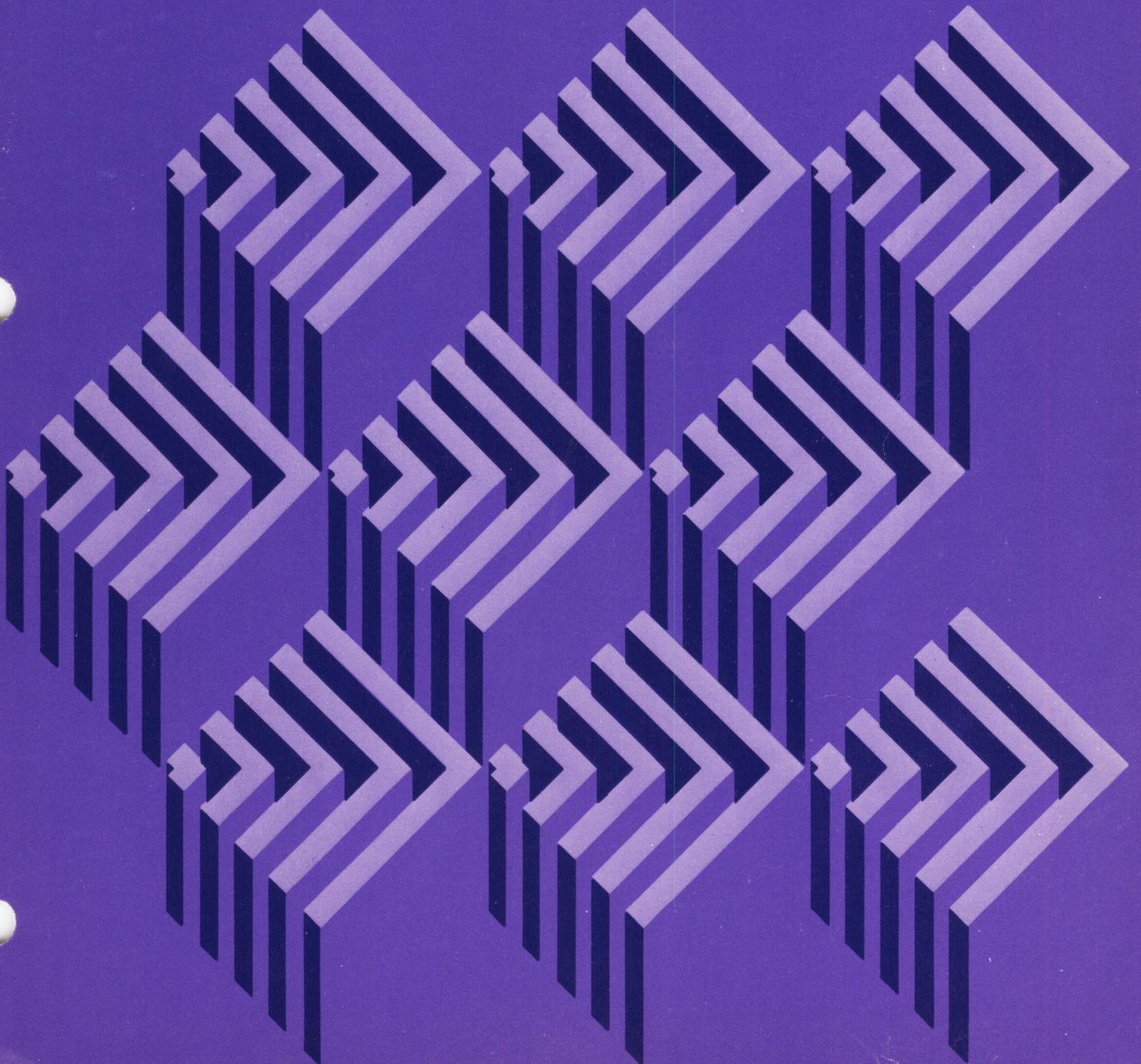IBM

**IBM Displaywriter System
5218/5228 Printwheel Printer
Problem Determination Guide**

# IBM Displaywriter System 5218/5228 Printwheel Printer Problem Determination Guide

IBM

Check the FCC label on the back of the Electronics Module to determine which of the following warning statements applies to your IBM Displaywriter System.

## Second Edition (June 1982)

This publication is for use when performing Problem Determination procedures while using either an IBM 5218 or IBM 5228 Printwheel Printer when attached to an IBM Displaywriter System.

# PREFACE

## Purpose

This book contains problem determination procedures for the IBM 5218 and the IBM 5228 Printwheel Printers and paper handling attachments.

## Audience

The procedures in this book are for operators who use the printer when it is attached to an IBM Displaywriter System.

## Contents

The book contains general information, directions, and the numbered steps to be followed.

## Related Publications

The three publications listed below may be required during printer problem determination:

- IBM Displaywriter System Problem Determination Guide, S544-0860

- IBM Displaywriter System Printer Guide, S544-0861

- IBM Displaywriter System Office Systems Customer Assistance Center Guide, S544-0874

IBM Displaywriter System 5218/5228 Printwheel Printer

This book will help you perform problem determination steps.  These steps will help you find out what actions to take to make your IBM 5218 or IBM 5228 Printwheel Printer operate correctly.

Because you probably do not perform problem determination very often, you may feel you do not have enough experience to do this.

**Do not worry:**  The next few pages explain how this can work for you.

When you are comfortable with the introductory information, you are ready to begin.

## WHY SHOULD YOU BE DOING THIS?

This book will help you resolve printer problems. It will help you find the problem and tell you how to resolve it.

When calling for service, it always helps to be able to describe your machine's problem as specifically as possible. This book tells you how to describe the problem. You will write down numbers and descriptions. They will be for your Service Representative to use to repair the printer.


## WHEN TO USE THIS GUIDE

This problem determination guide should be used when you suspect a problem with your printwheel printer. To ensure that the problem is not an error in procedure, attend to all messages or prompts on the Displaywriter screen before attempting to do problem determination.


## HOW TO USE THIS GUIDE

No special technical skills are required for you to complete these problem determination procedures. You will be guided along an orderly path of questions and procedures. Helpful information and illustrations are conveniently located along the way. Just start at the beginning ➊.


## PROBLEM DETERMINATION EFFECTIVENESS

For best results, the IBM 5218 or the IBM 5228 Printwheel Printer should be left ON and in the failing condition when you start these procedures at ➊. It is sometimes very helpful to have samples (print- outs, supplies, etc.) that indicate the failing condition for the Service Representative to examine.

DO NOT turn the printer power or the system power off unless instructed to do so. If you have already turned the power OFF, wait 10 seconds, then turn it back ON before proceeding.


## WHOM TO CALL

If you are instructed to report a Service Request number, call your LOCAL SERVICE REPRESENTATIVE. Your local Service Representative will use the Service Request number in the determination of how to repair your Displaywriter. DO NOT CALL the IBM Office Systems Customer Assistance Center to report a Service Request number. The Office Systems Customer Assistance Center handles customer setup questions, training questions, or task-related questions.

## NORMAL PROCEDURES

Normal procedures are described in the IBM Displaywriter System Printer Guide.
They include:

- Ribbon cartridge removal and replacement

- Printwheel cartridge removal and replacement

- Paper loading procedures

- Clearing paper jams

- Paper specifications

See the Table of Contents in the IBM Displaywriter Printer Guide for the location
of all controls and procedures.


## WHICH PRINTER DO YOU HAVE?

The illustrations below show both the IBM 5218 Printwheel Printer and the IBM 5228
Printwheel Printer.
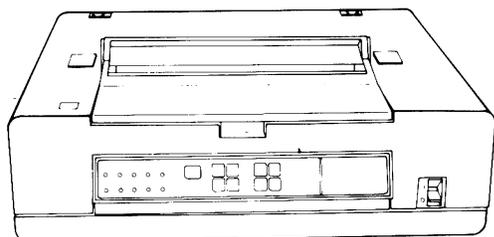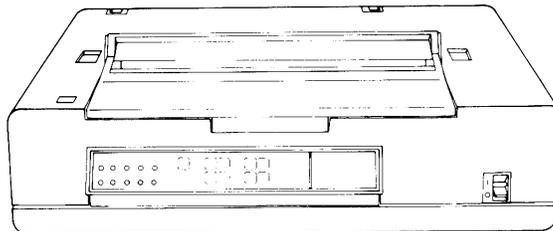
IBM 5218 Printwheel Printer                          IBM 5228 Printwheel Printer

For consistency, the illustrations used in this book show the IBM 5218 Printwheel
Printer.  All of the information in this book applies to both types of printers.


## CONTINUE WITH ❶

IBM Displaywriter System 5218/5228 Printwheel Printer

**1**

Is your printer obviously
being damaged (unusual noises
or odors, smoke, or excessive
heat)?

or

Is there obvious physical
damage such as broken or
missing parts such as springs,
knobs, etc., (but not
including the ribbon or the
printwheel)?

**NO**

If you are not familiar with
why, how, and when to use this
book, you will find the helpful
information you need in the
"Introduction" section of this
book.

When you have read the
Introduction and are ready to
begin, **CONTINUE WITH ②**.

**YES**

TURN OFF..........the printer power.

WRITE DOWN........Service Request number 000 002.

**SKIP TO...........⑮** .

**②**      FIND YOUR PROBLEM IN THE LIST BELOW

SYMPTOM INDEX

POWER LIGHT NOT ON........................................CONTINUE WITH  **❸**

RIBBON LIGHT ON.........................................SKIP TO  **❹**

PAPER JAMS OR MISFEEDS WITH THE TRACTOR
FEED ON THE PRINTER....................................SKIP TO  **❺**

NUMBERS ⎡0 1⎤ , ⎡0 2⎤ , OR ⎡0 5⎤ DISPLAYED
PAPER JAMS OR MISFEEDS WITH THE SHEET-FEED PAPER HANDLER
ON THE PRINTER.........................................SKIP TO  **❻**

CAN NOT CHANGE PRINTWHEEL...............................SKIP TO  **❼**

NUMBER ⎡7 9⎤ IS DISPLAYED...............................SKIP TO  **❽**

NUMBER ⎡0 6⎤ IS DISPLAYED...............................SKIP TO  **❾**

ANY NUMBER OTHER THAN ⎡0 1⎤ , ⎡0 2⎤ , ⎡0 5⎤ , ⎡0 6⎤ , OR ⎡7 9⎤
IS DISPLAYED (For example, 44, 54, 88)..................SKIP TO  **❿**

PRINT TEST, PRINT QUALITY, AND OTHER SYMPTOMS...........SKIP TO  **⓫**

CALLING YOUR LOCAL SERVICE REPRESENTATIVE...............SKIP TO  **⓯**

IBM Displaywriter System 5218/5228 Printwheel Printer

**3** POWER LIGHT NOT ON

IF...............it appears that your printer does not have any power,

CHECK............to make sure the printer power switch is ON ( █ ).
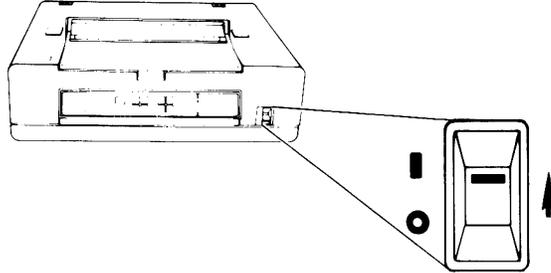


IF...............the printer power switch is ON ( █ ), turn it
OFF ( **O** ), then
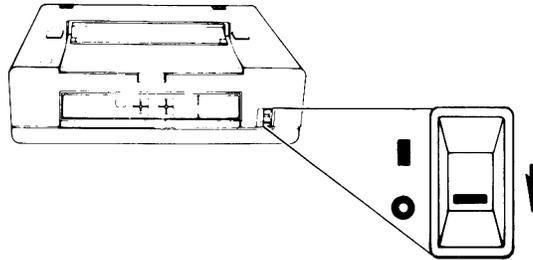


CHECK............to make sure the power cord is securely connected to the
rear panel and the electrical outlet.
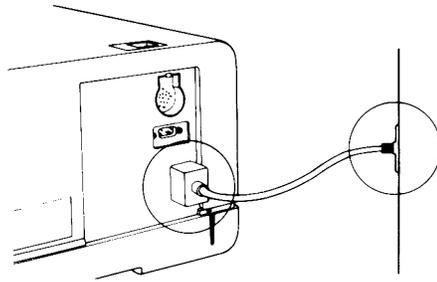


CHECK............to make sure the electrical outlet has power. (A circuit
breaker or fuse may have disrupted the power to your outlet.)

IF...............you have checked all of the above and have not been able to
correct the problem,

TURN OFF.........the printer power switch.

WRITE DOWN.......Service Request number 252 001.

SKIP TO..........**⑮** .

IF...............the ribbon light is on, it means the ribbon is
either not installed, used up, broken, or tangled.
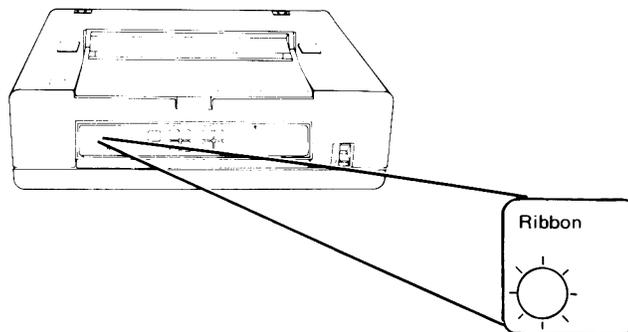
Ribbon

REPLACE..........the ribbon and try to print your document again.  (See
the IBM Displaywriter System Printer Guide
for additional information about ribbon replacement.)

Does the ribbon continue to
break or tangle?

NO

Is the ribbon light still on?

NO

CONTINUE WITH  **5**

YES

YES

WRITE
DOWN......Service Request
number 152 021.

SKIP TO  **15** .

WRITE
DOWN......Service Request
number 352 005.

SKIP TO  **15** .
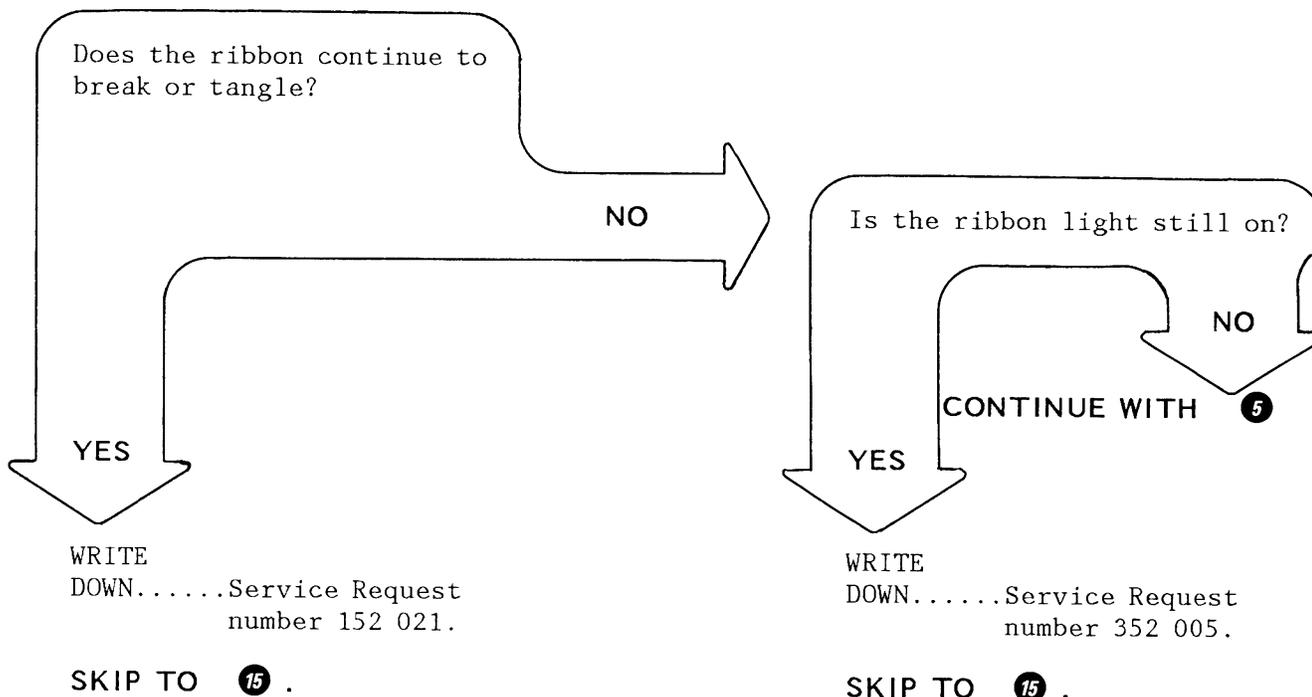
**⑤**     PAPER JAMS OR MISFEEDS WITH THE TRACTOR
         FEED ON THE PRINTER


IF..........you are using either a Tractor Feed with continuous forms or
            manual feed with a Tractor Feed on the printer,

USE.........the table below and on the next page to continue.
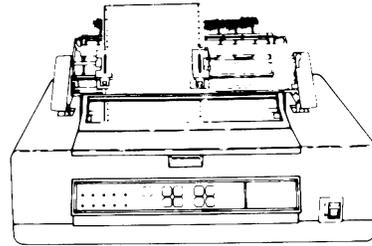

TRACTOR FEED WITH CONTINUOUS FORMS



| PROBLEM | CORRECTIVE ACTION-THEN TRY TO PRINT YOUR DOCUMENT AGAIN | IF THE PROBLEM RECURS, WRITE DOWN |
|---|---|---|
| Tractor Feed connector is not plugged in | Plug in Tractor Feed connector  | Service Request number 354 001 and **SKIP TO** ⑮ . |
| Paper not aligned | Align paper | Service Request number 052 002 and **SKIP TO** ⑮ . |
| Improper paper | See note below | |
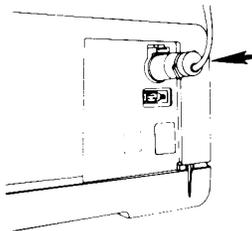

**Note:**  If you have changed paper recently, check your paper specifications
with those listed in the IBM Displaywriter System Printer Guide and
and replace the paper if necessary.

MANUAL FEED WITH TRACTOR FEED
ON THE PRINTER

| PROBLEM | CORRECTIVE ACTION-THEN TRY TO PRINT YOUR DOCUMENT AGAIN | IF THE PROBLEM RECURS, WRITE DOWN |
|---|---|---|
| Tractor Feed connector is plugged in | Unplug Tractor Feed connector | Service Request number 352 004 and **SKIP TO** 🛈 |
| Paper not aligned | Align paper | Service Request number 052 002 and **SKIP TO** 🛈 . |
| Improper paper | See note below | |

**Note:** If you have changed paper recently, check your paper specifications with those listed in the IBM Displaywriter System Printer Guide and replace the paper if necessary.

**6** NUMBERS ⎕⎕ , ⎕⎕ , OR ⎕⎕ DISPLAYED OR
PAPER JAMS OR MISFEEDS USING THE SHEET-FEED PAPER HANDLER

Your printer may or may not have numbers showing in the two digit display
on the front panel of the printer.

CLEAR..........any paper jams.

CHECK..........to make sure the Sheet-Feed Paper Handler is securely
attached.

To make sure the Sheet-Feed Paper Handler is installed
correctly, try to lift the device at both front corners.

If it can be lifted up, prefer to the IBM Displaywriter
System Printer Guide for the  proper installation
procedures.
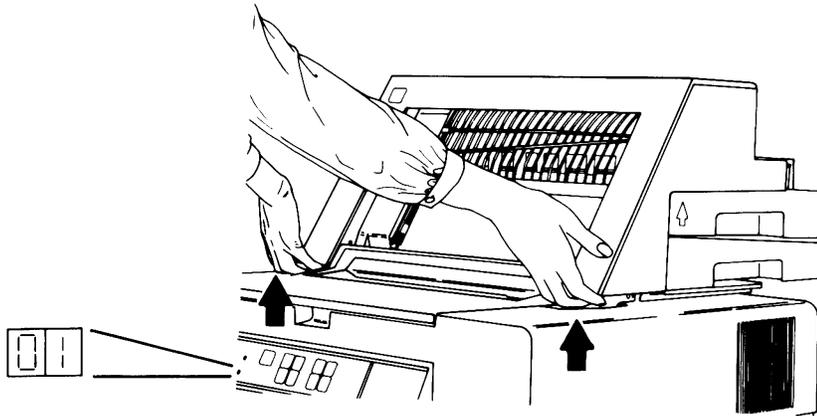


CHECK..........to make sure paper is loaded correctly in the printer
tray.

CHECK..........your paper specifications with those listed in the
IBM Displaywriter System Printer Guide and replace
the paper if necessary.

USE...........the table on the next two pages to continue.
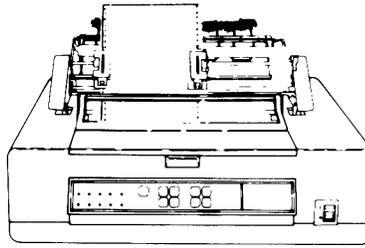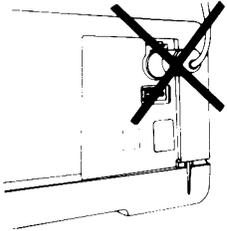
**6** (Continued)

| DISPLAY NUMBER | PROBLEM | CORRECTIVE ACTION -- THEN TRY TO PRINT YOUR DOCUMENT AGAIN | IF THE PROBLEM RECURS, WRITE DOWN: |
|---|---|---|---|
| Blank | Paper never feeds | Check to make sure the Sheet-Feed Paper Handler is plugged in. (Be sure the printer power switch is OFF before plugging or unplugging the cables.) | Service Request number 352 018. **SKIP TO** ⑮ . |
| Blank | Paper jams at the platen | Check for foreign material or obvious physical damage | Service Request number 052 002 if there is obvious physical damage, or Service Request number 153 006 if there is no obvious physical damage. **SKIP TO** ⑮ . |
| Blank | Paper does not stack properly | Check for obvious physical damage | Service Request number 052 002 if there is obvious physical damage, or Service Request number 453 004 if there is no obvious physical damage. **SKIP TO** ⑮ . |
| 01 | Bottom paper tray empty | Load paper in the bottom paper tray | Service Request number 553 001. **SKIP TO** ⑮ . |

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**6** **(Continued)**

| DISPLAY NUMBER | PROBLEM | CORRECTIVE ACTION -- THEN TRY TO PRINT YOUR DOCUMENT AGAIN | IF THE PROBLEM RECURS, WRITE DOWN: |
|---|---|---|---|
| 02 | Top paper tray empty | Load paper in the top tray | Service Request number 553 002. **SKIP TO** ⑮ . |
| 05 | The paper fed from the tray, but did not stack correctly. | The paper guide must be in the automatic position (see example below)  | Service Request number 453 004. **SKIP TO** ⑮ |
| 05 | The paper jams at the platen. | Check for physical damage. | Service Request number 052 002 if there is obvious physical damage, or Service Request number 352 018 if there is no obvious physical damage. **SKIP TO** ⑮ . |
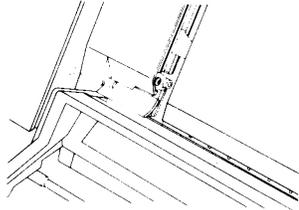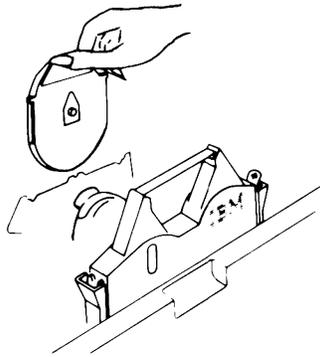
IF..........you are trying to change the printwheel and the release
           mechanism does not work,

WRITE DOWN..Service Request number 252 019 and

SKIP TO.....**15** .

**8**        NUMBER ⬛⬛ IS DISPLAYED

⬛⬛ is displayed on the front panel of the printer.  The top cover may
not be closed properly.

OPEN AND CLOSE the top cover.

PRESS..........START.

IF.............the steps above do not solve your problem,

TURN OFF.......the printer power switch.

WAIT...........10 seconds.

TURN ON........the printer power switch.

IF............. ⬛⬛ reappears,

WRITE DOWN.....Service Request number 352 003.

**SKIP TO........⑮ .**

⊓Ч is displayed on the front panel of the printer.  Follow the steps below.

CLEAR..........any paper jams from the paper path.
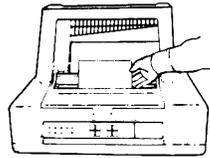
CHECK..........to make sure that the paper is aligned properly in both trays.

CHECK..........to make sure that the Sheet-Feed Paper Handler is securely attached.

To make sure the Sheet-Feed Paper Handler is installed correctly, try to lift the device at both front corners.

If the Sheet-Feed Paper Handler can be lifted up it is incorrectly installed.  Refer to the IBM System Printer Guide for proper installation procedures.
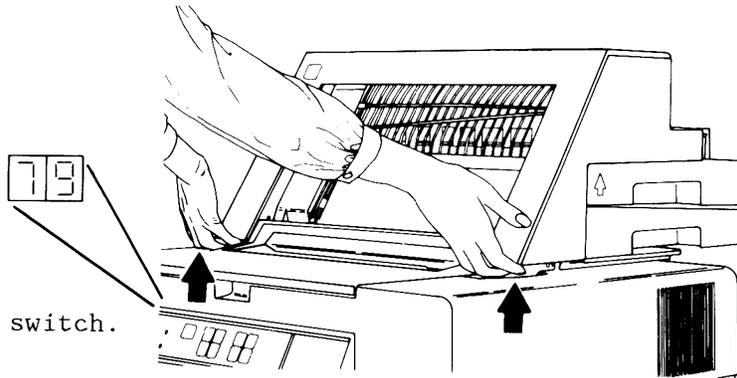
TURN OFF.......the printer power switch.

WAIT...........10 seconds.

TURN ON........the printer power switch.

TRY............to print the document again.

IF............. ⊓Ч reappears,

WRITE DOWN.....Service Request number 453 003 and

**SKIP TO........⑮** .

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**10**

ANY NUMBER OTHER THAN 01, 02, 05, 06, or 79
IS DISPLAYED


IF.........there is any number other than 01, 02, 05, 06, or 79 on
the front panel of the printer, for example, 44, 54, 88, etc.,


TURN OFF....the printer power switch.

WAIT........10 seconds.

TURN ON.....the printer power switch.

TRY.........to print your document again.

IF..........the number reappears,

WRITE DOWN..the two digit number displayed and Service Request
number 052 002 and

SKIP TO.....**15** .

DO..........a print test using the steps below. (Note: The print test
           is printed in 10-pitch, regardless of printwheel.)

PRESS.......STOP.

LOAD........a sheet of paper. If the Sheet-Feed Paper Handler is attached,
           do not insert paper manually. Make sure there is paper in
           the bottom tray.

PRESS.......PRINT TEST.
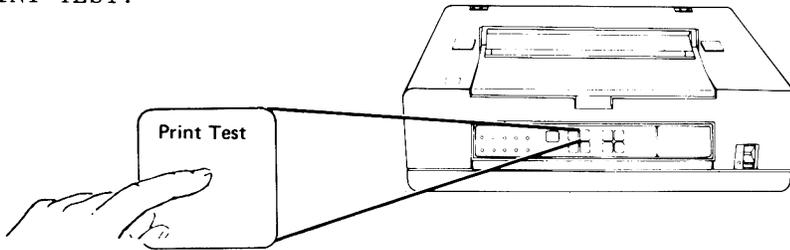


           If the printer is working properly, you should get a two line
           printout similar to the one below.

abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789
                    ,±°½§¶¢]³²"=':.?_%,#/-[;)*$&!+(.¼@

           Note: The characters on your printout may be different from
           the ones shown in this example. The print test is considered
           to be correct if all 96 characters on your printwheel
           printed.

CHECK.......the symptom list on the next page, and choose the item that
           best describes what is happening. Follow the steps listed
           for each item.

SYMPTOM LIST

SYMPTOM 1

The printer appeared to print, but
no characters appeared on the paper.............CONTINUE WITH ⓬

SYMPTOM 2

The print test printed, but some of
the characters are missing or incorrect.........CONTINUE WITH ⓭

SYMPTOM 3

A two digit error code appeared
on the front panel of the printer..............CONTINUE WITH ⓮

SYMPTOM 4

Paper would not load...........................CONTINUE WITH ⓮

SYMPTOM 5

Unveven spacing................................WRITE DOWN Service
Request number 152 016
and SKIP TO ⓯ .

SYMPTON 6

Poor print quality (for example, the        WRITE DOWN Service
characters are broken or illegible.)          Request number 252 017
and SKIP TO ⓯ .

SYMPTOM 7

Any other type of problem                     Be sure you are
following the correct
operating procedures
as given in the
IBM Displaywriter
System Printer
Guide.
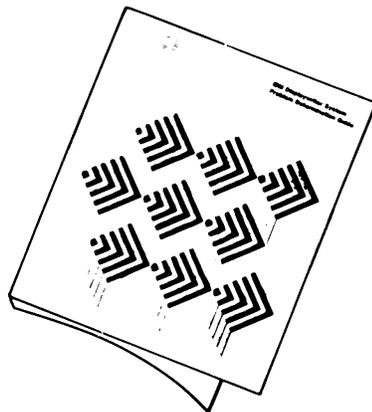
If you are satisfied
that your procedures
are correct, go to the
IBM Displaywriter
Problem Determi-
nation Guide, and
begin with ❶.

CHECK..........to make sure there is a printwheel installed in the printer.


CHECK..........to make sure there is a ribbon installed in the printer.


TURN...........the ribbon advance knob.

Ribbon
Advance
Knob
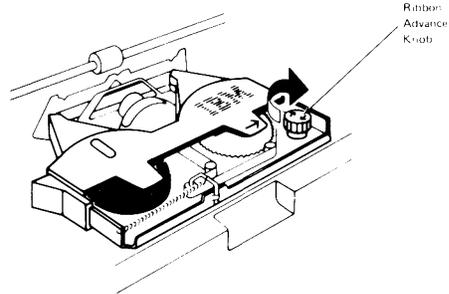

DO.............another print test (See   **11**   ).


IF.............the printer appears to print, and some or all of the
               characters are missing or incorrect,


CONTINUE WITH........**13** .

**(13)** MISSING OR INCORRECT CHARACTERS

Two probable causes for missing or incorrect characters are either a broken or tangled ribbon or a broken or defective printwheel.

BROKEN OR TANGLED RIBBON          or          BROKEN OR DEFECTIVE PRINTWHEEL

REPLACE the ribbon                          REPLACE the printwheel.

DO another print test                       DO another print test
(See **(11)** .)                            (See **(11)** .)

IF the ribbon continues to                  IF the printer continues to
break or tangle,                            print with missing or misprinted
                                            characters,

WRITE DOWN Service Request                  WRITE DOWN Service Request
number 152 021 and                          number 652 009 and

SKIP TO **(15)** .                          SKIP TO **(15)** .

WRITE DOWN.....the number on the display if the display is not blank.


IF.............you <u>have</u> a Sheet-Feed Paper Handler on the
                printer, WRITE DOWN Service Request number 352 018 and


CONTINUE WITH....**15** .




IF.............you <u>do</u> <u>not</u> have a Sheet-Feed Paper Handler on
                the printer, WRITE DOWN Service Request number 052 008 and


CONTINUE WITH....**15** .

Before calling your local service representative:


WRITE DOWN..........the Type_____

                 the Model_____

                 the Version_____(write blank if blank)


CALL................your local service representative

REPORT..............the Service Request Number you wrote down previously

        ..............the Type

        ..............the Model

        ..............the Version

        ..............the two digit number on the front panel of the printer (if any)

        ..............any damage you have observed

TURN OFF...........the printer power switch.


**STOP**

**YOU HAVE COMPLETED THIS PROCEDURE.**

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# READER'S COMMENT FORM

**IBM Displaywriter System 5218/5228 Printwheel Printer**
**Problem Dertermination Guide**

Your comments assist us in improving the usefulness of our publications; they are an important part of the input used in preparing updates to the publications. IBM may use and distribute any of the information you supply in any way it believes appropriate without incurring any obligation whatever. You may, of course, continue to use the information you supply.

Please do not use this form for technical questions about the system or for requests for additional publications; this only delays the response. Instead, direct your inquiries or requests to your IBM representative or the IBM branch office serving your locality.

Corrections or clarifications needed:

Page        Comment

Please indicate your name and address in the space below if you wish a reply.

_____

_____

_____

Thank you for your cooperation. No postage stamp necessary if mailed in the U.S.A.
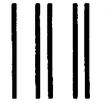(Elsewhere, an IBM office or representative will be happy to forward your comments.)

Cut or Fold Along Line

S544-2000-2

Reader's Comment Form

Fold and tape                    **Please Do Not Staple**                    Fold and tape

```
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES
```

# BUSINESS REPLY MAIL
FIRST CLASS    PERMIT NO. 40    ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

International Business Machines Corporation
Department 95H, Building 998
11400 Burnet Rd.
Austin, Texas  78758

Fold and tape                    **Please Do Not Staple**                    Fold and tape

IBM

S544- 2000- 2

IBM