CUSTOMER ENGINEERING TESTS
FOR THE 1401 DATA PROCESSING SYSTEM

Block No. 3310A

BRANCH LOW

Purpose of Test

First, to test the Branch Low circuitry by comparing each of the 64 possible characters with all other characters that are sequentially lower. Errors are detected by a No-Branch (High or Equal) which forces a print-out of the two characters compared, Result Should Be (always LOW), Result Is (High or Equal), and the word "Error"; or stops the machine with Sense Switch E ON.

Second, to test the Branch Low circuitry by comparing each of the 64 possible characters with all other characters that are sequentially higher. Errors are detected by a Branch (Low or Equal) which forces a print-out of the two characters compared, Result Should Be (always HIGH), Result Is (Low or Equal), and the word "Error"; or stops the machine with Sense Switch E ON.

NOTE: No print-out occurs for correct results except the printing of the Title and Headings when "1" is manually entered in S52.

Units Required

1401 Processing Unit
1402 Card Reader or 729 Tape Drive (see procedure on page 3)
1403 Printer (optional)

Operations Used	Code
Clear	(/)
Set Word Marks	(,)
Load	(L)
Clear Word Marks	(¤)
Test Character and Branch	(B------?)
Test for WM and Branch	(V------1)
Add	(A)
Compare	(C)
Branch on Low Compare B<A	(B---T)
Branch on High Compare B>A	(B---U)
Branch on Equal Compare B=A	(B---S)
Branch	(B)
Move	(M)
Move Zone	(Y)
Print & Branch	(2---)
Stop (error)	(.)

Method of Test

The complete test block consists of the following cards:

1. Title Card (0A)
2. Two Program Chaining Routine Cards (02-03)
3. Three Title and Headings Print Routine Cards (04-06)
4. Four special program cards to set up instructions that are effective only when tests are run from tape (07-10)
5. Program Instruction Cards (11-115)