Printer Kit *[9A259]*

Special Tools:
none

Language of origin: English

Note
When the sterilizer is plugged in, the printer is automatically powered up and initialized.
No user intervention or setup is required. When the printer successfully initializes after the sterilizer is powered up, it prints the word "READY" to assure the operator that its built in microprocessor is working properly and the sterilization cycles will be recorded by the printer.
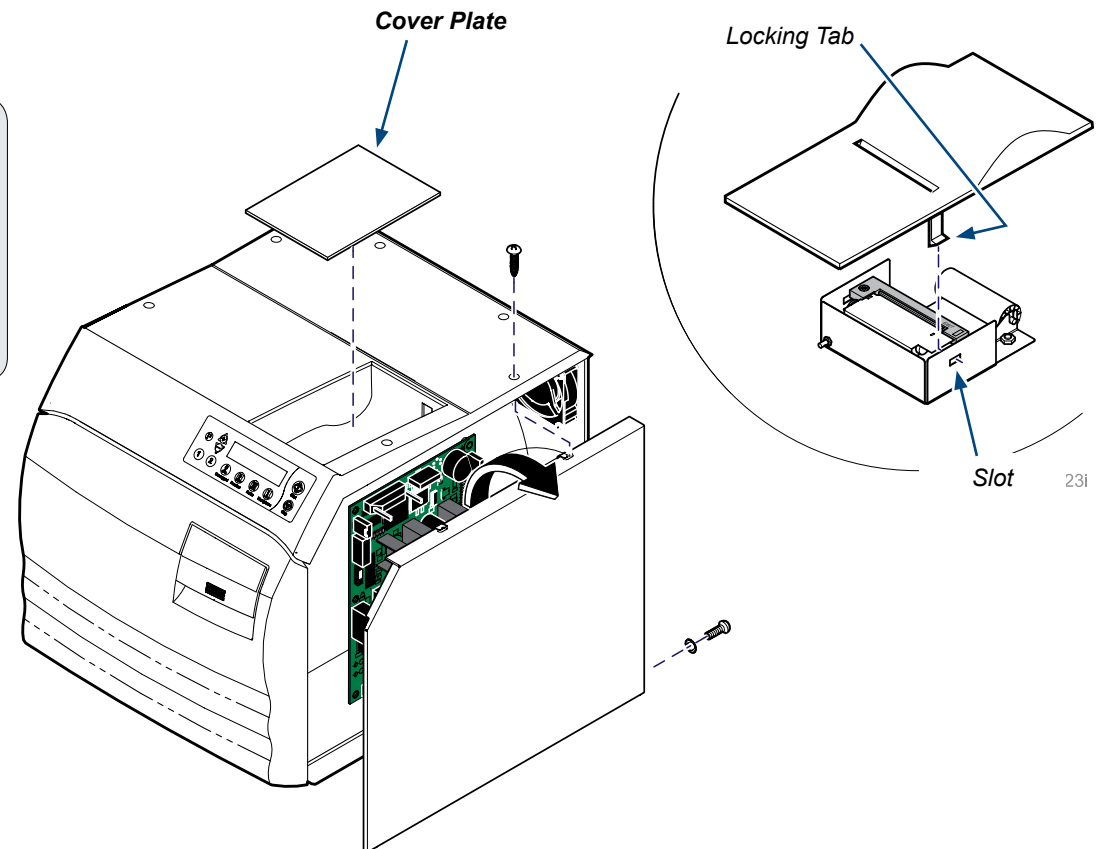
Printer Installation

⚠️ **WARNING**
To prevent risk of shock always disconnect power before removing covers or performing any service procedure.

Step 1:   Remove Covers / Assemble Printer
A) *Unplug sterilizer power cord.*
B) *Using a flat-bladed screwdriver, pry cover plate up, then remove.*
C) *Attach printer cover to printer, if necessary.*
   (Be sure locking tabs snap into slots).
D) *Remove RH side panel.*
   (Remove screws, then pull panel out and push down to release).

*Cover Plate*

Locking Tab

Slot

23i

Printer Installation - continued

Step 2:   Install Printer / Side Panel
A) Route printer harness thru slot in top cover.
B) Connect harness to printer terminal on PC board.
C) Install paper roll if necessary.
    (Refer to the following page).
D) Position printer assembly in cavity as shown*.
E) Install RH side panel / secure with screws.
    (Back lip of side panel must be **outside** of the back panel).

* Note: Be sure harness does not interfere with paper roll.

Printer Harness

Slot

Tab
(Side Panel)

MA8624i
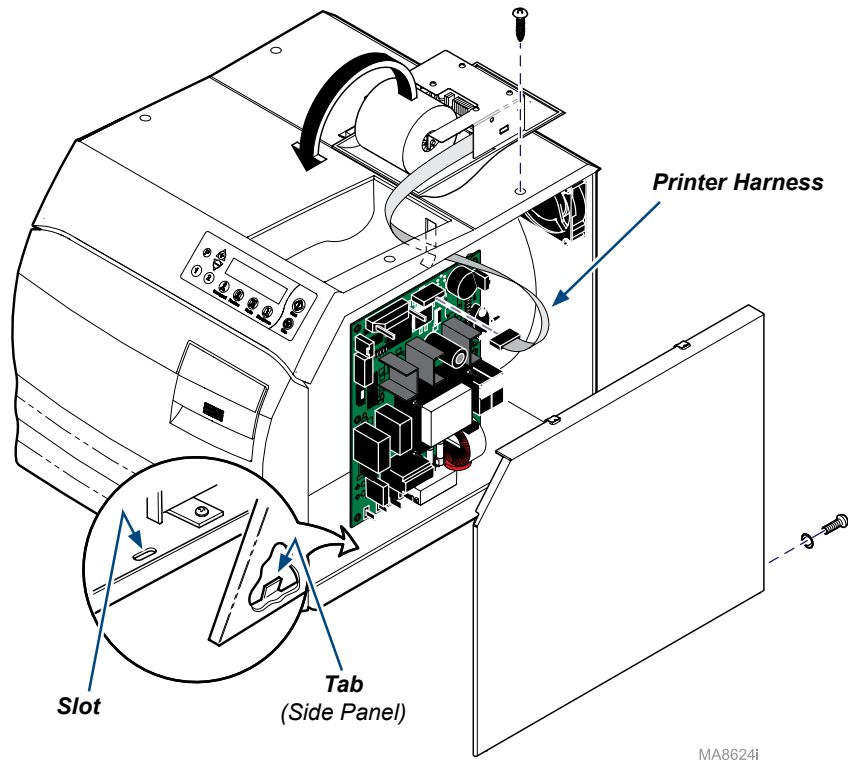
Cartridge Ribbon Replacement

Note
If the printed material is difficult to read and you suspect a dried out ribbon is the cause of the problem, advance to a properly inked portion of the ribbon by pressing the "PAPER FEED" button for three seconds. If this procedure does not correct the problem, replace the cartridge ribbon.

To replace the cartridge ribbon...
A) Remove printer assembly from top cover.
B) Remove the printer cover. (Bend the housing out slightly to release tabs).
C) Push down on the side of the cartridge marked "Eject", then remove cartridge.
D) Install the new cartridge. Be sure the ribbon is inserted in front of the paper, and flat against the paper.
E) Press cartridge down until it snaps into place.
F) Turn the cartridge knob clockwise until ribbon is tight.
G) Install printer cover / position printer on sterilizer.

Printer Cover

Tab

Cartridge Knob

MA8627i

Paper Feed Button

Housing
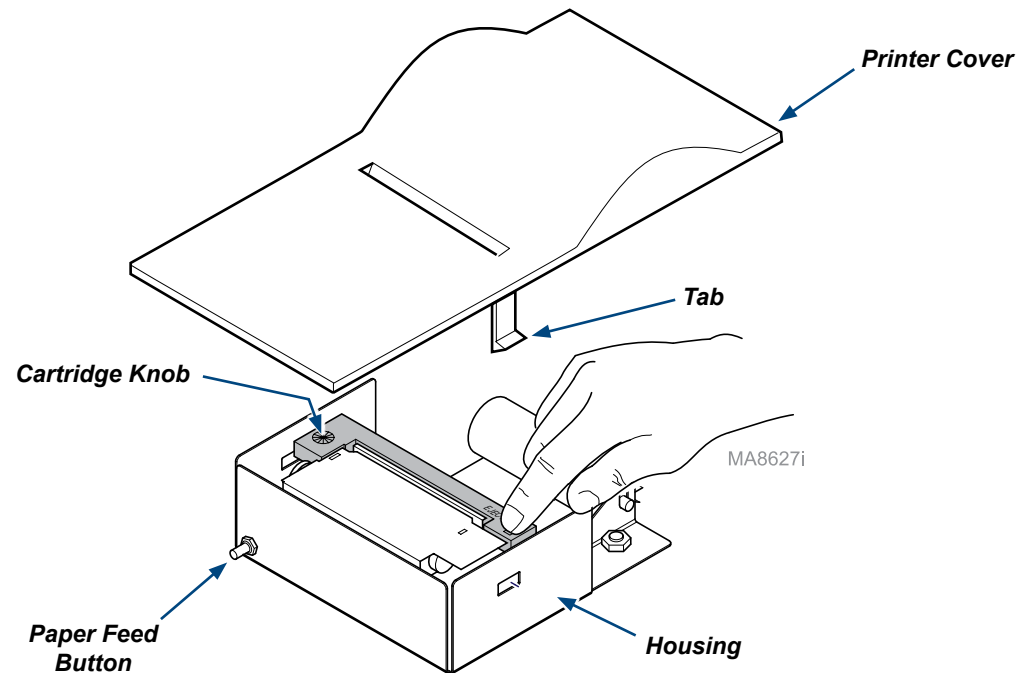
Paper Roll Replacement

> **Equipment Alert**
> *Be sure to pull the paper out of the top of printer. Pulling from the back will damage the printer.*

To remove the paper roll...
A) Press the "PAPER FEED" button to advance approx. 1" (2.5 cm) of paper.
B) Lift paper roll away from printer housing, then cut the paper feeding into the printer.
C) Pull remaining paper thru the printer mechanism.

> **Equipment Alert**
> *Using paper rolls larger than 1.97" (50 mm) in diameter, may cause the paper feed mechanism to slip and / or damage the printer.*

To install the paper roll...
A) Turn printer onto its back.
B) Insert spindle into new paper roll.
C) Unroll 2" to 3" (5 to 7.5 cm) of paper.
D) If necessary, cut a straight edge on the paper to feed into the printer slot.
E) Feed approx. 1/4" (6.4 mm) of paper into the printer slot.
F) While holding paper in place, press/hold "PAPER FEED" button until 1" (2.5 cm) paper comes thru slot in printer cover, then release button*.
G) Pull 2" to 3" (5 to 7.5 cm) of paper thru printer cover.
H) Insert paper roll / spindle into slots of spindle holder as shown.
I) Turn the paper roll to remove slack in the paper feeding to the printer.
J) Install the printer assembly back into the printer cavity.

Note: If necessary, remove the printer cover and manually feed the paper thru the slot in the cover.

Paper Feed Button

Printer Slot

Spindle
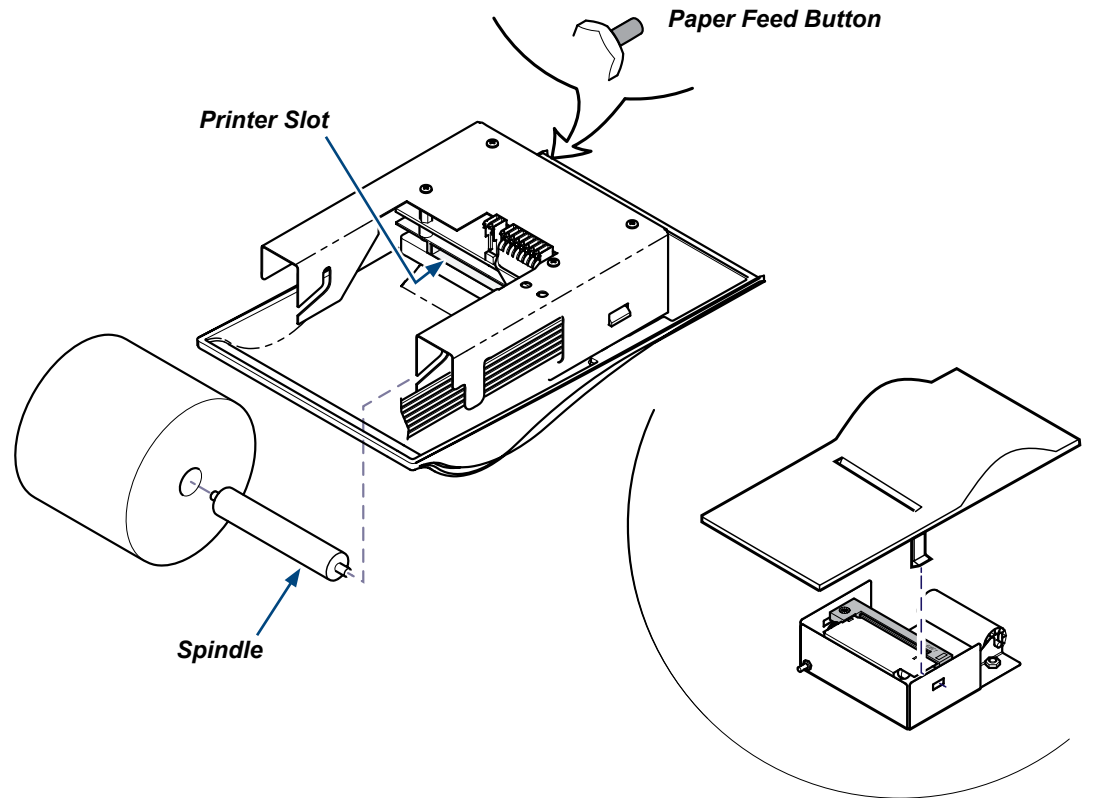
Printer Tape Description

The printer will print the following information for each program cycle:
- Cycle Number
- Identification: a line is printed so the sterilizer I.D. can be recorded on the printer tape
- Operator: a line is printed so the operator's signature can be recorded on the printer tape.
- Date: lines are printed for the month, day, year, hour, and minute so the date and time can be recorded by the operator on the printer tape.
- "BEGIN _selected_ CYCLE": to indicate the beginning of the cycle selected by the operator.
- Summary of selected cycle set points.

Once the cycle starts, the printer will print the words "FILLING CHAMBER" to show that the sterilizer is filing with water.

Once the sterilizer begins the Heating Phase of the sterilization cycle, the word "HEATING" is printed and the printer will print the chamber temperature, pressure, and elapsed time in 30 sec. increments until the heating phase is completed.

When the sterilizer enters the sterilization phase, the word "STERILIZING" is printed and the printer will print the chamber temperature, pressure, and elapsed time in 30 sec. increments until the sterilization phase is completed.

When the sterilizer has completed the sterilization phase of the program cycle, the printer will print the words "VENTING CHAMBER" to show that the steam pressure is being exhausted from the chamber.

When the sterilizer enters the drying phase, the word "DRYING" is printed and the printer will print the elapsed time in 5 minute increments starting with 0:00 and the words "DRYING START". The printer continues to print the elapsed time in 5 minute increments until the drying phase is completed. The final record for the drying phase will include the words "DRYING COMPLETE". In the event the drying time is programmed to a time that isn't divisible by 5, the final printed record for the drying phase will reflect the actual programmed drying time in 1 minute increments, e.g. a programmed dry time of 12 minutes will have 5,10,and 12 minutes printed on the printer tape.

When the sterilizer has completed the drying phase of the sterilization cycle, the printer will print a summary of the sterilization cycle with the duration of each phase of the cycle and the Total Cycle Time. Following the summary the printer will print "CYCLE COMPLETE".

[NOTE: If drying cycle is aborted, "DRYING COMPLETE" and "CYCLE COMPLETE" will not print].

Printer Tape Diagram

Line provided for sterilizer identification →

Total # of cycles run on unit →

Space provided for recording date & time →

Line provided for operator signature →

Selected Cycle →

Sterilization temperature, time, and dry time settings

Indicates Filling phase initiated →

During Heat-Up phase, the printer records chamber temperature & pressure in 30-second increments

During Sterilization phase, the printer records chamber temperature & pressure in 30-second increments

Summary of Sterilization phase →

Indicates Venting phase initiated →

During Drying phase, the printer records time in 5-minute increments

These lines will not print if Dry Cycle is aborted before it completes →

These lines will show the total dry time completed →

Cycle summary

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              Midmark M9 - v1.0.3
              Total Cycles: 10

        - - - - - - - - - - - - - - - - - -
                  Sterilizer ID

        - - - - - - - - - - - - - - - - - -
                    Operator

        - - / - - / - - - - - - : - -
        mm  /  dd  /  yyyy   hh : mm

            BEGIN UNWRAPPED CYCLE

        Temp:          270         Degrees F

        Time:           3          Minutes

        Dry:           30          Minutes

                 FILLING CHAMBER

                    HEATING
        mm:ss         Degrees        PSI
        0:00          233.8 F        0.0
        0:30          231.3 F        1.9
        2:30          265.7 F        25.0
        3:00          271.3 F        28.8

                   STERILIZING
        mm:ss         Degrees        PSI
        0:00          271.8 F        28.9
        0:30          272.4          29.5
        2:30          272.7          29.3
        3:00          272.6          29.3
        Min           271.8 F        28.7
        Max           273.2          29.9

                 VENTING CHAMBER

                    DRYING
        MM:SS
        0:00          Drying Start
        5:00
        25:00
        30:00         Drying Complete
        FILLING:                    3:22
        HEATING:                    8:54
        STERILIZING:                3:00
        VENTING:                    2:16
        DRYING:                     30:00
        TOTAL CYCLE                 00:47:32

                 CYCLE COMPETE
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