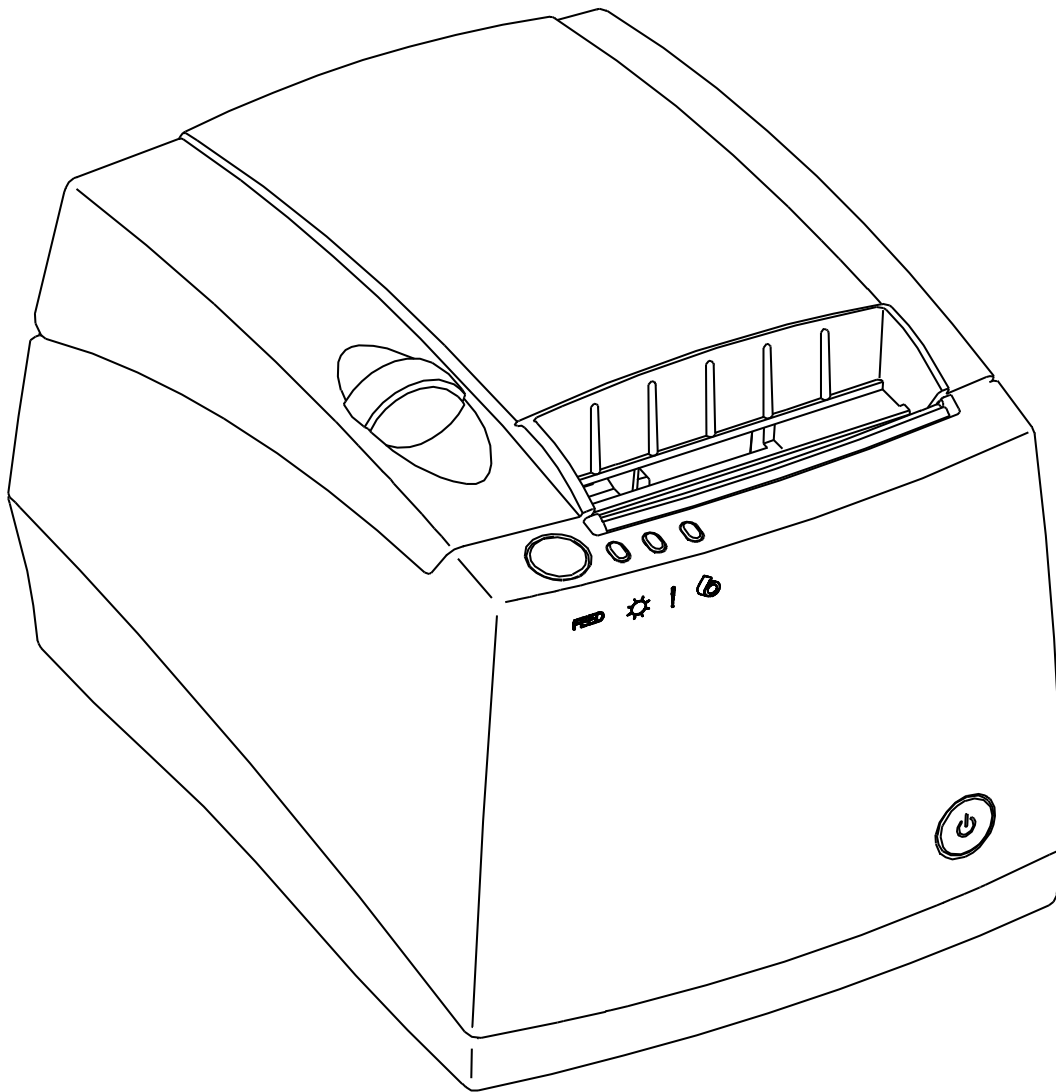


Ithaca Series 280

ITherm® 280

Spare Parts Guide



ithaca[®]
a product of TRANSACT

PN: 28-06357

April 2011

Change History

Rev	Description of change	Date
A	Initial Release	
B	Added Las Vegas address	
C	Pg 28 added p/n to item #4	
D	Pg 23 updated item #5 p/n	
E	Pg 28 updated item #4 p/n's	
F	Updated various p/n's to agree w/main spare parts list	
G	Pg 28 updated item #4 p/n (28-06478L)	
H	Pg 29 updated item #4 p/n	
J	Pg 1 Warranty 36 months was 24.	4/11

General Information

Important:

Before installing any equipment, be sure to consult the specifications in this manual or the corresponding Maintenance Manual. Failure to do so may cause integration problems. Please confirm any specifications with TransAct's Ithaca Facility's Sales Department. Portions of this manual may be changed without prior notice.

Note:

Losses that can be attributed to improper installation and working procedures are not the responsibility of TransAct Technologies Inc. No part of this manual may be used to recreate any part of the iTherm® 280 Printer. If this manual contains any questionable information or mistakes please contact TransAct for assistance.

Disclaimer

Information in this publication is subject to change without notice. However, as product improvements become available, TransAct Technologies Incorporated will make every effort to provide updated information for the products described in this publication.

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Revision Level J

April 2011

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iTherm® 280 General Information

Who should read this guide?

This document is intended for trained service technicians.

What is included in this guide?

This Spare Parts Guide provides a listing of available spare parts with diagrams.

Warranty Options

All iTherm® 280 Printers now come with a standard 36-month warranty covering both parts and labor that starts upon shipment from the factory. An optional extended warranty, covering both parts and labor for an additional 12 months, may be purchased separately. For more information concerning the warranty options, please contact the Sales Department at TransAct's Ithaca facility. You are responsible for insuring any product returned for service, and you assume the risk of loss during shipment to Ithaca C.O.D. packages are not accepted and warranty repairs are subject to the terms and conditions as stated on the Ithaca warranty policy.

Service Information

TransAct Technologies Incorporated has a full service organization to meet your printer service and repair requirements. If your printer needs service, please contact your service provider first. If any problems still persist, you can directly contact the Ithaca facility's Technical Support Department at (607) 257-8901 or (877) 7-ITHACA for a return authorization. International customers should contact your distributor for services. TransAct offers the following service programs to meet your needs.

- Extended Warranty
 - Depot Repair
 - Maintenance Contract
 - Internet Support
-

Ithaca Product Support Procedure

Monday through Friday, 8 A.M. to 8 P.M. EST/EDT (excluding holidays)

To obtain technical support, call TransAct's Ithaca Facility at (607) 257-8901 and ask for Technical Support. When you call, please have the following information at hand:

- The Model Number and Serial Number of the printer
 - A list of any other peripheral devices attached to the same port as the printer
 - What application software, operating system, and network (if any) you are using
 - What happened and what you were doing when the problem occurred
 - How you tried to solve the problem
 - Return Materials Authorization and Return Policies
-

If the technical support person determines that the printer should be serviced at our facility, and you want to return the printer for repair, a Returned Materials Authorization (RMA) number must be issued before returning the printer. Repairs are warranted for 90 days from the date of repair or for the balance of the original warranty period, which ever is greater. Please prepare the printer being returned for repair as follows:

- Pack the printer to be returned in the original packing material.
 - Packing material may be purchased from TransAct's Ithaca Facility.
 - Do not return any accessories unless asked to do so by a support technician.
 - Write the RMA number clearly on the outside of the box.
-

Contacting TransAct's Ithaca Facility

Contact TransAct's Ithaca facility for general information about the iTherm® 280 Printer. The Sales and Technical Support Departments will be able to help you with most of your questions. Call the Technical Support Department to receive technical support; order documentation; receive additional information, or send in a printer for service.

You may reach both the Sales and Technical Support Departments at the following address and telephone or fax numbers:

TransAct Technologies Incorporated
Ithaca Facility
20 Bomax Drive
Ithaca, NY 14850 USA

TransAct Technologies
World Gaming Headquarters
& Western Regional Repair Center
6700 Paradise Road
Suite D
Las Vegas, NV 89119 USA

Telephone	(877) 7-ITHACA or (607) 257-8901
Main fax	(607) 257-8922
Sales fax	(607) 257-3868
Technical Support fax	(607) 257-3911
Web site	http://www.transact-tech.com

iTherm® 280 - Features

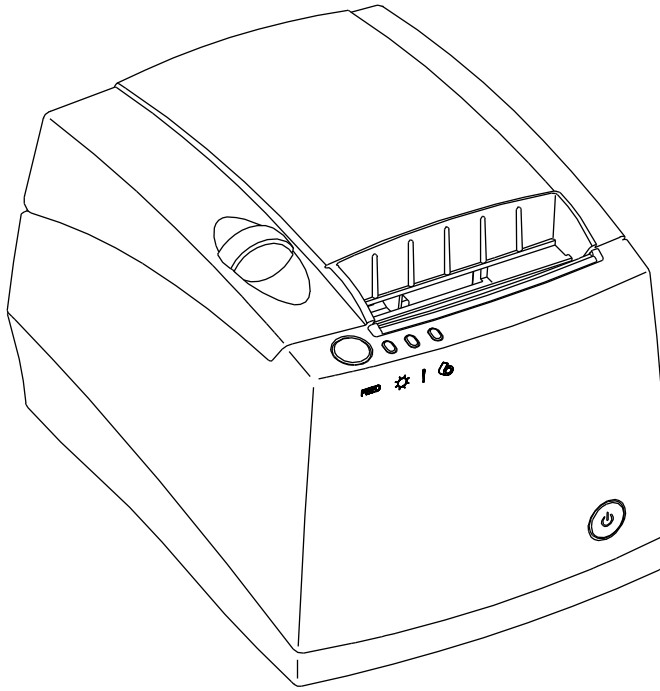


Figure 1 iTherm® 280 Printer

Standard Features

- 8 inches per second print speed (monochrome)
 - Barcode printing capabilities.
 - Four (4) Inch Diameter Paper Roll
 - Long Life cutter (partial cut)
 - 2-color printing @ 4.0 inches per second print speed
 - Modular Printer design for easy servicing
 - Single RJ12 Cash drawer driver with status
 - Internal Auto-Ranging (90-264 VAC) Power Supply
 - Easy paper load
-

Optional Features

- 9 pin RS-232 Serial Interface Card
 - 25 pin RS-232 Serial Interface Card
 - 25 pin Parallel Interface Card
 - 36 pin Centronics Parallel Interface Card
 - USB (version 1.1) Interface Card
 - Paper Low alert
 - DC powered Version (hosiden)
 - Vertical Wall mount Kit
 - 58mm wide Paper roll version
-

Specifications

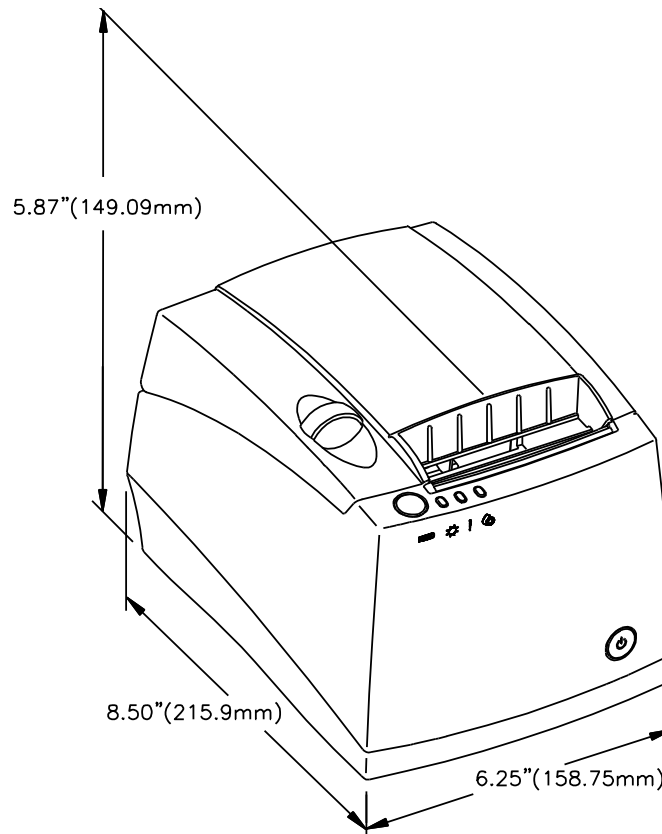


Figure 2 Dimensions

Printer Dimensions

H: 5.87" (149.09mm) W: 6.25" (158.75mm) D: 8.50" (215.9mm)

Weight

4.2 lbs.

Printer Type

Fixed 80mm linear thermal head

Printer Environmental Conditions

Operating Temperature Range:

5° ~ 45°C (41°F ~ 113°F)

Shipping/Storage Temperature Range:

-10° ~ 50°C (14°F ~ 122°F)

Operating Humidity Range:

10% ~ 90% non-condensing only

Shipping/Storage Humidity Range:

10% ~ 90% non-condensing only

Reliability

Printer Life:	20,000,000 print lines
Printhead Life:	100 Km. min.
Cutter Life:	1,200,000 cuts min.

AC Power Requirements

90-264 VAC at 47-63 Hz.

Test Standards

FCC CFR-47, Part 15, Class A
EN 55022, Class B
UL 1950 (U.S.)
UL 1950 (Canada)
IEC 60950
TUV –IEC 60950/EN 60950
CE Mark (Class B)

Acoustic Noise:

58 dBA

Printing Specifications

Print Method:	Thermal Sensitive Line Dot System.
Print Speed:	152mm/sec. (8" per sec.) max.
Paper advance speed:	152mm/sec. (8" per sec.) min.
Resolution:	203 dpi x 203 dpi
Dot Pitch-Horizontal:	0.125mm (8 dots/mm)
Dot Pitch-Vertical:	.125mm (8 dots/mm)
Line Feed Pitch:	3.2mm (.125")
No. of Elements:	640 dots in-line
Print Width:	80mm (3.15")

Paper Roll Specifications

Paper Width:	80mm (3.15")
Roll Diameter:	101.6mm (4.0")
Roll Core O.D.:	18.5 - 21.8mm (.730 to .860 inches)
Paper Type:	Kanzaki P300 or approved equivalent

iTherm® 280 Printer Sensors/LEDs

The iTherm® 280 printers use several sensors to provide feedback to the host system.

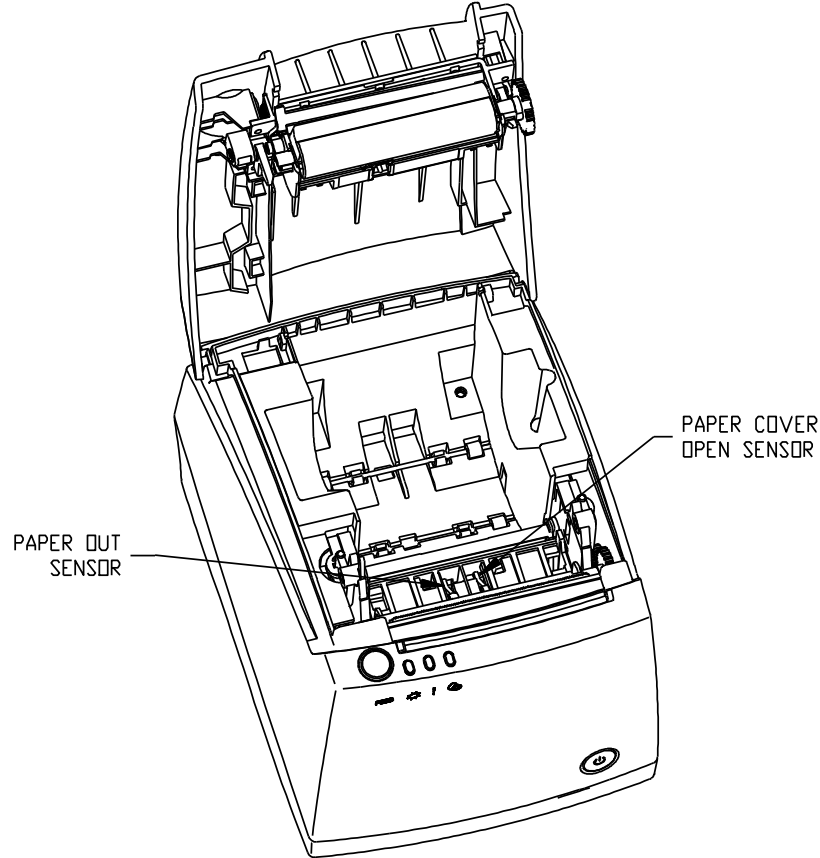


Figure 3 Sensor Breakdown and Locations

Paper Out Sensor

A Paper-Out Sensor, mounted to the Main Controller PCB, optically senses a Paper Out Flag located in the paper path. When the sensor detects the flag, it indicates that the paper roll is depleted.

Paper Cover-Open Sensor

A Paper Cover-Open Sensor, mounted to the Main Controller PCB, optically senses a Paper Cover-Open Flag located in the ticket path. When the Paper Cover is opened, the Cover Open Flag trips, and the printer goes off-line.

Paper Low Sensor (option)

A receipt paper-low sensor is provided as an optional feature. An operator adjustable paper-low assembly will be provided to allow the printer to sense when the paper roll diameter is between .94 to 1.29 inches (approximate). It is adjustable to compensate for various paper core dimensions.

Paper Low Adjustment Settings	Approximate Paper Remaining (in feet)	Paper Roll Diameter
UPPER LIMIT: 2 turns (counter clockwise)	29'	1.29"
1 turns (counter clockwise)	23'	1.203"
FACTORY SETTING	18'	1.115"
1 turn (clockwise)	13'	1.028"
LOW LIMIT: 2 turns (clockwise)	8.5 '	.940 "

Notes:

- These measurements are approximate. Paper roll used for testing had paper roll core outside diameter of .750 inches, and inside diameter is .625 inches. Results will vary depending on core O.D./I.D. dimensions.
- Paper roll core should meet or exceed paper width.
- Results based on thermal paper .0025 inches thick

Printer Status LEDs

The printer has been outfitted with three LED indicators that provide the condition of the printer

LED Indicator	Function
Power	Indicates power on/off
Paper	Indicates paper status
Error	Indicates error status

Table 1 Printer Status LEDs

Error LED

The error LED is the primary fault indicator. It will always be on if a fault has occurred. There are two basic types of faults:

- 1) Recoverable
 - Paper out
 - Cover open
 - Head over temperature.
- 2) Non-recoverable
 - Cutter failure
 - Component failure

Recoverable Errors

Recoverable errors are indicated when the error and power indicators are both lit. Recoverable errors are as follows:

Paper out Paper, Power and Error indicators are all on.
Cover open Error indicator is lit.

Non-recoverable Errors

If the error indicator is lit and the power indicator is blinking, a non-recoverable error has occurred. The power indicator will indicate the error by blinking a series of blink patterns. The pattern consists of a number of closely spaced blinks followed by a delay. The pattern then repeats. Press the **POWER** button to reset the printer.

Non-recoverable Error Codes

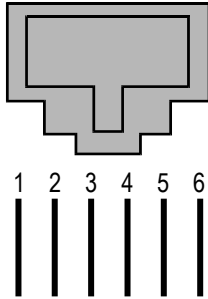
Error	Blinks
Errors that may be recoverable with the power button.	
Configuration Read	2
Configuration Write	3
Software Error Vector	4
Auto Cutter Fault	5
Not used	6
User Store Invalid	7
Electronic Journal Format Invalid	8
Flash Memory is not functional	9
Errors that cannot be recovered without intervention.	
Internal Memory	12
Communications Adapter is incorrect or not seated correctly.	14
Internal Software Error	15

NOTE: additional Error Modes exist. Refer to the programmer's guide for a complete list.

iTherm® 280 Cash Drawer Pin Assignments

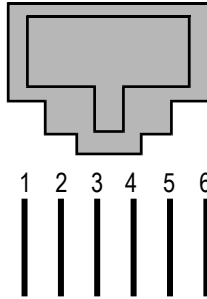
Figure 4 Cash Drawer Pin Definitions

Ithaca



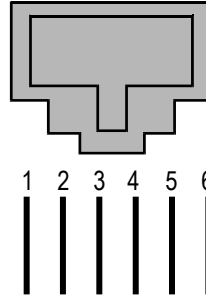
pin 1 CD2-
pin 2 CD1 Sense
pin 3 Ground
pin 4 CD Drive + (+24V)
pin 5 CD1-
pin 6 Not Connected

Epson



pin 1 Not Connected
pin 2 CD1-
pin 3 CD1 Sense
pin 4 CD Drive + (+24V)
pin 5 CD2-
pin 6 Ground

Star



pin 1 Not Connected
pin 2 CD1-
pin 3 CD Drive + (+24V)
pin 4 CD Drive + (+24V)
pin 5 CD2-
pin 6 CD1 Sense

The cash drawer can be configured for one of three configurations: Ithaca, Epson, or Star. The Main Controller PCB has three (3) six-pin headers: one for each configuration. The Cash Drawer harness is identical, and is plugged into the appropriate header at time of factory build. The header position defines the configuration of the cash drawer. This design allows for changing the cash drawer in the field by a trained technician. Refer to the markups on the board when determining where the harness should be installed to work in the three different configurations.

Pin Number	<i>Ithaca</i>		<i>Epson</i>		<i>Star</i>	
	Signal Name	Direction	Signal Name	Direction	Signal Name	Direction
1	Frame ground		Drawer kick-out drive signal 2	Output Sink Drive	Frame ground	
2	Drawer kick-out drive signal 1	Output Sink Drive	Drawer open/close signal	Input	Drawer kick-out drive signal 1	Output Sink Drive
3	Drawer open/close signal	Input	Signal ground		+24V DC	
4	+24V DC		+24V DC		+24V DC	
5	Drawer kick-out drive signal 2	Output Sink Drive	Drawer kick-out drive signal 1	Output Sink Drive	Drawer kick-out drive signal 2	Output
6	Signal Ground		Frame Ground		Drawer Open/Close signal	Input

Table 2 Cash Drawer Pin Assignment

Electrical Connections

Communications Interface PCB

Communications are supplied through a plug-in Communications Interface PCB under the printer.

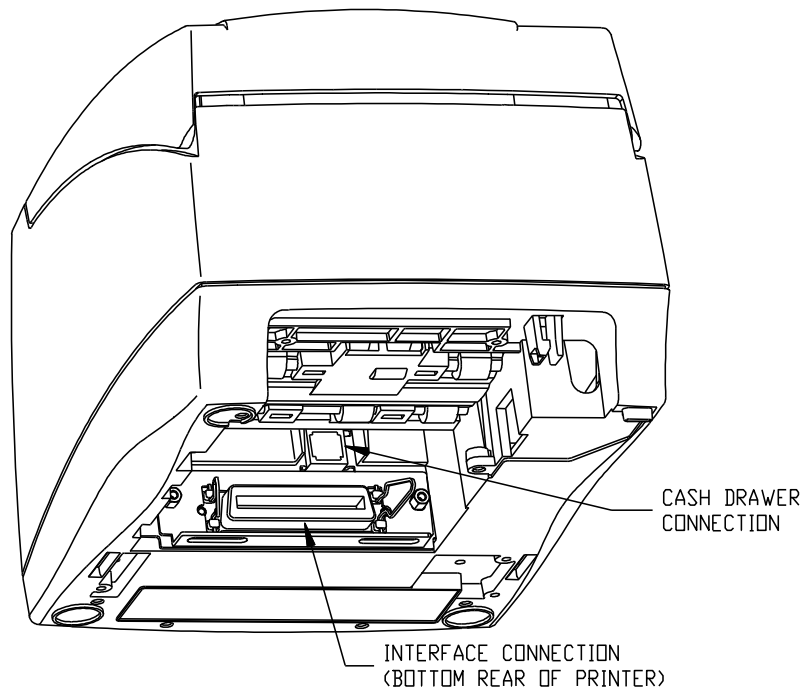


Figure 5 Communication PCB Location and Connector Info

Parallel Interface Adapters

There are two parallel interface adapters. One is a 25-pin, D-shell connector. The pin-out is such that the printer will interface to a standard IBM PC parallel printer interface with a one-to-one cable. The second adapter will provide a standard Centronics 36-pin connector.

Interface signals and pin definitions

25-pin Connector	36-pin Connector	Signal	Description	Direction
Pin 1	Pin 1	STROBE	Clock data to printer	Host to Printer
Pins 2-9	Pins 2-9	D0 - D7	Data	Host to Printer
Pin 10	Pin 10	ACK\	Printer accepted data	Printer to Host
Pin 11	Pin 11	BUSY	Printer busy	Printer to Host
Pin 12	Pin 12	PE	Paper Out/Status	Printer to Host
Pin 13	Pin 13	SLCT	Printer selected	Printer to Host
Pin 14	Pin 14	AUTOFD	Autofeed paper	Host to Printer
Pin 15	Pin 32	FAULT\	Printer error	Printer to Host
Pin 16	Pin 31	INIT\	Initialize printer	Host to Printer
Pin 17	Pin 36	SLIN	Select printer	Host to Printer
	Pin 17	FG	Frame ground	Printer to Host
	Pin 18	+5V	Peripheral logic high	Printer to Host
Pins 18-25	Pins 16, 19-30	GND	Ground	

Table 3 Parallel Port Pin-outs

Signal Levels

Voltage levels	0 V and +5 V (nominal)
Logic levels	
Logic one	
Driver	+2.4 V to +5 V
Receiver	+2.0 V to +5 V
Logic zero	
Driver	0 V to +0.4 V
Receiver	0 V to +0.8 V
Current requirements	
Logic one	Source 0.25 ma at +2.4 V
Logic zero	Sink 16 ma
Line termination	
Data and control	3.3K ohm to +5 V
Strobe	1.2K ohm to +5 V

Serial Interface Adapters

Serial Port Features

The serial port features are as follows

Baud Rate	300, 600, 1200, 2400, 4800, 9600, 19.2 K, 38.4 K
Bit Patterns	8-bit no parity; 8-bit odd; 8-bit even; 7-bit no parity; 7-bit odd; 7-bit even
Flow Control	DTR and XON/XOFF

Serial Port Pin-out

9-pin	25-pin	Signal	Description
Pin 2	Pin 3	RX	Receive Data
Pin 3	Pin 2	TX	Transmit Data
Pin 4	Pin 20	DTR	Data Terminal Ready
Pin 5	Pin 7	GND	Signal Ground
Pin 6	Pin 6	DSR	Data Set Ready
Pin 7	Pin 4	RTS	Request to Send
Pin 8	Pin 5	CTS	Clear to Send

Table 4 Serial Port Pin-outs

Because both the host and the printer are DTE's (Data Terminal Equipment), they use the same serial port pin-outs. If the cable that is used to connect the host to the printer is a pin-to-pin interconnect, it will not work. For this reason, a null modem or turn-around cable must be used to interconnect the host and the printer.

Signal levels

The serial interface meets EIA RS-232 Requirements.

-15 V to -3 V: mark = off = Logic 1

+3 V to +15 V: space = on = Logic 0

USB Interface Adapter

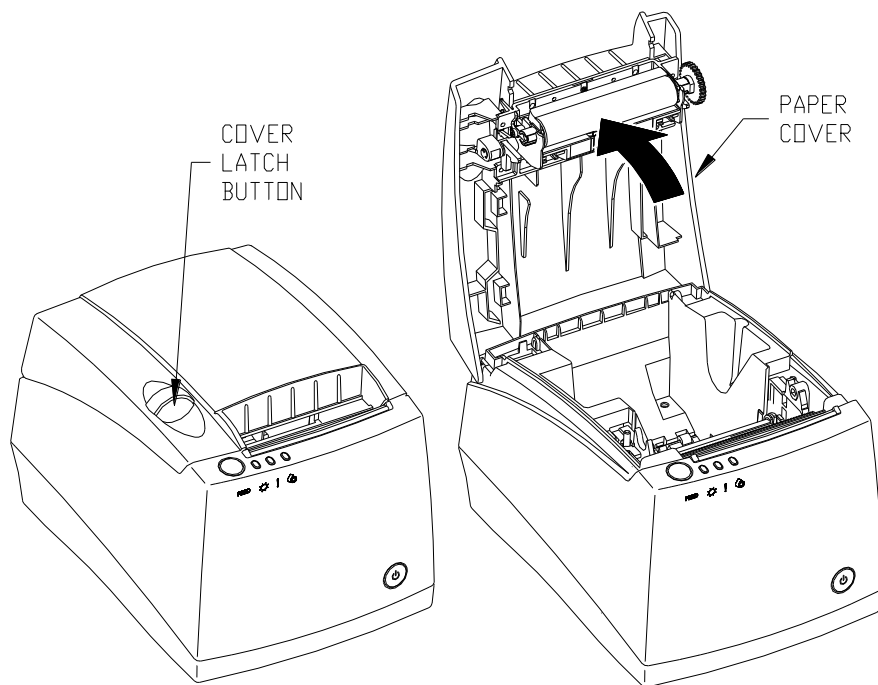
Standard USB Interface

The USB interface is a Version 1.1 Compliant interface. It is implemented through a Standard Series "B" Receptacle as defined in the USB Specification.

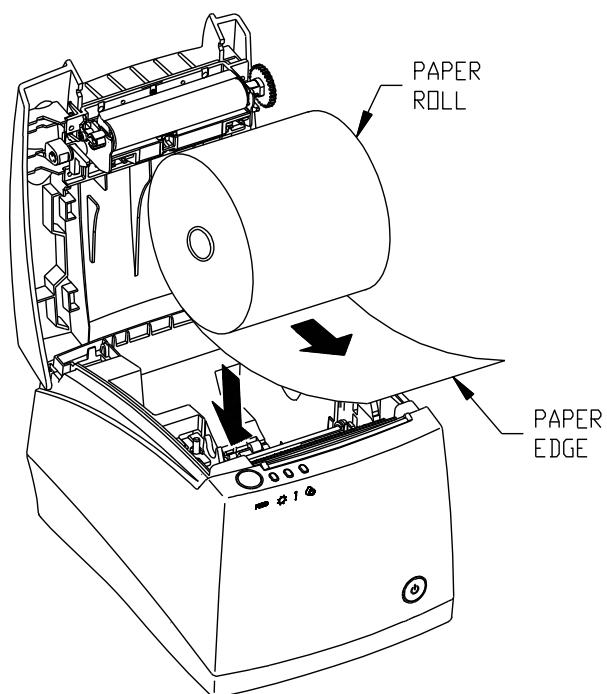
The printer is self-powered and does not draw power from the USB interface cable.

Operational Procedures

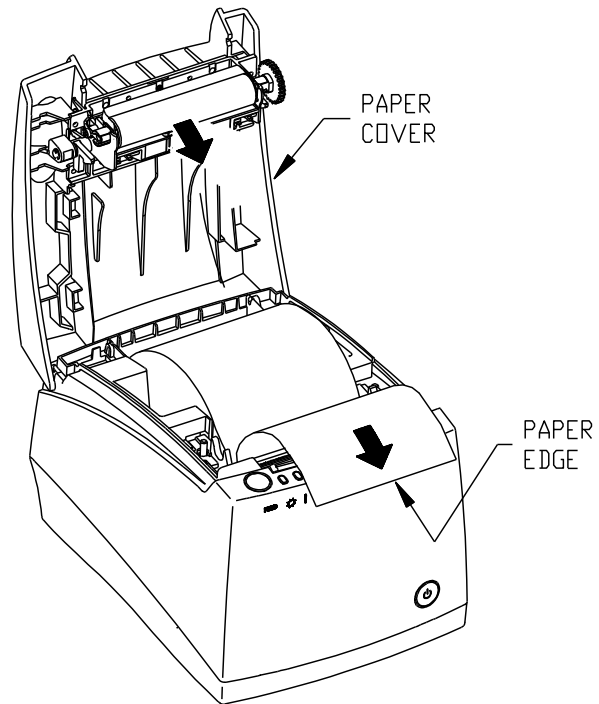
Loading Paper Supply Roll



1. Open the Paper Cover by pressing the cover latch button.



2. Place the paper roll into the printer, so that the paper unwinds from the bottom (front).



3. Close the Paper Cover firmly so that it latches securely. Paper will feed automatically to align itself, and then the printer will automatically cut off the excess paper
4. The printer is ready to receive information.

Cleaning the Print Head

Once the unit is opened, the paper path is accessible for cleaning or clearing paper. Use a soft brush to clean the paper dust from inside the printer. The paper dust should also be removed from the sensor optics. If streaking on the printed ticket is evident, the thermal print head may need to be cleaned. This can be with a cotton swab moistened with an alcohol solvent (ethanol, methanol, IPA).

Warning: After printing, the print head can be very hot. Be careful not to touch it and let it cool down before you clean it. Do not damage the print head by touching it with your fingers or any hard object.

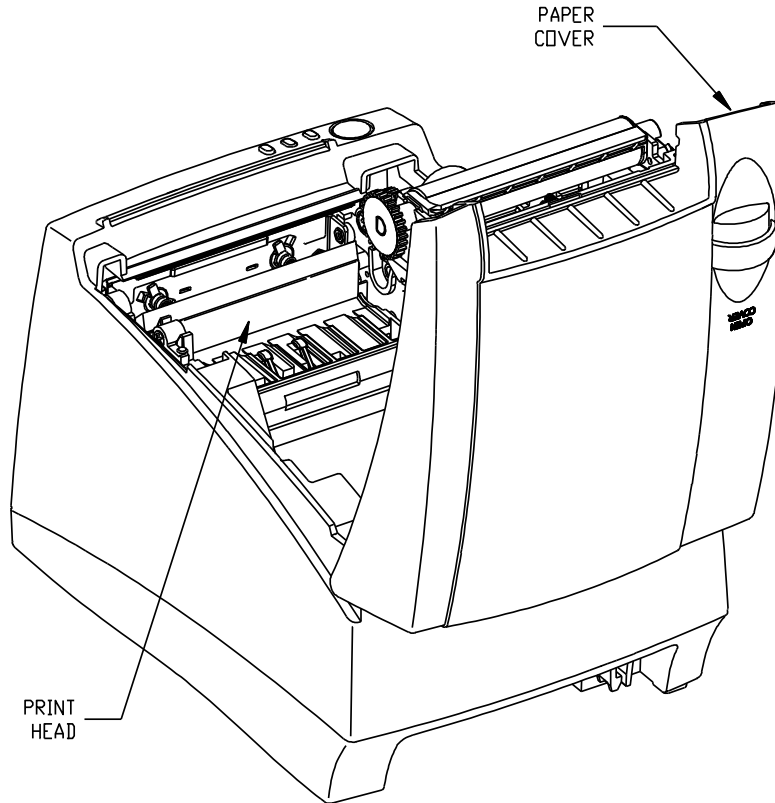


Figure 6 Cleaning the Print Head

Assembly/Disassembly

Precautions for Disassembly

Before disassembling any part of the printer, be sure the power is turned off. The Controller Board, the Thermal Print Head, and the Interface Board can be damaged by static electricity. Observe ESD precautions. Wear a grounded wrist strap, and use a static mat or other protected work surface.

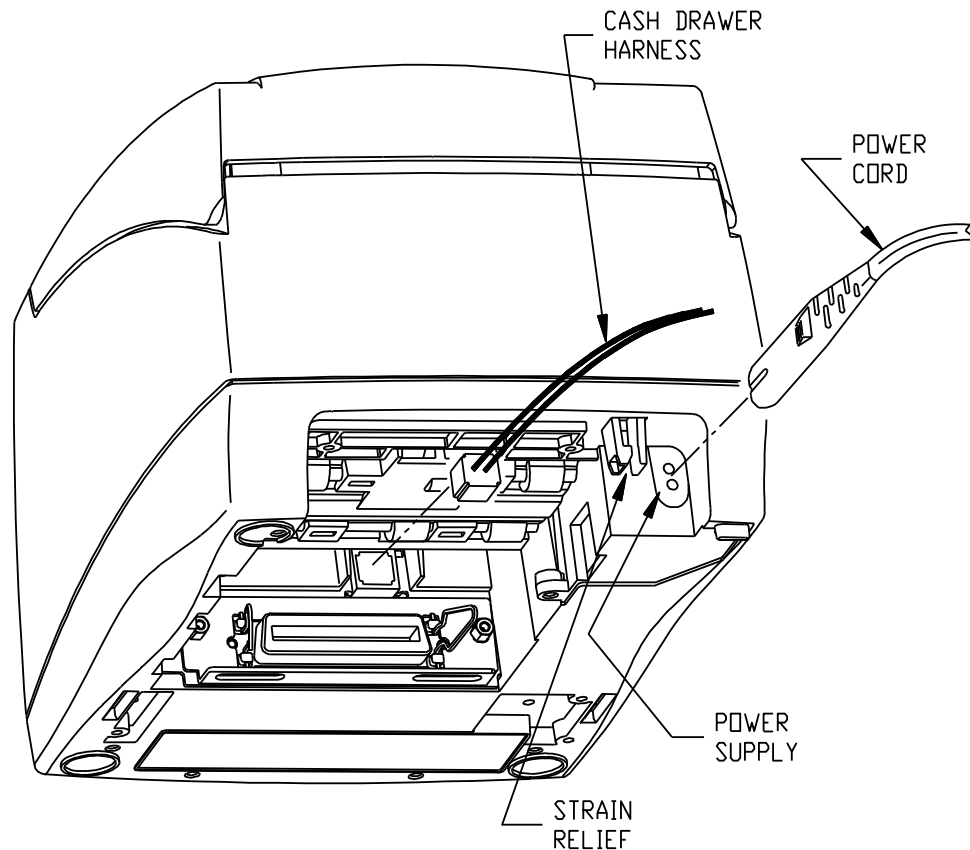
Necessary Tools

The following tools are required to disassemble the iTherm® 280 printer:

- #1 Phillips Screwdriver

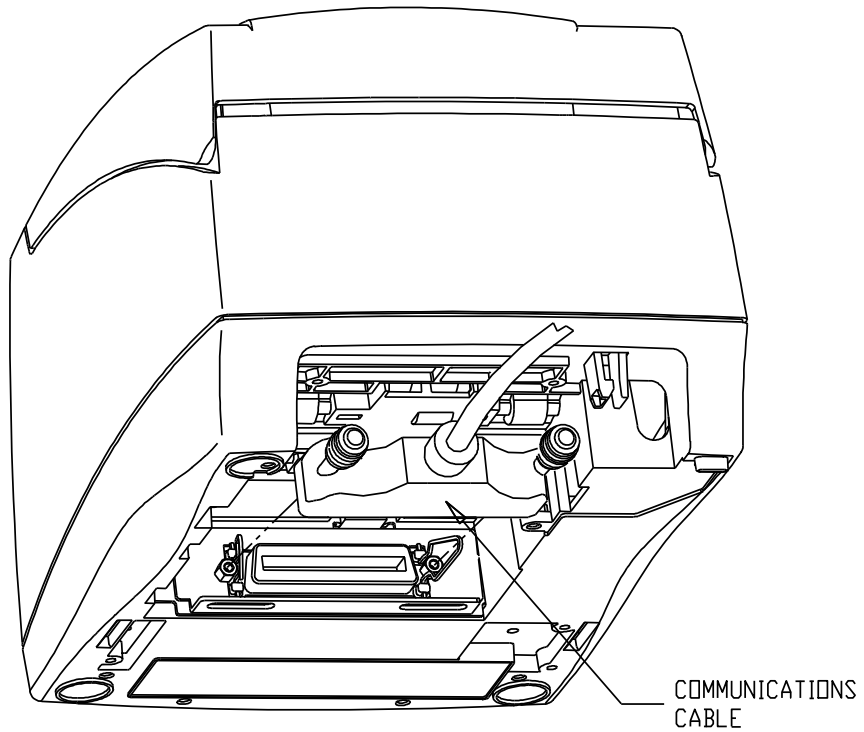
Disconnecting the Power Cord

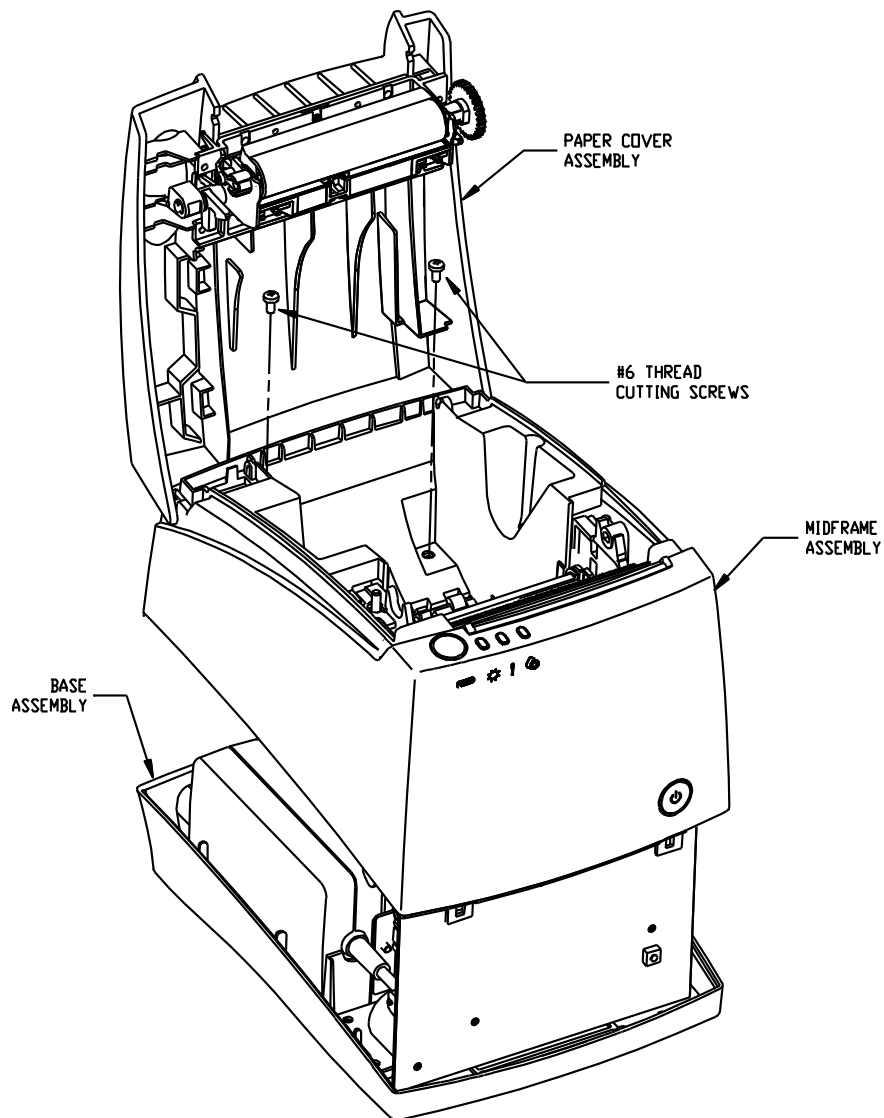
Unplug the power cord from the internal power supply, located at the rear of the printer.



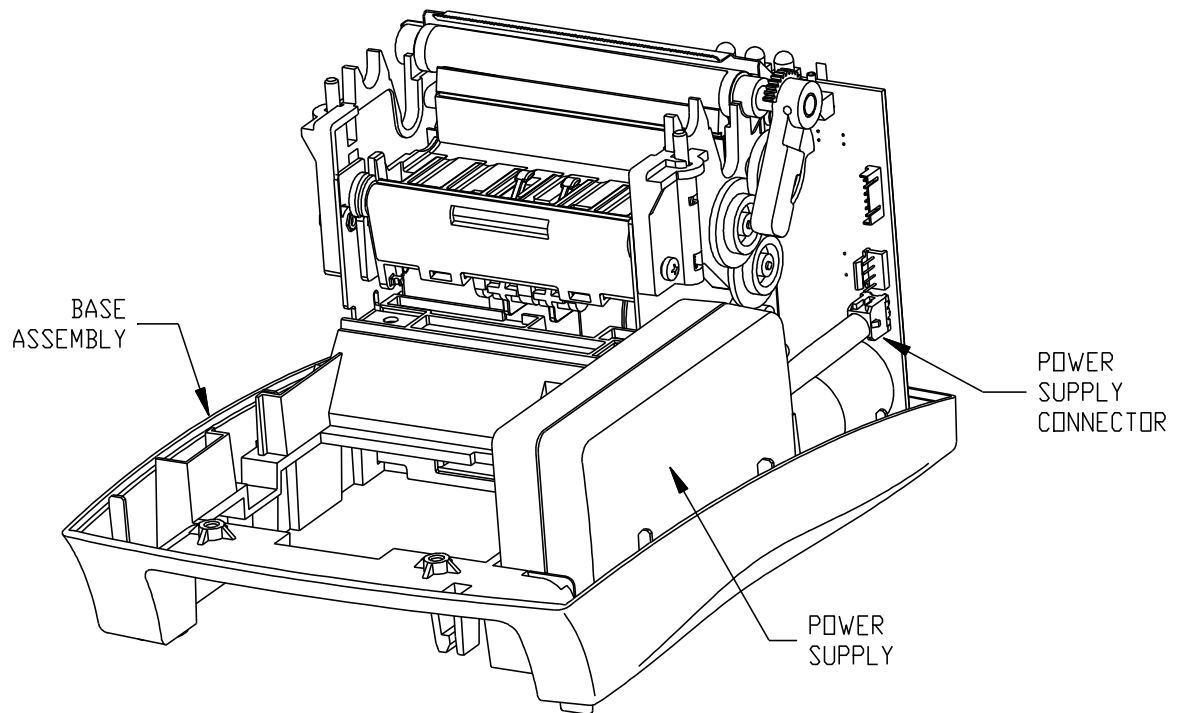
Disconnecting the Communications Cable and Cash Drawer Cable

Unplug the communications cable from the Communications Interface PCB Assembly, located at the rear of the printer, by unscrewing and gently pulling away from the PCB Assembly. Unplug cash drawer cable.



Remove Cover Assembly**Figure 6 Remove Cover Assembly**

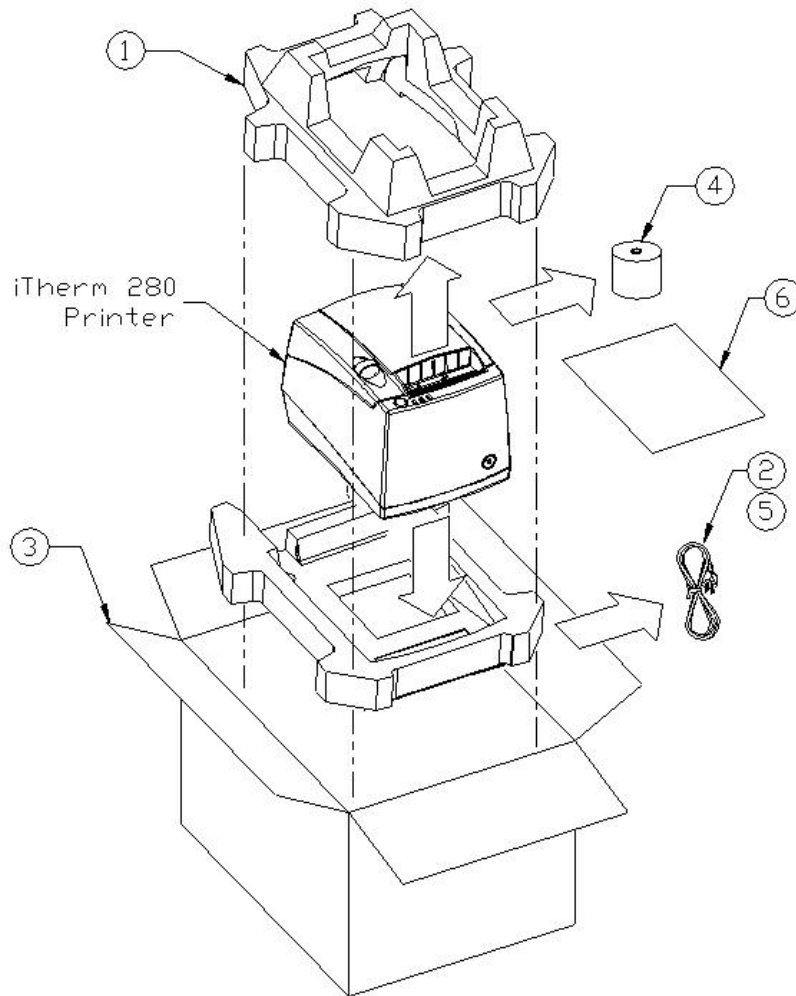
1. Open Paper Cover Assembly and remove Paper Roll, if present.
2. Unscrew two (2) #6 thread cutting screws holding the Mid-frame Assembly to Base Assembly.
3. Lift and rotate forward Mid-frame/Cover assembly to separate it from Base Assembly.
4. Unplug the Paper low Sensor Harness Assembly (if present) from the Main Controller PCB Assembly.

Remove Power Supply from Base Assembly**Figure 7 Remove Power Supply**

1. Unplug Power Supply from Main Controller PCB Assembly.
2. Lift Power Supply out of Base Assembly.

Parts Lists

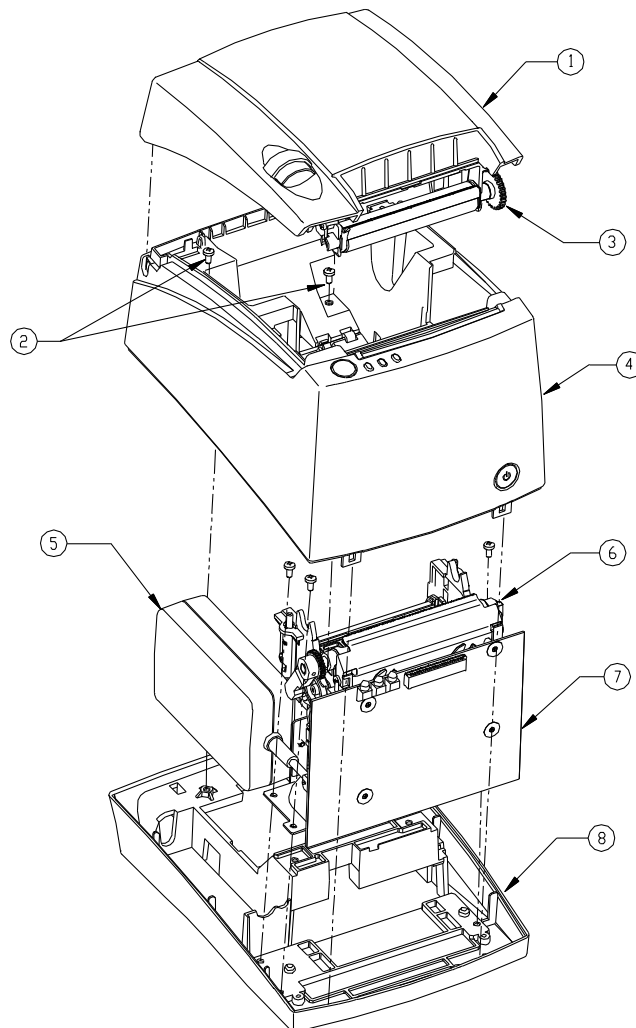
Unpack/Pack Assembly



No.	Description (standard parts)	Part No. (History)
1	Packset-M280 Wireless Foam Packset-M280 POS Foam	28-00814 28-04713
2	Cord-110V 2 Wire Power Cord-230V 2 Wire Euro Power Cord-240V 2 Wire UK Power Cord-220V 2 Wire Aus Power Cord-230V 2 Wire Ind/S. Africa Power Cord-125V 3 Wire North American Power (10 foot) Cord-125V 3 Wire North American Power (6 foot) Assembly-PAR (F3898) Power Cord Assembly-PAR (F3897) Power Cord	98-02174 98-02175 98-02176 98-02178 98-02179 98-05427 98-05428 28-06375 28-06376
3	Carton-M280 POS Shipping	28-00825
4	Roll-Paper	80-01047
5	Harness-M280 POS Cash Drawer	R28-04279
6	Sheet-Quick Reference	100-04420
7	Debris Shield-Molded (not shown)	28-04696

* Not available as a spare part

Printer Assembly

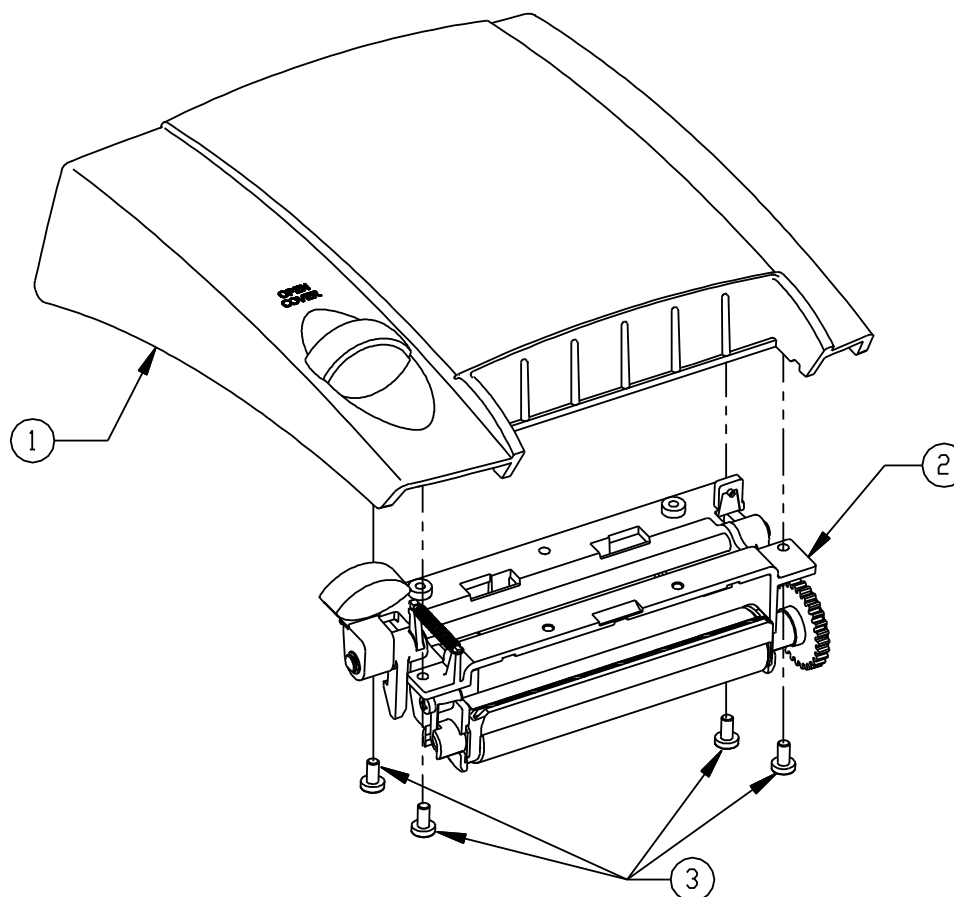


No.	Description (standard parts)	QTY.	Part No. (History)
1	Assembly-Paper Cover (Lt. Tan) Assembly-Paper Cover (Dk. Gray)	1 1	28-05305 (28-00816) 28-05306
2	Screw-#6-20 x 3/8 " Thread Cutting Phillips Panhead	2	98-2052
3	Assembly-Knife Frame (See note, this page)	1	28-04411L (28-04411)
4	Assembly-POS Lt Tan Midframe Assembly-POS Dk Gray Midframe	1 1	28-05619 (28-05310,28-04596,28-04560) 28-05620 (28-05311,28-04601,28-04561)
5	Supply- 24V Power Kit-24 VDC DIN (Not Shown) Supply-3 Wire Power	1 1 1	98-05487L (98-04289) 28-00769L (28-00769) 98-05423L
6	Assembly-M280 Printer (includes Knife Frame Assy)	1	28-04412L (28-04412)
7	Assembly-M280 Controller PCB	1	28-06331L (28-06331, 28-06010, 28-04286)
8	Assembly-POS Lt Tan Base Frame Assembly-POS Dk Gray Base Frame	1 1	28-05688 (28-05315, 28-04595,28-00817) 28-05689 (28-05316, 28-04600,28-00853)

* Not available as a spare part

Note: When replacing Knife Frame Assembly (28-04411L) you must also replace Knife Ground (28-03873) with ESD Ground Plate (28-05827), if not already equipped. (Ref. Page 29 – item #14)

Paper Cover/Knife Frame Assembly

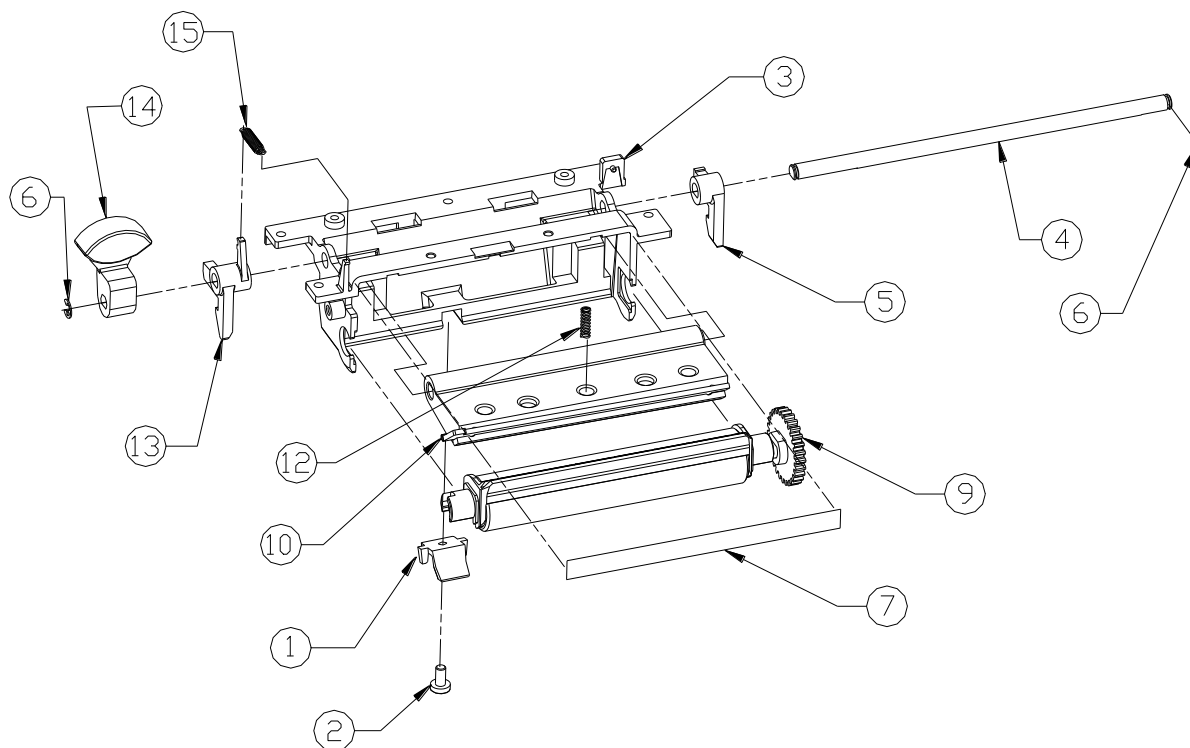


No.	Description (standard parts)	QTY.	Part No. (History)
1	Assembly-PP POS Lt Tan Paper Cover	1	28-05305 (28-00816)
	Assembly-PP POS Dk Gray Paper Cover	1	28-05306 (28-00852)
2	Assembly-Knife Frame (See note, this page)	1	28-04411L (28-04411)
3	Screw-#4 Plastic Thread Cutting Phillips Panhead	4	98-7608 (98-04272)

* Not available as a spare part

Note: When replacing Knife Frame Assembly (28-04411L) you must also replace Knife Ground (28-03873) with ESD Ground Plate (28-05827), if not already equipped. (Ref. Page 29 – item #14)

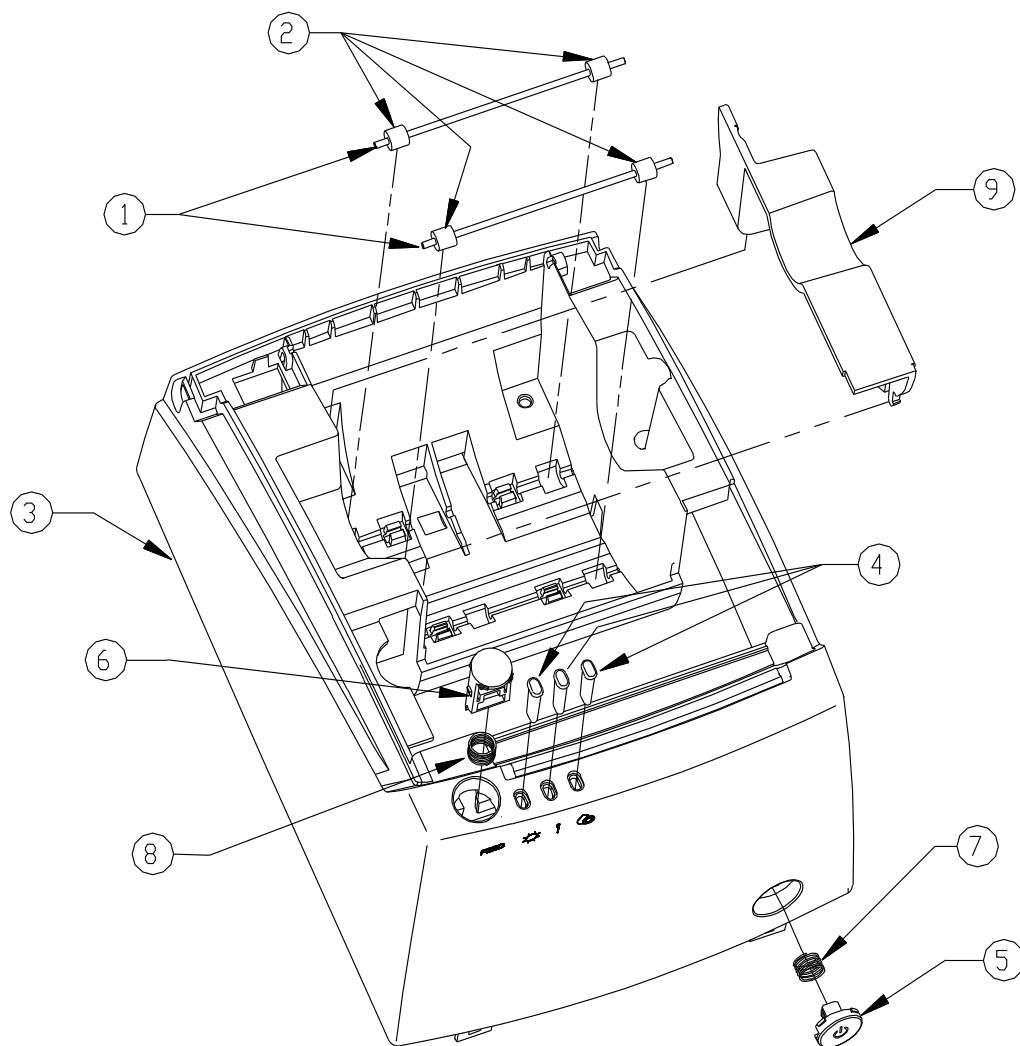
Knife Frame Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Cap-Switch Arm	1	28-03928 (28-03918)
2	Screw-#4 Plastic Thread Forming	1	98-7608 (98-04272)
3	Frame-Knife	1	28-03973
4	Shaft-Latch	1	28-03906
5	Latch-Right	1	28-05654 (28-03907)
6	E-Ring	2	98-1390
7	Film-Adhesive Kapton	1	28-03879
8			
9	Assy-Platen	1	28-03940
10	Assembly-Fixed Blade	1	28-06808 (28-05782, 28-00818)
11			
12	Spring-Compression	1	28-03985
13	Latch-Left	1	28-05655 (28-03908)
14	Lever-Cover Release (Black)	1	28-03831
15	Spring-Latch Arm Extension	1	28-03921

* Not available as a spare part

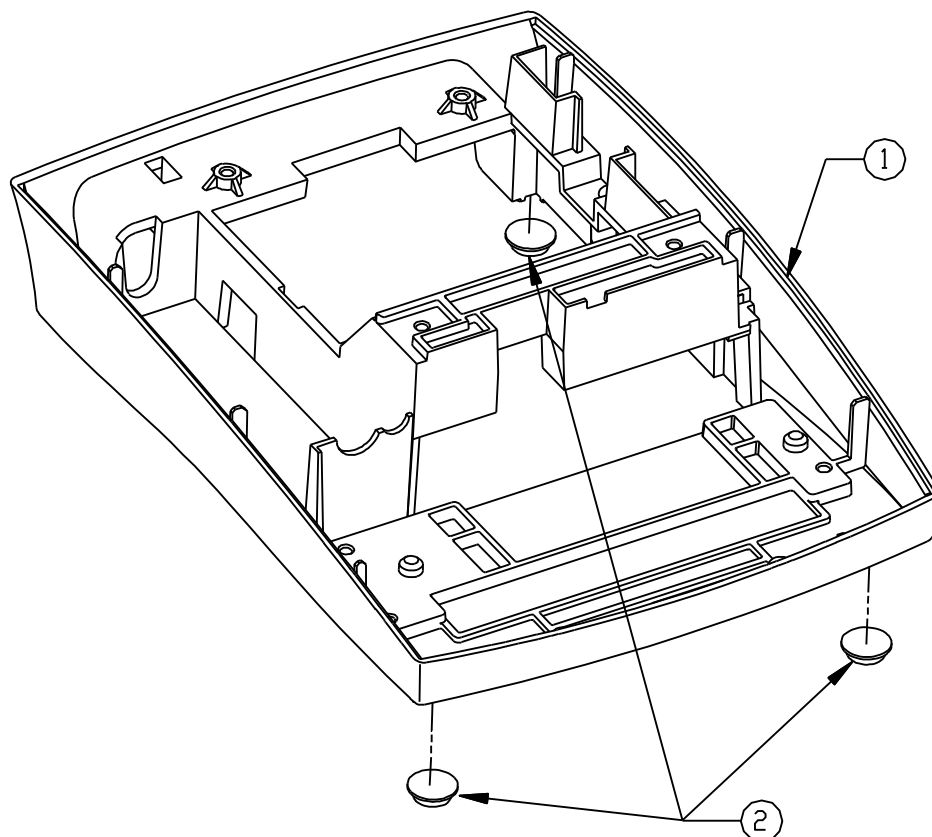
Midframe Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Rod-Roller Support	2	28-03865*
2	Roller-Paper Supply	4	15-9798*
3	Midframe-Printer (Lt Tan)	1	28-05290* (28-04590,28-03840)
	Midframe-Printer (Dk Gray)	1	28-05291* (28-04591,28-03841)
4	Lens-LED	3	28-05618* (28-03855)
5	Button-Power (Lt Tan)	1	28-05285* (28-04580,28-03828)
	Button-Power (Dk Gray)	1	28-05286* (28-04581)
6	Button-Paper Feed	1	28-03829*
7	Spring-Power Button	1	28-03857*
8	Spring-Compression	1	28-03859* (M067865-02)
9	Wall-Paper Divider	1	28-03866

* Not available as a spare part

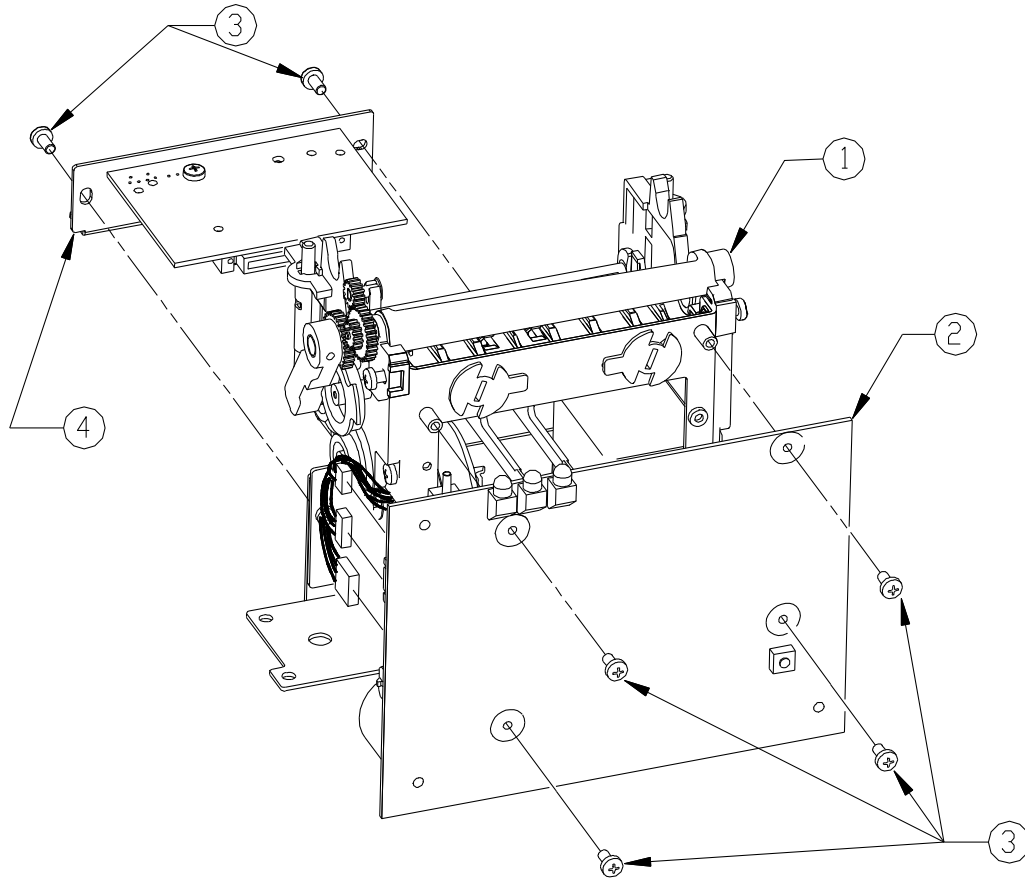
Base Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Base-M280 Lt Tan Printer	1	28-05685* (28-05295,28-04585,28-03835)
	Base-M280 Dk Gray Printer	1	28-05686* (28-05296,28-04586,28-03836)
2	Foot-Black Rubber	3	119000401* (98-04248)

* Not available as a spare part

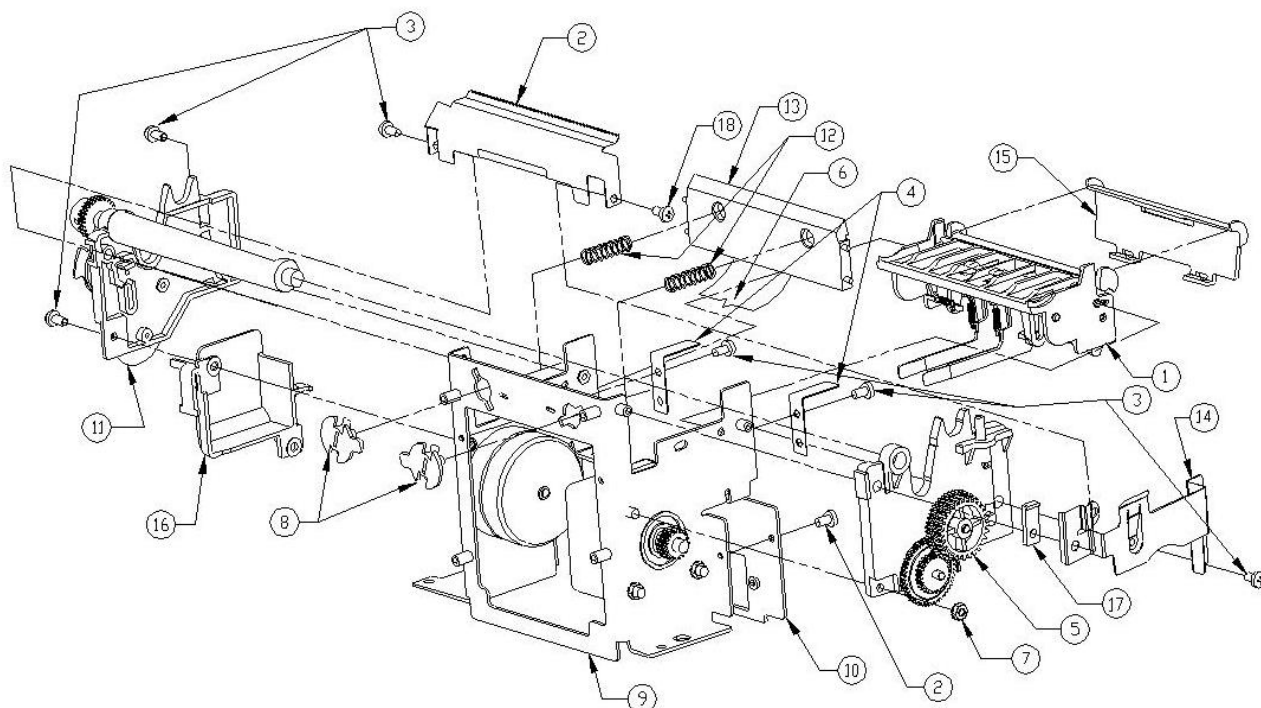
Controller Board/Interface Board Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Assembly-M280 POS Printer	1	28-04412L (28-04412)
2	Assembly-M280 Controller PCB	1	28-06331L (28-06331, 28-06010)
3	Screw-M3 x 6 Phillips Panhead	6	98-0611
4	Assembly-25 Pin Serial Interface PCB/Bracket	1	28-00855L (28-00855)
	Assembly-9 Pin Serial Interface PCB/Bracket	1	28-00824L (28-00824)
	Assembly-36 Pin Centronics	1	28-06478L (28-04414L, 28-04414)
	Assembly-25 Pin Parallel	1	28-04415L (28-04415)
	Assembly-M280 Std USB I/F PCB/Bracket	1	28-05878L (28-05878, 28-05412, 28-04626)
	Assembly-M280 Powered USB I/F PCB/Bracket	1	28-05876L (28-05876)
	Assembly-9 Pin Wireless	1	28-00856
	Assembly-Ethernet Interface PCB/Bracket	1	28-05069L (28-05069)

* Not available as a spare part

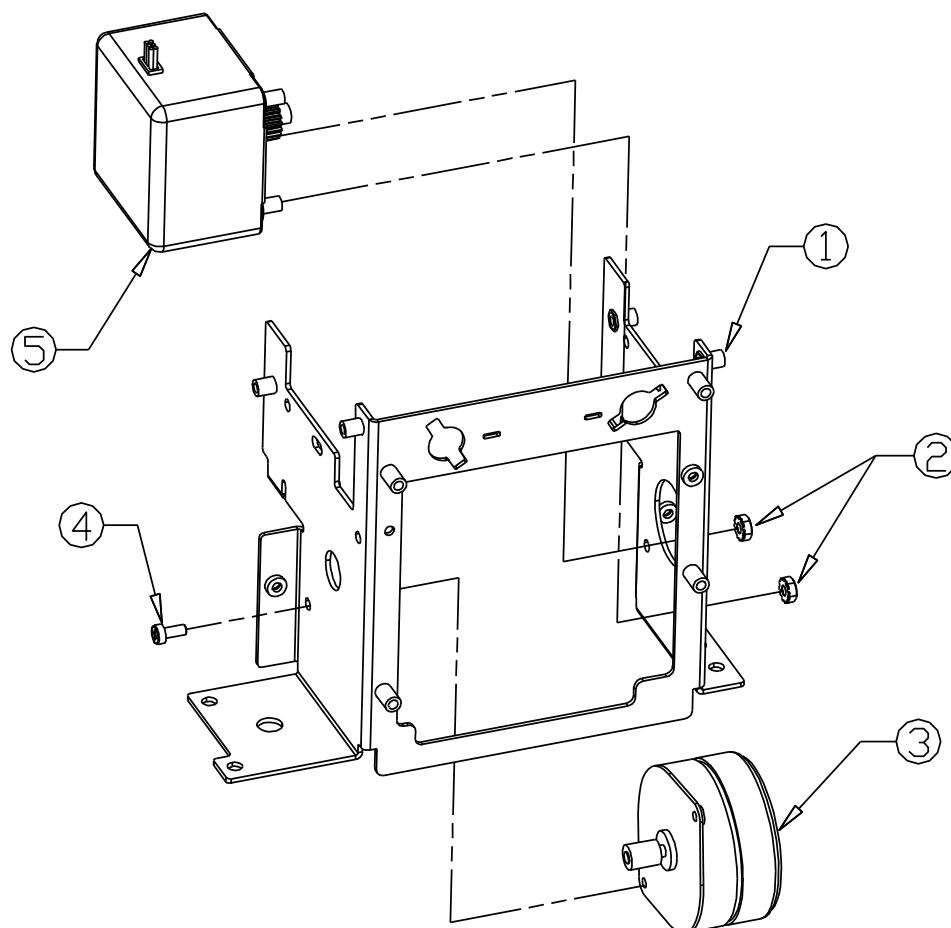
Printer Mechanism Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Assembly-Paper Path	1	28-00763*
2	Tear off-Paper	1	28-03725
3	Screw-M3 x 6 Phillips Panhead	9	98-0611
4	Ground-Printhead	2	28-06855 (28-03871)
5	Assembly-Right Bearing Plate	1	28-00762*
6	Cable-Flat Flexible	1	28-04036L (28-04036)
7	Nut-M3	1	98-0621
8	Holder-Head Spring	2	28-03735
9	Frame-Main	1	28-04712 (28-03710)
10	Plate-POS Interface Backer	1	28-03715*
11	Assembly-Left Bearing Plate	1	28-00761
12	Spring-Printhead Compression	2	28-03765
13	Assembly-Print Head	1	28-03702
14	Plate-ESD Ground	1	28-05827 (28-03873)
15	Guide-80mm Paper	1	28-03965
	Guide-58mm Paper	1	28-03966
16	Cap-Wire Clip Gear	1	28-03958
17	Spacer-ESD Ground	1	28-04709
18	Screw-M3x7mm Phps Phd	1	98-04717

* Not available as a spare part

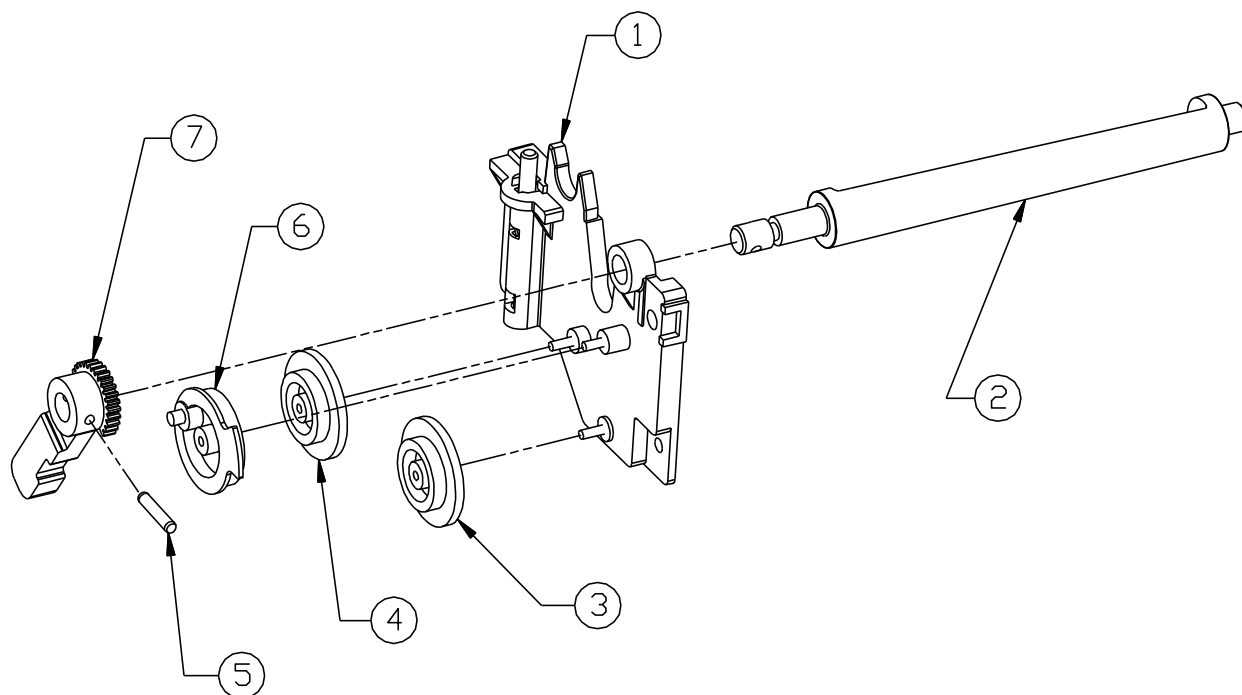
Knife/Linefeed Motor Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Frame-Main	1	28-04712 (28-03710)
2	Nut-M3	2	98-0621
3	Assembly-Knife Motor	1	28-00760
4	Screw-M3 x 6 Phillips Panhead	1	98-0611
5	Assembly-Line Feed Motor	1	28-00759L (28-00759)

* Not available as a spare part

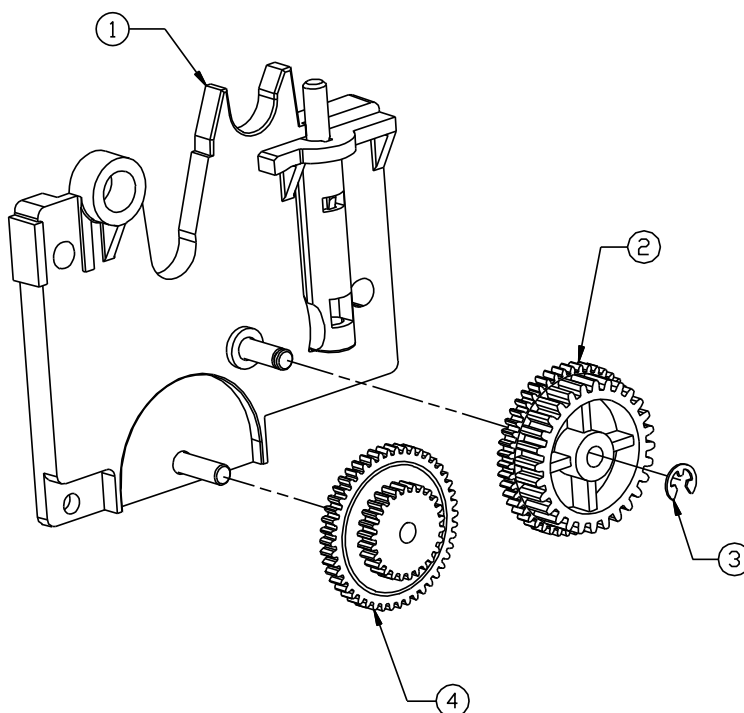
Left Bearing Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Assy-Left Bearing Plate/Plunger	1	28-04268
2	Knife Blade-Rotative	1	28-03711*
3	Gear-36/18 Tooth	1	28-03780
4	Gear-45/24 Tooth	1	28-03782
5	Pin-Spring	1	M063298-07*
6	Gear-24 Tooth	1	28-03703
7	Arm-Rotary	1	28-03731*

* Not available as a spare part

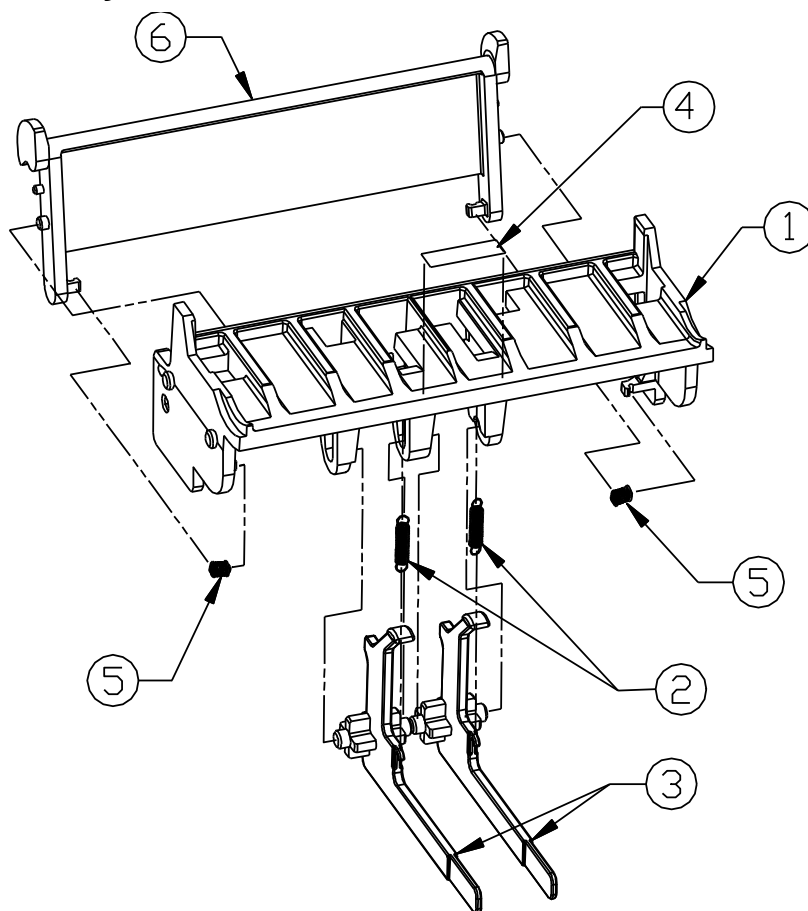
Right Bearing Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Assy-Right Bearing Plate/Plunger	1	28-04269
2	Combo gear-48/28 Idler	1	28-03705
3	Retainer-'E' Ring .125	1	520-9800002
4	Gear-Combo 26/46 Drive	1	28-03707

* Not available as a spare part

Paper Path Assembly



No.	Description (standard parts)	QTY.	Part No. (History)
1	Mount-Paper Path/Flag	1	28-03730
2	Spring-Extension	2	98-03952
3	Flag-Paper out/Cover open	2	28-03950
4	Label-Static Awareness	1	28-04395
5	Spring-Slacker Compression	2	28-03951
6	Slacker-Paper	1	28-03920

* Not available as a spare part

