

Installation Instructions

*P/N 1-960424-01
Edition 2
September 1998*

EasyCoder 401 LinerLess Paper Cutter Kit

 **ntermec**

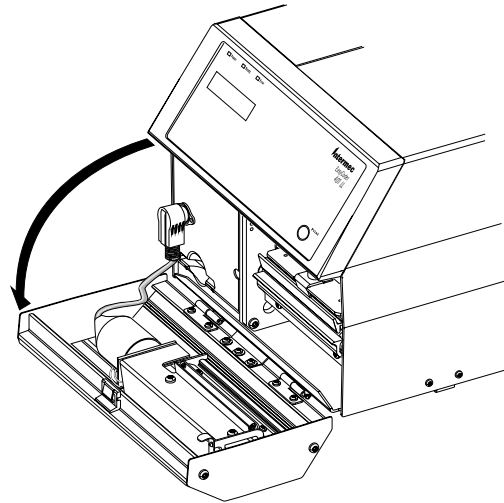
A **UNOVA** Company

EasyCoder 401 Linerless – Installation Instructions

PAPER CUTTER KIT

Description

The paper cutter is factory fitted on the *EasyCoder 401 Linerless Cutter* model (EC 401 LLC) and can be fitted as an option on the *EasyCoder 401 Linerless Tear-Off* model (EC 401 LLT) which thereby is upgraded to EC 401 LLC standard.



The cutter can easily be opened for paper load and cleaning.

The linerless paper cutter is intended to cut through continuous linerless paper strip and is thus provided with a cutting mechanism designed to cut and feed linerless paper without the adhesive sticking to the various parts. The cutter has a built-in label-taken sensor/jam detector, and a safety switch that prevents it from operating when the anvil shear is open.

The cutter kit consists of:

- One Linerless Cutter Unit
- One Guide Plate
- This Installation Instructions leaflet

Maximum paper thickness is 175 μm (\approx 175 grammes/m²) for paper-based linerless materials.

The Paper Cutter **increases** the printer's total weight by approx. 1.0 kgs (=2.2 lbs) and its length by 28 mm (1.1") without the guide plate, and by 58 mm (2.3") with the guide plate fitted at the front of the cutter.

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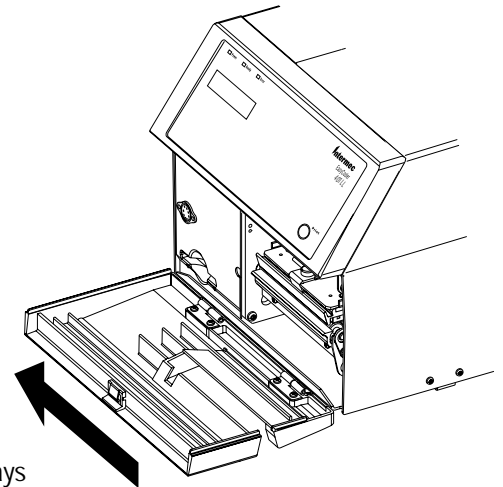
EasyCoder 401 Linerless – Installation Instructions

PAPER CUTTER KIT, cont'd.

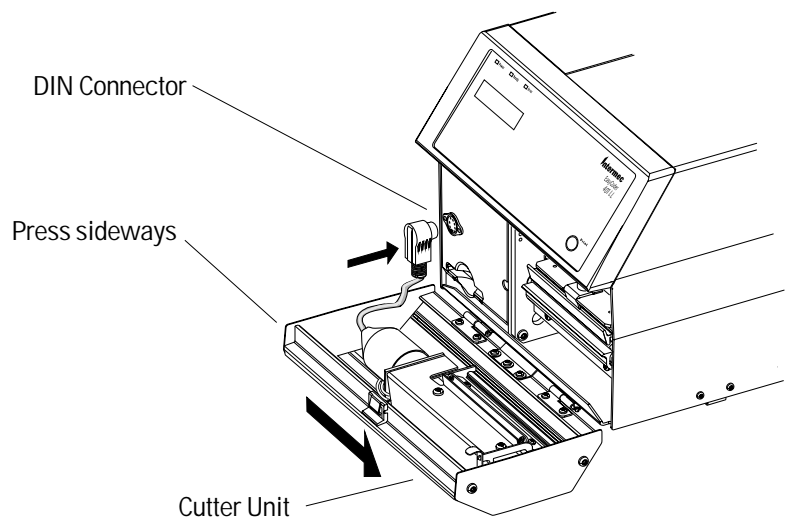
Installation

This chapter describes installation of a paper cutter on an *Easy-Coder 401 LLT* printer without an optional label-taken sensor:

- Turn off the power.
- Open the printer's front hatch.
- Hold the printer firmly and press the front hatch sideways to the left so as to disengage the hinges.
- Remove the hatch completely.



- Fit the cutter unit to the vacant hinges. Make sure that the locking plate snaps into the groove of the right-hand hinge and that the angled plate at the bottom of the cutter is inserted under the printer's bottom plate.
- Fit the cable from the cutter unit into the DIN connector on the printer's front.



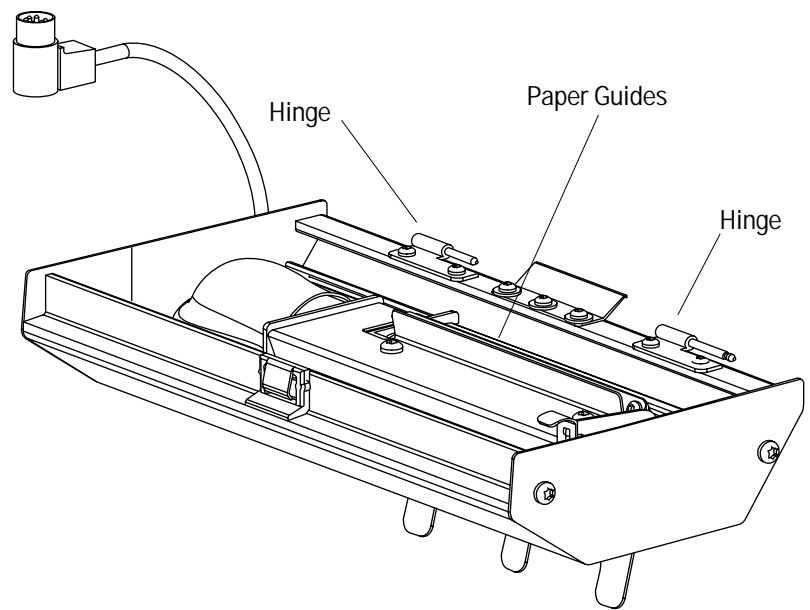
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EasyCoder 401 Linerless – Installation Instructions

PAPER CUTTER KIT, cont'd.

Installation, cont'd.

- Tilt the cutter unit upwards until it locks into place. If the cutter does not lock properly, the hinges of the cutter unit may need to be adjusted using a #T10 Torx screwdriver.



- Switch on power. The cutter will perform an idle cycle in order to occupy its home position.
- Use e.g. the *Terminal Setup* in *Intermec Shell* or setup files to change the startadjust value to -294 and the stopadjust value to +250. Setup files should be composed like this:
"DETECTION, FEEDADJ, STARTADJ, -294"
"DETECTION, FEEDADJ, STOPADJ, 250"
- Tilt down the cutter and thread the paper through the cutter unit between the paper guides (see illustration above). Then tilt up the cutter again and lock it in closed position. Check that the printhead is lowered. Now the printer is converted to *EC 401 LLC* standard and is ready for operation after the guide plate has been installed, as described on next page.

Note!

If the cutter does not operate properly after installation, follow the instructions on page 5.

Continued!

PAPER CUTTER KIT, cont'd.

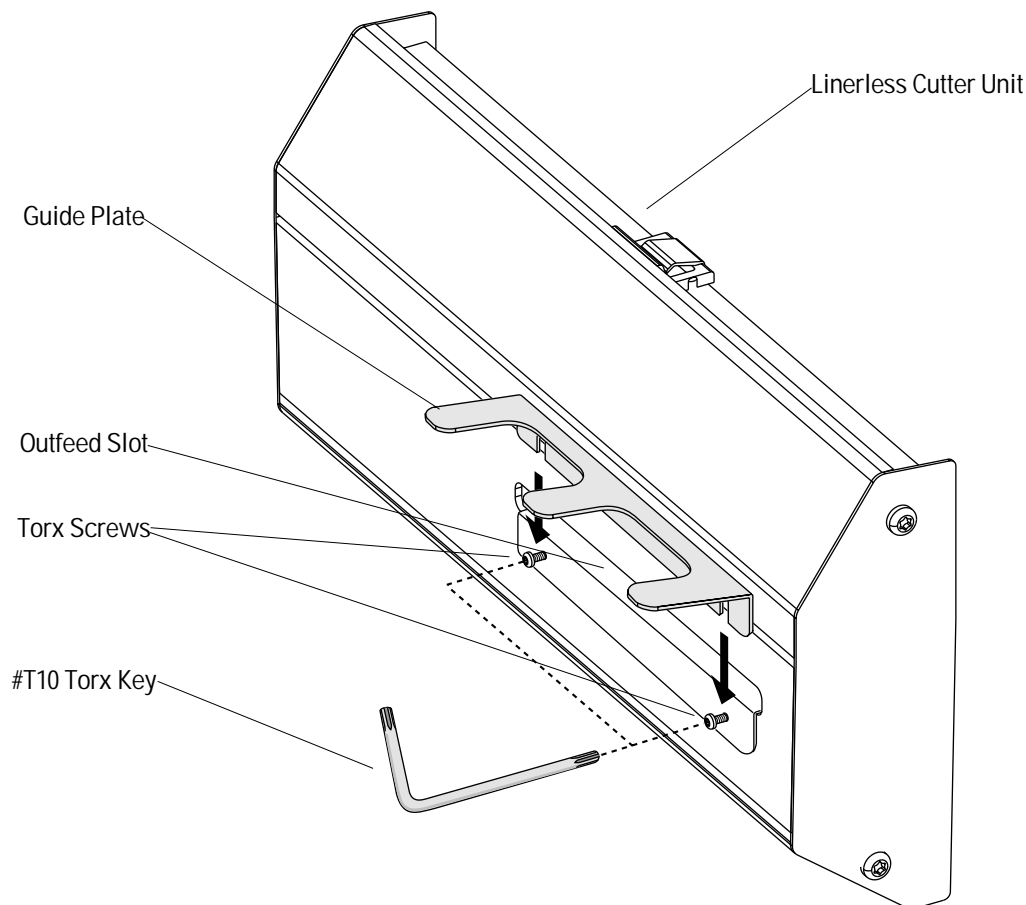
Installation, cont'd.

The guide plate is intended to be fitted on the front of the linerless cutter. It prevents labels up to a length of 120 mm (4.75") from falling off after cutting and stick e.g. to the front of the cutter, or to the table where the printer stands. It is not necessary to fit the guide plate, but we recommend to fit it unless some other means of taking care of the label are provided, e.g. an applicator.

The guide plate has a special coating that prevents labels from getting stuck.

The guide plate is not fitted at delivery to prevent damage during transportation, but is easy to fit using a #T10 Torx key:

- Loosen the two #T10 Torx screws, that hold the plate beneath the cutter's outfeed slot, a few turns.
- Slip the guide plate inside the heads of the screws from above.
- Make sure to press the guide plate down as far as the U-shaped indents allow.
- Tighten the screws.



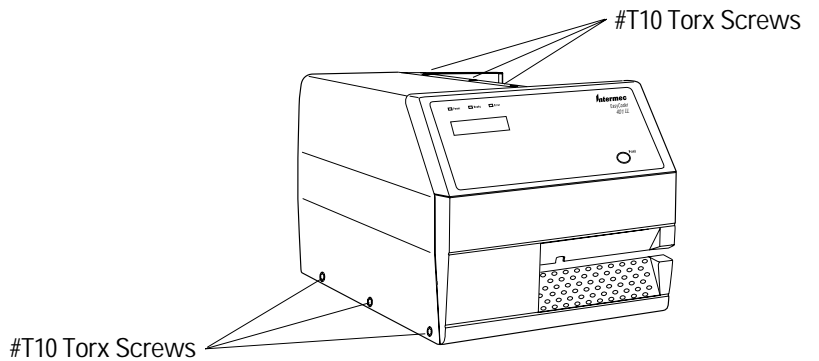
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EasyCoder 401 Linerless – Installation Instructions

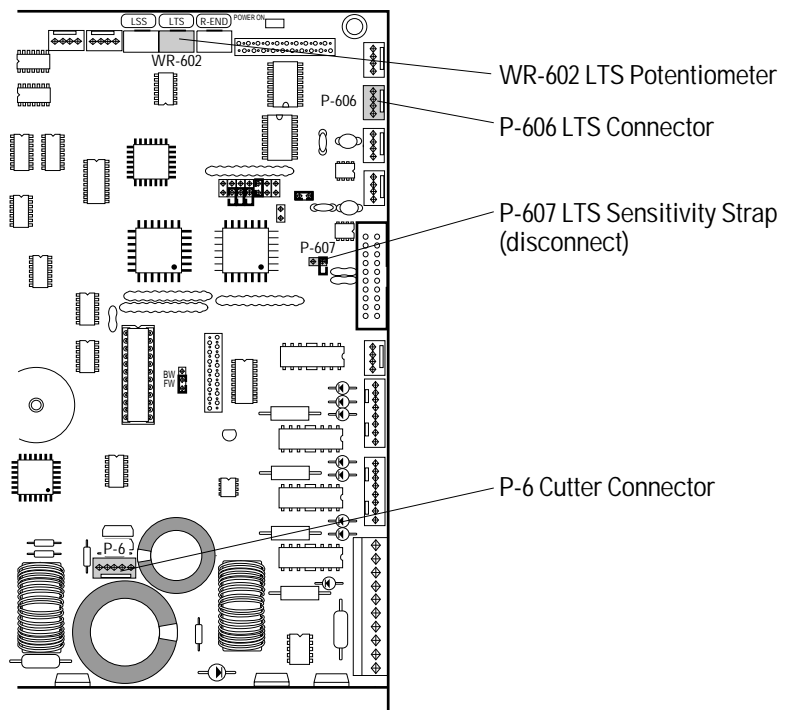
PAPER CUTTER KIT, cont'd.

Installation, cont'd.

- If the printer is, or has been, fitted with a label-taken sensor (LTS) inside the front hatch, the following steps must be performed:
 - Open the left-hand cover by removing six #T10 Torx screws.



- Disconnect the LTS cable from **P-606**.
- Remove the LTS by unscrewing the single #T10 Torx screw that holds it to the print unit and carefully pulling out the cable.
- Connect the loose cable from the cutter interface connector to **P-606** on the CPU board.
- Check that the other cable from the cutter interface connector is fitted on **P-6** on the CPU board.
- Disconnect any jumper on **P-607** on the CPU board¹.
- Put back the left-hand cover.



¹/. The photoelectric sensors in the cutter's LTS have a different sensitivity than those in the front-fitted LTS. It is important that the jumper on P-607 is disconnected when upgrading an EC 401 LLT or when replacing the CPU board in an EC 401 LLC.

PAPER CUTTER KIT, cont'd.

Controlling the Cutter

The cutter is activated by CUT or CUT ON statements in the *Fingerprint* program, see *Intermec Fingerprint 6.13 Reference Manual*.

The rotating edge will cut through the paper approx. 37 mm (1.5") in front of the printer's dot line.

The default start adjust setup value is set to pull back the paper before printing so the printing can start at the top of the label (i.e. immediately after the cut).

The default stop adjust setup value makes the printer feed out a sufficient amount of paper after the printing so the label web can be cut off without interfering with the print image.

Start adjust	- 294
Stop adjust	+ 250
Note that these values are stored in RAM of the EC 401 LLC (but not in EC 401 LLT) and could be lost at e.g. a memory reset or replacement of the CPU board. In such a case, the default values stored in EPROM (0/0) will decide the paper feed.	

LSS Adjustment

The cutter is fitted with a built-in label-taken sensor (LTS) that can be used for two purposes; to prevent a new label being printed before the previous one has been removed, and to detect paper jams. If the label-taken sensor does not operate properly, it may need to be adjusted:

- Make a simple *Fingerprint* program that checks the status of the LTS, e.g.:

```
10 BREAK 1,88
20 BREAK 1 ON
30 FORMFEED
40 IF (PRSTAT AND 2) THEN BEEP
50 GOTO 40
60 END
RUN
```

You can break this program by transmitting the character **X** (ASCII 88) decimal on the standard serial interface "uart1:".

- Remove the left-hand cover.
- Start up *Fingerprint* and run the program described above. Leave the label in the cutter's outfeed slot to create a label-not-taken condition.
- The printer should start to beep continuously. If not, turn the potentiometer **WR-602** (see illustration on page 5) back and forth until the beeping starts.



CAUTION!
High Voltage



The LTS must be adjusted with the power on. To avoid the risk of electrical shock or short-circuits, use non-conductive tools only. Keep your fingers away from the area behind the CPU board, where the mains inlet and switch are situated.

Continued!

PAPER CUTTER KIT, cont'd.

LSS Adjustment, cont'd.

- Adjust the potentiometer so the beeping does not stop when the screw is turned a quarter of a turn in either direction.
- Remove the label. The beeping should cease immediately.
- If necessary, readjust the potentiometer.
- Break the program by typing **X** on the host.
- When the label-taken sensor works properly, put back the left-hand cover and close the front hatch and right-hand door. Then the printer is ready for operation.

Paper Jam Detection

The built-in LTS can be used for detecting paper jams by means of a few lines in a *Fingerprint* program, as illustrated by the following example:

```
IMMEDIATE OFF
'Init
QJAMWAIT%=150                                (see note)
OPTIMIZE "BATCH" ON
.....
'MAIN LOOP
W%=TICKS+QJAMWAIT%
PF
.....
WHILE (TICKS<W%) AND (NOT(PRSTAT AND 2))
.....
WEND
IF NOT (PRSTAT AND 2) THEN GOSUB JAMHANDLER
.....
JAMHANDLER:
BEEP
RETURN
```

Note:

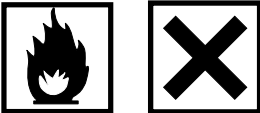
If necessary, adjust value of QJAMWAIT% variable to obtain proper jam detection.

PAPER CUTTER KIT, cont'd.

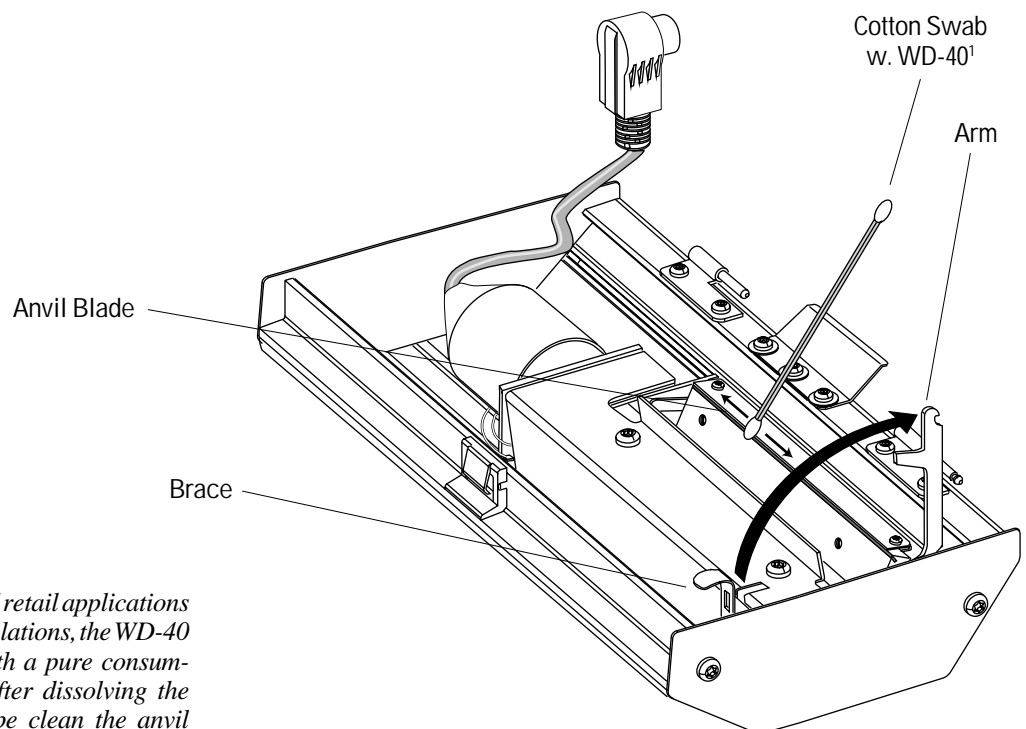
Cleaning

The cutter mechanism consists of a rotating shear and a spring-loaded anvil blade. To prevent the adhesive to stick to the cutting parts, the rotating shear is lubricated with a thin film of silicon oil at each cutting cycle, and the anvil blade is provided with a special “non-stick” coating. Nevertheless, regular cleaning from adhesive residue at the cutting edge of the anvil blade at an interval of approximately 50,000 cuts is essential for troublefree operation. Proceed as follows:

CAUTION!
WD-40 is an anti-corrosion spray lubricant manufactured by WD-40 Company Ltd., Milton Keynes, England, which contains 50% alifatic petroleum distillate. It is highly flammable and may be harmful if inhaled or consumed and at prolonged skin contact. Before use, carefully read the warning text on the container.



- Fold down the cutter. Be careful not to bend the guide plate, if fitted.
- Disconnect the spring-loaded brace from the arm at the side opposite to the motor and fold back the anvil blade. A microswitch prevents the cutter from being operated while the anvil blade is in open position.
- Soak a cotton swab with *WD-40* multi-spray (or similar)¹ and rub it against the cutting edge of the anvil blade to dissolve any adhesive residue.
- Inspect the interior of the cutter for possible shreds of labels, adhesive residue and similar. If necessary, clean using a cleaning card or a cotton swab soaked with *WD-40*.
- Close the anvil blade and lock the arm with the brace.
- Fold up the cutter and the printer is ready for operation.



^{1/} In food industry and retail applications subject to specific regulations, the *WD-40* could be replaced with a pure consumable vegetable oil. After dissolving the residue, carefully wipe clean the anvil blade.