

DIAGNOSTIC FUNCTION TEST  
**REPRODUCTION**

PART NO. 451446  
 SHEET 1 of 14  
 BLOCK NO. 3600E

CUSTOMER ENGINEERING TESTS  
 FOR THE 1401 DATA PROCESSING SYSTEM

PUNCH FEED READ

A. PURPOSE OF TEST

1. TO TEST PUNCH-FEED-READ FEATURE
2. TO TEST PFR FOLLOWED BY A READ.

B. LOADING PROCEDURES

1. TO RUN TEST FROM CARDS (1402)
  - A. PLACE DECK IN READ HOPPER.
  - B. PRESS LOAD KEY ON 1402
  - C. WHEN MACHINE HALTS AT 500, RUN CARDS OUT OF PUNCH WITH NON-PROCESS KEY
  - D. PLACE RIPPLE PUNCHED DECK IN PUNCH HOPPER.
  - E. PLACE AT LEAST 4 BLANK CARDS BEHIND THE RIPPLE PUNCHED CARDS IN THE PUNCH HOPPER.
  - F. PRESS START KEY.
  - G. WHEN MACHINE STOPS BECUASE OF AN EMPTY READ HOPPER, PRESS START KEY.
2. TO RUN THIS TEST ONLY FROM TEST TAPE.
  - A. MANUALLY ENTER BLOCK NO. 3600 IN LOCATIONS S73-S76 AND "1" IN S72.
  - B. LOAD BLANK CARDS IN THE PUNCH FEED HOPPER.
  - C. SET SENSE SWITCH "F" TO THE ON POSITION.
  - D. PLACE AT LEAST 82 CARDS IN THE READ HOPPER (BLANK OR PUNCHED).
  - E. PRESS START KEY.
  - F. WHEN MACHINE HALTS AT 500, RUN CARDS OUT OF PUNCH WITH NON-PROCESS KEY.
  - G. PLACE RIPPLE PUNCHED CARDS IN THE PUNCH HOPPER.
  - H. PLACE AT LEAST 4 BLANK CARDS BEHIND THE RIPPLE PUNCHED CARDS IN THE PUNCH HOPPER.
  - I. PRESS START KEY

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
NO. CHG. NO.	110378	110378B	115283	117628	TA 1976		

# REPRODUCTION

## C. PROGRAM CONTROL

### 1. CHECKING PROCEDURE

- A. MACHINE STOPS FOR ERROR AT 690 BEFORE THE CARD IS PUNCHED.
- B. LIFT THE CARDS IN THE PUNCH FEED HOPPER AND DO A NON-PROCESS RUN-OUT. THE CARD NEXT TO THE LAST CARD IN PUNCH STACKER 4 IS THE CARD THAT STOPPED THE MACHINE.
- C. RE-START THE PROGRAM IN THE SINGLE-CYCLE MODE AT LOCATION 531 TO EXECUTE THE COMPARE INSTRUCTION. WITH EACH DEPRESSION OF THE START KEY WATCH THE B ≠ A LOGIC LIGHT UNTIL IT TURNS ON. AT THIS TIME THE CHARACTER IN THE STORED TABLE IS DISPLAYED IN THE A-REGISTER AND THE CHARACTER IN THE READ AREA THAT CAUSED THE UNEQUAL COMPARISON IS DISPLAYED IN THE B-REGISTER.
- D. CHECK THE CHARACTER IN THE READ AREA WITH THE CHARACTER PUNCHED IN THE CORRESPONDING COLUMN OF THE CARD.

### 2. SENSE SWITCHES.

SENSE SWITCH C ON - CORRECT PRINT

SENSE SWITCH D ON - PERMITS PROCESSING OF MULTIPLE DETAIL SETS.

NOTE: USE ONLY WHEN TEST IS RUN SEPARATELY

SENSE SWITCH E ON - STOPS ON ERROR

SENSE SWITCH E OFF - PRINTS ERROR

### D. TEST PROCEDURE:

AFTER TESTING FOR A "I" IN S52 TO PRINT OR BY-PASS THE TITLE, THE 80-CHARACTER TABLE, STORED BY THE PROGRAM IN LOCATIONS 701-780, IS EXPANDED TO A 160-CHARACTER TABLE IN LOCATIONS 701-860. THE CHARACTERS IN 701-780 ARE THEN MOVED TO THE PUNCH AREA AND A CARD IS PUNCHED AND SELECTED IN STACKER 4. A "I" IS THEN ADDED TO THE A-ADDRESS OF THE MOVE INSTRUCTION INCREASING IT FROM 780 TO 781, AND ANOTHER CARD IS PUNCHED, THIS TIME WITH CHARACTERS STORED IN LOCATIONS 702-781. THIS LOOP IS REPEATED UNTIL THE A-ADDRESS OF THE MOVE INSTRUCTION STANDS AT 860, INDICATING THAT THE LAST CARD OF THE SET HAS BEEN RIPPLE PUNCHED. WITH SENSE SWITCH D NORMALLY OFF, A BLANK CARD IS THEN PUNCHED IN ORDER TO SELECT THE BOTH CARD OF THE SET IN STACKER 4. FOLLOWING THIS, THE MACHINE STOPS AT LOCATION 499 (STAR AT 500).

AFTER THE PUNCHED CARDS FOLLOWED BY AT LEAST FOUR BLANK CARDS HAVE BEEN PLACED IN THE PUNCH HOPPER AND THE START KEY IS DEPRESSED, THE PROGRAM STARTS AT 500.

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
NO. CHG. NO.	110378	110378B	115283	117628	TA 1976		

DIAGNOSTIC FUNCTION TEST

REPRODUCTION

D. (CONTINUED)

BEGINNING AT LOCATION 500, THE A-ADDRESSES OF THE MOVE AND COMPARE INSTRUCTIONS ARE STARTED AT 779. THE PRINT, PUNCH, AND READ AREAS ARE THEN CLEARED AND A COMMAND IS GIVEN TO READ A PRE-PUNCHED CARD AT THE PUNCH FEED READ STATION, PUNCH THE CARD AHEAD OF IT, AND BRANCH. IF NO BRANCH, AN ERROR IS INDICATED WITH THE MACHINE STOPPING AT LOCATION 555. IF BRANCH, THE PROGRAM BRANCHES TO SELECT THE CARD IN STACKER 4 AND MOVE THE READ AREA TO THE PRINT AND PUNCH AREAS. THE INFORMATION IN THE PRINT AREA SHOULD BE AN EXACT IMAGE OF THE INFORMATION IN THE READ AREA WHICH WILL LATER BE COMPARED WITH THE RIPPLE TABLE IN STORAGE. THE INFORMATION IN THE PUNCH AREA, HOWEVER, IS RE-ARRANGED IN THE FOLLOWING MANNER:

COLUMNS 1-40 ARE STORED IN PUNCH POSITIONS 141-180  
 COLUMNS 41-80 ARE STORED IN PUNCH POSITIONS 101-140

NOTE: THIS ARRANGEMENT PRODUCES A CRISSCROSS PATTERN WHEN THE CARD IS PUNCHED FOR THE SECOND TIME.

AT THIS POINT A COMPARISON IS MADE BETWEEN THE INFORMATION IN THE TABLE AND THE INFORMATION IN THE READ AREA.

NEXT, A READ COMMAND IS GIVEN.

A BRANCH UNEQUAL IS THEN USED TO CHECK THE PUNCH FEED READ OPERATION FOR CORRECT TRANSFER OF INFORMATION TO THE READ AREA. AN EQUAL INDICATES NO ERROR.

THE LOOP IS REPEATED UNTIL ALL DETAIL CARDS ARE READ.

E. STOPS

STORAGE ADDR. REG

TYPE OF HALT

500

TO ALLOW STKR. 4 CARDS TO BE PLACED IN PUNCH HOPPER.

555

THE 4 555 R INSTRUCTION FAILED TO BRANCH.

690

COMPARE ERROR BETWEEN TABLE AND READ IN AREA OCCURRED.

F. PRINTOUTS

TWO LINES ARE PRINTED. THE FIRST LINE WITH CARD NO. REPRESENTS THE CARD READ, AND THE SECOND LINE REPRESENTS THE TABLE. PRINTING FOR CORRECT RESULTS IS OBTAINED WHEN SENSE SWITCH C IS SET TO THE ON POSITION. THE FIRST LINE IS ALWAYS PRINTED WITH A PRINT PUNCH-FEED-READ INSTRUCTION (6R).

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		



F. (CONTINUED)

# REPRODUCTION

EXAMPLE OF ERROR PRINTOUT:

(LINE ONE IS THE CARD READ; LINE TWO IS THE TABLE IN STORAGE.)

&&AABBCCDDEEFFGGHHIIIOO//SS3TUUVVWXXYYZZRRQPPPOONNMMLLKKJJ--998877665544332211 ERROR 1  
&&AABBCCDDEEFFGGHHIIIOO//SSTTUUVVWXXYYZZRRQPPPOONNMMLLKKJJ--998877665544332211

&AABBCCDDEEFFGGHHIIIOO//SSTTUUVVWXXYYZZRRQPPPOONNMMLLKKJJ--998877665544332211 & ERROR 2  
&AABBCCDDEEFFGGHHIIIOO//SSTTUUVVWXXYYZZRRQPPPOONNMMLLKKJJ--998877665544332211 &

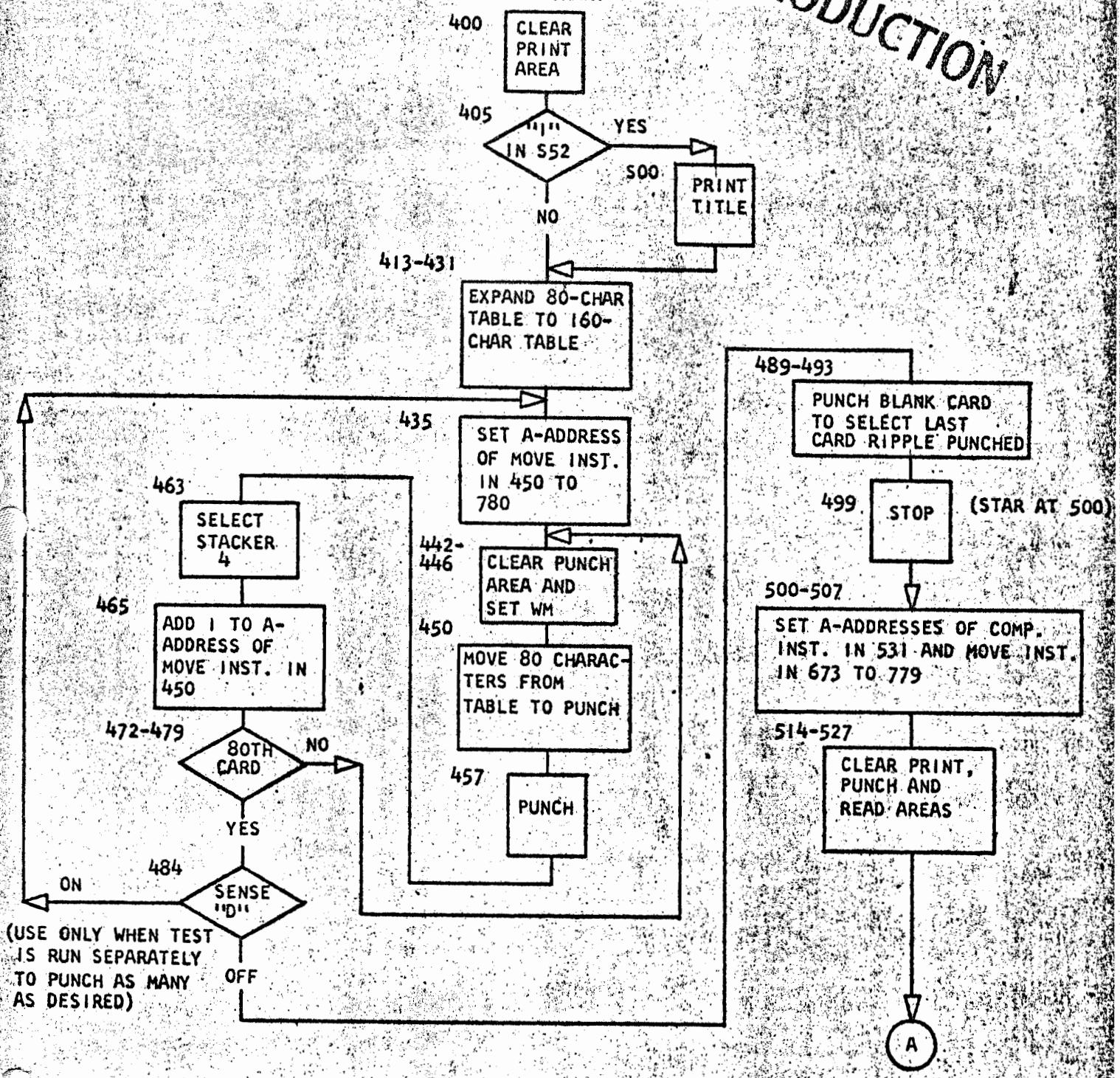
WHEN MACHINE PRINTS CORRECT RESULTS, INFORMATION ON LINE 1 AGREES WITH INFORMATION ON LINE 2 AND THE WORD "ERROR" IS OMITTED.

NOTE: IF THE CARDS ARE NOT IN RIPPLE SEQUENCE DURING THE PUNCH FEED READ PORTION OF THE TEST, ERROR PRINT-OUTS WILL OCCUR.

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
NG. CHG. NO.	110378	110378B	115283	117628	TA 1976		

REPRODUCTION

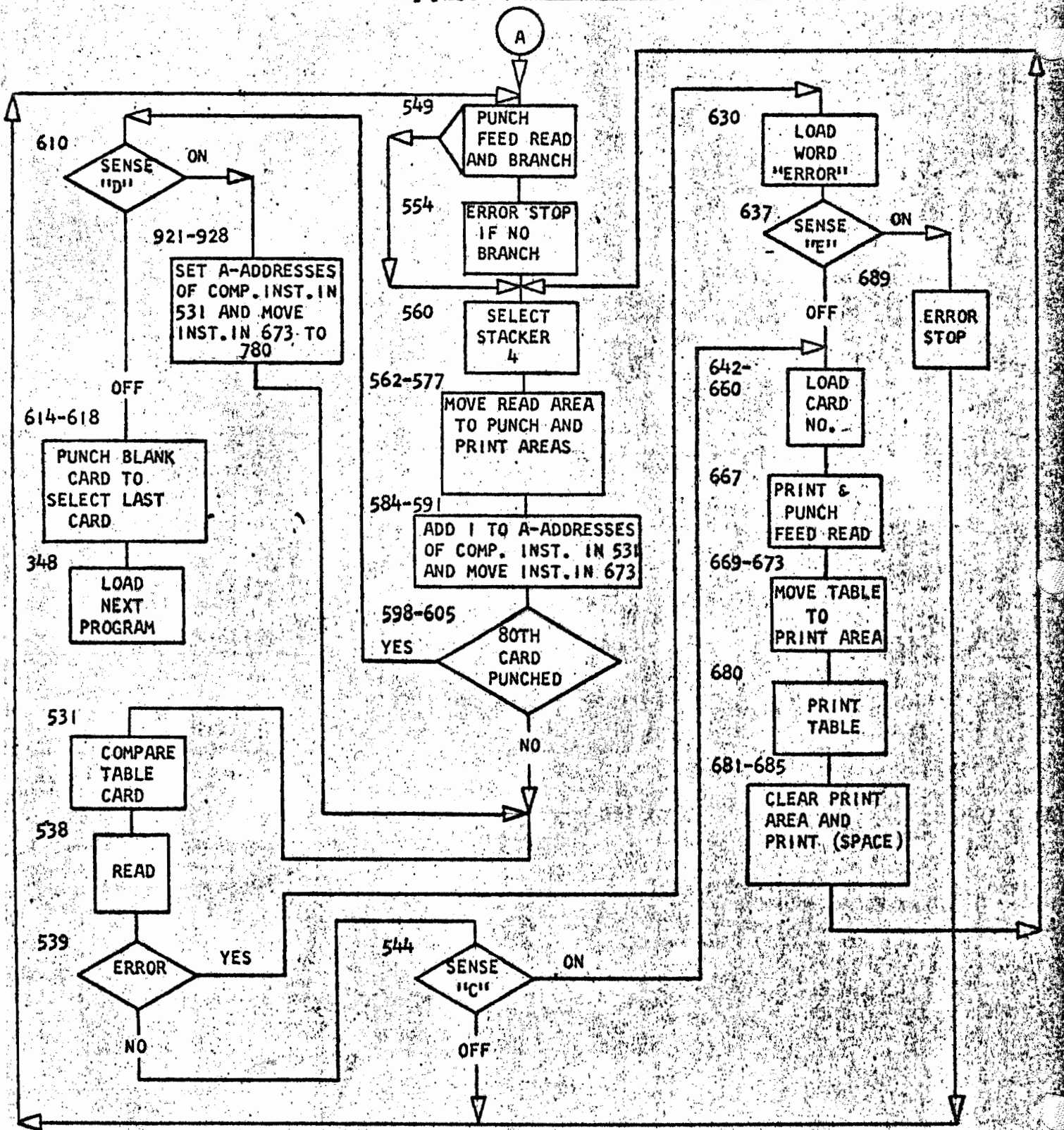
PUNCH FEED READ  
 FLOW CHART



(USE ONLY WHEN TEST IS RUN SEPARATELY TO PUNCH AS MANY AS DESIRED)

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	11078	110378B	115283	117628	TA 1976		

# DIAGNOSTIC FUNCTION TEST REPRODUCTION



DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		



DIAGNOSTIC FUNCTION TEST

REPRODUCTION

PROGRAM LISTING FOR USE WITH FLOW CHART

PUNCH FEED READ 36000

INSTRUCTION

ADDRESS OP A B

REMARKS

377	377	B	400	5721	USE WHEN TESTS ARE RUN FROM TAPE
385	385	B	588		
400	400	/	332		START TEST
404	404	/			
405	405	B	500	5521	BR TO TITLE PRINT ROUTINE IF 1 IN 552
413	413	B	721	741	EXPAND RIPPLE TABLE TO 160 CHARACTERS
420	420	B	761		
424	424	L	780	860	
431	431	B	781		
435	435	M	903	463	SET A ADDR OF MOVE INSTR IN 450 TO 780
442	442	/	180		CLEAR PUNCH AREA
446	446	.	101		
450	450	M	780	180	MOVE RIPPLE TABLE TO PUNCH AREA
457	457	.			PUNCH
458	458	N	000	0	NOP
463	463	K	.		SELECT 4 IF NO PUNCH ERROR
465	465	A	400	453	ADD 1 TO A ADDR OF MOVE INSTR IN 450
472	472	C	453	906	TEST IF LAST CARD HAS BEEN PUNCHED
479	479	B	442	/	BRANCH TO PUNCH NEXT CARD IF NOT LAST
484	484	B	435	0	D ON TO REPEAT PUNCHING
480	480	/	180		PUNCH BLANK CARD TO SELECT LAST
493	493	.			CARD RIPPLE PUNCHED
494	494	B	499		BRANCH TO STOP
498	498	.			STOP TO RELOAD STACKER 4 CARDS TO PUNCH
500	500	M	909	534	SET A ADDR OF COMP INSTR IN 531 TO 779
507	507	M	909	676	SET A ADDR OF MOVE INSTR IN 673 TO 779
514	514	/	299		CLEAR PRINT, PUNCH + READ AREAS
518	518	.			
519	519	/			
520	520	.	001	101	SET WORD MARKS TO STOP MOVE INSTR
527	527	B	549		BRANCH TO PUNCH FEED READ
531	531	C	XXX	080	TEST FOR ERROR IN READING RIPPLE INFO
538	538	.			READ
539	539	B	630	/	BRANCH TO ERROR PRINT ROUTINE IF ERROR
544	544	B	642	C	C ON TO CORRECT PRINT
549	549	.	555	R	PUNCH FEED READ + BRANCH
554	554	.			ERROR STOP IF NO BRANCH
555	555	N	000	0	NOP
560	560	K	.		SELECT STACKER 4 IF NO PUNCH ERROR
562	562	M	040	180	MOVE READ AREA TO PUNCH AREA
569	569	M	080		
573	573	/	299		CLEAR PRINT AREA

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
NO. CHG. NO.	110378	110378B	1115283	117628	TA 1976		

DIAGNOSTIC FUNCTION TEST  
**REPRODUCTION**

577 577 M 080 280  
 584 584 A 400 534  
 591 591 A 400 676  
 598 598 C 676 904  
 605 605 B 531 /  
 610 610 B 921 D  
 615 615 / 180  
 619 619 v  
 628 628 B 348  
 630 630 L /19 285  
 637 637 B 689 E  
 642 642 M 676 912  
 649 649 S 909 912  
 656 656 . 297  
 660 660 Z 912 299  
 667 667 6 R  
 669 669 / 299  
 673 673 M XXX 280  
 680 680 2  
 681 681 / 280  
 685 685 2 555  
 689 689 .  
 690 690 B 549  
 701 701 + AA BBCCDDEEFFGGHHII  
 721 721 0 0// SSTTUUVVWXXYYZZ  
 741 741 R RQQ PPOONNNMLLKKJJ--  
 761 761 9 988 77665544332211  
 901 901 7 80  
 904 904 8 60  
 907 907 7 79  
 910 910 X XX  
 921 921 M 903 534  
 928 928 M 903 676  
 935 935 B 531  
 1115 /15 E RRO R  
 1120 /20 L INE 1 - CARD READ  
 1140 /40  
 1160 /60 L INE 2 - TABLE IN ST  
 1180 /80 O RAG E

MOVE READ AREA TO PRINT AREA  
 ADD 1 TO A ADDR OF COMP INSTR IN 531  
 ADD 1 TO A ADDR OF MOVE INSTR IN 673  
 TEST FOR LAST CARD  
 BR TO TEST FOR READ ERROR IF NOT LAST  
 D ON TO REPEAT TEST  
 PUNCH BLANK CARD TO SELECT LAST  
 PUNCHED CARD  
 BRANCH TO READ NEXT PROGRAM  
 LOAD WORD ERROR TO PRINT  
 E ON TO ERROR STOP  
 MOVE CARD NO. TO PRINT AREA  
 ..  
 ..  
 ..  
 PRINT AND PUNCH FEED READ  
 CLEAR PRINT AREA  
 \*MOVE TABLE TO PRINT AREA  
 PRINT TABLE  
 PRINT BLANKS TO SPACE  
 ..  
 ERROR STOP  
 BR TO PUNCH FEED READ NEXT CARD  
 RIPPLE TABLE  
 ..  
 ..  
 ..  
 CONSTANTS  
 ..  
 ..  
 \*COUNTER USED TO FIND CARD NUMBER  
 SET A FIELD OF COMP IN 531 TO 780  
 SET A FIELD OF MOVE IN 673 TO 780  
 BRANCH TO REPEAT PROGRAM  
 CONSTANTS  
 ..  
 ..  
 ..

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17.10.63		
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PROGRAM LISTING FOR USE WITH FLOW CHART

PUNCH FEED READ

3600E

INSTRUCTION

ADDRESS	OP	A	B	REMARKS
377	377	B	400 5721	USE WHEN TESTS ARE RUN FROM TAPE
385	385	B	588	..
400	400	/	332	START TEST
404	404	/		
405	405	B	500 5521	BR TO TITLE PRINT ROUTINE IF 1 IN 552
413	413	□	721 741	EXPAND RIPPLE TABLE TO 160 CHARACTERS
420	420	□	761	..
424	424	L	780 860	..
431	431	□	781	..
435	435	M	903 453	SET A ADDR OF MOVE INSTR IN 450 TO 780
442	442	/	180	CLEAR PUNCH AREA,
446	446	.	101	..
450	450	M	780 180	*MOVE RIPPLE TABLE TO PUNCH AREA
457	457	4		PUNCH
458	458	N	000 0	NOP
463	463	K	4	SELECT 4 IF NO PUNCH ERROR
465	465	A	400 453	ADD 1 TO A ADDR OF MOVE INSTR IN 450
472	472	C	453 906	TEST IF LAST CARD HAS BEEN PUNCHED
479	479	B	442 /	BRANCH TO PUNCH NEXT CARD IF NOT LAST
484	484	B	435 0	D ON TO REPEAT PUNCHING
489	489	/	180	PUNCH BLANK CARD TO SELECT LAST
493	493	4		CARD RIPPLE PUNCHED
494	494	B	499	BRANCH TO STOP
499	499	.		STOP TO RELOAD STACKER 4 CARDS TO PUNCH
500	500	M	909 534	SET A ADDR OF COMP INSTR IN 531 TO 779
507	507	M	909 676	SET A ADDR OF MOVE INSTR IN 673 TO 779
514	514	/	299	CLEAR PRINT, PUNCH + READ AREAS
518	518	/		..
519	519	/		..
520	520	.	001 101	SET WORD MARKS TO STOP MOVE INSTR
527	527	B	549	BRANCH TO PUNCH FEED READ
531	531	C	XXX 080	*TEST FOR ERROR IN READING RIPPLE INFO
538	538	1		READ
539	539	B	630 /	BRANCH TO ERROR PRINT ROUTINE IF ERROR
544	544	B	642 C	C ON TO CORRECT PRINT
549	549	4	555 R	PUNCH FEED READ + BRANCH
554	554	.		ERROR STOP IF NO BRANCH
555	555	N	000 0	NOP
560	560	K	4	SELECT STACKER 4 IF NO PUNCH ERROR
562	562	M	040 180	MOVE READ AREA TO PUNCH AREA
569	569	M	080	..
573	573	/	299	CLEAR PRINT AREA
577	577	M	080 280	MOVE READ AREA TO PRINT AREA

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17.10.63		
IG. CHG. NO.	110378	110378B	115283	117628	TA 1976		

# REPRODUCTION

584	584	A	400	534	ADD 1 TO A ADDR OF COMP INSTR IN 531
591	591	A	400	676	ADD 1 TO A ADDR OF MOVE INSTR IN 673
598	598	C	676	906	TEST FOR LAST CARD
605	605	B	531	/	BR TO TEST FOR READ ERROR IF NOT LAST
610	610	B	921	D	D ON TO REPEAT TEST
615	615	/	180		PUNCH BLANK CARD TO SELECT LAST
619	619	4			PUNCHED CARD
620	620	B	348		BRANCH TO READ NEXT PROGRAM
630	630	L	/19	285	LOAD WORD ERROR TO PRINT
637	637	B	689	E	E ON TO ERROR STOP
642	642	M	676	912	MOVE CARD NO. TO PRINT AREA
649	649	S	909	912	..
656	656	.	297		..
660	660	Z	912	299	..
667	667	6	R		PRINT AND PUNCH FEED READ
669	669	/	299		CLEAR PRINT AREA
673	673	M	XXX	280	*MOVE TABLE TO PRINT AREA
680	680	2			PRINT TABLE
681	681	/	280		PRINT BLANKS TO SPACE
685	685	2	555		..
689	689	.			ERROR STOP
690	690	B	549		BR TO PUNCH FEED READ NEXT CARD
701	701	+	AA	BBCCDDEEFFGGHHII	RIPPLE TABLE
721	721	0	0//	SSITUUVVWXXYYZZ	..
741	741	R	RQQ	PPOONNMMLLKKJJ---	..
761	761	9	988	77665544332211	..
901	901	7	80		CONSTANTS
904	904	8	60		..
907	907	7	79		..
910	910	X	XX		*COUNTER USED TO FIND CARD NUMBER
921	921	M	903	534	SET A FIELD OF COMP IN 531 TO 780
928	928	M	903	676	SET A FIELD OF MOVE IN 673 TO 780
935	935	B	531		BRANCH TO REPEAT PROGRAM
1115	/15	E	RRO	R	CONSTANTS
1120	/20	L	INE	1 - CARD READ	..
1140	/40	.			..
1160	/60	L	INE	2 - TABLE IN ST	..
1180	/80	O	RAG	E	..

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		

# REPRODUCTION

## 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	PUNCH FEED READ	3600E 0A
,008015,022029,033033N	1001	SET WORDMARK CARD	3600E 02
L067367,340344,348349,357361	1001,008012,00110011B361080AB421/340080		3600E 03
L069404,377385,400404,405405	1001 B4005721BS88 /332/		3600E 04
L069441,413420,424431,435442	1001BS00S52107217410761L7808600781M903453		3600E 05
L062471,446450,457458,463465	1001/180,101M7801804N0000K4A400453		3600E 06
L060499,479484,489493,494499	1001C4539068442/8435D/18048499		3600E 07
L063530,507514,518519,520527	1001M909534M909676/299//,0011018549		3600E 08
L061559,538539,544549,554555	1001CXXX0801B630/B642C4555R.N0000		3600E 09
L070597,562569,573577,584591	1001K4M040180M080/299M080280A400534A400676		3600E 10
L071636,605610,615619,620630	1001C6769068531/8921D/18048348 L/19285		3600E 11
L068672,642649,656660,667669	1001B689EM676912S909912,29729122996R/299		3600E 12
L072712,680681,685689,690701	1001MXXX2802/2802555.B549 PPAABCCDDEE		3600E 13
	ZZ		
L0727520713713,721741,741741	1001FFGGHHI100//SSTTUUVVWXXYYZZRRQQPP		3600E 14
L0727920753753,761761,761761	1001LLKKJJMM998877665544332211		3600E 15
	ZZ		
L0699090873873,901904,907910	1001 780860779		3600E 16
L072949,921928,935935,935935	1001XXX M903534M9036768531		3600E 17
L072/490/10/10,/15/20,/40/40	1001 ERRORLINE 1 - CARD READ		3600E 18
L072/890/50/50,/60/80,/80/80	1001 LINE 2 - TABLE IN STORAGE		3600E 19
L057S24,S01S05,S12S13,S17S18	10012,049L0772772/27720/40/60		3600E 20
L052S44,S29S36,S37S41,S45S45	10010/80L/892802/2802413		3600E 21
/333080N	CLEAR WORDMARK CARD		3600E 22
.019027,031,0380428031T98GB400L046352BW04BS88	PUNCH FEED READ		3600E 23

## DETAIL CARDS

AKT4	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCM3600E	24
M	E	S	M	Z	Z	M		
KT4	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV3600E	25
M	E	S	M	Z	Z	M		
T4	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV63600E	26
M	E	S	M	Z	Z	M		
4	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV6	3600E 27
M	E	S	M	Z	Z	M		
	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV6	D3600E 28
M	E	S	M	Z	Z	M		
	BLUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV6	DN3600E 29
M	E	S	M	Z	Z	M		
	LUSGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV6	DNW3600E 30
M	E	S	M	Z	Z	M		
	USGCMV6	DNW7DEOX8	FPY9TGQZO	HR+#TI-,@	+\$%IP.* /2	0JS3MAKT4	BLUSGCMV6	DNW73600E 31

M	DATE	2-2-61	3-13-61	2-15-62	6-29-63	17.10.63	M
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		



1401 DATA PROCESSING SYSTEM  
DIAGNOSTIC FUNCTION TEST

PART NO. 451446  
SHEET 12 OF 14  
BLOCK NO. 3600E

REPRODUCTION

5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7D3600E 32  
M E S M Z Z M E  
GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DE3600E 33  
M E S M Z Z M E  
CMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DE03600E 34  
E S M Z Z M E  
MV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX3600E 35  
E S M Z Z M E  
V6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX83600E 36  
E S M Z Z M E  
6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 3600E 37  
E S M Z Z M E  
DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 F3600E 38  
E S M Z Z M E  
DNW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FP3600E 39  
E S M Z Z M E  
NW7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY3600E 40  
E S M Z Z M E  
W7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY93600E 41  
E S M Z Z M E  
7DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9T3600E 42  
E S M Z Z M E S  
DEOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TG3600E 43  
E S M Z Z M E S  
EOX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQ3600E 44  
S M Z Z M E S  
OX8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ3600E 45  
S M Z Z M E S  
X8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ03600E 46  
S M Z Z M E S  
8 FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 3600E 47  
S M Z Z M E S  
FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 H3600E 48  
S M Z Z M E S  
FPY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR3600E 49  
S M Z Z M E S  
PY9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#3600E 50  
S M Z Z M E S  
Y9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#3600E 51  
S M Z Z M E S  
9TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#T3600E 52  
S M Z Z M E S  
TGQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI3600E 53  
S M Z Z M E S  
GQZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-3600E 54  
M Z Z M E S  
QZ0 HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,3600E 55  
M Z Z M E S  
ZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a3600E 56  
M Z Z M E S  
O HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZ0 HR#TI-,a 3600E 57  
M Z Z M E S

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		

# REPRODUCTION

HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +3600E 58  
M Z M E S M  
HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$3600E 59  
M Z M E S M  
R#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$3600E 60  
M Z M E S M  
#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z13600E 61  
M Z M E S M  
#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P3600E 62  
M Z M E S M Z  
TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P.3600E 63  
M Z M E S M Z  
I-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P.\*3600E 64  
Z M E S M Z  
-,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./3600E 65  
Z M E S M Z  
,a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./23600E 66  
Z M E S M Z  
a +\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 3600E 67  
Z M E S M Z  
+\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □3600E 68  
Z M E S M Z  
+\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □J3600E 69  
Z M E S M Z  
\$Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3600E 70  
Z M E S M Z  
Z1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS33600E 71  
Z M E S M Z  
1P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3M3600E 72  
Z M E S M Z  
P./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MA3600E 73  
Z M E S M Z  
./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAK3600E 74  
Z M E S M Z  
./2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT3600E 75  
Z M E S M Z  
/2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT43600E 76  
Z M E S M Z  
2 □JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 3600E 77  
Z M E S M Z  
□JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 B3600E 78  
Z M E S M Z  
□JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BL3600E 79  
Z M E S M Z  
JS3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU3600E 80  
Z M E S M Z  
S3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU53600E 81  
Z M E S M Z  
3MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5G3600E 82  
Z M E S M Z  
MAKT4 BLU5GCMV6 DNW7DEOX8 FPY9TGQZO HR#TI-,a +\$Z1P./2 □JS3MAKT4 BLU5GC3600E 83  
Z M E S M Z

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		

REPRODUCTION

AKT4 BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCM3600E 84  
M E S M Z Z M  
KT4 BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV3600E 85  
M E S M Z Z M  
T4 BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV63600E 86  
M E S M Z Z M  
4 BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 3600E 87  
M E S M Z Z M  
BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 D3600E 88  
M E S M Z Z M  
BLUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DN3600E 89  
M E S M Z Z M  
LUSGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW3600E 90  
M E S M Z Z M  
USGCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW73600E 91  
M E S M Z Z M  
5GCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7D3600E 92  
M E S M Z Z M E  
GCMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DE3600E 93  
M E S M Z Z M E  
CMV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DE03600E 94  
E S M Z Z M E  
MV6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX3600E 95  
E S M Z Z M E  
V6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX83600E 96  
E S M Z Z M E  
6 DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 3600E 97  
E S M Z Z M E  
DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 F3600E 98  
E S M Z Z M E  
DNW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 FP3600E 99  
E S M Z Z M E  
NW7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 FPY3600E100  
E S M Z Z M E  
W7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 FPY93600E101  
E S M Z Z M E  
7DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 FPY9T3600E102  
E S M Z Z M E S  
DEOX8 FPY9TGQZO HR+#TI-,a +\$Z1P.\* /2 □JS3MAKT4 BLUSGCMV6 DNW7DEOX8 FPY9TG3600E103  
E S M Z Z M E S

DATE	2-2-61	3-13-61	2-15-62	6-29-63	17. 10. 63		
ENG. CHG. NO.	110378	110378B	115283	117628	TA 1976		