

REPRODUCTION

TEST FOR ZONE OR WM AND BRANCH

A. PURPOSE OF TEST

TO TEST THE TEST FOR ZONE OR WM AND BRANCH CIRCUITRY BY USING ONE AT A TIME THE NINE DIFFERENT d-CHARACTERS, NAMELY, I, 2, B, K, S, 3, C, L, AND T,

B. LOADING PROCEDURES

- 1. PLACE TEST IN 1402 READ HOPPER AND DEPRESS LOAD KEY.
- 2. NO SELECTION DIGIT IS REQUIRED WHEN TEST IS RUN FROM TAPE.

C. PROGRAM CONTROL

1. SENSE SWITCHES

- B. ON TO REPEAT FOR SCOPING
OFF TO CONTINUE
- C. ON TO PRINT CORRECT RESULTS
OFF TO CONTINUE
- D. ON TO REPEAT SAME DETAIL CARD
OFF TO CONTINUE
- E. ON TO STOP ON ERROR
OFF TO PRINT ERROR

2. COUNTER

A COUNTER (LOCATION 967-970) IS USED TO ALLOW THE PROGRAM TO REPEAT 90 TIMES FOR EACH DETAIL CARD. WHEN SENSE SWITCH C IS ON, ONLY ONE CORRECT PRINTOUT OCCURS PER DETAIL CARD. AN ERROR TEST IS MADE EACH TIME THE PROGRAM IS REPEATED. AN ERROR PRINTOUT OCCURS FOR EACH FAILURE.

D. TEST PROCEDURE

CHECK THAT EACH d-CHARACTER CAUSES A BRANCH WHEN IT IS SUPPOSED TO AND DOES NOT CAUSE A BRANCH WHEN IT IS NOT SUPPOSED TO. THE d-CHARACTER IS IN COLUMN ONE OF THE DETAIL CARD. THE FIELD TESTED IS IN COLUMNS 21 THROUGH 24 OF THE DETAIL CARD. COLUMN 41 OF THE DETAIL CARD IS TESTED TO DETERMINE WHICH ROUTINE TO USE.

THE ROUTINE AT 493 EXPECTS A SUCCESSFUL BRANCH.

THE ROUTINE AT 466 DOES NOT EXPECT A SUCCESSFUL BRANCH.

CONDITIONS SPECIFIED BY THE d MODIFIER THAT MUST BE MET BY THE B FIELD CHARACTERS TO CAUSE A BRANCH ARE AS FOLLOWS:

DATE	2-2-61	3-17-63	10.5.63				
ENG. CHG. NO.	110378	116745	TA-1844				

REPRODUCTION

D MODIFIER

B FIELD CHARACTER

- I WORD MARK
- 2 NO ZONE (NO-"A", NO-"B" BIT)
- B 12-ZONE ("AB" BITS)
- K 11-ZONE ("B", NO-"A" BIT)
- S ZERO-ZONE ("A", NO-"B" BIT)
- 3 EITHER A WORD MARK, OR NO ZONE
- C EITHER A WORD MARK, OR 12-ZONE
- L EITHER A WORD MARK, OR 11-ZONE
- T EITHER A WORD MARK OR ZERO-ZONE

E. STOPS

920 IN STORAGE ADDRESS REGISTER: ERROR WITH SENSE E ON.

F. PRINTOUTS

1. CORRECT

D MODIFIER	B FIELD CHARACTERS	RESULT SHOULD BE	RESULT IS
B	A	EQUAL	EQUAL
2	4	EQUAL	EQUAL
I	*	EQUAL	EQUAL
L	%	EQUAL	EQUAL
B	KT4*	UNEQUAL	UNEQUAL
K	AT4%	UNEQUAL	UNEQUAL

2. ERROR

D MODIFIER	B FIELD CHARACTERS	RESULT SHOULD BE	RESULT IS
B	A	EQUAL	ERROR
2	4	EQUAL	ERROR
I	*	EQUAL	ERROR
L	%	EQUAL	ERROR
B	KT4*	UNEQUAL	ERROR
K	AT4%	UNEQUAL	ERROR

NOTE: IN THE CASE OF TEST FOR UNEQUAL ZONE OR WORD MARK THE d MODIFIER (B IN EXAMPLE 5) WAS COMPARED WITH THE B FIELD CHARACTERS *,4,T, AND K IN THAT ORDER; IN EXAMPLE 6 THE d MODIFIER(K) WAS COMPARED WITH %,4,T, AND A. THE FIRST ERROR DETECTED CAUSED THE ERROR PRINT-OUT.

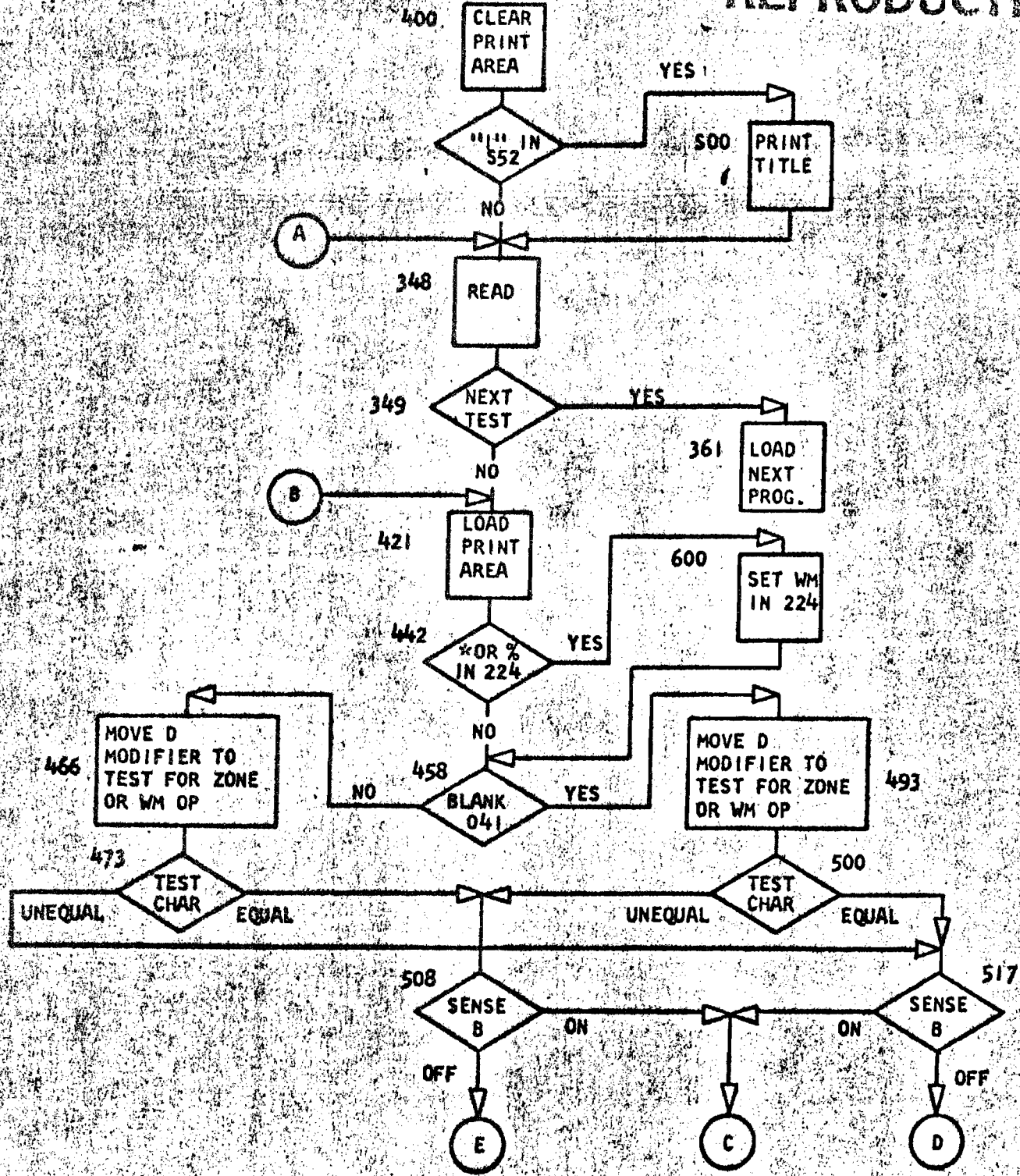
G. COMMENTS:

THE BRANCH INSTRUCTION AT LOCATION 927 CAN BE CHANGED MANUALLY TO CAUSE THE PROGRAM TO LOOP AS FEW AS 1 OR AS MANY AS 9,000 TIMES PER DETAIL CARD. THE PROGRAM CALLS FOR 90 LOOPS PER CARD.

DATE	2-2-61	3-17-63	10.5.63				
ENG. CHG. NO.	110378	116745	TA-1844				

TEST FOR ZONE OR WM AND BRANCH
FLOW CHART

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PROGRAM LISTING FOR USE WITH FLOW CHART

TEST ZONE OR WM + BR

00608

INSTRUCTION ADDRESS	OP	A	B	REMARKS
377	377	B	389	USE WHEN TESTS ARE RUN FROM TAPE
385	385	B	588	..
389	389	N	000	..
393	393	M	360 392	..
400	400	/	332	START TEST
404	404	/		..
405	405	B	500 \$521	BR TO TITLE PRINT ROUTINE IF 1 IN S52
413	413	/	080	CLEAR READ AREA
417	417	B	348	BRANCH TO PROGRAM CHAINING ROUTINE
421	421	.	001 078	LOAD PRINT AREA
428	428	L	080 299	..
435	435	L	072 272	..
442	442	B	537 224*	GO SET WM
450	450	B	537 224*	..
458	458	B	493 041	GO TO EQUAL TEST
466	466	M	201 480	SETUP TEST CHARACTER FOR UNEQUAL
473	473	V	508 224X	*BRANCH IF ERROR
481	481	V		..
482	482	V		..
483	483	V		..
484	484	B	517	BRANCH IF CORRECT
493	493	M	201 507	SETUP TEST CHARACTER FOR EQUAL
500	500	V	517 224X	*BRANCH IF CORRECT
508	508	B	935 B	LOOP ON SW B SS
513	513	B	900	GO TO ERROR ROUTINE
517	517	B	935 B	LOOP ON SW B SS
522	522	.	241	DEFINE FIELD
526	526	L	247 267	LOAD REMARKS
533	533	B	920	GO TO CORRECT ROUTINE
537	537	.	224	PART OF TEST CONDITION
541	541	B	458	GO AND TEST
545	545			*AN ASTERISK MEANS INSTRUCTION CHANGES
900	900	L	/14 285	BEGIN ERROR PRINT ROUTINE
907	907	B	916 E	E ON TO ERROR STOP SS
912	912	2	920	ERROR PRINT
916	916	.	920	ERROR STOP
920	920	A	920 970	ADD ONE TO OPERATION COUNTER
927	927	B	944 9699	BRANCH AFTER 90 OPERATIONS C FOR TA
935	935	/	332	CLEAR PRINT AREA
939	939	/		..
940	940	B	421	BRANCH TO REPEAT
944	944	S	970	RESET OPERATION COUNTER

DATE	2-2-61	3-17-63	10.5.63			
ENG. CHG. NO.	110378	116745	TA-1844			

DIAGNOSTIC FUNCTION TEST

REPRODUCTION

948	948	B	957	C	C ON FOR CORRECT PRINT	SS
953	953	B	958		BRANCH TO SENSE D	
957	957	2			PRINT CORRECT RESULTS	
958	958	B	421	D	D ON TO REPEAT	SS
963	963	B	348		BRANCH TO PROG. CHAINING ROUTINE	
967	967	0	00+		OPERATION COUNTER	
1110	/10	E	RRO	R	CONSTANTS	
1115	/15				..	
1120	/20	D	NO	DIFIER	..	
1140	/40	B	FI	ELD CHARACTERS	..	
1160	/60	R	ESU	LT SHOULD BE	..	
1180	/80	R	ESU	LT IS	..	

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DIAGNOSTIC FUNCTION TEST

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TABLE OF UNPRINTABLE CHARACTERS

LP-LEFT PARENTHESIS	12 5 8	SE-SEMICOLON	11 6 8	DE-DELTA	11 7 8
WS-WORD SEPARATOR	0 5 8	LT-LESS THAN	12 6 8	PZ-PLUS ZERO	12 0
TS-TAPE SEGMENT MARK	0 7 8	GT-GREATER THAN	6 8	TM-TAPE MARK	7 8
GM-GROUP MARK	12 7 8	MZ-MINUS ZERO	11 0	CO-COLON	5 8
RP-RIGHT PARENTHESIS	11 5 8	AP-APOSTROPHE	0 6 8		

008015,022029,033033N	1001	TEST ZONE OR WM + BR	0060B00A
008015,022029,033033N	1001	SET WORDMARK CARD	0060B 02
L067367,340344,348349,3573611001,008012,00110011B361080A8421/340080			0060B 03
L069404,377385,389393,4004041001	B389	BS88N000M360392/332/	0060B 04
L069441,413417,421428,4354421001B500S521/080B348,001078L080299L072272			0060B 05
L072481,450458,466473,4814811001B537224*85372248493041	M201480V508224XV		0060B 06
L067516,483484,493500,5085131001VV8517	M201507V517224XB93588900		0060B 07
L060544,522526,533537,5415451001B9358,241L247267B920,224B458			0060B 08
L071938,907912,916920,9279351001L/142858916E2920.920A920970B9449699/332			0060B 09
L056962,940944,948953,9579581001/B42159708957CB9582B421D			0060B 10
L040970,967971,971971,9719711001B348000P			0060B 11
2			
L065/39#/07/07,/10/15,/20/401001	ERROR	D MODIFIER	0060B 12
L072/79,/60/80,/80/80,/80/801001B	FIELD CHARACTERS	RESULT SHOULD BE	0060B 13
L070S17,S00S01,S05S12,S13S171001	RESULT IS	2,049L0772772/2772	0060B 14
L059S44,S25S29,S36S37,S41S451001#40/60#/80L/892702/2702413			0060B 15
/333080N		CLEAR WORDMARK CARD	0060B 16
019027,031,0380428031T98GB400L046352BW04BS88		TEST ZONE OR WM + BR	0060B 17

DETAIL CARDS

B	A	EQUAL	0060B 18
K	K	EQUAL	0060B 19
S	T	EQUAL	0060B 20
2	4	EQUAL	0060B 21
1	*	EQUAL	0060B 22
C	E	EQUAL	0060B 23
L	O	EQUAL	0060B 24
T	X	EQUAL	0060B 25
3	8	EQUAL	0060B 26
C	*	EQUAL	0060B 27
L	*	EQUAL	0060B 28
T	*	EQUAL	0060B 29
3	*	EQUAL	0060B 30
B	KT4*	UNEQUAL	0060B 31
K	AT4*	UNEQUAL	0060B 32
S	AK4*	UNEQUAL	0060B 33
2	AKT*	UNEQUAL	0060B 34
1	AKT4	UNEQUAL	0060B 35
C	OX8\$	UNEQUAL	0060B 36
L	EX8,	UNEQUAL	0060B 37
	EX8,	UNEQUAL	0060B 37

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5

EOX.

UNEQUAL

00608 3H

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