

REPRODUCTION

I-STAR TRANSFER

A. PURPOSE OF TEST

TO TEST THE I-STAR TRANSFER CIRCUITRY BY EXECUTING A BRANCH OR NO-OP INSTRUCTION, STORING THE CONTENTS OF THE I-STAR IF BRANCH OR B-STAR IF NO BRANCH, AND COMPARING THE RESULT WITH THE RESULT SHOULD BE FIELD. FOR UNEQUAL CONDITIONS, THE MACHINE EITHER STOPS TO PERMIT CONSOLE CHECKING OR PRINTS THE RESULTS DEPENDING UPON THE SETTING OF SENSE SWITCH E.

B. LOADING PROCEDURES

1. PLACE TEST IN 1402 READ HOPPER AND DEPRESS LOAD KEY.
2. WHEN RUNNING FROM TAPE, ENTER A 1 IN 1257.

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

THE INSTRUCTION PERFORMED IN 454 (COLUMNS 1-8) AND RESULT SHOULD BE (COLUMNS 41-43) ARE TRANSFERRED FROM THE READ AREA TO THE PRINT AREA. THE INSTRUCTION IS THEN LOADED INTO THE PROGRAM IN LOCATIONS 454-461 AND EXECUTED. AS A RESULT OF THIS INSTRUCTION EITHER B-STAR IF NO BRANCH OR I-STAR IF BRANCH IS LOADED INTO LOCATIONS 261-263 OF THE PRINT AREA. THE RESULT IS THEN COMPARED WITH THE RESULT SHOULD BE. FOR UNEQUAL CONDITIONS, THE PROGRAM BRANCHES TO THE ERROR PRINT ROUTINE.

DATE	2-2-61	4-27-61	7-1-63	17. 10. 63			
ENG. CHG. NO.	110378	110378C	117628	TA 1976			



# DIAGNOSTIC FUNCTION TEST

PART NO. 451438  
 SHEET 2 of 7  
 BLOCK NO. 3130D

## REPRODUCTION

### E. STOPS

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

### F. PRINTOUTS

#### 1. CORRECT

INSTRUCTION PERFORMED IN 454		RESULT SHOULD BE	RESULT IS
B500	BRANCH	458	458
N5009981	NO BRANCH	998	998
B500999A	BRANCH	462	462
V5009992	NO BRANCH	998	998

#### 2. ERRORS

B500	BRANCH	458		ERROR
N5009981	NO BRANCH	998	462	ERROR
B500999A	BRANCH	462	998	ERROR
V5009992	NO BRANCH	998	462	ERROR

### G. COMMENTS

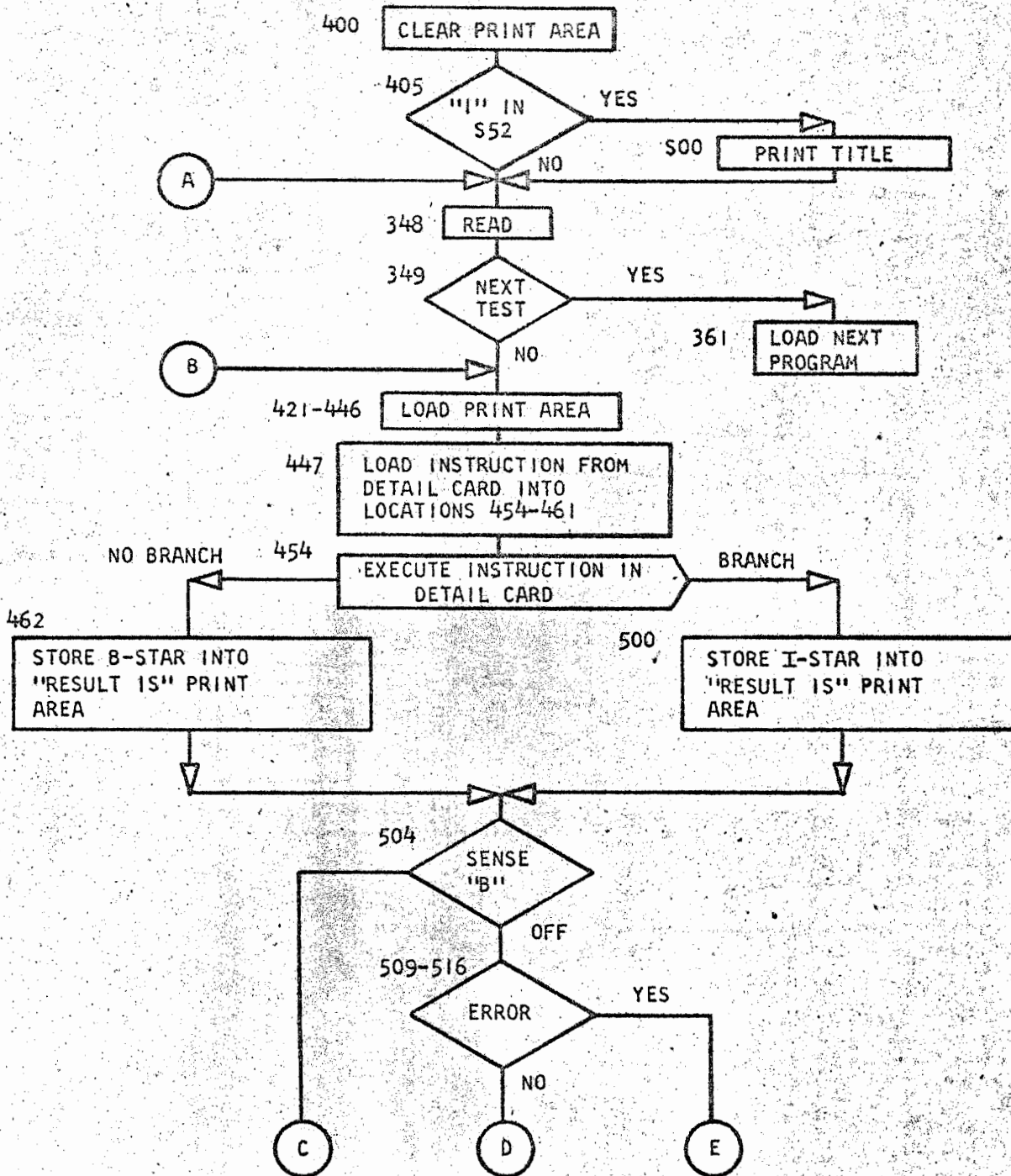
THE BRANCH INSTRUCTION AT LOCATION 927 CAN BE CHANGED MANUALLY TO CAUSE THE PROGRAM TO LOOP AS FEW AS 1 OR AS MANY AS 9,000 TIMES PER DETAIL CARD. THE PROGRAM CALLS FOR 90 LOOPS PER CARD.

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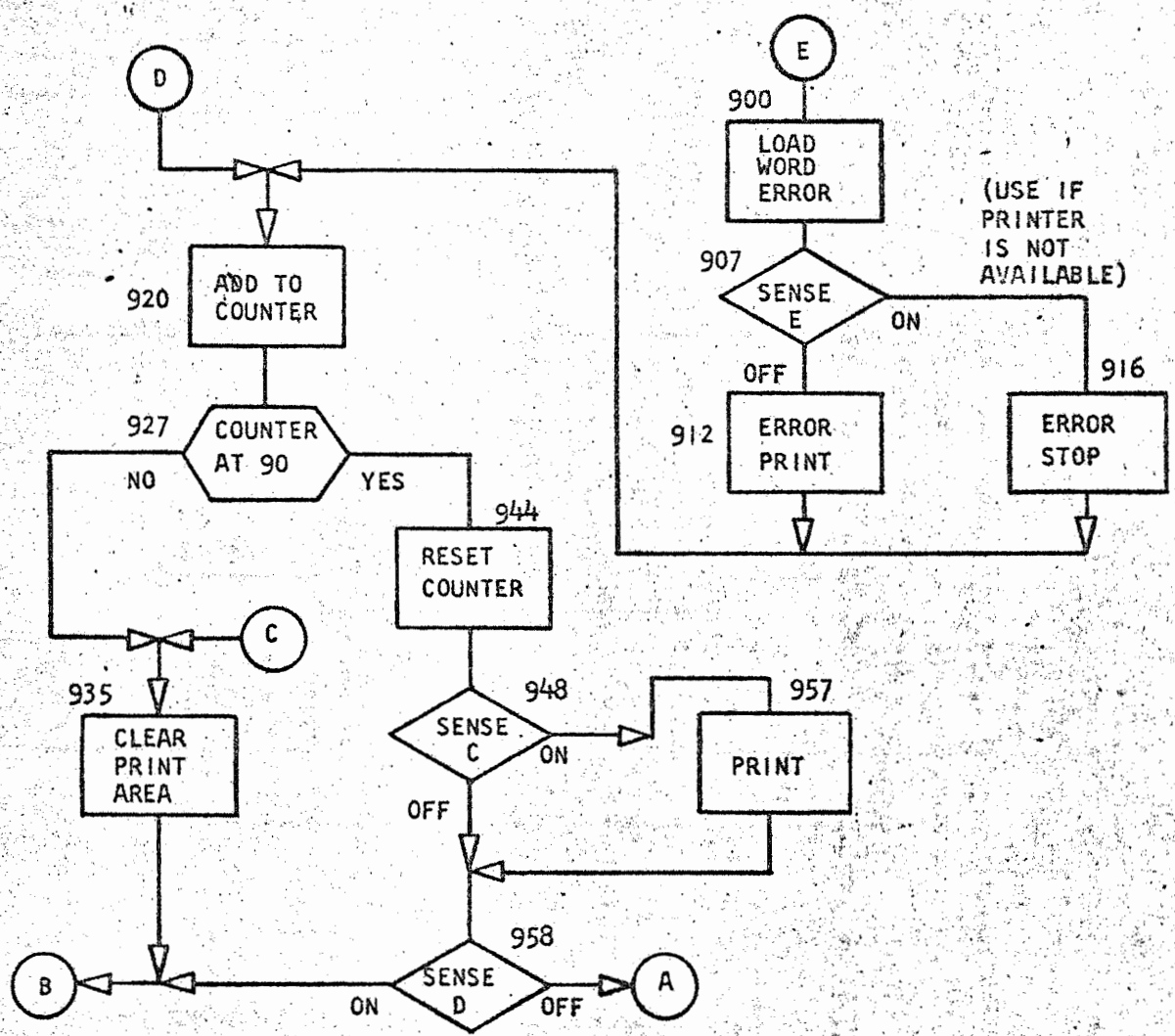
## I-STAR TRANSFER

### FLOW CHART



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PROGRAM LISTING FOR USE WITH FLOW CHART

I-STAR TRANSFER

3130D

INSTRUCTION

ADDRESS	OP	A	B	REMARKS
377	377	B	389 S571	USE WHEN TESTS ARE RUN FROM TAPE
385	385	B	S88	..
389	389	N	000	..
393	393	M	360 392	..
400	400	/	332	START TEST
404	404	/		..
405	405	B	S00 S521	BR TO TITLE PRINT ROUTINE IF I IN S52
413	413	/	080	CLEAR READ AREA
417	417	B	348	BRANCH TO PROGRAM CHAINING ROUTINE
421	421	.	001 041	LOAD PRINT AREA
428	428	.	078	..
432	432	L	080 299	..
439	439	L	072 272	..
446	446	L		..
447	447	L	008 461	LOAD INSTRUCTION INTO PROGRAM
454	454	X	500 XXXX	*INSTRUC READ FROM DETAIL CARD
462	462	H	263	STORE B STAR - NO BR OCCURRED IN 454
466	466	B	504	BRANCH TO SENSE B
500	500	H	263	STORE I STAR - BRANCH OCCURRED IN 454
504	504	B	935 B	B ON TO SCOPE SS
509	509	C	263 243	TEST FOR ERROR
516	516	B	900 /	BRANCH TO ERROR PRINT ROUTINE IF UNEQ
521	521	B	920	GO TO CORRECT PRINT ROUTINE
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
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
971	971	A		CHARACTERS TO BE TESTED
1110	/10	E	RRO R	CONSTANTS
1115	/15			..
1120	/20	I	NST R. PERFORMED IN	..

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1401 DATA PROCESSING SYSTEM  
DIAGNOSTIC FUNCTION TEST

PART NO. 451438  
SHEET 6 OF 7  
BLOCK NO. 31300

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1140 /40 4 54  
1160 /60 R ESU LT SHOULD BE  
1180 /80 R ESU LT IS

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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	I-STAR TRANSFER	3130D 0A
,008015,022029,033033N	1001	SET WORDMARK CARD	3130D 02
L067367,340344,348349,3573611001,008012,00110011B361080AB421/340080			3130D 03
L069404,377385,389393,4004041001		B389S571BS88N000M360392/332/	3130D 04
L066438,413417,421428,4324391001BS00S521/080B348,001041,078L080299			3130D 05
L072478,446447,454462,4664661001L072272LL008461X500XXXXH2638504			3130D 06
L072539,504509,516521,5215211001H2638935BC263243B900/B920			3130D 07
L071938,907912,916920,9279351001L/142858916E2920.920A920970B9449699/332			3130D 08
L056962,940944,948953,9579581001/B421S970B957CB9582B4210			3130D 09
L072#02,967971,971971,9719711001B348000PA			3130D 10
	Z		
L065/39#07/07,/10/15,/20/401001	ERROR	INSTR. PERFORMED IN	3130D 11
L072/79,/60/80,/80/80,/80/801001454		RESULT SHOULD BE	3130D 12
L070S17,S00S01,S05S12,S13S171001	RESULT IS	2,049L0772772/2772	3130D 13
L059S44,S25S29,S36S37,S41S451001#40/60#80L/892702/2702413			3130D 14
/333080N		CLEAR WORDMARK CARD	3130D 15
,019027,031,038042B031T98GB400L046352BW04BS88		I-STAR TRANSFER	3130D 16

M

## DETAIL CARDS

B500	BRANCH	458	3130D 17
N5009711	NO BRANCH	971	3130D 18
B500	BRANCH	458	3130D 19
N5009711	NO BRANCH	971	3130D 20
B500971A	BRANCH	462	3130D 21
V5009712	NO BRANCH	970	3130D 22
B500971A	BRANCH	462	3130D 23
V5009712	NO BRANCH	970	3130D 24
V500971B	BRANCH	462	3130D 25
B5009711	NO BRANCH	970	3130D 26
V500971B	BRANCH	462	3130D 27
B5009711	NO BRANCH	970	3130D 28
/500100	BRANCH	461	3130D 29

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