LEXMARK™

Forms Printer 2500 Series

User's Guide

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Safety information

Connect the power supply cord to a properly grounded electrical outlet that is near the product and easily accessible.

CAUTION—POTENTIAL INJURY: Do not twist, bind, crush, or place heavy objects on the power cord. Do not subject the power cord to abrasion or stress. Do not pinch the power cord between objects such as furniture and walls. If the power cord is misused, a risk of fire or electrical shock results. Inspect the power cord regularly for signs of misuse. Remove the power cord from the electrical outlet before inspecting it.

Refer service or repairs, other than those described in the user documentation, to a professional service person.

This product is designed, tested, and approved to meet strict global safety standards with the use of specific Lexmark components. The safety features of some parts may not always be obvious. Lexmark is not responsible for the use of other replacement parts.

CAUTION—SHOCK HAZARD: Do not set up this product or make any electrical or cabling connections, such as the power supply cord or telephone, during a lightning storm.

CAUTION—POTENTIAL INJURY: The printhead may be hot. If so, allow it to cool before touching.

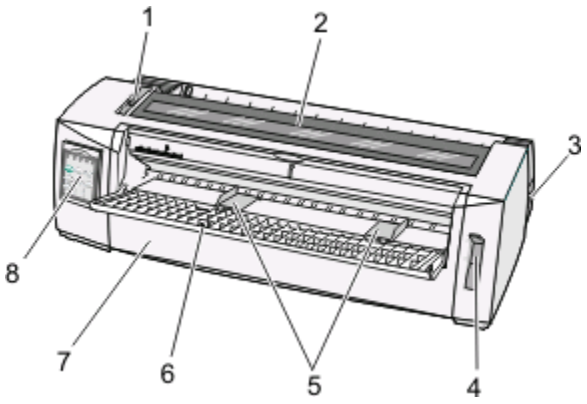
CAUTION—SHOCK HAZARD: Make sure that all external connections (such as Ethernet and telephone system connections) are properly installed in their marked plug-in ports.

Learning about the printer

Printer overview

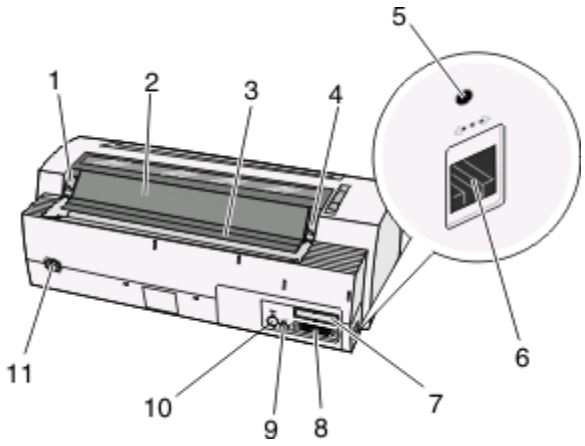
The Lexmark™ Forms Printer 2500 Series printers are available in 9- and 24-wire narrow- and wide-carriage models. Depending on the model you have chosen, your printer may look slightly different from the printer illustrated.

Printer front view



Part name	
1	Forms thickness lever
2	Ribbon access cover
3	Power switch
4	Paper select lever
5	Paper guides
6	Manual feeder
7	Front cover
8	Control panel

Printer back view



Part name	
1	Ribbon access cover latch
2	Acoustic flap
3	Tear off bar
4	Ribbon access cover latch
5	Recessed network button
6	Network connector **Warning—Potential Damage:** Do not touch the Network connector except when the printer is turned off.
7	Optional serial interface knockout
8	Parallel connector
9	USB connector
10	Optional Tractor 2 connector knockout
11	Power cord connector

Applying control panel overlays

The Lexmark Forms Printer 2500 Series printers have control panel overlays available in different languages.

Note: There is an overlay label for layer 1 of the control panel and a different overlay label for layer 2 of the control panel.

To apply an overlay in the language of your choice:

1. Peel the backing off of the layer 1 label, and then place the overlay directly over layer 1 of the control panel.
2. Open the control panel cover to access layer 2.
3. Peel the backing off of the layer 2 label, and then place the overlay directly over layer 2 of the control panel.
4. Close the control panel cover.

Understanding the printer features and functions

Printer features by model

Feature/function	2580/2581	2590/2591
Multi-speed printing		
FastDft (Fast Draft) • 10 characters per inch (cpi) • 12 cpi	• 440 characters per second (cps) • 520 cps	• 410 cps • 520 cps
Draft	309 cps	274 cps
Courier Gothic	77 cps (Near-Letter-Quality mode)	91 cps (Letter-Quality mode)
Character spacing **Note:** Fast Draft supports only 10, 12, and 15 pitch.	Prints in 10, 12, 15, 17, and 20 cpi, as well as proportional spacing	Prints in 10, 12, 15, 17, 20, and 24 cpi, as well as proportional spacing
Resident fonts	• Fast Draft • Draft • Gothic • Courier	• Fast Draft • Draft • Gothic • Courier • Prestige • Presentor • Orator • Script
Print styles **Note:** This feature is available through printer commands.	Highlighting capability: • Double-high • Double-strike • Double-wide • Emphasized • Italics • Overscore • Subscript • Superscript • Underline	Highlighting capability: • Double-high • Double-strike • Double-wide • Emphasized • Italics • Overscore • Subscript • Superscript • Underline • Shading • Outline
Graphics printing **Note:** This feature supports existing graphics programs.	Resolution of up to 144 x 240 dots per square inch (dpi)	Resolution of up to 360 x 360 dpi
Multiple-part forms	Prints original plus five copies (six-part forms)	Prints original plus three copies (four-part forms)

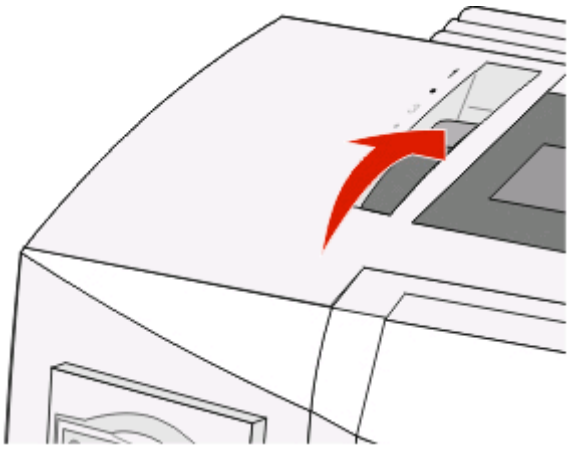
Feature/function	All models
Control panel	Button control for Load/Unload, Tear Off, Font, Setup, Pitch, Macro, and paper movement functions. Control panel lights indicate current status.
Font lock	• Locks the font selection you make from the control panel so it is not changed by your program. • Font lock is deactivated when you turn the printer off unless it is set in the printer default settings.
Pitch lock	• Locks pitch selections you make from the control panel so they are not changed by your program • Pitch lock is deactivated when you turn the printer off unless it is set in the printer default settings.
Load/Unload	Loads and unloads continuous form paper (tractor fed)
Macro function	The printer has the capability of storing four unique document formats to enhance flexibility when using different styles of pre-printed forms.
Manual front loading for cut sheets	Enables printing on cut sheets or envelopes
Tear Off bar	• Assists in removing printed continuous forms at the perforation • Assists in tearing non-perforated forms • Reduces the amount of paper used, thus reducing costs
Adjustable tractor	Lets you handle continuous form paper without purchasing additional options. It can be repositioned to function as: • Push tractor • Pull tractor
Control panel disable	Limits control panel functions to the Start/Stop, FormFeed, Tear Off, and Load/Unload buttons only, thus limiting the potential that untrained operators may accidentally change forms settings
Ribbon cartridge	Contains the inked fabric ribbon
Printer tests	• Power-on Self Test • Printer test page—Determines whether your machine has print problems • Demonstration Print
Box and line drawings	Prints tables, charts, and other graphics as shown on your computer screen
Greek and math symbols	Prints a variety of symbols used in mathematical equations, including subscript and superscript
Code pages	Selects the characters and symbols corresponding to various country languages

Feature/function	All models
Bar code function	These bar codes are resident in the printer: • 3 of 9 • Codabar (NW-7) • Code 39 • Code 128 • Interleaved 2 of 5 • UPC-A • UPC-E • EAN 8 • EAN 13 • PostNet **Note:** For more information on the Bar code function, see the *Technical Reference* available on the Lexmark Web site at **www.lexmark.com**.
Software compatibility	• Compatible with all programs that support IBM emulation or Epson emulation • Compatible with Okidata MICROLINE emulation (with the M320 turbo), which is standard on the 9-wire printer and 2580/2581 printer models.
Interface connection **Warning—Potential Damage:** Do not touch the Network connector except when the printer is turned off.	Allows the printer to work with all computers with compatible interface connections Both parallel and USB interfaces are standard. The internal serial interface (RS-232) is optional for the 2580/2581 and 2590/2591 models. The Network option is standard on the 2580n/2581n and 2590n/2591n models.

Printing a demonstration page

The following steps explain how to load a single sheet of paper so you can print a demonstration page.

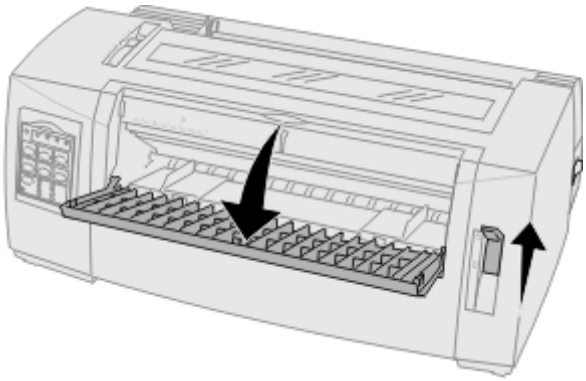
1 Set the forms thickness lever to position 1.



2 Turn the printer on.

The Power light comes on solid, the Paper Out light is blinking, and the current default font light is on solid.

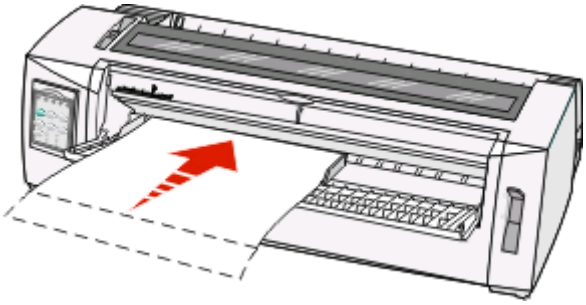
3 Open the manual feeder, and then move the paper select lever to the position.



4 Move the left paper guide to the right until it stops.

5 Insert a single sheet of paper into the front of the printer.

6 Adjust the right paper guide to fit the paper width.



7 Continue to push the paper into the printer until the Paper Out light stops blinking.

- If Auto Cut Sheet Load is set to On, the paper feeds automatically to the Top-Of-Form.
- If Auto Cut Sheet Load is set to Off, press **FormFeed**.

8 Turn the printer off.

9 While pressing **Font** on the control panel, turn the printer on.

Hold down the **Font** button until all the control panel lights blink.

10 Release the **Font** button.

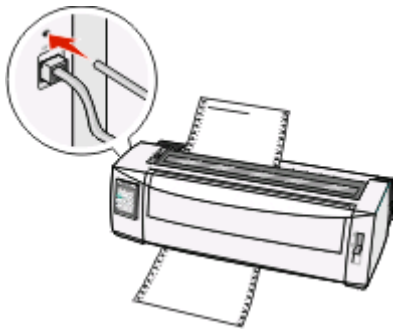
The Power and Ready lights stay on, and the demonstration page prints.

Printing a network setup page

If the printer is attached to a network, print a network setup page to verify the network connection and find the printer address.

Note: This function is disabled if a USB cable is connected.

1. Make sure the printer is on and paper is loaded.
2. With a paper clip or the tip of a pen, press the recessed button located just above the Network connection.



The network setup page prints.

Warning—Potential Damage: Do not touch the Network connector except when the printer is turned off.

3. Check the first section on the network setup page, and confirm that the status is **Connected**.

   If the status is **Not Connected**, the LAN drop may not be active, or the network cable may be malfunctioning. Consult a system support person for a solution, and then print another network setup page.

4. Check the network setup page to find the IP Address and the Fully Qualified Domain Name.

   The Fully Qualified Domain Name is useful in situations where the Address changes. For instance, the Address changes if the printer is moved; however, the Fully Qualified Domain Name does not change.

   Note: The network setup page also provides important network configuration information.

Printing from Windows or DOS

Windows

When printing from a Windows application, use the Windows Forms Printer 2500 Series driver available from the Lexmark Web site at **www.lexmark.com**.

DOS

Follow the instructions that came with your DOS application to see what printer drivers are supported for your level of DOS. Most applications let you specify the type of printer you are using so the application can take full advantage of the printer features.

Using IBM emulation mode

If the printer is using IBM mode (the factory default setting), select a printer from your program in the following preferred order.

For Lexmark Forms Printer 2580/2581 users:

1. Forms Printer 2580/2581
2. Forms Printer 2480/2481 plus
3. Forms Printer 2380/2381 plus
4. 2380 plus/2381 plus
5. 2380/2381 IBM Personal Printer Series™ II
6. 4201/4202 IBM Proprinter™ III
7. 4201/4202 IBM Proprinter II
8. IBM ExecJet™ Printer Model 4072

For Lexmark Forms Printer 2590/2591 users:

1. Forms Printer 2590/2591
2. Forms Printer 2490/2491
3. Forms Printer 2390 plus/2391 plus
4. 2390 plus/2391 plus
5. 2390/2391 IBM Personal Printer Series II
6. 4212 IBM Proprinter 24P
7. 2390 IBM PS/1 Printer
8. 4207/4208 Proprinter X24/XL24
9. IBM ExecJet Printer Model 4072
10. 2205 IBM PS/1 Printer

If your software does not allow you to select one of the printers in this list, you may need to customize your printer for Epson emulation mode.

Note: The printer driver you select in your program must match the emulation model you select for your printer. Printer drivers other than the 2500 series support most, but not all, of the printer capabilities.

Using Epson emulation mode

If the printer is using Epson mode, select a printer from your application in the following preferred order.

Note: The printer driver you select in your application must match the emulation mode you select for your printer. Printer drivers other than the 2500 series support most, but not all, of the printer capabilities.

For Forms Printer 2580/2581 users:

1. Epson FX850
2. Epson FX 1050

For Forms Printer 2590/2591 users:

1. Epson LQ850
2. LQ 1050

Using Okidata MICROLINE emulation mode

If the printer has the Okidata MICROLINE emulation option installed, select a printer from your application in the following preferred order.

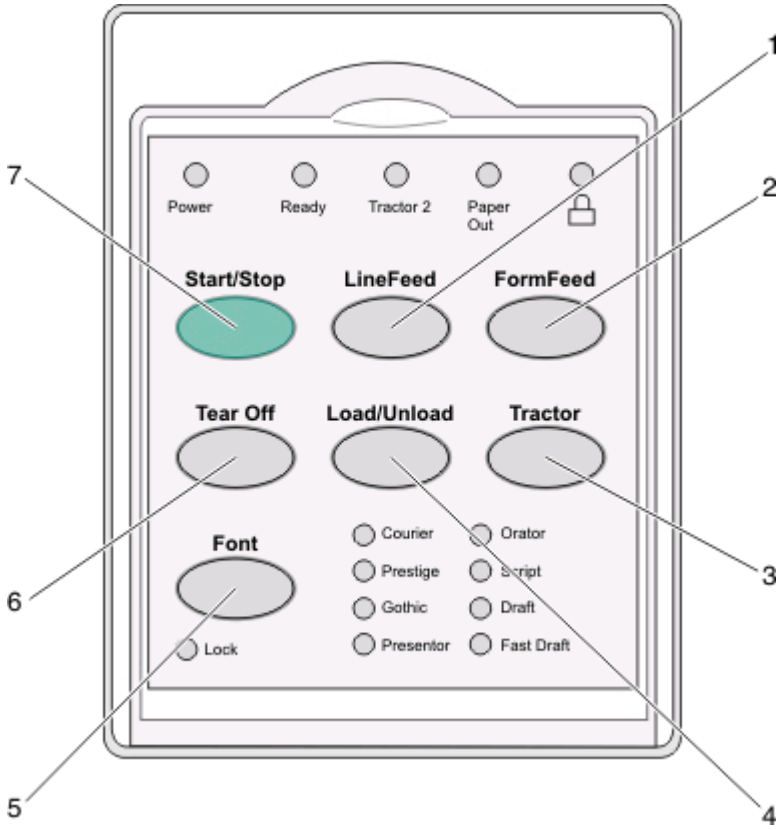
1. Oki 320/321 Turbo
2. Oki 320/321

Using the control panel

Understanding the control panel buttons

The control panel has two layers of functionality:

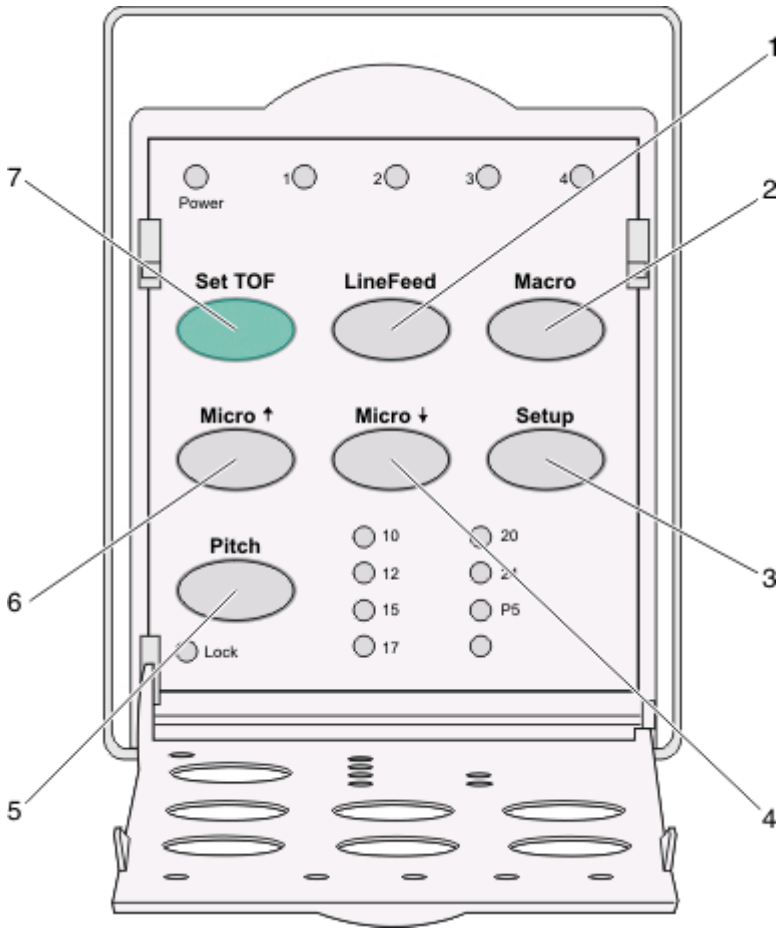
- Layer 1, with the control panel cover closed, contains basic functions like FormFeed, Tear Off, and taking the printer online/offline.
- Layer 2, with the control panel cover open, contains more advanced functionality. Use layer 2 to select a macro and change printer menu settings.



Layer 1 control panel buttons

Button		Function
1	LineFeed	Advances the paper one line
2	FormFeed	Advances the paper to the next Top-Of-Form
3	Tractor	Alternates between Tractor 1 and Tractor 2 if the optional Tractor 2 is installed
4	Load/Unload	Loads paper to the current Top-Of-Form or unloads paper to a parked position
5	Font	Selects one of the resident font styles **Note:** Repeatedly pressing the Font button cycles through the printer font selections. If you continue pressing Font through a second pass, the font selections will be locked.

Button		Function
6	Tear Off	Alternates the paper between Tear Off and Top-Of-Form
7	Start/Stop	Communicates the on/off status of the printer



Layer 2 control panel buttons

Button		Function
1	LineFeed	Advances the paper one line. Press and hold **LineFeed** to advance the paper 5 micro movements, and then go into continuous feed.
2	Macro	To support different styles of pre-printed forms, selects between four document formats
3	Setup	Press to enter Setup mode. Lets you change the default values and modes of printer operation.
4	Micro ↓	Feeds the paper downward in small incremental movements. Press and hold to select continuous feed.
5	Pitch	Sets the character pitch to: 10 cpi, 12 cpi, 15 cpi, 17 cpi, 20 cpi, or proportional spacing **Notes:** • On 2590/2591 models, you can also select 24 cpi. • Fast Draft supports only 10, 12, and 15 pitch.
6	Micro ↑	Feeds the paper upward in small incremental movements. Press and hold to select continuous feed.

Button		Function
7	Set TOF	Sets the Top-Of-Form, which is the position of the first print line on the page

Understanding the control panel lights

The following tables describe the light patterns on the control panel.

Layer 1 control panel lights

Light	Light status	What it means
Power	On	The printer is online.
Ready	On	The printer is online and ready to print.
	Blinking	The printer is receiving data.
	Off	The printer is offline.
Tractor 2	On	Tractor 2 is activated. **Note:** The optional Tractor 2 Feeder must be installed.
Paper Out	Off	Paper is loaded in the printer.
	Blinking	The printer is out of paper.
	On	A printer error has occurred.
	On	The control panel is locked, restricting the use of the following buttons: Start/Stop, FormFeed, Tear Off, and Load/Unload.
Font	On	One of the printer resident fonts is selected.
	Off	A downloaded font is selected.
Font Lock	On	Font Lock is active. Printer resident fonts are locked.

Layer 2 control panel lights

Light	Light status	What it means
Macro	On	The specified macro function is active.
	Off	No macro is being used, or Macros are disabled in the Setup menu.
Pitch	On	One of the printer resident pitches is selected.
Pitch Lock	On	Pitch Lock is active. Printer resident fonts are locked.

Setting the printer online or offline

The printer must be online to accept data.

- To set the printer online, press **Start/Stop**.

  The Ready light comes on. If paper is not loaded, the Paper Out light blinks. When online, the printer is ready to receive print jobs.
- To set the printer offline, press **Start/Stop**.

  The Ready light turns off. The printer finishes printing the current line and then stops. To resume printing, press **Start/Stop** until the Ready light comes on.

Advancing paper

Use these control panel buttons to advance the paper when the printer is not printing:

Note: When you are printing continuous forms, the first time you press LineFeed, it moves the paper from the Tear Off position to the current print line before advancing the paper.

- Press **LineFeed** to advance the paper to the next line.
- Press **FormFeed** to advance the paper to the Top-Of-Form on the next page or to eject the cut form.

To change the Tear Off position on the current page:

- Press **LineFeed** to move the paper incrementally.
- Press **Tear Off** to move the paper to the Top-Of-Form.

Using the Load/Unload function

Use the Load/Unload button to unload continuous forms from the printer to allow printing on either a cut form or an envelope.

The Load/Unload function works only when the tractor unit is in the push position.

You can also use the Load/Unload button to load continuous forms into the printer when the paper path is clear, or to change one type of pre-printed form to another.

Locking and unlocking the control panel

To restrict the use of printer functions to the Start/Stop, FormFeed, Tear Off, and Load/Unload buttons, lock the control panel. When the panel is locked, the light comes on.

To lock the control panel:

1. Turn the printer off.
2. Press and hold **Load/Unload** and **Tractor** while turning the printer on.

To unlock the control panel:

1. Turn the printer off.
2. Press and hold **Load/Unload** and **Tractor** while turning the printer on.

Selecting a Tractor mode

Note: Because this function unloads continuous forms from the currently selected tractor, tear off excess paper prior to initiating.

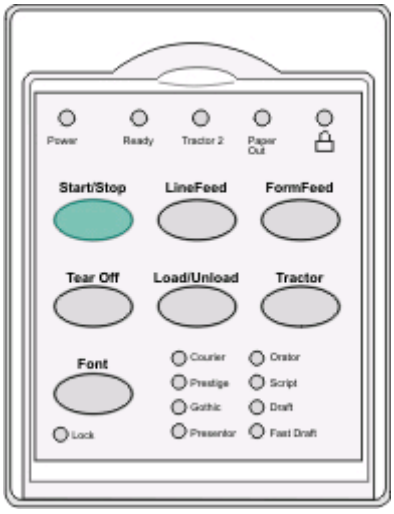
When the optional Tractor 2 Feeder is installed, you can press **Tractor** to unload the current continuous forms and switch to the continuous forms loaded in the other tractor source.

The Tractor 2 light comes on when the optional Tractor 2 Feeder is selected.

Selecting and locking a font

The printer data stream may contain control codes which select a particular font. To override the codes, you can select and lock a particular font of your choice.

1 To select a font, press **Font** repeatedly until you see the font light on next to the selection you want.



2 Continue pressing **Font** until the Font Lock light comes on, and the font you want is selected.

The font is locked until the printer is turned off.

Disabling Font Lock

1 To disable Font Lock, press **Font** repeatedly until the Font Lock light turns off and the font you want is selected.

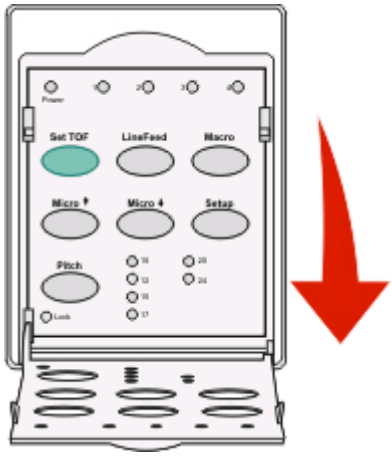
2 If the printer is offline, press **Start/Stop**.

The printer is ready to print when the Ready light comes on.

Selecting and locking a pitch

The printer data stream may contain control codes which select a particular pitch. To override the codes, you can select and lock a particular pitch of your choice.

1 To select a pitch, open the control panel to layer 2.



2 Press **Pitch** repeatedly until the pitch light comes on next to the pitch you want.

3 Continue pressing **Pitch** until the Pitch Lock light comes on and the pitch you want is selected.

The pitch is locked until the printer is turned off.

Disabling Pitch Lock

1 To disable Pitch Lock, press **Pitch** repeatedly until the Pitch Lock light turns off and the pitch you want is selected.

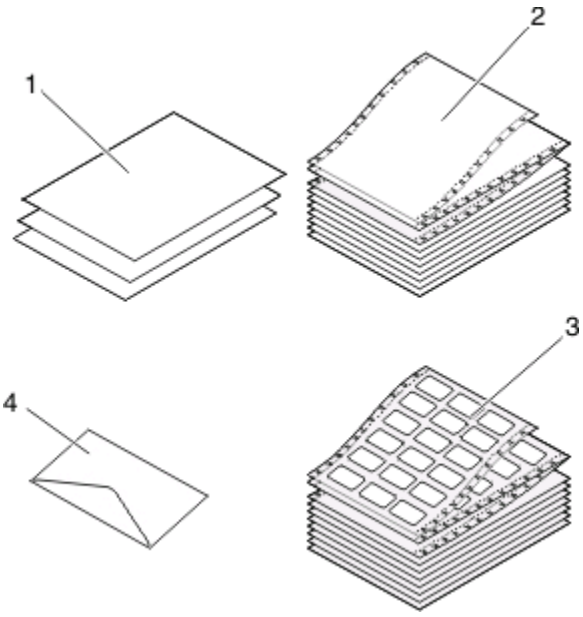
2 Close the control panel.

3 If the printer is offline, press **Start/Stop**.

When the Ready light comes on, the printer is ready to print.

Loading paper

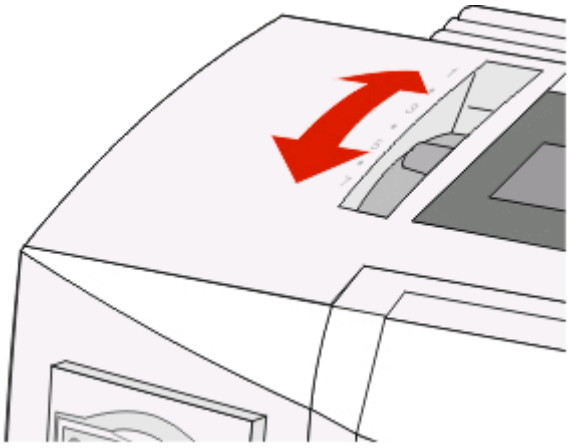
This section explains how to load continuous forms, cut sheet forms, labels and envelopes. It also includes information about paper orientation, setting the forms thickness lever, and using the push and pull tractors for different paper paths.



1	Cut sheet forms
2	Continuous forms
3	Envelopes
4	Labels

Setting the forms thickness lever

Use the forms thickness lever to make adjustments for printing on various forms depending on the paper thickness. When setting this lever, see one of the following tables depending on your printer model:



Forms thickness for 2580/2581

Paper type	Paper thickness	Paper weight	Forms thickness lever setting
Single forms (cut or continuous)	Thin	56 g/m^2 (15 lb) 65 g/m^2 (16 lb)	1
	Normal	68 g/m^2 (18 lb) 75 g/m^2 (20 lb)	1 or 2
	Thick	90 g/m^2 (24 lb)	2
Multiple-part forms		2-part 3-part 4-part 5-part 6-part	2 or 3 3 or 4 4 or 5 5 or 6 5, 6, or 7
Envelopes			4, 5, or 6

Notes:

- Print quality depends on the multiple-paper quality and the operating environment. Low-temperature printing may cause poor print quality, depending on the paper used.
- Printing speed becomes slower when the forms thickness lever setting is 4 or higher.

Forms thickness for 2590/2591

Paper type	Paper thickness	Paper weight	Forms thickness lever setting
Single forms (cut or continuous)	Thin	56 g/m^2 (15 lb) 65 g/m^2 (16 lb)	1
	Normal	68 g/m^2 (18 lb) 75 g/m^2 (20 lb)	1 or 2
	Thick	90 g/m^2 (24 lb)	2
Multiple-part forms		2-part 3-part 4-part 5-part 6-part	2 or 3 3 or 4 4 or 5 5 or 6 5, 6, or 7
Envelopes			4, 5, or 6

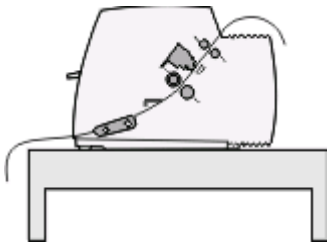
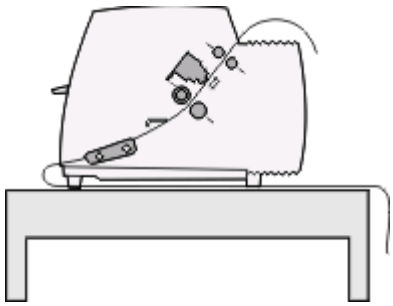
Note:

Print quality depends on the multiple-paper quality and the operating environment. Low-temperature printing may cause poor print quality, depending on the paper used.

Paper paths

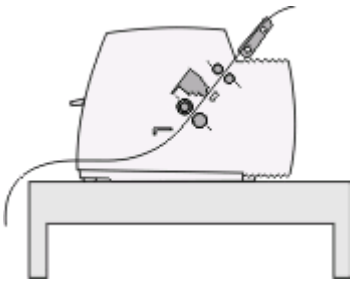
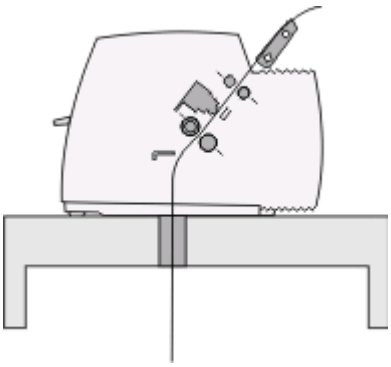
Paper paths for the push tractor

In these examples, the tractor pushes the paper from the front or the rear of the printer.

	
Front loading paper	Rear loading paper

Paper paths for the pull tractor

In these examples, the tractor pulls the paper from the front or the bottom of the printer.

	
Front loading paper	Bottom loading paper

Using the Tear Off function

Pressing the Tear Off button advances the perforation of a continuous form to the tear off position. You can set the Tear Off function to automatic or manual by adjusting the Auto Tear Off Setting in Setup mode:

- **On**—Sets the Tear Off function to move a continuous form automatically to the Tear Off position
- **Off**—Lets you move a continuous form manually to the Tear Off position

Note: On is the factory default setting.

Note: The Tear Off function works only when the tractor unit is in the push position, and the correct page length is set in the Setup menu or from your program. For more information, see “Using Setup mode” on page 48.

Setting the Tear Off position

When Auto Tear Off is set to On, it moves the top perforation of a continuous form to the Tear Off position when all of the following are true:

- The printer has finished printing.
- The paper has advanced to the Top-Of-Form on the next page.
- No data, printer control codes, or escape codes have been sent to the printer after advancing to the Top-Of-Form.
- The print buffer has not received data for one second.

If you have already set your Top-Of-Form and now want to change the Tear Off position, follow these steps:

1. Press **Start/Stop** to take the printer offline.
2. Press and hold **Tear Off** until the printer beeps.

   The light blinks.
3. Open the control panel cover to access layer 2.
4. Press **Micro** ↑ or **Micro** ↓ to move the paper to the desired Tear Off position.
5. Close the control panel cover.

   The printer beeps twice. The paper rolls backward, then goes to the new Tear Off position.
6. Press **Start/Stop**.

   The paper remains at the current Tear Off position until you send another job to the printer. The paper moves from the Tear Off position to the Top-Of-Form and begins printing.

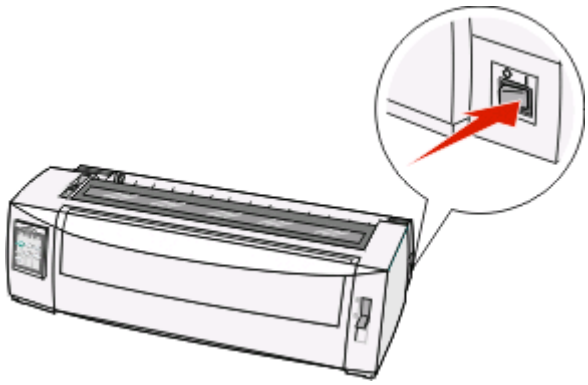
Loading continuous paper

Loading continuous forms using the push tractor

You can load continuous paper utilizing four different paper paths, depending on whether you have the push tractor installed or the pull tractor installed. The factory default setting for your printer is the push tractor position.

Note: If you have installed the optional Auto Sheet Feeder or Tractor 2, see the documentation that came with your option for paper loading instructions.

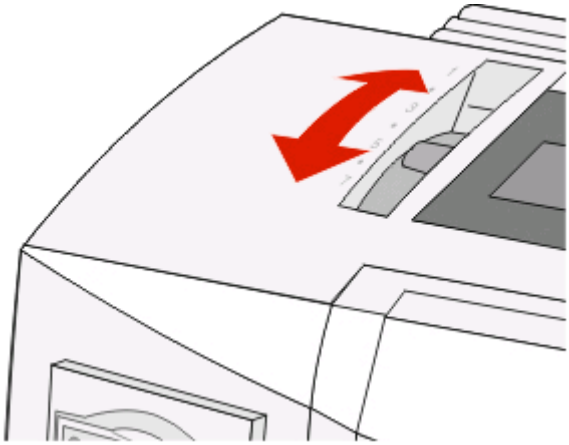
1. Turn the printer on.



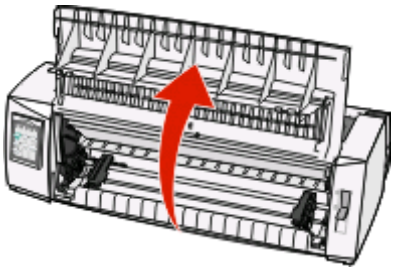
2 Make sure the paper path is clear.

Note: If a cut form or envelope is loaded in the printer, press **FormFeed** to remove it.

3 Set the forms thickness lever to a setting corresponding with the paper thickness you are using.

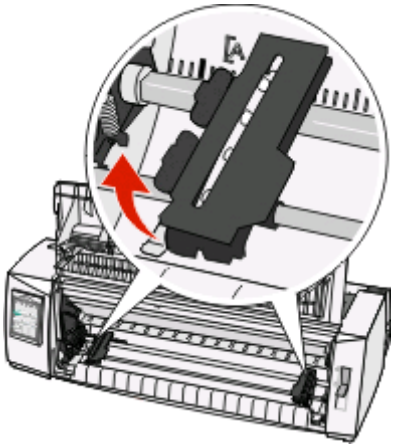


4 Pull the front cover up.

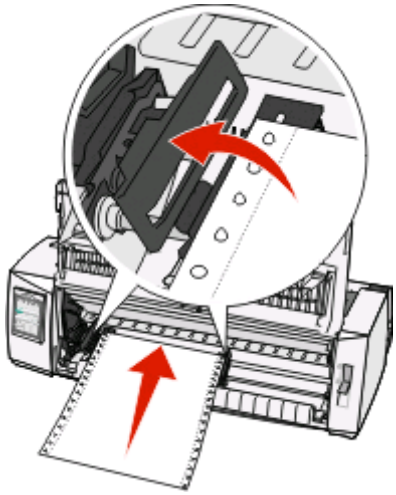


5 Move the paper select lever down to the position.

6 Pull the left and right tractor locking levers up to unlock the tractors.



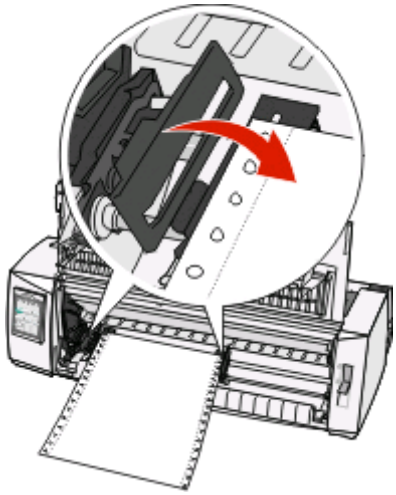
7 Open the left and right tractor doors, and then place the paper holes over the second or third pins of the tractor unit.



If necessary, move the left or right tractor to adjust the tractors to the paper width.

Note: Keeping the left tractor positioned to the left of the rubber tractor stop keeps your paper within the paper sensor area.

8 Close the left and right tractor doors.



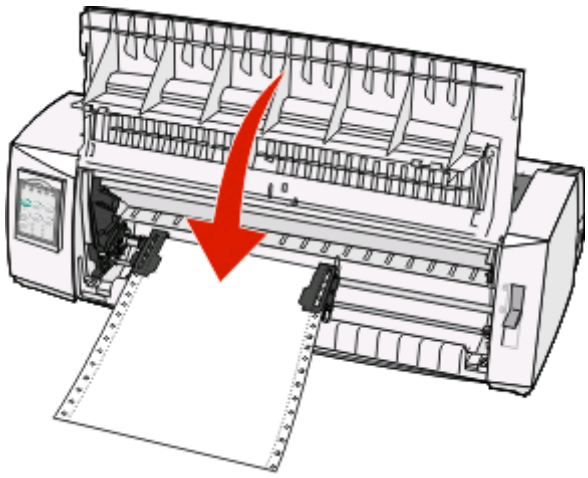
9 Move the tractor to align the left margin on your paper with the **[A** symbol printed on the rear plate.

Note: The distance from the **[A** symbol to the left edge of the paper determines the width of the left margin.

10 Push the left tractor locking lever down to lock the tractor in place.

11 Remove slack from the paper, and then lock the right locking lever.

12 Close the front cover.



13 Press **Start/Stop** to load the paper to Top-Of-Form and put the printer online.

If Auto Tear Off is set to On, the printer moves the paper to the Tear Off bar.

Note: When you use the push tractor to print continuous forms, line spacing within the first 1.5 inches of the first form may not be uniform.

Front loading continuous forms using the pull tractor

Make sure the tractor is in the pull position.

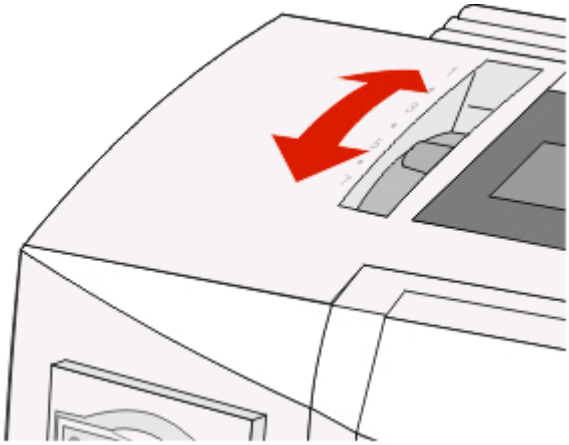
Note: If you have installed the optional Auto Sheet Feeder or Tractor 2, see the documentation that came with your option for paper loading instructions.

1 Turn the printer on.

2 Make sure the paper path is clear.

Note: If a cut form or envelope is loaded in the printer, press **FormFeed** to remove it.

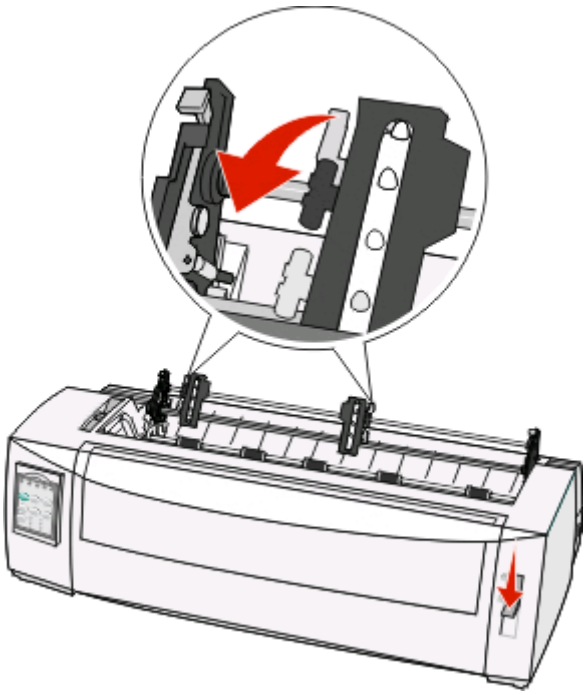
3 Set the forms thickness lever to a setting corresponding with the paper thickness you are using.



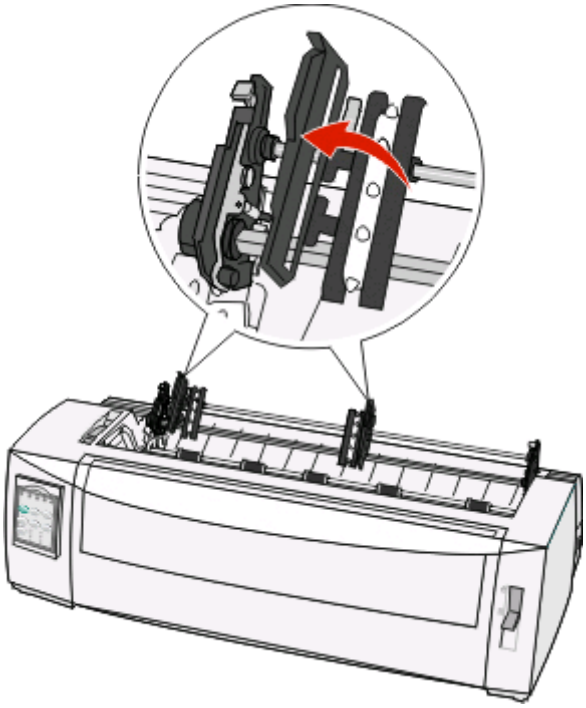
4 Remove the ribbon access cover.

5 Move the paper select lever down to the position.

6 Pull the left and right tractor locking levers up to unlock the tractors.



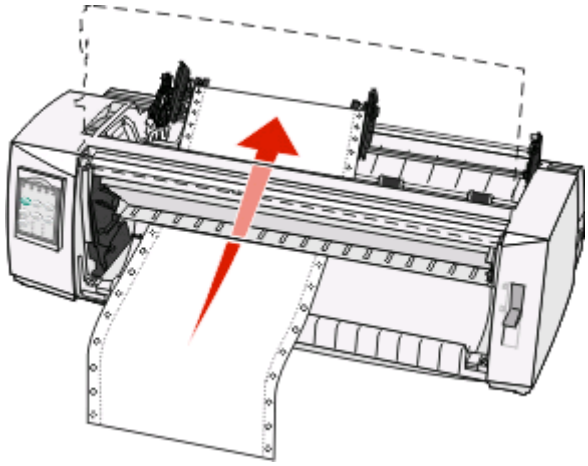
7 Open the left and right tractor doors.



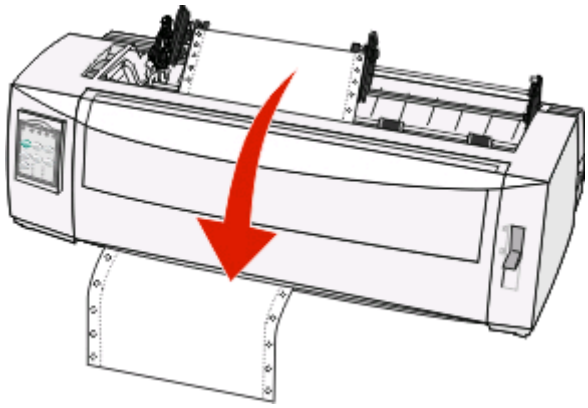
8 Open the front cover.

9 Insert paper into the front of the printer between the metal and plastic plates.

Push or pull the paper through the paper path until it passes the printhead.



10 Close the front cover.



11 Place the paper holes over the tractor pins.

If necessary, move the left or right tractor to adjust the tractors to the paper width.

Note: If you have trouble moving the right tractor to the paper width, roll the rubber tractor stop out of the seated position. Move the tractor to the paper width, load the paper, and then lock the right tractor.

12 Close the left and right tractor doors.

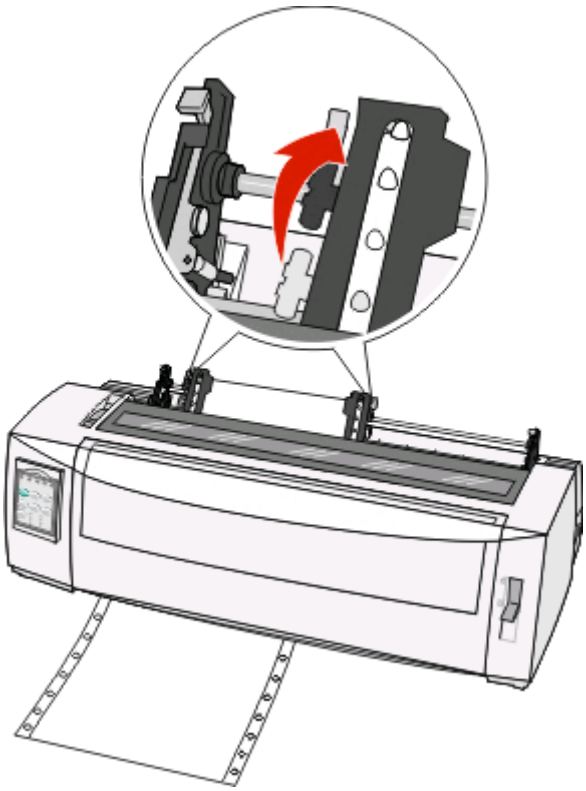
13 Replace the ribbon access cover.

14 Move the tractor to align the left margin on the paper with the **[A** symbol printed on the rear plate.

Note: The distance from the **[A** symbol to the left edge of the paper determines the width of the left margin.

15 Push the left tractor locking lever down to lock the tractor in place.

16 Remove slack from the paper, and then lock the right locking lever.



17 Open the control panel cover to access layer 2.

18 Press **Micro ↑**, **Micro ↓**, or **LineFeed** to move the paper to the Top-Of-Form you want to use.

Notes:

- Use the second form to set Top-Of-Form alignment.
- To do this, align the horizontal lines (located on the platen) with the Top-Of-Form you want.

19 Press **Set TOF** to set the Top-Of-Form.

Note: Top-Of-Form is not saved if the printer is turned off or runs out of paper when using the pull tractor.

20 Make sure the printer is online, and the Ready light is on solid.

Note: If not, press **Start/Stop** until the Ready light is on solid.

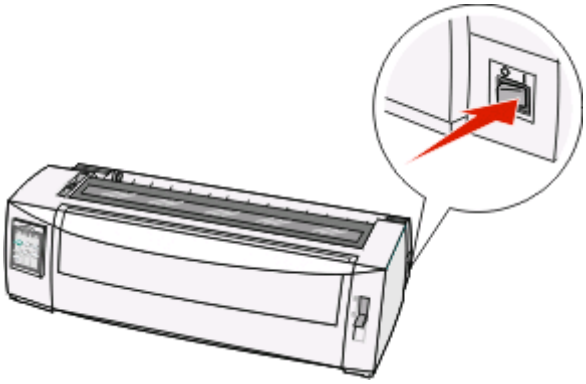
Bottom loading continuous forms using the pull tractor

Notes:

- Make sure the tractor is in the pull position.
- Use a furniture type with a paper-feed opening in the middle of it.
- Because the printer uses a pull function for bottom loading, it is especially useful for paper that has a tendency to curl, is very heavy, or is very light weight.

Note: If you have installed the optional Auto Sheet Feeder or Tractor 2 Feeder, see the documentation that came with the option for paper loading instructions.

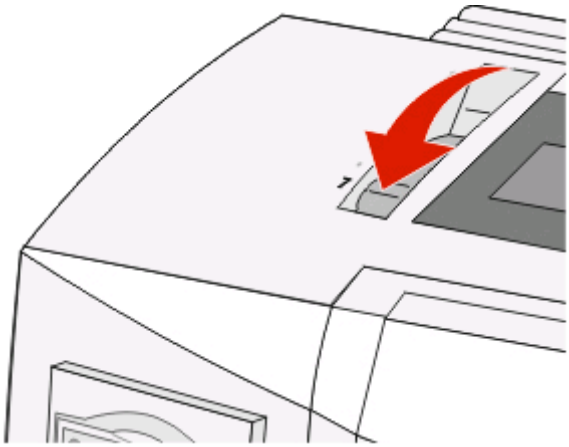
1 Turn the printer on.



2 Make sure the paper path is clear.

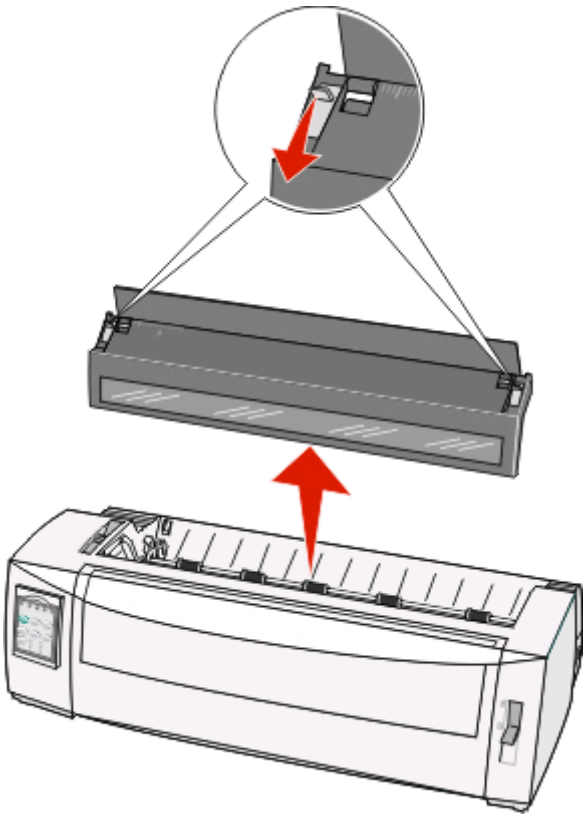
Note: If a cut form or envelope is loaded in the printer, press **FormFeed** to remove it.

3 Set the forms thickness lever to 7.

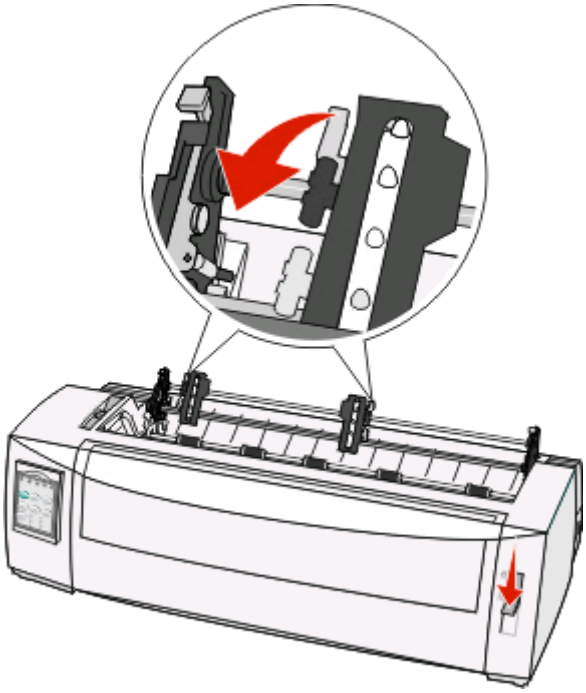


4 Move the paper select lever down to the position.

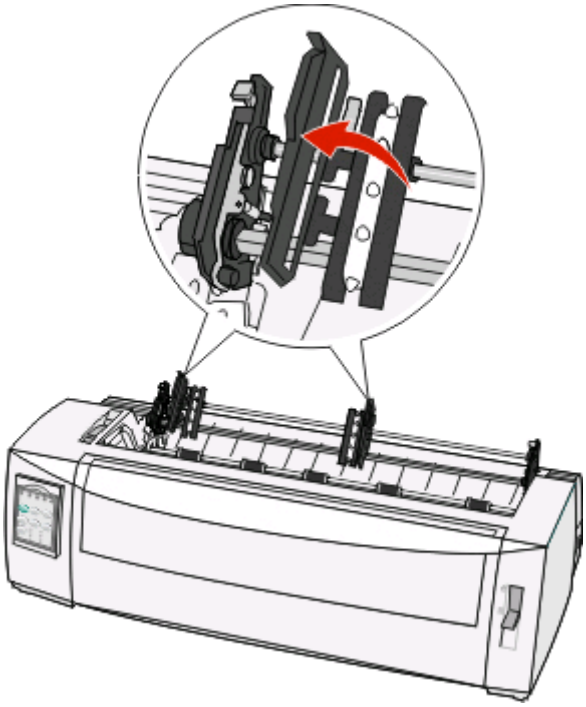
5 Remove the ribbon access cover.



6 Pull the left and right tractor locking levers up to unlock the tractors.



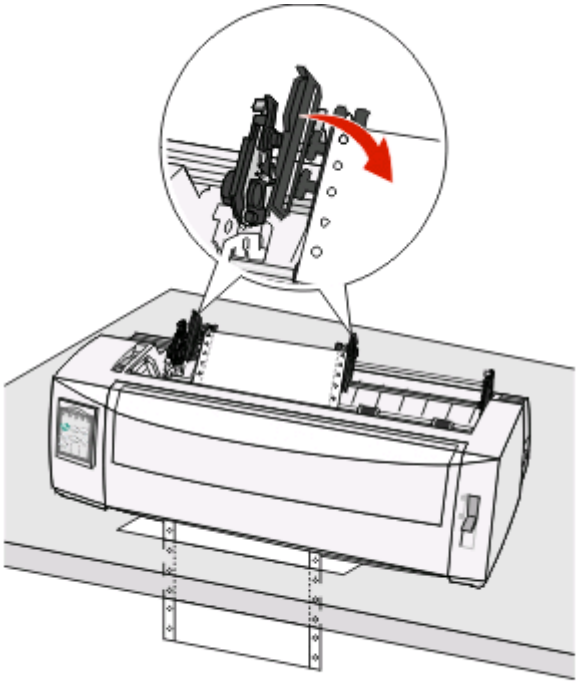
7 Open the left and right tractor doors.



8 Insert the paper through the bottom slot of the printer.

Push or pull the paper through the paper path until it passes the printhead.

9 Place the paper holes over the tractor pins.



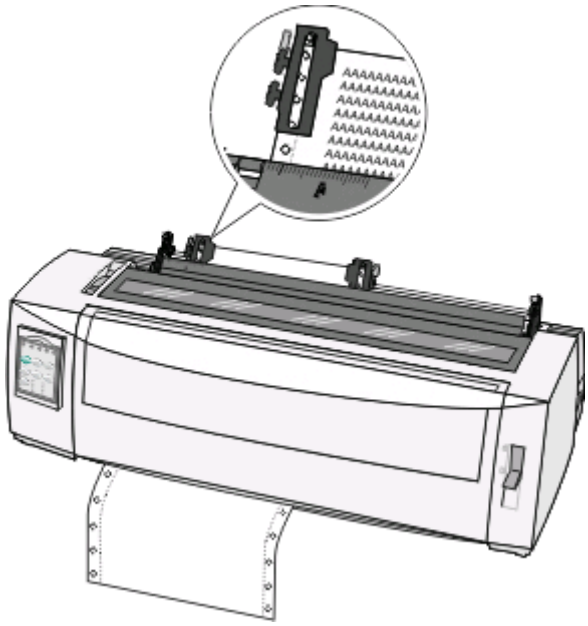
If necessary, move the left or right tractor to adjust the tractors to the paper width.

Note: If you have trouble moving the right tractor to the paper width, roll the rubber tractor stop out of the seated position. Move the tractor to the paper width, load the paper, and then lock the right tractor.

10 Close the left and right tractor doors.

11 Replace the ribbon access cover.

12 Move the tractor to align the left margin on the paper with the **[A** symbol printed on the rear plate.



Note: The distance from the **[A** symbol to the left edge of the paper determines the width of the left margin.

13 Push the left tractor locking lever down to lock the tractor in place.

14 Remove slack from the paper, and then lock the right locking lever.

15 Open the control panel cover to access layer 2.

16 Press **Micro ↑**, **Micro ↓**, or **LineFeed** to move the paper to the Top-Of-Form you want to use.

17 Press **Set TOF** to set the Top-Of-Form.

Note: Top-Of-Form is not saved if the printer is turned off or runs out of paper when using the pull tractor.

18 Make sure the printer is online, and the Ready light is on solid.

Note: If not, press **Start/Stop** until the Ready light is on solid.

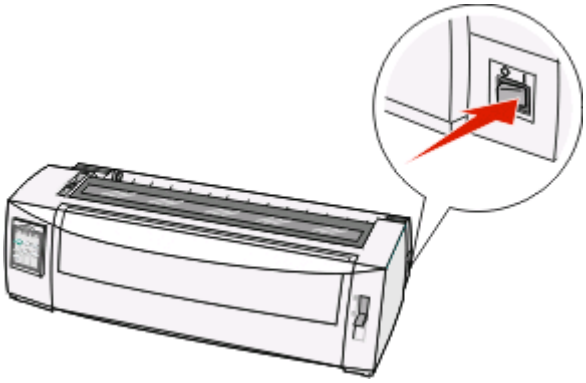
Loading cut forms

Cut forms can be single sheets, envelopes, or multiple-part forms. They are placed one at a time into the manual feeder.

Loading a cut form or envelope manually

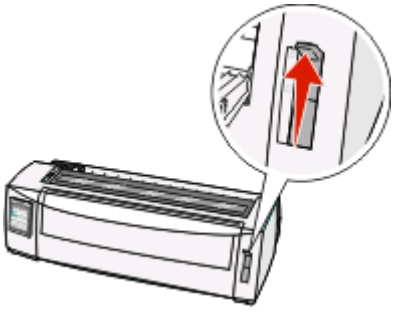
Note: If you have installed the optional Auto Sheet Feeder or Tractor 2 Feeder, see the documentation that came with the option, for paper loading instructions.

1. Turn the printer on.

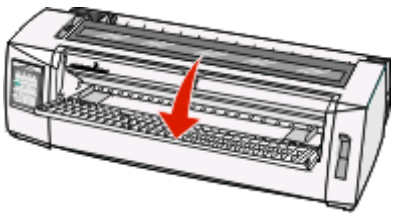


2. Make sure the paper path is clear.
3. If continuous forms are currently loaded, tear off the leading edge of the continuous form, and then press **Load/Unload** to park the continuous forms.

   The Paper Out light blinks.
4. Set the forms thickness lever to a corresponding setting for the type of paper you are using.
5. Move the paper select lever up to the position.

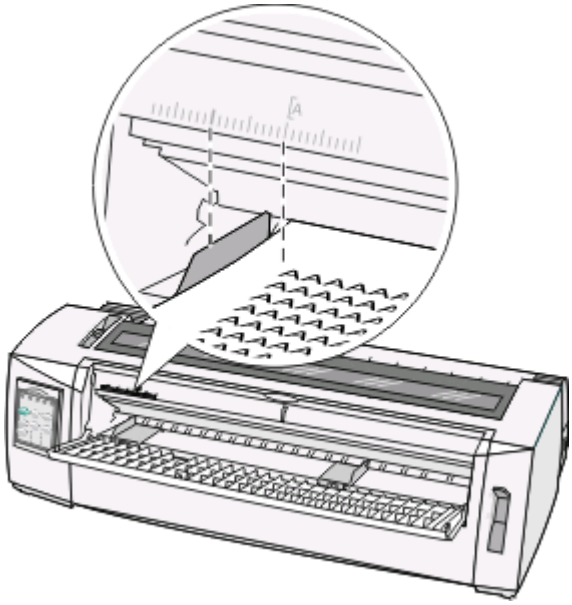


6. Open the manual feeder.



7 Move the left paper guide so that the print start position you want aligns with the **[A** symbol printed on the margin guide.

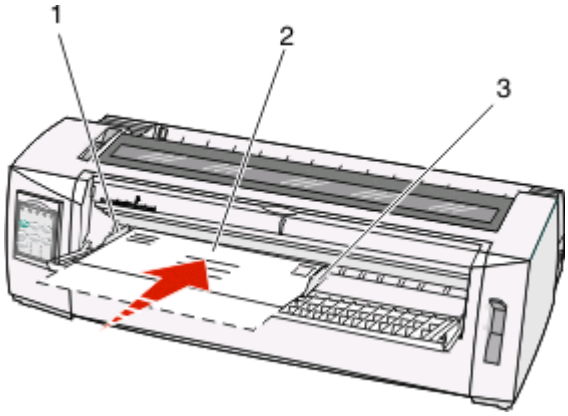
The distance from the left paper guide to the **[A** symbol determines the width of the left margin.



8 Place a cut form or an envelope against the left paper guide.

Note: If you are loading a preprinted form or envelope, put the top edge in first with the printed side up.

9 Move the right paper guide so the guide aligns with the right edge of the cut form or envelope.



1	Left paper guide
2	Cut form or envelope
3	Right paper guide

10 Insert the cut form or envelope into the printer until the Paper Out light stops blinking.

Notes:

- If Auto Cut Sheet Load is set to On, the paper feeds automatically to the Top-Of-Form.
- If Auto Cut Sheet Load is set to Off, press **FormFeed**.

11 Make sure the printer is online, and the Ready light is on solid.

Note: If not, press **Start/Stop** until the Ready light is on solid.

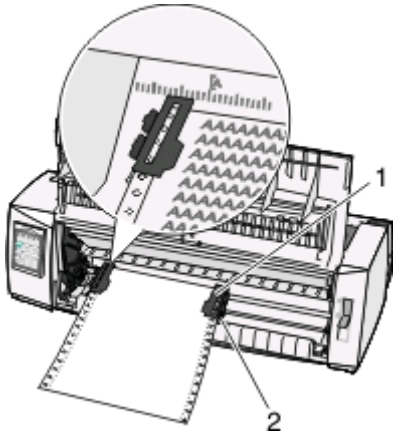
Aligning the left margin

You can manually change the first print position at the left margin. The first print position is indicated by the **[A** symbol. You can also set the left margin in your program.

Notes:

- Setting the left margin in your program adds that amount to the left margin setting on the printer. For example, if you set the left margin at one inch on the printer, and also have the left margin set at one inch in your program, the printer begins printing two inches from the left edge of the page.
- The location of the **[A** symbol depends on the position of the tractor unit.
- For the purposes of these instructions, the tractor is shown in the push position with continuous paper.

1 Locate the left margin for continuous forms by locating the **[A** symbol on the printer.



1	Tractor (in push position)
2	Right locking lever

2 Continue to load paper utilizing different paper paths, depending on whether you have the push tractor installed or the pull tractor installed. For help, see one of the following sections in this chapter:

- "Loading continuous forms using the push tractor" on page 26
- "Front loading continuous forms using the pull tractor" on page 29
- "Bottom loading continuous forms using the pull tractor" on page 32
- "Loading a cut form or envelope manually" on page 37

Setting Top-of-Form

Top-of-Form sets the first line of print. Use the control panel to save your Top-of-Form settings for continuous forms, cut forms, and for each macro enabled.

Setting Top-Of-Form for continuous forms in push mode

1. Clear the paper path.

   The Paper Out light blinks if no paper is loaded. If the Paper Out light is off, tear off excess forms, and then press **Load/Unload**. If a cut form is loaded, press **FormFeed** to clear the paper path.

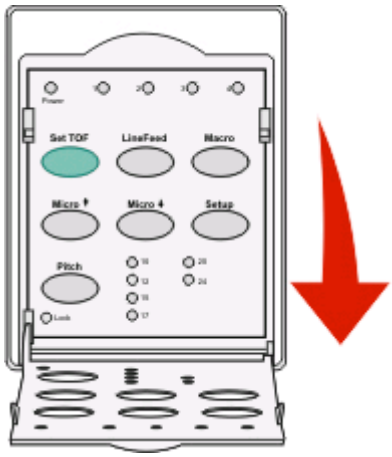
2. Make sure the paper select lever is in the position.

3. Load continuous form paper on the push tractor feed pins (or the Tractor 2 feed pins if you are using the optional Tractor 2 Feeder).

4. Press **FormFeed**.

   The paper moves to the current Top-Of-Form, and the Paper Out light goes off.

5. Open the control panel cover to access layer 2.



6. Press any paper movement button (**LineFeed**, **Micro**↑, **Micro**↓) to align the horizontal lines located on the platen with the Top-Of-Form you want.

   Note: If you press and hold a paper movement button, the paper advances in micro movements and then goes into continuous feed.

7. Press **Set TOF** to set and save your Top-Of-Form.

8. Close the control panel cover.

9. To verify the new Top-Of-Form, press **Load/Unload** to unload the continuous forms paper, and then press **FormFeed** to reload the continuous forms paper.

   The continuous forms paper loads to the current Top-Of-Form setting.

10. Press **Start/Stop** to set the printer online.

    Note: If Auto Tear Off is set to On, the paper will advance to the Tear Off position. Sending a print job or pressing **Tear Off** returns the paper to the current Top-Of-Form.

Setting Top-Of-Form for continuous forms in pull mode

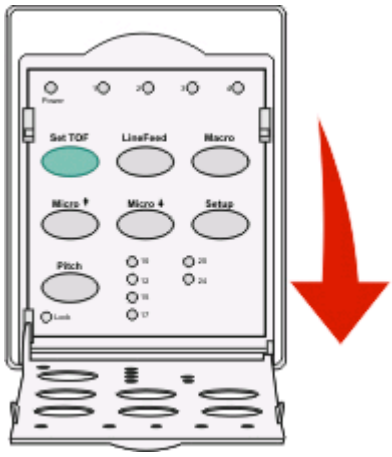
1. Turn the printer on.

   The Paper Out light blinks if no paper is loaded.

2. Move the paper select lever down to the position.

3. Load continuous form paper on the pull tractor feed pins.

4. Open the control panel cover to access layer 2.



5. Press any paper movement button (**Micro** , **Micro** , or **LineFeed**) to move the paper to the Top-Of-Form position.

   Note: Use the second sheet of continuous forms paper to set Top-Of-Form.

6. Press **Set TOF** to set and save Top-Of-Form.

7. Close the control panel cover.

   Note: Top-Of-Form is not saved if the printer is turned off or runs out of paper when the printer is in pull tractor mode.

8. Press **Start/Stop** to set the printer online.

Setting Top-Of-Form for a cut form or an envelope

Top-Of-Form can range from minus one inch to plus 22 inches from the top of a cut form.

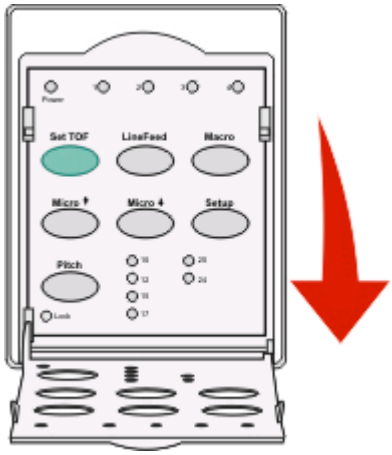
1. Clear the paper path.

   The Paper Out light blinks if no paper is loaded. If the Paper Out light is off, tear off excess forms, and then press **Load/Unload**. If a single form is loaded, press **FormFeed** to clear the paper path.

2. Move the paper select lever up to the position.

3. Load a cut sheet of paper or an envelope through the manual feeder.
   - If Auto Cut Sheet is set to On, the printer will move the paper or envelope to the current Top-Of-Form.
   - If Auto Cut Sheet is set to Off, press **FormFeed** when the Paper Out light goes off.

4 Open the control panel cover to access layer 2.



5 Press any paper movement button (**Micro ↑**, **Micro ↓**, **LineFeed**) to align the horizontal lines located on the platen with the Top-Of-Form you want.

Note: If you press and hold a paper movement button, the paper will advance in micro movements and then go into continuous feed mode.

6 Press **Set TOF** to set and save your Top-Of-Form.

7 Close the control panel cover.

8 Press **Start/Stop** to put the printer online.

Setting Top-Of-Form in a macro

Each macro has a separate Top-Of-Form setting. To set Top-Of-Form in a macro, you must first select that macro.

1 Open the control panel cover to access layer 2.

2 Press **Macro** to select the macro you want to use.

Note: The procedure for setting Top-Of-Form depends on the paper and print mode you are using. For help, see one of the following sections in this chapter:

- "Setting Top-Of-Form for continuous forms in push mode" on page 40
- "Setting Top-Of-Form for continuous forms in pull mode" on page 41
- "Setting Top-Of-Form for a cut form or an envelope" on page 41

Paper and specialty media guide

Paper types and sizes supported by the printer

The printer supports paper weights of 56–90 g/m^2 (15-24 lb) and envelope weights of 75–90 g/m^2 (20-24 lb).

Width

Paper types	Single	Multiple part	Envelopes
Cut Forms	76 mm (3.0 in.) to 297 mm (11.7 in.)*	76 mm (3.0 in.) to 297 mm (11.7 in.)*	152 mm (6.0 in.) to 241 mm (9.5 in.)
Continuous Forms	76 mm (3.0 in.) to 254 mm (10.0 in.)	76 mm (3.0 in.) to 254 mm (10.0 in.)	Not applicable
Hole-to-hole widths	63 mm (2.5 in.) to 241 mm (9.5 in.)	63 mm (2.5 in.) to 241 mm (9.5 in.)	Not applicable
* When the optional Auto Sheet Feeder or the Tractor 2 Feeder is installed, the cut form maximum width is 215 mm (8.5 in.) for manual loading.			

Length

Paper types	Single	Multiple part	Envelopes
Cut Forms	76 mm (3.0 in.) to 559 mm (22.0 in.)	76 mm (3.0 in.) to 559 mm (22.0 in.)	110 mm (4.1 in.) to 152 mm (6.0 in.)
Continuous Forms	76 mm (3.0 in.) (no maximum)	76 mm (3.0 in.) (no maximum)	Not applicable

Thickness

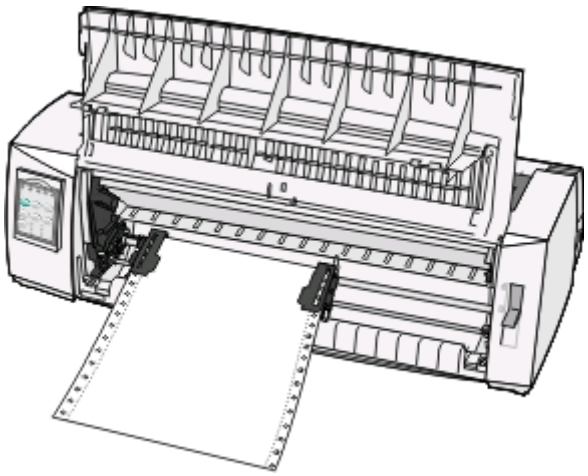
Paper types	Single	Multiple part	Envelopes
Cut Forms	0.058 mm (0.0023 in.) to 0.114 mm (0.0045 in.)	See the following note.	0.42 mm (0.017 in.)
Continuous Forms	0.058 mm (0.0023 in.) to 0.114 mm (0.0045 in.)	See the following note.	0.42 mm (0.017 in.)
Note: For 2580/2581 printers, the maximum thickness of multiple part forms is 0.512 mm (0.0202 in.). For 2590/2591 printers, the maximum thickness is 0.36 mm (0.015 in.).			

Changing tractor positions

The tractor unit can be installed in the push tractor position or the pull tractor position. This section describes how to change the tractor unit position.

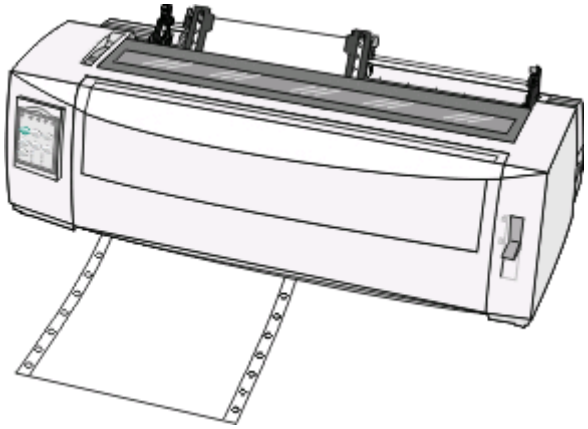
Push tractor position

The printer comes with the tractor unit installed in the push tractor position, at the front of the printer. Using the front push tractor is the most convenient way to load continuous forms, and allows you to use the Tear Off feature of the printer.



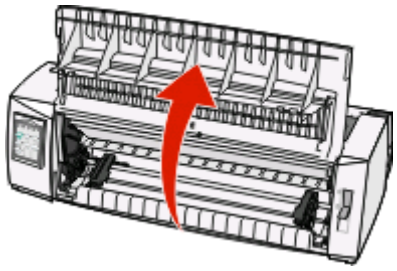
Pull tractor position

The front tractor unit can be removed and installed at the top of the printer. It then functions as a pull tractor and supports front and bottom paper loading.

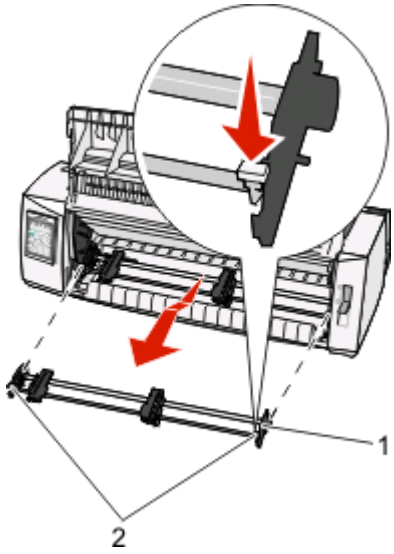


Converting the push tractor to pull tractor position

1. Make sure the printer is off.
2. Make sure paper is not loaded in the printer.
3. Pull the front cover up and out of the way.

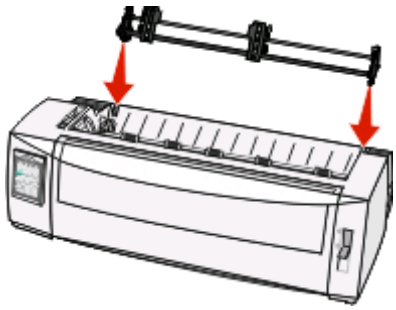


4. Hold down the latching levers while you lift and pull the tractor unit out of the printer.



1	Tractor unit
2	Latching levers

5. Remove the ribbon access cover.
6. Turn the tractor unit around so that the latching levers are upright, facing you.
7. Place the tractor against the back slant of the printer along the tractor guides.

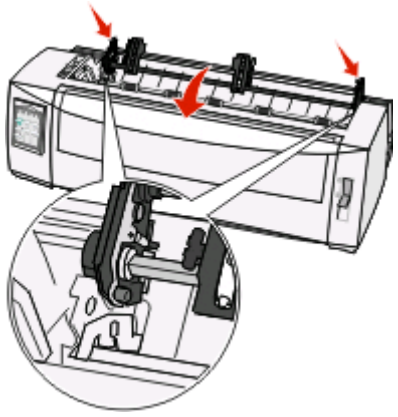


Changing tractor positions

8 To slide the tractor feeder into the printer:

a Hold down the latching levers and gently push the tractor feeder into the printer until it stops.

b Continue holding down the latching levers, and tilt the tractor feeder toward the front of the printer until the hooks at the end of the latching levers fit around the posts on the printer frame.



c Release the latching levers.

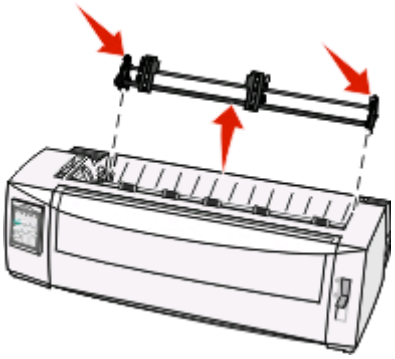
Note: The tractor unit fits into place at a 40° angle.

Converting the pull tractor to push tractor position

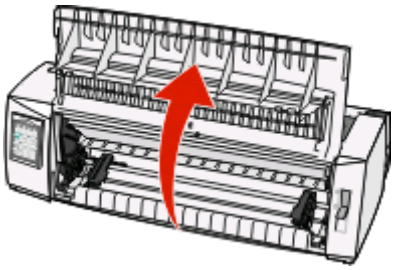
1 Make sure the printer is off.

2 Make sure paper is not loaded in the printer.

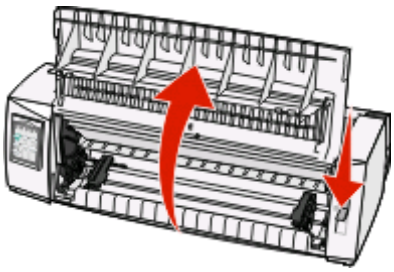
3 Hold down the latching levers while you lift and pull the tractor unit out of the printer.



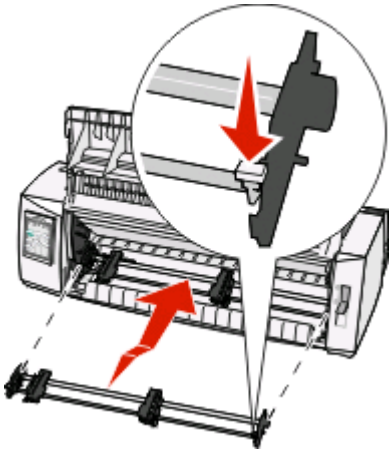
4 Pull the front cover up and out of the way.



5 Make sure the paper select lever is set to the position.



6 While holding down the latching levers, fit the left and right locks onto the posts in the printer.



7 Release the latching levers.

8 Close the front cover.

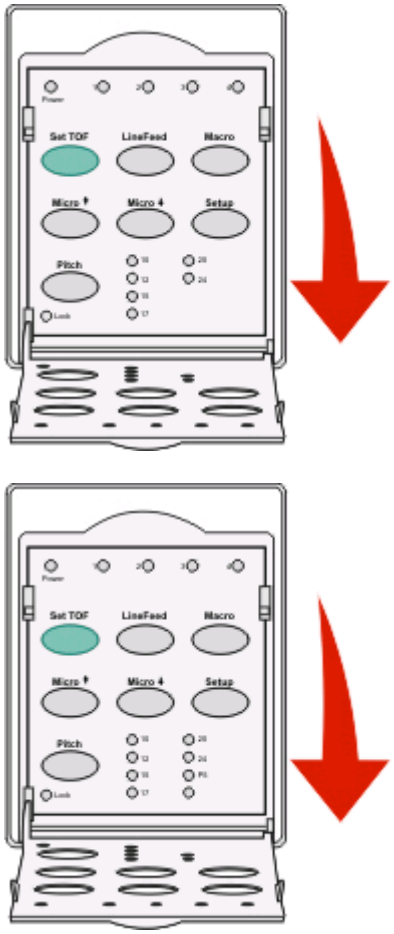
Understanding Setup mode and menu options

The printer is preset at the factory for font, pitch, form length, and other settings. These are called factory default settings. This chapter describes how to change the factory default settings, how to set up macros, and how to set form length.

Using Setup mode

Note: Make sure continuous forms are loaded in the printer when using Setup mode.

1 Open the control panel to access layer 2.



2 Press **Setup** to put the printer in Setup mode and print the Main menu.

3 Press **LineFeed** to print a list of available options you can change.

Printer Setup mode—Main menu

To Select	Press
Exit and Save Setup	Set TOF
Print All	LineFeed
Forms Macro Options	Macro
Data Options	Micro ↑
Control Options	Micro ↓
Emulation Options	Setup
Interface Options	Pitch

4 Select any option from the Main menu by pressing the corresponding button.

Note: A new menu will print each time you press a button, displaying the new selection.

5 After you make all your selections, the printer will print a page with your changes reflected.

6 Press **Set TOF** until the printer returns to the Main menu, or press **Pitch** from any menu containing a **Return to Main menu** selection.

7 Press **Set TOF** again to exit Setup mode.

New settings are saved only when the printer exits Setup mode.

Note: If the printer runs out of paper while you are using Setup mode, load more paper into the Tractor pins, and then press **Setup** to continue.

Changing menu settings (an example)

Note: Make sure continuous forms are loaded in the printer when using Setup mode.

The following is an example of how to change the Menu Language setting.

1 With the printer in Setup mode, press **Micro** ↓ to print the Control Options menu.

2 Press **Pitch** to print more Control Options.

Control Options	Current	Press
Return to Main menu	Off	Set TOF
Uni-Dir Printing	On	LineFeed
Auto Ready Cut Sheet	Enabled	Macro
Paper Out Alarm	Enabled	Micro ↑
Bi-Di alignment		Micro ↓
Demo Print		Setup
(More)		Pitch

3 To change the Menu Language, press **Macro**.

Control Options	Current	Press
Return to Main menu	English	Set TOF
Return to previous page	Enabled	LineFeed
Menu Language		Macro
TOF Read		Micro ↑
Quiet		Micro ↓

4 Press the button that corresponds to the language you want, or press **Setup** to print more Menu Language options.

5 For this example, press **Macro** to select French.

Menu Language	
To Select	**Press**
No Change	Set TOF
English	LineFeed
French	Macro
German	Micro ↑
Italian	Micro ↓
(More)	Setup
Return to Main menu	Pitch

Printer menus now print in French.

6 Press **Pitch** to return to the Main menu or press **Set TOF** (No Change) to go back one menu and change another setting.

7 If you return to the Main menu, press **Set TOF** to exit Setup mode and save the new setting.

Notes:

- New settings are saved only when the printer exits Setup mode.
- If the printer runs out of paper while you are using Setup mode, load more paper into the Tractor pins, and then press **Setup** to continue.

Setup Mode - Main menu

Main menu options

Note: Use Setup mode to configure the printer according to your needs. To print a list of all default settings, press **LineFeed** from the Main menu.

The following list items will appear at the top of the Main menu page:

Forms Macro Options

Forms Macro Options customizes macros to print a variety of forms.

Data Options

Data Options defines how information sent to the printer is processed.

Control Options

Control Options define how the printer performs many basic tasks.

Emulation Options

Emulation Options determine how the printer interacts with the program.

Interface Options

Interface Options define how information is transferred from the computer to the printer.

Forms Macro options

Note: Use Setup mode to configure the printer according to your needs. To print a list of all default settings, press **LineFeed** from the Main menu.

The following list items outline and explain the Forms Macro functions and settings you can use with the printer:

Default Macro

Default Macro lets you select the macro default you want when the printer is powered on. Select Disabled if you do not want to use a macro as the default.

Note: Enabled is the factory default setting.

Character options

Use the following options to select character option changes, as detailed:

- **Default Font**—Select the font you want from the available fonts listed.
- **Font Lock**—Select Yes to set Font Lock as the default even after the printer has been turned off and back on.
- **Default Pitch**—Select the pitch you want as the default from the available pitches listed.

  Note: Not all pitches are available in all fonts.
- **Pitch Lock**—Select Yes to set Pitch Lock as the default even after the printer has been turned off and back on.
- **Code Page**—Select one of the following code pages for different language sets: 437, 850, 858, 860, 861, 863, 865, 437G, 813, 851, 853T, 857, 869, 920, 1004, or 1053.

Notes:

- Eastern European, Baltic, and Middle Eastern language code page configurations can be selected by holding down specific key combinations when the printer is turned on. For more information, see the *Technical Reference* available on the Lexmark Web site at **www.lexmark.com**.
- 437 is the factory default setting.

- **Character Set**—Select Character Set 1 or Character Set 2.

Note: Character Set 1 is the factory default setting for the US, and Character Set 2 is the factory default setting for the European Union.

Paper Handling Options

Use the following options to select paper handling option changes, as detailed:

- Auto Tear Off
  - **On**—Continuous forms automatically advance to the Tear Off bar position.
  - **Off**—You can manually advance the perforation of a continuous form to the Tear Off bar position.

    Note: On is the factory default setting.
- Auto Cut Sheet Load
  - **On**—Cut sheet paper automatically loads to the current Top-Of-Form position.
  - **Off**—You must press **FormFeed** to load paper.

    Note: On is the factory default setting.
- Auto Sheet Feeder

  On—Automatically loads paper if the optional Auto Sheet Feeder is installed.

  Note: Off is the factory default setting.
- Form Length

  This option lets you set the form length (in lines per page) from one line to a maximum of 22 inches.
- Left Margin

  This option lets you set the left margin to any inch increment from 0″ to 3″.
- Right Margin

  This option lets you set the right margin to any inch increment from 4″ to 8″. If you have a wide carriage model, the maximum right margin is 13.6″.
- Lines Per Inch

  Lets you specify the number of text lines in an inch from 3 to 6.

  Note: 6 is the factory default setting.
- Eject by FF
  - **On**—Lets you eject loaded cut sheet paper by pressing **FormFeed**.

    Note: On is the factory default setting.

Data options

Note: Use Setup mode to configure the printer according to your needs. To print a list of all default settings, press **LineFeed** from the Main menu.

The following list items outline and explain the Data options and settings you can use with the printer:

Buffer

- **Minimum**—Sets the receive buffer size to zero
- **Maximum**—For 2580/2581 models, sets the receive buffer size to 64KB or 480KB, depending on whether *NLQ* II (Near Letter Quality) Download is enabled
- **Maximum**—For 2590/2591 models, sets the receive buffer size to 47.5KB or 480KB, depending on whether Download is enabled

  Note: Maximum is the factory default setting.

Auto LF

Requires a line feed to occur.

- **On**—A line feed is performed for each *Carrier Return* (CR) code received.
- **Off**—A line feed does not occur when a CR code is received.

  Note: Off is the factory default setting.

Auto CR

Requires a CR to occur.

- **On**—A CR is performed for each line feed code received.
- **Off**—A CR does not occur when a line feed code is received.

  Note: Off is the factory default setting.

Zero Slash

- **On**—The zero (0) prints with a slash down the middle.
- **Off**—The zero (0) prints without a slash down the middle.

  Note: Off is the factory default setting.

Download to NLQ II (available for 2580/2581 models only)

- **Enabled**—Reserves a portion of the receive buffer for downloading fonts
- **Disabled**—Uses the entire buffer as a receive buffer

  Note: Enabled is the factory default setting.

Download (available for 2590/2591 models only)

- **Enabled**—Reserves a portion of the receive buffer for downloading fonts
- **Disabled**—Uses the entire buffer as a receive buffer

  Note: Enabled is the factory default setting.

Code Page Sub.

- **Enabled**—Substitutes code page 858 for 850 to allow older programs access to the European characters
- **Disabled**—No code page substitution

  Note: Disabled is the factory default setting.

Control options

Note: Use Setup mode to configure the printer according to your needs. To print a list of all default settings, press **LineFeed** from the Main menu.

The following list items outline and explain the Control options and settings you can use with the printer:

Uni-Dir Printing

- **On**—The printer prints unidirectionally by line (in NLQ mode).
- **Off**—The printer prints one line and a return line of print bidirectionally. Proportional Spacing is an exception; when this pitch is selected, the printer still prints unidirectionally.

  Note: Off is the factory default setting.

Auto Ready Cut Sheet

Customizes how the printer goes to the Ready state after a cut sheet is loaded.

- **On**—The printer automatically goes to the Ready state after a cut sheet is loaded.
- **Off**—The printer remains offline after a cut sheet is loaded. Press **Start/Stop** to return the printer to the Ready state.

  Note: On is the factory default setting.

Paper Out Alarm

- **Enabled**—An alarm sounds when the printer runs out of paper.
- **Disabled**—No alarm sounds when the printer runs out of paper.

  Note: Enabled is the factory default setting.

Demo Print

- **Enabled**—Prints a Demo page
- **Disabled**—Does not print a Demo page

  Note: Enabled is the factory default setting.

Menu Language

Select the language you want the menus to print in. Available languages are: English, French, German, Italian, Spanish, and Brazilian Portuguese.

Note: English is the factory default setting.

TOF Read

- **Enabled**—Verifies the Top-Of-Form before printing begins on continuous forms
- **Disabled**—Does not verify the Top-Of-Form before printing on continuous forms

  Note: Enabled is the factory default setting.

Quiet

- **Enabled**—The printer prints at a quieter noise level.
- **Disabled**—The printer prints at the normal noise level.

  Note: Disabled is the factory default setting.

Note: Printing speed slows in Quiet mode.

Emulation options

Note: Enter Setup mode to configure the printer according to your needs. For more information, see "Using Setup mode" on page 48. To print a list of all default settings, press **LineFeed** from the Main menu.

Make Emulation option selections from IBM (the factory default setting), Epson, or OKI mode. For more information regarding data stream changes, see the *Technical Reference* available on the Lexmark Web site at **www.lexmark.com/publications**.

IBM mode

Proprinter III, available only on 2580/2581 printers, enables compatibility with the Proprinter III.

- **On**—The printer emulates a Proprinter III.
- **Off**—The printer operates with added capabilities.

AGM, available only on 2590/2591 models, lets you use the high-resolution 24-wire graphics commands. These commands are similar to those used with the Epson LQ570/LQ 1070.

- **On**—Graphics commands are available.
- **Off**—Graphics commands are not available.

  Note: Off is the factory default setting.

Epson mode

- Table Select lets you select Italic Character Table or Epson Extended Graphic Character Table.

  Note: Graphics is the factory default setting.
- Int'l Char Set lets you select the character set associated with the language you want to print in.

  Supported international character sets for Epson mode are: USA, France, Germany, U.K., Denmark, Sweden, Italy, and Spain I.

  The following character sets are also supported, but only through host commands used by Epson FX850/FX 1050: Japan, Norway, Denmark II, Korea (2580/2581 models only), Spain II, Latin America, and Legal.

  Note: USA is the factory default setting.

OKI mode

OKI mode lets you select from the following functions:

- 7 or 8 Bit Graphics
- Paper Out Override
- Reset Inhibit
- Print Suppress Effective
- Print DEL Code

Interface options

Note: Use Setup mode to configure the printer according to your needs. To print a list of all default settings, press **LineFeed** from the Main menu.

The following list items outline and explain the Interface options and settings you can use with the printer:

Interface Selection

Unless turned off, the Auto setting automatically selects the printer interface from the available connection cables.

The following connection cables are available: parallel cable, USB cable, serial cable (only available when an optional serial interface is installed), and network cable (only available on network models).

Note: Auto is the factory default setting.

Honor Init.

- **Enabled**—Honors the initialization signal on the parallel port
- **Disabled**—Ignores the initialization signal on the parallel port

  Note: Enabled is the factory default setting.

Maintaining the printer

Periodically, certain tasks are required to maintain optimum print quality.

Ordering supplies

Use the listed part numbers to order printer supply items you will need.

Supply item	Part number
Parallel cable	• 1329605 (10-foot cable) • 1427498 (20-foot cable)
USB cable	12A2405
Serial adapter and cable	12T0154 (Serial Interface option) 1038693 (50-foot cable)
Printer ribbon	• 11A3540 (2400/2500 series standard re-inking ribbon) • 11A3550 (2500 series high yield re-inking ribbon) **Note:** Printer ribbons can be ordered from the Lexmark Web site at **www.lexmark.com**.

Removing the ribbon cartridge

1. Turn the printer off.
2. Lift the left and right release latches on the ribbon access cover to remove it.
3. Place the ribbon access cover on a flat surface.
4. Set the forms thickness lever to position 7.
5. Squeeze the left and right latches on the ribbon cartridge to lift it out of the printer.

Cleaning the printer

Preparing the printer for cleaning

1. Turn the printer off.
2. Unplug the power cord from the wall outlet.

   CAUTION—HOT SURFACE: The printhead may be hot. If so, allow it to cool before touching.
3. Squeeze the left and right latches on the ribbon cartridge, and then lift it out of the printer.

Cleaning the inside of the printer

Every few months, use a soft brush and a vacuum to remove dust, ribbon lint, and pieces of paper from the printer. Vacuum any dust from around the printhead and from inside the printer.

Cleaning the outside of the printer

Clean the outside of the printer with a damp cloth and mild soap. Do not use spray or chemical cleaners anywhere on your printer. Do not use liquids or spray near the air vents. For stubborn ink stains on the outside of the printer, use a commercial mechanic's hand cleaner.

Recycling Lexmark products

To return Lexmark products to Lexmark for recycling:

1. Visit our Web site at **www.lexmark.com/recycle**.
2. Find the product type you want to recycle, and then select your country from the list.
3. Follow the instructions on the computer screen.

Administrative support

Restoring the factory default settings

Restoring the US factory default settings

The factory default settings for the United States are:

- Code pages: 437
- Character Set: 1
- Form length: 11 inches

To restore the factory default settings:

1. Make sure the ribbon cartridge is installed and paper is loaded.
2. Turn the printer off.
3. Open the ribbon access cover.
4. Move the printhead over toward the control panel side of the printer until it stops.
5. Close the ribbon access cover.
6. Press and hold **Tear Off** and **Load/Unload** while turning the printer on.
7. Continue holding the buttons until the carrier moves.

Note: The control panel lights blink on and off several times.

The factory default settings have been restored once the carrier moves.

Restoring the EU factory default settings

The factory default settings for Europe are:

- Code pages: 858
- Character Set: 2
- Form length: 12 inches

To restore the factory default settings:

1. Make sure the ribbon cartridge is installed and paper is loaded.
2. Turn the printer off.
3. Open the ribbon access cover.
4. Move the printhead over toward the control panel side of the printer until it stops.
5. Close the ribbon access cover.
6. Press and hold **Tear Off** and **Tractor** while turning the printer on.
7. Continue holding the buttons until the carrier moves.

Note: The control panel lights blink on and off several times.

The factory default settings have been restored once the carrier moves.

Supporting IPSec

Internet Protocol Security (IPSec) provides authentication and encryption at the network layer allowing all application and network connections over the IP protocol to be secure. IPSec can be set up between the printer and up to five hosts, using both IPv4 and IPv6.

To configure IPSec using the Embedded Web Server:

1. Open a Web browser. In the address bar, type the IP address of the printer or print server to be protected using the format: *http://ip_address*.
2. Click **Configuration**.
3. Under Other Settings, click **Network/Ports**.
4. Click **IPSec**.

IPSec supports two types of authentication:

- **Shared Key Authentication**—Authenticates any ASCII phrase shared among all participating host computers. This is the easiest way to configure when only a few host computers on the network use IPSec.
- **Certificate Authentication**—Authenticates any host computer or subnet of hosts for IPSec. Each host computer must have a public/private key pair. Validate Peer Certificate is enabled by default, requiring each host to have a signed authority certificate that is installed. Each host must have its identifier in the Subject Alternate Name field of the signed certificate.

Note: After a printer is configured for IPSec with a host, IPSec is required for any IP communications to take place.

Supporting SNMPv3

Simple Network Management Protocol version 3 (SNMPv3) allows for encrypted and authenticated network connections. It also lets a system support person select the desired level of security. Prior to use, at least one user name and password must be assigned from the settings page.

To configure SNMPv3 through the Embedded Web Server:

1. Open a Web browser. In the address bar, type the IP address of the printer or print server to be protected using the format: *http://ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Network/Ports**.
4. Click **SNMP**.

SNMPv3 authentication and encryption has three levels of support:

- No authentication and no encryption
- Authentication with no encryption
- Authentication and encryption

Using 802.1x authentication

802.1x authentication allows the printer to join networks that require authentication before allowing access.

Support for 802.1x requires the establishment of credentials for the printer, such as certificates. Certificates provide a way for the printer to be known to the Authentication Server (AS). The AS allows network access to print servers presenting a valid set of credentials. You can manage the credentials by using the Embedded Web Server.

To install and use certificates as part of the credentials:

1. Open a Web browser. In the address bar, type the IP address of the printer or print server to be protected using the format: *http://ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Network/Ports**.
4. Click **Certificate Management**.

To enable and configure 802.1x after installing the required certificates:

1. Open a Web browser. In the address bar, type the IP address of the printer or print server to be protected using the format: *http://ip_address/*.
2. Click **Configuration**.
3. Under Other Settings, click **Network/Ports**.
4. Click **802.1x Authentication**.

Troubleshooting

Checking an unresponsive printer

If your printer is not responding, make sure:

- The power cord is plugged into the printer and a properly grounded electrical outlet.
- The electrical outlet is not turned off by any switch or breaker.
- The printer is not plugged into any surge protectors, uninterrupted power supplies, or extension cords.
- Other electrical equipment plugged into the outlet is working.
- The printer is turned on.
- The printer cable is securely attached to the printer and the host computer, print server, option, or other network device.

Once you have checked each of these possibilities, turn the printer off and then back on. This often fixes the problem.

Testing the printer

Each time you turn the printer on, an internal check, or power-on self test, is performed.

Running a printer test page produces a printout that shows any problem the printer may be experiencing.

Note: You can run a printer test page with or without a computer connected to the printer.

Running a printer test page

1. Make sure the paper is loaded, and the ribbon cartridge is installed.
2. Turn the printer off.
3. Press and hold **LineFeed** while turning the printer on.
4. Release **LineFeed** when printing starts.

   Printing continues until you stop the printer.

Interrupting or stopping a printer test page

To interrupt a printer test page:

1. Press **Start/Stop**.

   The printer test page stops printing after a complete line of characters has printed.
2. Press **Start/Stop** again to continue printing a printer test page.

   To stop a printer test page, turn the printer off.

Using Hex Trace mode

Hex Trace mode prints the control codes that are sent to the printer. Use this mode to help diagnose software/driver problems.

1. Make sure the paper is loaded, and the ribbon cartridge is installed.
2. Turn the printer off.
3. Press and hold **Tractor** while turning the printer on.
4. Release **Tractor** when the lights go out.
5. Turn the printer off and back on again to exit Hex Trace mode.

Checking the printer status

Check the control panel lights and compare their status with the table information. Different patterns and combinations of lights provide you with information about the condition of the printer and actions needed to correct the condition.

Note: Many error codes can be corrected by turning the printer off and back on again.

Printer status

Control panel lights	Status	Action required
Power Ready Paper Out	On On Off	Normal operating conditions. No action required.
Power Ready Paper Out	On Off Off	Normal offline condition
Power Ready Paper Out	On Off Blinking	1 Load paper. 2 Press **Start/Stop**. The Paper Out light goes off and the Ready light comes on. **Note:** If you installed the optional Tractor 2 Feeder and you are printing continuous forms, make sure the paper select lever is in the continuous forms position.
Ready	Blinking	The printer has data in the buffer that needs to be printed.

Control panel lights	Status	Action required
Power Ready Paper Out Panel Lock Font Lock	On Blinking Blinking Blinking Blinking	1 Check for a paper or ribbon jam. 2 Turn the printer off. 3 Remove the ribbon cartridge, and then check for paper dust or bits of paper. 4 Make sure the carrier packing tape has been removed. 5 With the printer on, run the printer test. a Replace the ribbon cartridge, and make sure paper is loaded. b Turn the printer off. c Press and hold **LineFeed** while turning the printer on. d Release **LineFeed** when printing starts. Printing continues until the printer is stopped. 6 If the printer test fails, contact Customer Support. **Note:** If the printer is not beeping, there is a power supply problem. Contact Customer Support.
Power	Off	Check the power cord and power source. If the power light remains off, contact Customer Support.
Power Ready Paper Out Panel Lock	On Off Blinking Blinking	The paper select lever has been changed while the paper was loaded. Move the paper select lever back to the correct position, and then press **Start/Stop**. **Note:** Make sure the paper is parked or unloaded before changing the position of the paper select lever.
Power Ready Paper Out Panel Lock	On Blinking Blinking Blinking	1 Open and close the control panel. 2 Turn the printer off and back on. 3 If the control panel light sequence continues, contact Customer Support.
Power Ready Paper Out Tractor 2	On Blinking Blinking Blinking	Make sure the Tractor 2 option is installed correctly. For more information, see the documentation that came with the option.

Control panel lights	Status	Action required
Power Ready Paper Out Font Lock	On Blinking Blinking Blinking	**1** Turn the printer off. **2** Turn the printer on. If the control panel light sequence returns, contact Customer Support. **Note:** If you need help locating the nearest service representative, visit the Lexmark Web site at **www.lexmark.com**.
All lights on solid	On	
Panel Lock	Blinking	
Power Ready Tractor 2 Paper Out Font Lock	On Blinking Blinking Blinking Blinking	
Power Ready Paper Out Panel Lock Font Lock	On Blinking Blinking Blinking Blinking	
Power Ready Tractor 2 Paper Out Panel Lock Font Lock	On Blinking Blinking Blinking Blinking Blinking	
Power Ready Tractor 2 Paper Out Panel Lock	On Blinking Blinking Blinking Blinking	

Adjusting character (bidirectional) alignment

Occasionally you may want to adjust the character alignment (also called *bidirectional alignment*) on your printer. The following steps illustrate how to adjust the alignment of the print wires.

Notes:

- Make sure continuous forms are loaded in the printer.
- Make sure the factory default setting for the Uni-Dir Printing menu option is set to Off (bidirectional).
- Make sure the default macro is set to Disabled. For more information, see “Forms Macro options” on page 51.

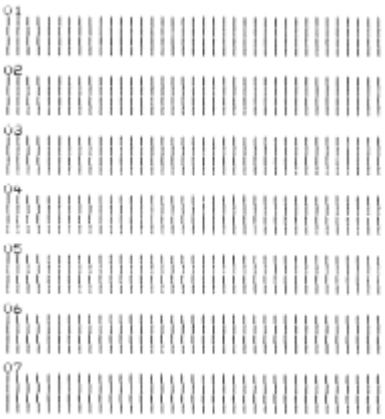
1 Turn the printer off.

2 Open the control panel cover to access layer 2.

3 Press and hold **Pitch** while turning the printer on.

The draft alignment bars print.

Note: The current value is the number printed below the bars.

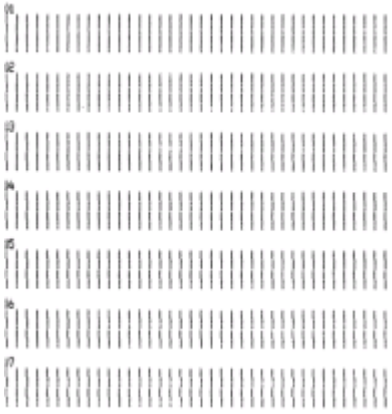


4 To set Draft, select the best row of alignment bars from the 01–07 printout.

a Press **Micro↑** or **Micro↓** to select the best alignment by number, or keep the current value.

b Press **Set TOF** to save your selection.
After you make your selection, the printer prints a single row showing the current alignment setting.

c The printer automatically starts printing the alignment bars for *Near-Letter-Quality (NLQ)*.



The current value is the number printed below the bars.

Solving printing problems

Printer test works, but the printer does not print when attached to the computer

These are possible solutions. Try one or more of the following:

- Turn the printer and the computer off.
- Make sure the printer cable is correctly connected at both ends.

- See the documentation that came with your program to make sure you have selected the correct printer driver.
- If you are using Windows, use the Windows Forms Printer 2500 Series driver available from the Lexmark Web site at **www.lexmark.com**.
- If you are using DOS, follow the instructions that came with your DOS application.

Printer is noisy

These are possible solutions. Try one of more of the following:

- Move any objects that are touching the printer.
- Make sure the printer is on a level, sturdy surface.
- Close the ribbon access cover.
- Close the front cover.

Printer sounds like it is printing, but does not print

These are possible solutions. Try one or more of the following:

- Make sure the forms thickness lever is appropriately set for the paper thickness being used.
- Make sure the ribbon cartridge is correctly installed and securely *snapped* onto the carrier.
- Adjust the ribbon density control knob.
- Replace the ribbon cartridge if it is out of ink.
- Turn the printer off and then back on.

Printer alarm sounds

This might indicate an error or a normal operation. If an error condition is present, these are possible solutions. Try one or more of the following:

- Check the status of the control panel lights.
- Turn the printer off and then back on.

Printer goes to the Tear Off position before the print job finishes

Set Auto Tear Off to On:

1. Press **Start/Stop**.
2. Press and hold **Tear Off** until the printer beeps and the light blinks.
3. Open the control panel to access layer 2.
4. Press **Micro** ↑ or **Micro** ↓ to move the paper to the desired position.
5. Close the control panel.

   The printer beeps twice and the paper rolls backward and then advances to the new Top-Of-Form position.
6. Press **Start/Stop**.

   The paper remains at the new Top-Of-Form position until another job is initiated.
7. Send the print job again.

Buttons do not work, except for Start/Stop, FormFeed, Tear Off and Load/Unload

1. Turn the printer off.
2. Press and hold **Load/Unload** and **Tractor** while turning the printer on.

   When the light goes off, the control panel is unlocked, and all buttons are active.

Printer power switch is on, but the power light is off

These are possible solutions. Try one of more of the following:

- Make sure the power cord is correctly connected at both ends.
- Verify that the power source works.
- Turn the printer off and then back on.

Left margin moves to the right during printing

These are possible solutions. Try one or more of the following:

- Make sure the ribbon cartridge is properly installed, and the paper is correctly loaded.
- Make sure the carrier packing tape has been removed.
- Check to see if anything is blocking the carrier movement.
- If a paper jam has recently occurred, turn the printer off and then back on.
- Contact Customer Support.

Incorrect line length; lines do not start at the left margin

These are possible solutions. Try one or more of the following:

- See the documentation that came with the program.
- Make sure the correct printer driver is selected.
- Adjust the left margin by adjusting the tractor or paper guide.

Printer speed slows

These are possible solutions. Try one of more of the following:

- Make sure the forms thickness lever setting is appropriate for the thickness of the forms being used.

  Printing speed is slower when the forms thickness lever is set at 4 or higher. This is normal.
- Select resident fonts.

  Note: Automatic thermal slowdown protects the printhead from overheating. This operation is normal and is affected by the print type being used (letter quality, etc.) and the amount and density of graphics being printed.

Incorrect characters print, left margin changes, or printing stops

These are possible solutions. Try one or more of the following:

- Make sure the printer cable is properly shielded and correctly connected at both ends.
- Select the correct driver.
  - If you are using Windows, use the Windows Forms Printer 2500 Series driver available from the Lexmark Web site at **www.lexmark.com**.
  - If you are using DOS, follow the instructions that came with your DOS application.

Printing continues beyond the edges of the continuous forms

These are possible solutions. Try one or more of the following:

- Change the program so that the selected paper size is the same as the actual paper size.
- Adjust tractors or paper guides to align with the paper being used.
- Make sure the ribbon cartridge is correctly installed.
- Clear any paper jam.
- Turn the printer off and then back on.

Selected font or pitch is not printing or is changing

If you encounter this problem, your software is overriding your control panel font and/or pitch selection, or using graphic fonts. If possible, use resident fonts and/or pitches. Otherwise, try the following solution:

- Select another font from the Character Options selection of the Main menu.
- Select another pitch from the Character Options selection of the Main menu.

Solving paper feed problems

Paper is jammed in the printer

To clear a continuous forms paper jam:

1. Turn the printer off.
2. Detach any continuous forms that have already printed.
3. Set the forms thickness lever to position 7.
4. Tear the continuous forms off at the perforation line just below the bottom of the printer.
5. Open the front cover.
6. Open the left and right tractor doors, and then remove the paper.
7. Remove the ribbon access cover to clear any torn paper.
8. Remove torn perforation strips or bits of paper from the paper path.

To clear a cut form paper jam:

1. Turn the printer off.
2. Set the forms thickness lever to position 7.
3. Push the paper select lever down to the position.
4. Gently pull the sheet of paper from the front of the printer.
5. Remove the ribbon access cover to clear any torn pieces of paper.
6. Push the paper select lever up to the position.
7. Set the forms thickness lever to the proper setting for the type of paper you are using.

Paper is jammed in the Auto Sheet Feeder

These are possible solutions. Try one or more of the following:

- Remove the paper.
- Align the edges of the paper, and then reload the paper.
- Remove foreign objects from the Auto Sheet Feeder:
  1. Remove the Auto Sheet Feeder.
  2. Remove any foreign objects.
  3. Reinstall the Auto Sheet Feeder.

Paper fed in the Auto Sheet Feeder jams at the printer entrance

These are possible solutions. Try one or more of the following:

- Remove the Auto Sheet Feeder, remove any bits of paper or foreign objects, and then reinstall the Auto Sheet Feeder.
- Move the paper guide to the left.
- Remove the Auto Sheet Feeder, move the continuous forms to the park position using the **Load/Unload** button, and then reinstall the Auto Sheet Feeder.
- Adjust the forms thickness lever to correspond with the paper thickness being used.

Paper jam in the Tractor 2 Feeder

The continuous form on one tractor feeder was not properly parked before switching to the other tractor feeder.

Make sure you tear off the leading edge of the continuous form on the currently selected tractor feeder before switching tractor feeders. For help, see the documentation that came with the optional Tractor 2 Feeder.

Printer does not feed paper

These are possible solutions. Try one or more of the following:

- Remove all forms and pieces of paper.

  Look for loose pinfeed hole strips that can sometimes tear from the continuous forms and remain in the printer.
- Readjust the right tractor position.
- Make sure the forms thickness lever is set correctly for the paper type being used.
- Press **Load/Unload** to release the continuous form paper from a parked status.

- Make sure the right paper guide is set correctly for the paper width being used.
- Make sure the Auto Cut Sheet Load option is set correctly. For more information, see “Main menu options” on page 50.
- Make sure the paper select lever is in the correct position for the type of sheet you are trying to print.

Printer does not feed from the optional Tractor 2 Feeder

These are possible solutions. Try one or more of the following:

- Move the paper select lever down to the position.
- Press **Tractor** to select the other tractor feeder or load paper on the selected tractor feeder.
- Plug the optional Tractor 2 Feeder into the back of the printer.

Printer does not feed from the Auto Sheet Feeder

These are possible solutions. Try one or more of the following:

- Set the Auto Sheet Feeder locking lever to the back position.
- Set the paper select lever to the position.
- Enter Setup mode and set the option to On. For more information, see “Main menu options” on page 50.
- Remove extra sheets of paper if more than 150 sheets are loaded.
- Remove all paper, and then replace it with paper that has a lower weight.
- Remove all paper, fan the top and bottom edges, and then place it back in the paper bin.
- Clean the Auto Sheet Feeder rollers:
  1. Remove all paper from the printer.
  2. Turn the Auto Sheet Feeder upside down, and then place it on a flat surface.
  3. Clean the two paper guide wheels located inside the bottom of the Auto Sheet Feeder using isopropyl alcohol and a clean cloth.

     Rotate one roller while applying the cleaning cloth to the other roller.

The optional Tractor 2 Feeder positions paper at incorrect Top-Of-Form position

The Top-Of-Form is set incorrectly. For more information about correctly setting Top-Of-Form, see “Setting Top-of-Form” on page 40.

The Auto Sheet Feeder feeds paper at an incorrect rate

These are possible solutions. Try one or more of the following:

- Remove all paper from the Auto Sheet Feeder and replace it with paper that has a lighter weight.
- Remove the Auto Sheet Feeder, remove any bits of paper or foreign objects, and then reinstall the Auto Sheet Feeder.
- Move the paper guide to the left.
- Remove the Auto Sheet Feeder, move the continuous forms to the park position using the **Load/Unload** button, and then reinstall the Auto Sheet Feeder.
- Adjust the forms thickness lever to correspond with the paper thickness being used.

The Auto Sheet Feeder places paper at the wrong Top-Of-Form position

These are possible solutions. Try one or more of the following:

- Make sure the Top-Of-Form is set correctly. For information about Top-Of-Form settings, see the documentation that came with the Auto Sheet Feeder.
- Make sure the paper being used meets the paper specifications in the Auto Sheet Feeder documentation.
- Clean the Auto Sheet Feeder rollers:
  1. Remove all paper from the printer.
  2. Turn the Auto Sheet Feeder upside down, and then place it on a flat surface.
  3. Clean the two paper guide rollers located inside the bottom of the Auto Sheet Feeder using isopropyl alcohol and a clean cloth.

     You can rotate one roller while applying the cleaning cloth to the other roller.

Paper fed from the Auto Sheet Feeder is skewed

These are possible solutions. Try one of more of the following:

- Adjust the left and right paper guides to fit the paper width being used.
- Remove paper from the paper bin.
- Fan the paper, and then reload it.

The Auto Sheet Feeder feeds multiple sheets

These are possible solutions. Try one of more of the following:

- Remove paper from the paper bin.
- Fan the paper, and then reload it.
- Remove all paper from the paper bin, and replace it with paper that has a heavier weight.
- Add more paper to the paper bin.

Solving print quality problems

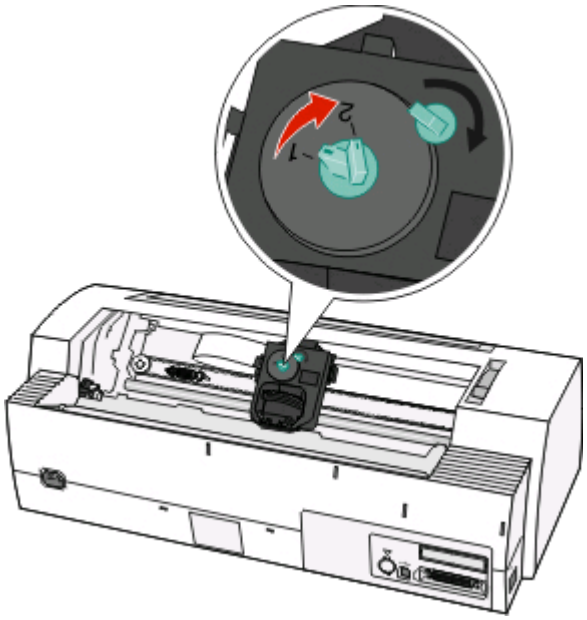
The information in the following topics may help you solve print quality problems. If these suggestions do not correct the problem, contact Customer Support. You may have a printer part that requires adjustment or replacement.

Print is too light

These are possible solutions. Try one or more of the following:

Check the ribbon density control knob

The ribbon density control knob located on the ribbon cartridge is preset to 1. When the print becomes too light, turn the knob from 1 to 2 to increase print darkness.



Check the forms thickness lever

The forms thickness lever may be set to the wrong number. If so, move it to the correct number for the form thickness you are using.

Dots are missing or print quality is poor

1. Make sure the ribbon is securely *snapped* down on the carrier.
2. Adjust the density control knob from 1 to 2 to increase darkness of print.
3. Replace the ribbon cartridge.
4. Run a printer test.
   a. Make sure the paper and the ribbon cartridge are installed.
   b. Turn the printer off.
   c. Press and hold **LineFeed** while you turn the printer on, and then release **LineFeed** when printing begins.

d Press **Start/Stop** to stop or interrupt the printer test.

e Press **Start/Stop** again if you want to resume the printer test.
Printing continues until you turn the printer off.

If the print quality does not improve, contact Customer Support.

Characters are wrong or missing

Run a printer test:

1. Make sure the forms thickness lever setting is in a position that corresponds with the forms you are using.
2. Make sure paper and the ribbon cartridge are installed.
3. Set the paper select lever to the position that corresponds with the forms you are using.
4. Turn the printer off.
5. Press and hold **LineFeed** while you turn the printer on.
6. Release **LineFeed** when printing starts.
   Printing continues until you stop the printer.
7. Press **Start/Stop** to stop the printing, and then turn the printer off.

Forms are smudged or print is too dark

These are possible solutions. Try one or more of the following:

- Make sure the forms thickness lever is in the appropriate position for the paper being used.
- Make sure the ribbon is installed correctly.
- Untwist or untangle the ribbon.
- Remove the ribbon slack using the ribbon advance knob.
- Set the density control knob to 1.
- Remove and replace the ribbon cartridge.

Incorrect number of lines on a page

These are possible solutions. Try one or more of the following:

- Make sure the paper is free to feed from the carton and there is nothing obstructing paper movement.
- Readjust the Top-Of-Form. For more information, see “Setting Top-of-Form” on page 40.
- From the Setup menu, adjust the page length. For more information, see “Using Setup mode” on page 48.

Graphics do not print

These are possible solutions. Try one or more of the following:

- See the documentation that came with your software application.
- Make sure the correct printer driver is selected.

Incorrect line spacing or overprinting occurs

These are possible solutions. Try one or more of the following:

- Reset the forms thickness lever.
- For more information, see the documentation that came with your software application.

Contacting Customer Support

When you call Customer Support, describe the problem you are experiencing, the message on the display, and the troubleshooting steps you have already taken to find a solution.

You need to know your printer model type and serial number. For more information, see the label on the inside top front cover of the printer. The serial number is also listed on the menu settings page.

In the U.S. or Canada, call (1-800-539-6275). For other countries/regions, visit the Lexmark Web site at **www.lexmark.com**.

Notices

Product name	Machine type	Model number
Lexmark 2580	2580	100
Lexmark 2580n	2580	110
Lexmark 2581	2581	100
Lexmark 2581n	2581	110
Lexmark 2590	2590	100
Lexmark 2590n	2590	110
Lexmark 2591	2591	100
Lexmark 2591n	2591	110

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July 2007

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For information on supplies and downloads, visit **www.lexmark.com**.

If you don't have access to the Internet, you can contact Lexmark by mail:

Lexmark International, Inc.
Bldg 004-2/CSC
740 New Circle Road NW
Lexington, KY 40550

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Conventions

Note: A *Note* identifies something that could help you.

Warning—Potential Damage: A *Warning* identifies something that could damage your product hardware or software.

CAUTION—POTENTIAL INJURY: A *CAUTION* identifies something that could cause you harm.

CAUTION—DO NOT TOUCH: This type of *CAUTION* indicates that you should *not touch* the marked area.

CAUTION—HOT SURFACE: This type of *CAUTION* indicates a *hot surface*.

CAUTION—SHOCK HAZARD: This type of *CAUTION* indicates a *shock hazard*.

CAUTION—TIPPING HAZARD: This type of *CAUTION* indicates a *tipping hazard*.

Federal Communications Commission (FCC) compliance information statement

This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The FCC Class B limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your point of purchase or service representative for additional suggestions.

The manufacturer is not responsible for radio or television interference caused by using other than recommended cables or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate this equipment.

Note: To assure compliance with FCC regulations on electromagnetic interference for a Class B computing device, use a properly shielded and grounded cable such as Lexmark part number 1021294 for USB attach. Use of a substitute cable not properly shielded and grounded may result in a violation of FCC regulations.

Any questions regarding this compliance information statement should be directed to:

Director of Lexmark Technology & Services
Lexmark International, Inc.
740 West New Circle Road
Lexington, KY 40550
(859) 232–3000

Industry Canada compliance statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Standard ICES-003.

Avis de conformité aux normes de l'industrie du Canada

Cet appareil numérique de classe B est conforme aux exigences de la norme canadienne relative aux équipements pouvant causer des interférences NMB-003.

European Community (EC) directives conformity

This product is in conformity with the protection requirements of EC Council directives 89/336/EEC and 2006/95/EC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility and safety of electrical equipment designed for use within certain voltage limits.

A declaration of conformity with the requirements of the directives has been signed by the Director of Manufacturing and Technical Support, Lexmark International, Inc., S.A., Boigny, France.

This product satisfies the Class B limits of EN 55022 and safety requirements of EN 60950.

Noise emission levels

The following measurements were made in accordance with ISO 7779 and reported in conformance with ISO 9296.

Note: Some modes may not apply to your product.

1-meter average sound pressure, dBA	
Printing	56 dBA
Ready	NA

Values are subject to change. See **www.lexmark.com** for current values.

Waste from Electrical and Electronic Equipment (WEEE) directive

The WEEE logo signifies specific recycling programs and procedures for electronic products in countries of the European Union. We encourage the recycling of our products. If you have further questions about recycling options, visit the Lexmark Web site at **www.lexmark.com** for your local sales office phone number.

ENERGY STAR

Power consumption

Product power consumption

The following table documents the power consumption characteristics of the product.

Note: Some modes may not apply to your product.

Mode	Description	Power consumption (Watts)
Printing	The product is generating hard-copy output from electronic inputs.	47 W
Copying	The product is generating hard-copy output from hard-copy original documents.	NA

Mode	Description	Power consumption (Watts)
Scanning	The product is scanning hard-copy documents.	NA
Ready	The product is waiting for a print job.	8 W
Power Saver	The product is in energy-saving mode.	NA
High Off	The product is plugged into a wall outlet, but the power switch is turned off.	NA
Low Off (<1 W Off)	The product is plugged into a wall outlet, the power switch is turned off, and the product is in the lowest possible power consumption mode.	NA
Off	The product is plugged into a wall outlet, but the power switch is turned off.	0.055 W

The power consumption levels listed in the previous table represent time-averaged measurements. Instantaneous power draws may be substantially higher than the average.

Values are subject to change. See **www.lexmark.com** for current values.

Power Saver

This product is designed with an energy-saving mode called Power Saver. The Power Saver Mode is equivalent to the EPA Sleep Mode. The Power Saver Mode saves energy by lowering power consumption during extended periods of inactivity. The Power Saver Mode is automatically engaged after this product is not used for a specified period of time, called the Power Saver Timeout.

Off mode

If this product has an off mode which still consumes a small amount of power, then to completely stop product power consumption, disconnect the power supply cord from the wall outlet.

Total energy usage

It is sometimes helpful to calculate the total product energy usage. Since power consumption claims are provided in power units of Watts, the power consumption should be multiplied by the time the product spends in each mode in order to calculate energy usage. The total product energy usage is the sum of each mode's energy usage.

Statement of Limited Warranty

Lexmark 2580	Lexmark 2590
Lexmark 2580n	Lexmark 2590n
Lexmark 2581	Lexmark 2591
Lexmark 2581n	Lexmark 2591n

Lexmark International, Inc., Lexington, KY

This limited warranty applies to the United States and Canada. For customers outside the U.S., refer to the country-specific warranty information that came with your product.

This limited warranty applies to this product only if it was originally purchased for your use, and not for resale, from Lexmark or a Lexmark Remarketer, referred to in this statement as "Remarketer."

Limited warranty

Lexmark warrants that this product:

—Is manufactured from new parts, or new and serviceable used parts, which perform like new parts

—Is, during normal use, free from defects in material and workmanship

If this product does not function as warranted during the warranty period, contact a Remarketer or Lexmark for repair or replacement (at Lexmark's option).

If this product is a feature or option, this statement applies only when that feature or option is used with the product for which it was intended. To obtain warranty service, you may be required to present the feature or option with the product.

If you transfer this product to another user, warranty service under the terms of this statement is available to that user for the remainder of the warranty period. You should transfer proof of original purchase and this statement to that user.

Limited warranty service

The warranty period starts on the date of original purchase as shown on the purchase receipt and ends 24 months later provided that the warranty period for any supplies and for any maintenance items included with the printer shall end earlier if it, or its original contents, are substantially used up, depleted, or consumed.

To obtain warranty service you may be required to present proof of original purchase. You may be required to deliver your product to the Remarketer or Lexmark, or ship it prepaid and suitably packaged to a Lexmark designated location. You are responsible for loss of, or damage to, a product in transit to the Remarketer or the Lexmark designated location.

When warranty service involves the exchange of a product or part, the item replaced becomes the property of the Remarketer or Lexmark. The replacement may be a new or repaired item.

The replacement item assumes the remaining warranty period of the original product.

Replacement is not available to you if the product you present for exchange is defaced, altered, in need of a repair not included in warranty service, damaged beyond repair, or if the product is not free of all legal obligations, restrictions, liens, and encumbrances.

Before you present this product for warranty service, remove all print cartridges, programs, data, and removable storage media (unless directed otherwise by Lexmark).

For further explanation of your warranty alternatives and the nearest Lexmark authorized servicer in your area contact Lexmark on the World Wide Web at **www.lexmark.com/support**.

Remote technical support is provided for this product throughout its warranty period. For products no longer covered by a Lexmark warranty, technical support may not be available or only be available for a fee.

Extent of limited warranty

Lexmark does not warrant uninterrupted or error-free operation of any product or the durability or longevity of prints produced by any product.

Warranty service does not include repair of failures caused by:

—Modification or unauthorized attachments

—Accidents, misuse, abuse or use inconsistent with Lexmark user's guides, manuals, instructions or guidance

—Unsuitable physical or operating environment

—Maintenance by anyone other than Lexmark or a Lexmark authorized servicer

—Operation of a product beyond the limit of its duty cycle

—Use of printing media outside of Lexmark specifications

—Refurbishment, repair, refilling or remanufacture by a third party of products, supplies or parts

—Products, supplies, parts, materials (such as toners and inks), software, or interfaces not furnished by Lexmark

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Your sole remedy under this limited warranty is set forth in this document. For any claim concerning performance or nonperformance of Lexmark or a Remarketer for this product under this limited warranty, you may recover actual damages up to the limit set forth in the following paragraph.

Lexmark's liability for actual damages from any cause whatsoever will be limited to the amount you paid for the product that caused the damages. This limitation of liability will not apply to claims by you for bodily injury or damage to real property or tangible personal property for which Lexmark is legally liable. **IN NO EVENT WILL LEXMARK BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, INCIDENTAL DAMAGE, OR OTHER ECONOMIC OR CONSEQUENTIAL DAMAGES.** This is true even if you advise Lexmark or a Remarketer of the possibility of such damages. Lexmark is not liable for any claim by you based on a third party claim.

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Additional rights

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions contained above may not apply to you.

This limited warranty gives you specific legal rights. You may also have other rights that vary from state to state.

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