xl16 expected result
0001960				973+	DROP	R5	m to enpected result
00001960	0000000 000070Е0			974	DC		0070E0 D0C0B0A090807060' result
0001968	DOCOBOAO 90807060						
00001970				975	DC	XL16' 70E0D0C0B0	A09080 7060504030201000' v2
00001978							
00001980				976	DC	XL16' 00000000000	000030 00000000000000000' v3
00001988	00000000 00000000			077			
0001000	00000000			977 978	DC	F'O' END OF	TADI E
0001990	0000000			978 979	DC DC	F' 0'	IADLE
0001334	0000000			980 *	DC	r o	
					of poi	nters to individu	ual load test
				982 *	or por	neers to marvia	au Tout Cose
00001998					DS	0F	
				984	PTTAB:		
0001998				985+TTABLE	DS	0F	
0001998	000010A8			986+	DC	A(T1)	
0000199C				987+	DC	A(T2)	
00019A0	000011D8			988+	DC DC	A(T3)	
000019A4 000019A8	00001270 00001308			989+ 990+	DC DC	A(T4) A(T5)	
00019A8				990+ 991+	DC DC	A(15) A(T6)	
00019AC				992+	DC DC	A(T7)	
00013B0				993+	DC	A(T8)	
00019B8	00001568			994+	DC	A(T9)	
				995+	DC	A(T10)	
MANTARC				996+	DC	A(T11)	
00019C0						A(T12)	
00019C0 00019C4	00001730			997+	DC		
000019C0 000019C4 000019C8	00001730 000017C8			998+	DC	A(T13)	
000019BC 000019C0 000019C4 000019C8	00001730 000017C8 00001860			998+ 999+	DC DC	A(T13) A(T14)	
000019C0 000019C4 000019C8	00001730 000017C8			998+	DC	A(T13)	

	0. 7. 0 zv				cm: -					03 Apr 2025	15: 38: 33	Page	24
LOC	OBJECT	CODE	ADDR1	ADDR2	STMT	D.C.	1 (0)	w-12.	ID OF MARKS				
0019D4 0019D8	00000000				1002+ 1003+	DC DC	A(0) A(0)	EN	ID OF TABLE				
0019DC	0000000 0000000				1004 1005 1006	DC DC	F' 0' F' 0'	END OF TABL	Æ				
OOISEO	0000000				1000	ЪС	r U						

wa ver.	0. 7. 0 zvector- e7	'- 15- Shi ftByB	yte					03 Ap	or 2025 1	5: 38: 33	Page	26
LOC	OBJECT CODE	ADDR1	ADDR2	STMT								
		00000016	00000001	1055 V22	EQU	22						
		00000017 00000018	00000001 00000001	1056 V23 1057 V24	EQU EQU	23 24						
		00000019	00000001	1058 V25	EQU	25						
		0000001A 0000001B	00000001 00000001	1059 V26 1060 V27	EQU EQU EQU EQU EQU EQU EQU EQU EQU	22 23 24 25 26 27 28 29 30 31						
		0000001C	00000001	1061 V28	EQU	28						
		0000001D 0000001E	00000001 00000001	1062 V29 1063 V30	EQU EQU	29 30						
		0000001F	00000001	1064 V31 1065	EQU	31						
				1066	END							

SYMB0L	TYPE	VALUE	LENGTH	DEFN	REFERE	NCES											
CT N	-	0000000	0	150	100	150	150	154									
CGIN	Ī	00000200	2	156	122	152	153	154									
LRO	F	00000474	4	345	166	167	168	169									
CCNUM	C	00001067	16	393	266	268											
TEST	4	0000000	64	407	215												
TESTS	F	00001998	4	983	208												
IT	X	0000103B	18	388	267												
DTEST	Ü	0000031E	1	252	213												
J	Ť	00000312	$\overset{1}{4}$	335	201	255											
JPSW	D I	00000438	8	333	335	۵JJ											
	D		0	333	333												
ILCONT	U	0000030E	1	242													
I LED	F	00001000	4	373	244	253											
I LMSG	U	0000030A	1	236	226												
ILPSW	D	00000460	8	337	339												
ILTEST	I	00000470	4	339	256												
0001	F	00000280	8	185	189	190	192										
AGE	ī	00000000	6628	0	100	100	102										
HUL	Ū	0000000	00£0 1	357	358	250	360										
1	_		1	337	330	359	300										
4	U	00010000	1	359													
	Ū	00100000	1	360	000	070											
G	1	00000390	4	295	200	278											
GCMD	C	000003DE	9	325	308	309											
GMSG	C	000003E7	95	326	302	323	300										
GMVC	I	000003D8	6	323	306												
GOK	Ī	000003A6	2	304	301												
GRET	Î	000003C6	$\tilde{4}$	319	312	315											
GSAVE	F	000003CC	4	322	298	319											
			4	010													
XTE7	U	000002D4	1	210	229	247											
PNAME	<u>C</u>	00000008	8	413	271												
GE	U	00001000	1	358													
T3	C	00001051	18	391	267	268	269										
TLINE	C	00001008	16	379	383	277											
TLNG	Ū	00000033	1	383	276												
TNAME	č	00001033	8	382	271												
TNUM	č	00001033	3	380	269												
			J 1			100	100	100	101	100	100	100	017	010	0.40	044	075
	U	00000000	1	1012	116	166	169	189	191	192	193	198	217	218	243	244	275
			_		276	279	295	298	300	302	304	319					
	U	0000001	1	1013	199	224	225	253	254	277	309	323	537	538	539	540	567
					568	569	570	597	598	599	600	627	628	629	630	657	658
					659	660	691	692	693	694	721	722	723	724	751	752	753
					754	781	782	783	784	811	812	813	814	845	846	847	848
					875	876	877	878	905	906	907	908	935	936	937	938	965
					966	967	968	370	300	JUU	301	500	000	300	007	550	J U U
0	TI	00000004	1	1022													
0	U	0000000A	1	1022	154	163	164	E 77.0	600	600	660	602	707	757	707	017	051
1	U	000000B	1	1023	221	222	543	573	603	633	663	697	727	757	787	817	851
_					881	911	941	971									
2	U	000000C	1	1024	208	211	228	246									
3	U	000000D	1	1025													
4	U	000000E	1	1026													
5	Ŭ	000000F	1	1027	237	262	282	283									
J	Ŭ	00000001	1	1014	200	265	266	275	278	279	296	298	304	305	306	308	314
	U	00000002	1	1014	319		۵00	~ I J	210	~ 1 J	200	200	304	303	300	300	314
	T T	0000000	4	1015	219	320											
	U	00000003	1	1015													
:	U	0000004	1	1016													
	U	00000005	1	1017	211	212	215	263	281	522	545	552	575	582	605	612	635
					642	665	676	699	706	729	736				796	819	
					042	UUJ	070	UJJ	700	129	730	759	766	789	790	019	830

ASMA Ver. 0.7.0	zvector	- e7- 15- Shi f	tByByte									(03 Apr	2025	15: 38: 3	3 Paş	ge 29
SYMBOL	TYPE	VALUE	LENGTH	DEFN	REFERI	ENCES											
Γ6	A	000013A0	4	677	991												
7	Ä	00001340	4	707	992												
8	A	000014D0	4	737	993												
19	A	00001168	$\overline{4}$	767	994												
TESTI NG	$\ddot{\mathbf{F}}$	00001004	$ar{4}$	374	218												
ΓNUM	H	0000004	2	409	217	265											
TSUB	A	00000000	4	408	221												
TABLE	F	00001998	4	985													
VO	U	00000000	1	1033													
V1	U	00000001	1	1034	220												
/10	U	000000A	1	1043													
/11	U	0000000B	1 1	1044													
/12 /13	U U	0000000C 0000000D	1	1045 1046													
/14	Ü	000000D	1	1040													
/1 4 /15	Ü	000000E	1	1047													
V16	Ü	0000001	1	1049													
17	Ŭ	00000011	1	1050													
/18	Ŭ	00000012	$\bar{1}$	1051													
119	U	0000013	1	1052													
1FUDGE	X	00001088	16	400	220												
7101	X	000010D0	16	533	542												
1010	X	00001628	16	807	816												
/1011	X	000016C0	16	841	850												
/1012	X	00001758	16	871	880												
/1013	X	000017F0	16	901	910												
/1014	X	00001888	16	931	940												
V1015 V102	X X	00001920 00001168	16 16	961 563	970 572												
V102 V103	X	00001108	16	593	602												
V103 V104	X	00001200	16	623	632												
V105	X	00001230	16	653	662												
V106	X	000013C8	16	687	696												
/107	X	00001460	16	717	726												
/ 108	X	000014F8	16	747	756												
V109	X	00001590	16	777	786												
V10UTPUT	X	00000028	16	419	225												
V2	U	00000002	1	1035													
/20	U	00000014	1	1053													
/21	U	00000015	1	1054	700	P 4 4	T 40	700	r ~ 4	r ~ 0	700	001	000	000	001	000	050
122	U	0000016	1	1055	538	541	542	568	571	572	598	601	602	628	631	632	658
					661 786	662 812	692 815	695 816	696 846	722 849	725 850	726 876	752 879	755 880	756 906	782 909	785 910
					936	939	940	966	969	970	630	0/0	0/9	000	900	909	910
/23	U	0000017	1	1056	540	541	570	571	600	601	630	631	660	661	694	695	724
120	· ·	0000017	-	1000	725	754	755	784	785	814	815	848	849	878	879	908	909
					938	939	968	969	. 00	J. I	310	310	310	3.0	J. J	0.00	
/24	U	0000018	1	1057													
125	Ū	00000019	1	1058													
/26	U	000001A	1	1059													
127	U	000001B	1	1060													
/28	U	0000001C	1	1061													
V29	U	0000001D	1	1062		= -		00-	0==	001	= 6.1		~ 6:	044	0.45	0==	007
2ADDR	A	0000010	4	414	537 935	567 965	597	627	657	691	721	751	781	811	845	875	905
/3	U	0000003	1	1036													

		zvect REFEREN		5-Shi ft	ByByte									03 Apr	2025	15: 38: 33	Page	31
HECK TABLE R_C	68 483 438	175 984 520																
R_C	438	520	550	580	610	640	674	704	734	764	794	828	858	888	918	948		

