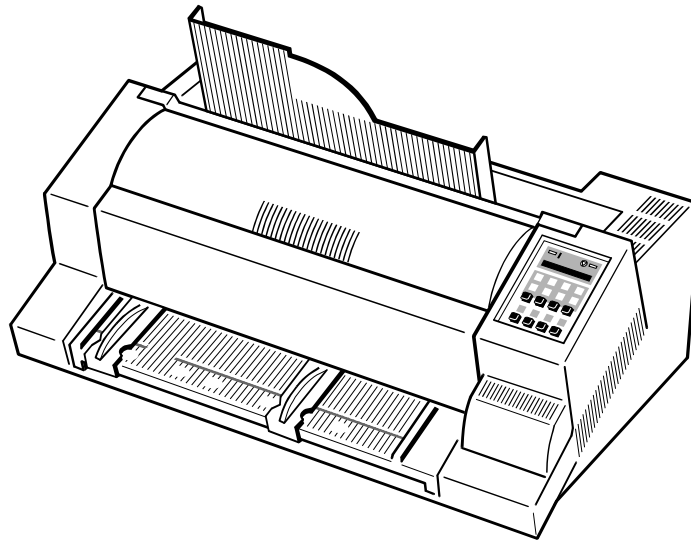


# LA600 MultiPrinter

**digital**

**Field Service Manual**



---

The information in this document is subject to change without notice and should not be construed as a commitment by Digital Equipment Corporation. Digital Equipment Corporation assumes no responsibility for any errors that may appear in this document.

Copyright © by **Digital Equipment Corporation** 1994.  
All rights strictly reserved. Reproduction or issue to third parties in any form is not permitted without written authorization from the publisher.

Pub. No. 5112 991 12932  
November 1994

---

Order No.: ER-LA600-SV

**Table of Contents**

**1. Safety Precautions** ..... 1-1

**2. Preventive Actions for Keeping the Printer Running** ..... 2-1

**3. Procedures for Removal and Reassembly** ..... 3-1

    Housing ..... 3-2

    Printer Engine LA600 ..... 3-4

    PSU-40A Assy ..... 3-6

    DEV-40 LA600 Assy ..... 3-8

    CU-40 LA600 Assy ..... 3-10

    EEPROM CU-40-00 ..... 3-12

    Operator Panel ..... 3-14

    Power ON/OFF Switch Assy ..... 3-16

    Cable Print Head Assy ..... 3-18

    Encoder Strip Assy ..... 3-20

    Kit Lubrication Felt ..... 3-22

    Print Head H-Encoder 40A ..... 3-24

    Horizontal Motor 40A ..... 3-26

    Carriage 40A Assy ..... 3-28

    Protection Shield ..... 3-30

    Ribbon Gear Assy ..... 3-32

    Rep. Kit Ribbon Gear ..... 3-34

    Stepping Motor 7.5 DEG (Platen gap control) ..... 3-36

    Stepping Motor 1.8 DEG (Vertical paper transport) ..... 3-38

    Tractor Gear 40A ..... 3-40

    Stacker Elements 40B Assy ..... 3-42

    Print Head LA600 ..... 3-44

    Paper Run/In Detector Assy ..... 3-48

    Kit Pressure Roll FF1 ..... 3-50

    Kit Vertical Transport A40 ..... 3-52

    Minipitch Belt Stepper ..... 3-52

    Minipitch Belt Form Feed ..... 3-52

    Kit Belt Pulley 40A ..... 3-54

    Kit Cont. Forms Exit 40A ..... 3-56

    Kit Tractor 40A ..... 3-58

    Kit Belt Tension 40A ..... 3-60

    Kit ASF Levers ..... 3-62

    Kit Torsion Spring D-Axis ..... 3-64

    Kit Screws and Springs ..... 3-66

**4. Wearing Parts** ..... 4-1

    Platen Assy A1 ..... 4-2

    ASF Pick-up Rollers ..... 4-6

**5. List of Spares and Repairs** ..... 5-1

## 1. Safety Precautions

1. **Some of the maintenance procedures described in this section require that the printers top housing is removed. This exposes the internal working parts of the printer. During operating some of these parts are potentially dangerous.**
2. **All replacement and cleaning procedures should be performed with the printer switched OFF and the mains connector disconnected.**
3. **Only recommended parts should be used to replace defective parts. Details of field exchangeable parts, including part number and service number are listed in Chapter 5 'Spares and Repairs'.**
4. **Switch the printer OFF while connecting or disconnecting a Personality Module, a Memory Card or a Colour Option.**
5. **Never print over the edges of paper or beyond the perforations of fanfold paper, otherwise the print head can be damaged.**
6. **Never attempt to print with no paper loaded or no ink ribbon installed in the printer**
7. **Put the printer in the STOP mode immediately a paper jam occurs, using the START/STOP key at the Operator Panel.**

## 2. Preventive Actions for Keeping the Printer Running

The following points should be additionally checked on a service call.

Item	Problem	Remedial Action
Platen <sup>*)</sup>	Paper feeding problems	Remove platen and clean surface thoroughly using platen cleaner S/CP 09.
Paper input transport rollers	Paper feeding problems	Disconnect mains cable, remove the ribbon, and remove housing (see chapter 3, Part: Housing). Also remove the paper guide secured with two green screws. Clean all transport rollers using platen cleaner S/CP 09.
ASF <sup>*)</sup>	Paper insertion problems	Remove ASF cassette. Clean pick-up rollers using platen cleaner S/CP 09, and check the paper handling of the ASF cassette using a few sheets of paper which have to be transported properly by manually rotating the pick-up wheel of the ASF-cassette.

---

<sup>\*)</sup> Refer to Chapter 4 to check a necessary exchange of platen or pick-up rollers.

### 3. Procedures for Removal and Reassembly

This chapter describes the removal procedures which are necessary for proper handling of the spare parts and subunits of the printer.

**Note:**

All removal procedures consists of several steps indicated with a:

- to show preparation and
- ⇒ ● to indicate the main removal steps.

Part: **Housing**

DEC P/N:

**FD-W03RF-01**

Part No: 5112 292 38200

---

#### REMOVAL

- Disconnect mains cable
- Remove the manual front insertion (A)
- ⇒ ● Remove the front cover (B) resp. the ASF cassette(s) out of the mounting slots (C)
- ⇒ ● Swing cover (D) to its nearly upright position and remove it
  - ⇒ ● a) Remove the cover (E) by releasing the cover snap locks (F) with a flat bladed screwdriver
  - b) To remove the cover (E) grasp it by the sides, raise the front slightly, push the cover back until the metal snaps are out of the slots at the rear of the printer and then lift the cover

#### REASSEMBLING

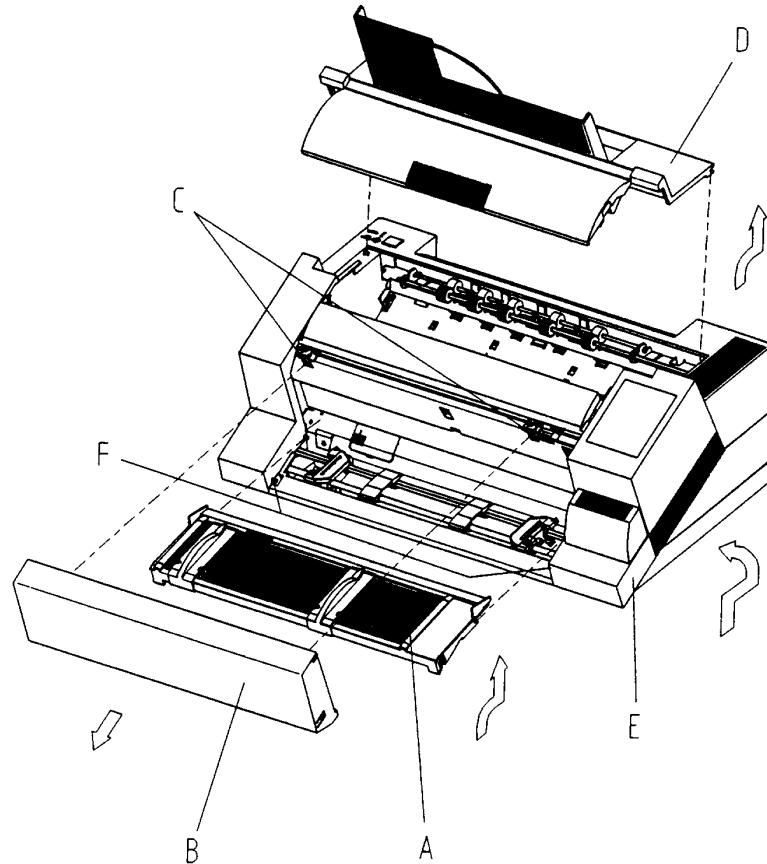
Execute the REMOVAL procedure in reverse sequence

Part: **Printer Engine LA600**

DEC P/N:

**29 31790-01.A01**

Part No: 5112 292 62901

**REMOVAL**

- Set the printer into "LOCAL MODE"
- Disconnect the system interface cable
- Remove the ribbon cartridge
- Switch the printer off and disconnect the mains cable
  - ⇒ ● Remove all encasing parts
    - ⇒ ● Remove the personality module (A)
    - ⇒ ● Remove the plastic insert of the memory card interface (B)
    - ⇒ ● Loosen screw (C)
    - ⇒ ● Remove screws (D)
    - ⇒ ● Disconnect the Device Electronic (E)
    - ⇒ ● Disconnect the Control Unit (F)
    - ⇒ ● Loosen the fixation screws of the power on switch and remove it (G)
    - ⇒ ● Swivel the printer as shown in figure 2.

**Note:** For protection of the operator panel please use a part of the packaging material of the new printer engine as support.

- ⇒ ● Shift the entire Electronic Subassembly to the left. (1)
- ⇒ ● Swivel it in the direction towards you and remove it from the printer engine. (2)

**REASSEMBLING**

- Unpack the new printer engine
- Execute the REMOVAL procedure with the new printer engine in reverse direction.
- ⇒ ● Change the print head from the "old" printer engine into the "new" one.
- ⇒ ● Perform an AGC Adjust procedure
  - ⇒ ● Adjust the parameter "Paper In Adj." to the value indicated on the field service instruction attached to the new printer engine.
  - ⇒ ● Perform "PRINT TEST 3" and check for proper operation of the printer.

**Note:** Take a note of the value of the page counter (PGCNT) on the FRU-label of the new printer engine.

Part: **PSU-40A Assy**  
 Part No: 5112 292 38110

DEC P/N: **FD-W02BY-01**

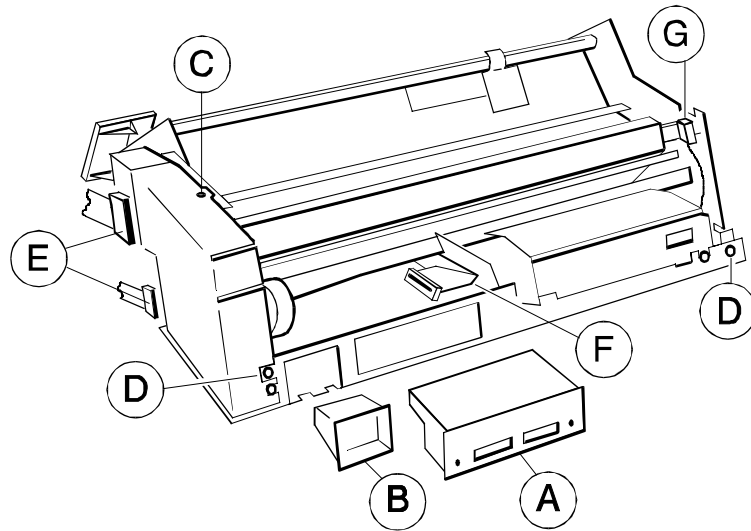


Figure 1

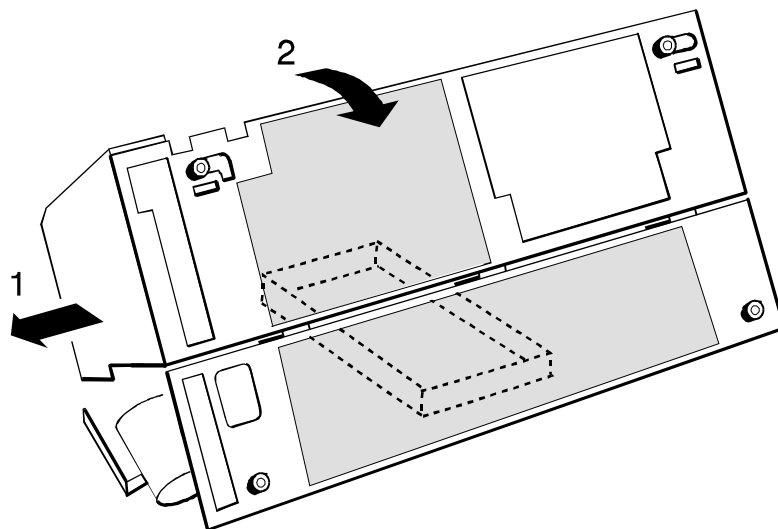


Figure 2

Value of PAPER-IN ADJ.:

### REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Loosen the two screws (A) securing the PSU-40A assy
  - ⇒ ● Lift the complete Power Supply Unit (PSU), using a screwdriver
  - ⇒ ● Disconnect plug (C)
  - ⇒ ● Remove clamp (D) and disconnect plug (B)

### REASSEMBLING

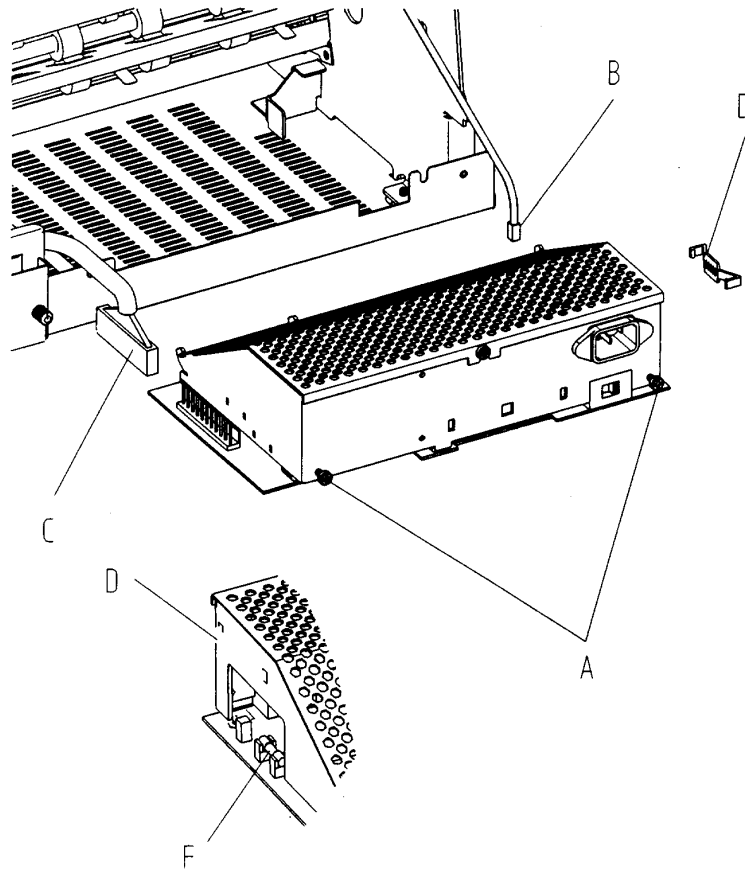
Execute the REMOVAL procedure in reverse sequence

### ATTENTION:

Do not touch the PSU board within min. 2 minutes after power OFF  
 Before exchanging the PSU, please check the fuse (F)

Part: **DEV-40 LA600 Assy**  
 Part No: 5112 292 62921

DEC P/N: **29-31791-01 A01**



## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- ⇒ ● Loosen the two screws (A) and remove screw (B)
- ⇒ ● Remove the DEV-40 LA600 Assy
  - a) while removing, DEV-40 LA600 assy (K) is automatically disconnected from CU-40 LA600 assy (C)
  - b) disconnect all plug connections from the DEV-board:
    - plug (D)
    - plug (E)
    - plug (F)

## Reassembly

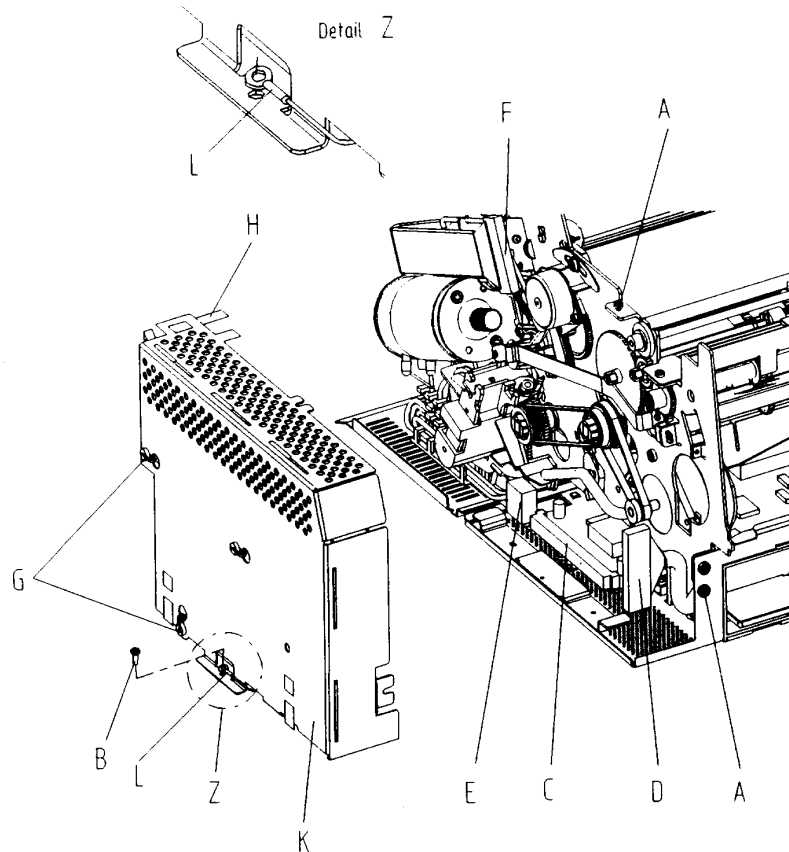
Execute the REMOVAL procedure in reverse sequence

**Attention:** Wire (L) has to be fastened by screw (B) as shown in Detail Z



Part: **CU-40 LA600 Assy**  
 Part No: 5112 292 62991

DEC P/N: **29-31792-01. A01**



## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 LA600 Assy (see Part: **DEV-40 LA600 Assy**)
- ⇒ ● Remove if plugged in memory card (A)
- ⇒ ● Remove the Personality Module after loosening the two lock screws (B)
- ⇒ ● Disconnect plug (C) from CU-40 LA600 Assy and remove CU-40 LA600 Assy
- ⇒ ● Remove the EEPROM CU-40-00 (D) and plug it into the new CU-40 LA600 assy.

**Note: Pay attention, that EEPROM (D) is stuffed correct position (pin marker (E))**

## Reassembly

Execute the REMOVAL procedure in reverse sequence

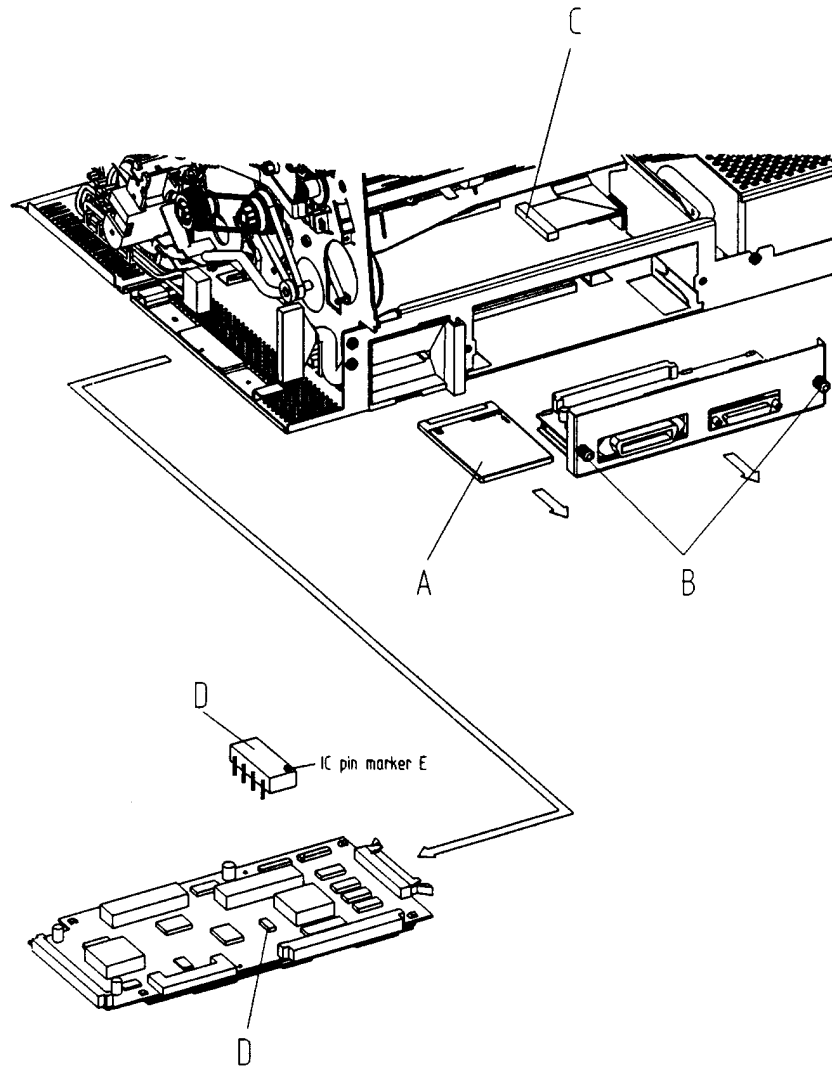
**Note:** Start the function 'Print Out' and check 'Current Settings'

Part: **EEPROM CU-40-00**

DEC P/N:

**29-31802-01. A01**

Part No: 5112 208 07590

**REMOVAL**

- Disconnect mains cable
  - Remove all encasing parts (see Part: **Housing**)
  - Remove DEV-40 LA600 Assy (see Part: **DEV-40 LA600 Assy**)
  - Remove CU-40 LA600 Assy (see Part: **CU-40 LA600 Assy**)
    - ⇒ ● Exchange the EEPROM CU-40-00 (D)

**Note:** Pay attention, that EEPROM (D) is stuffed correctly position (pin marker (E))

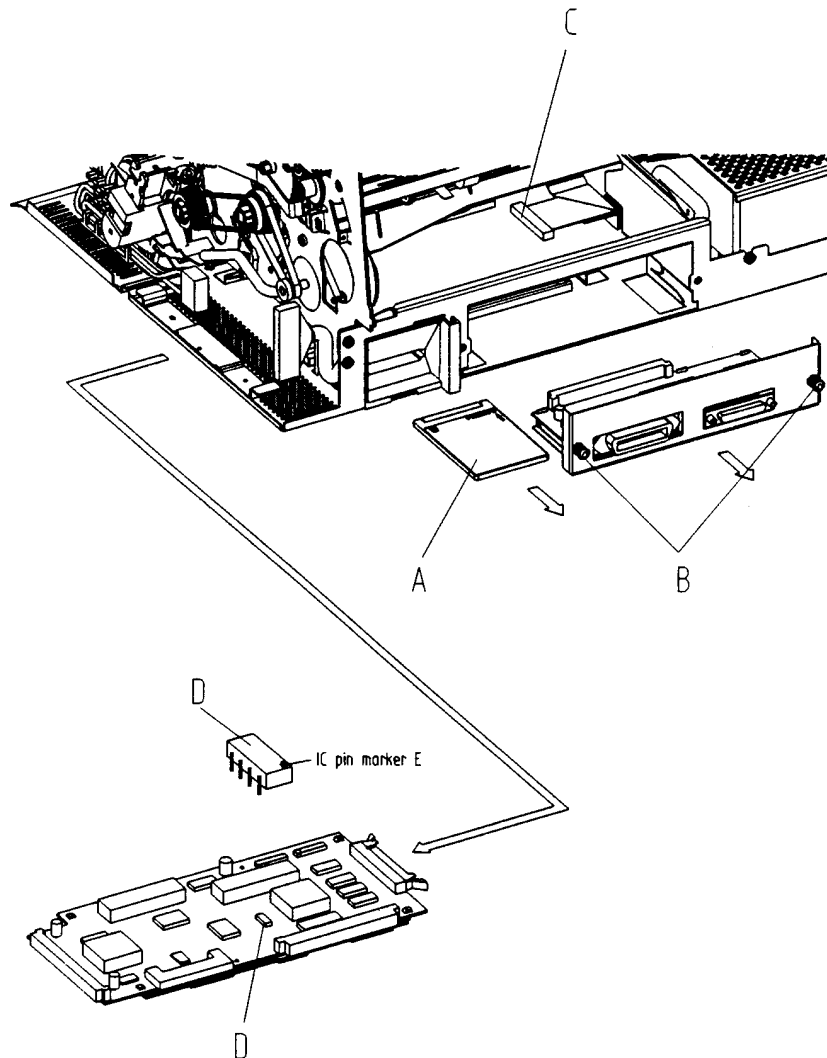
**Reassembly**

Execute the REMOVAL procedure in reverse sequence

**Note:** Start the function 'Print Out' and check 'Current Settings'

Part: **Operator Panel**  
 Part No: 5112 292 38150

DEC P/N: **FD-W00CU-01**



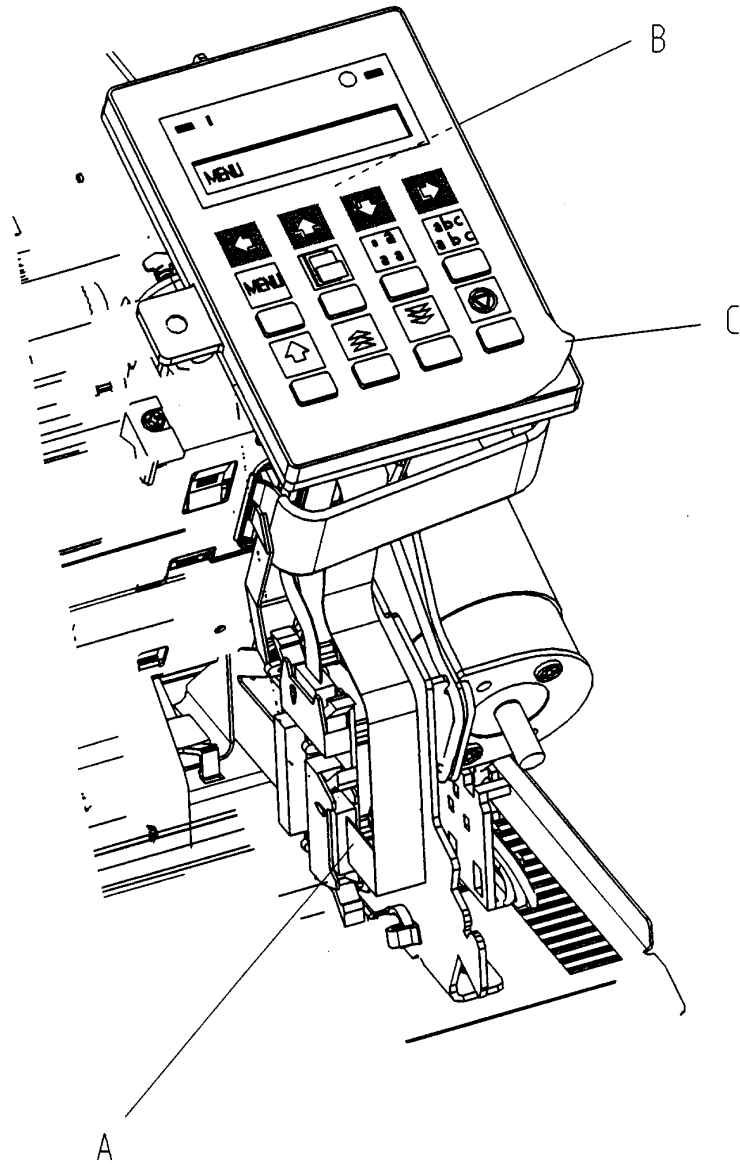
## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
  - ⇒ ● Disconnect Operating Panel cable (A)
  - ⇒ ● Loosen the screw (B) located at the bottom of the Operating Panel
  - ⇒ ● Remove the Operator Panel Assy

## REASSEMBLING

Execute the Removal procedure in reverse sequence

**Note:** Remove the protection foil (C) from the Operator Panel installed before mounting the housing



Part: **Power ON/OFF Switch Assy** DEC P/N: **FD-W02B3-01**  
 Part No: 5112 292 38820

### REMOVAL

- Disconnect mains cable
  - Remove all encasing parts (see Part: **Housing**)
  - Remove PSU-40A Assy (see Part: **PSU-40A Assy**)
    - ⇒ ● Loosen the two screws (A)
    - ⇒ ● Remove the power ON/OFF Switch Assy

### REASSEMBLING

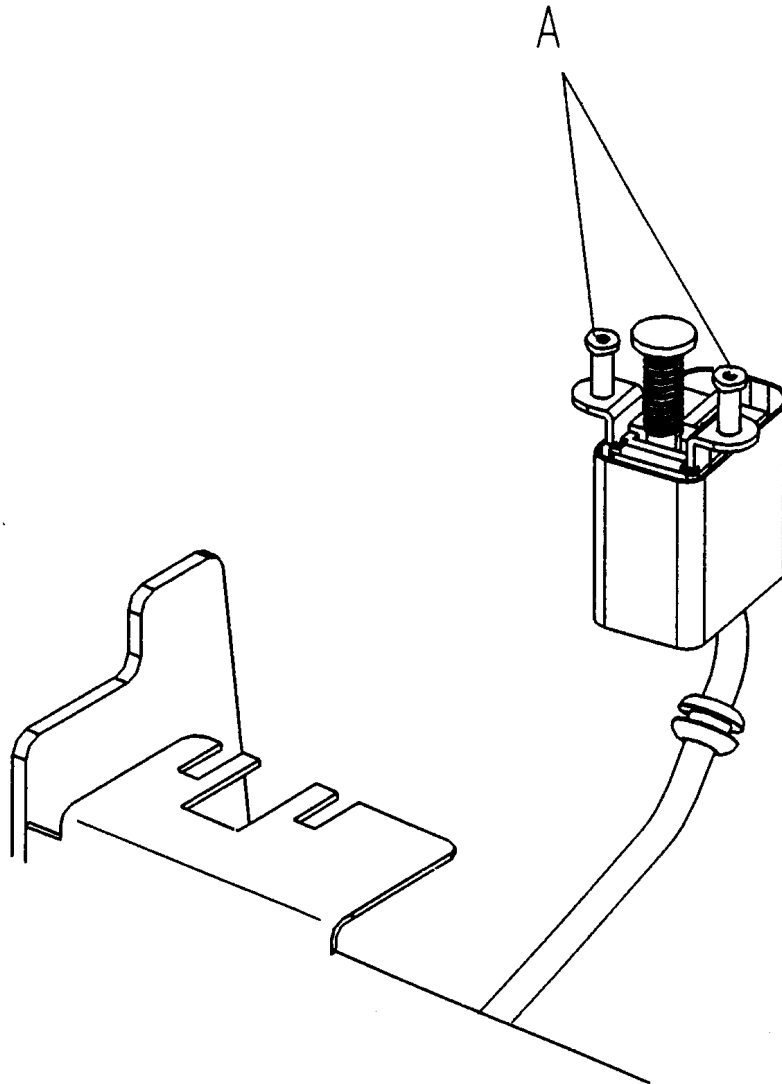
Execute the REMOVAL procedure in reverse sequence.

Part: **Cable Print Head Assy**

DEC P/N:

**FD-W02Y2-01**

Part No: 5112 292 38800

**REMOVAL**

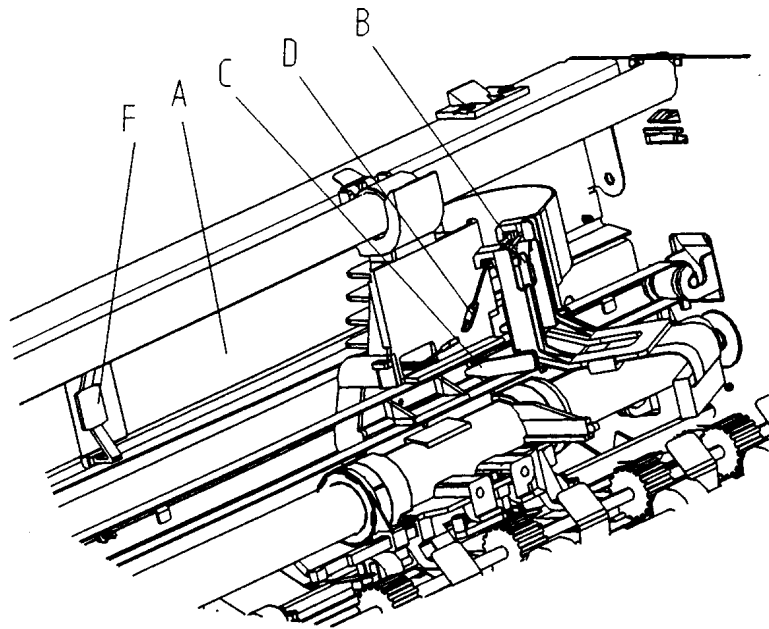
- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
  - ⇒ ● a) Disconnect print head cable from the print head
  - b) Remove the noise reduction foam (A) from the cable channel
  - c) Clip the plastic support (B) from the print head carriage, by first releasing clamps (C)
  - d) Disconnect the wire-to-wire connection (D) of the H-Encoder Assy
  - e) Disconnect the colour option, if installed, incl.connector
  - f) Disconnect cable (E) from the interface connection board
  - g) Disconnect the print head cable from DEV-40 LA600 Assy
  - h) Remove the two plastic clips (F)
  - i) Remove the print head cable

**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

Part: **Encoder Strip Assy**  
 Part No: 5112 292 37970

DEC P/N: **FD-W0417-01**



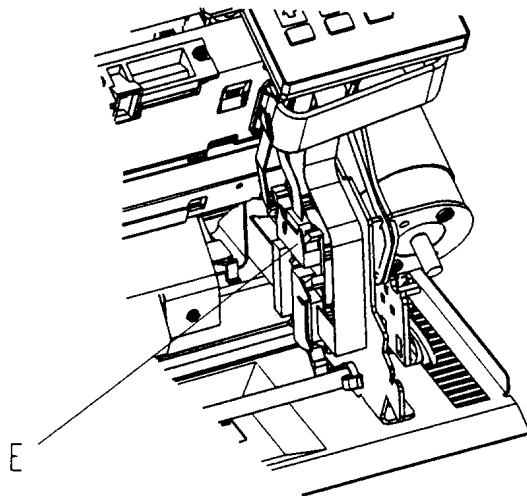
### REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
  - ⇒ ● Remove the two screws (A) (Detail Y)
  - ⇒ ● Remove the encoder strip 40A Assy (B)

### REASSEMBLING

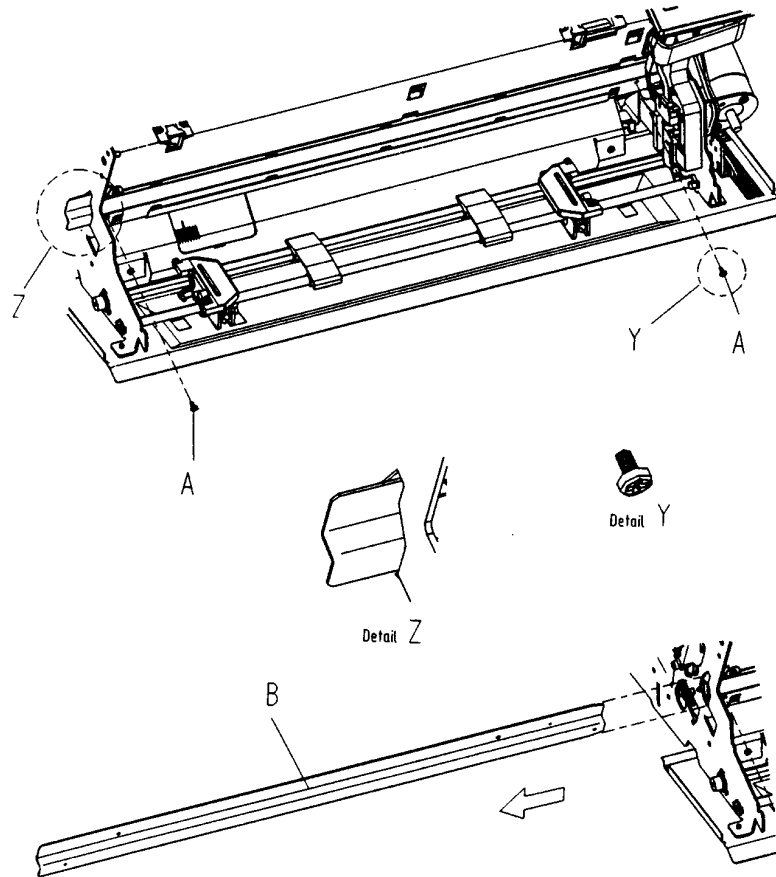
- a) Move the carriage to the centre position
- b) Execute the REMOVAL procedure in reverse sequence

**Caution:** Pay attention, that the Encoder Strip Assy is mounted in the correct position by (Detail Z) and observe that the strip is slipping under the first two steel noses visible from the front side of the printer.



Part: **Kit Lubrication Felt**  
 Part No: 5112 270 04541

DEC P/N: **29-31804-01. A01**



## REMOVAL

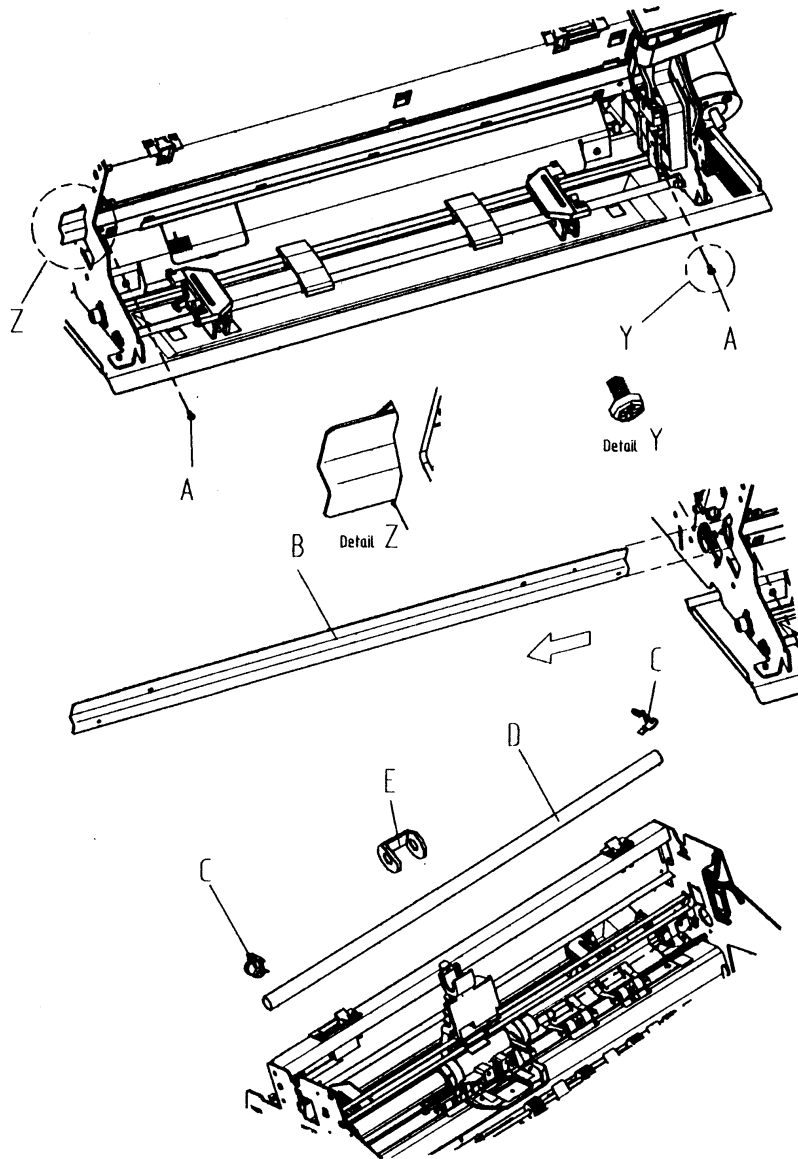
- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove Encoder Strip Assy (see Part: **Encoder Strip Assy**)
- Remove operator panel, but leave the interface cable connected (see Part: **Operator Panel**)
  - ⇒ ● a) Remove the two springs (C)
  - b) Remove the upper guide rail (D)
  - ⇒ ● Exchange the lubrication felt (E). Insert the new felt with flatten ear towards the operator panel

## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

**Caution:** Pay attention that the encoder strip Assy is mounted in a correct position (Detail Z) and observe that the strip is slipping under the first two steel noses seen from the front side of the printer

Part: **Print Head H-Encoder 40A** DEC P/N: **FD-W0290-01**  
 Part No: 5112 292 43100



## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove encoder strip Assy (see Part: **Encoder Strip Assy**)
- Remove the noise reduction foam (see Part: **Cable Print Head Assy**)
  - ⇒ ● Remove the upper screws (A)
  - ⇒ ● Loosen the two screws (B) and remove the mounting plate and the right side cover plate
  - ⇒ ● Move the Carriage Assy to the cutout (D)
  - ⇒ ● Remove the two screws (E) from the Carriage Assy
  - ⇒ ● Disconnect the print head cable from the head
  - ⇒ ● Clip the plastic support (F) from the carriage Assy and disconnect the wire-to-wire connector (G) H-Encoder/print head cable
  - ⇒ ● Remove the cable clamp from the carriage
  - ⇒ ● Remove the print head H-Encoder Assy

## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

**Note:** Pay attention that the logic cable is fixed correctly by clamp (H)

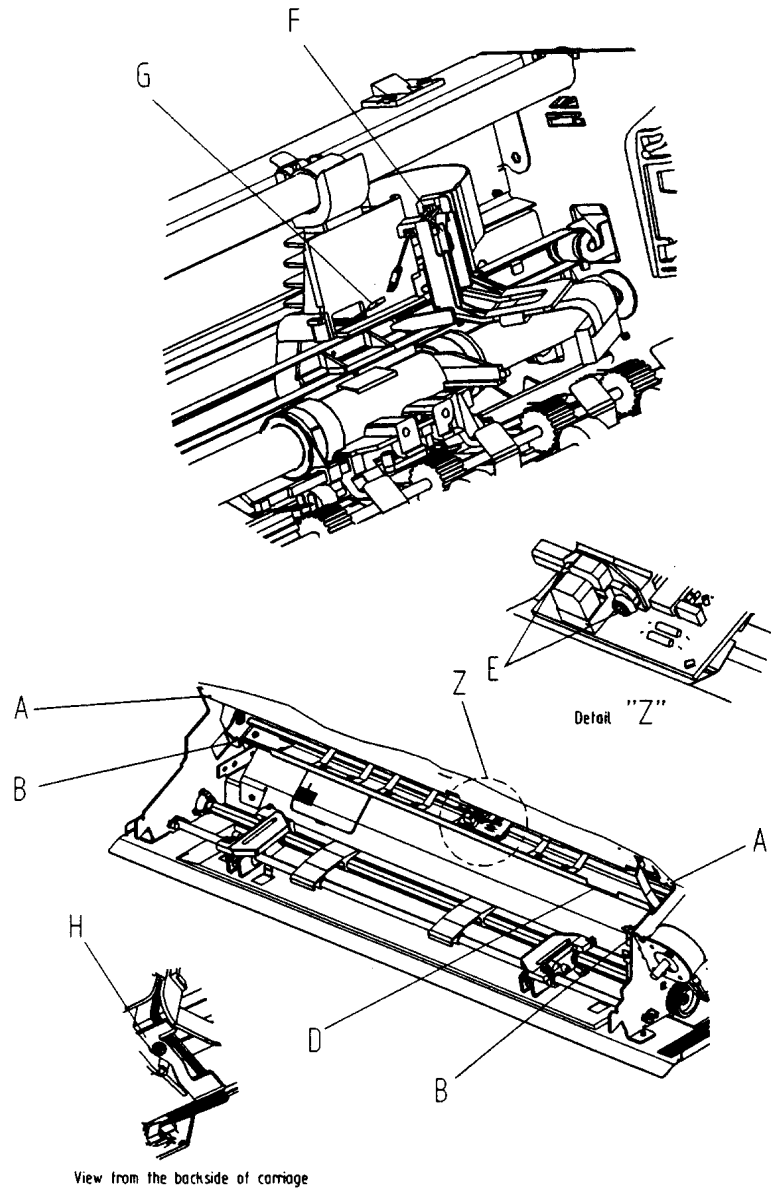


Part: **Horizontal Motor 40A**

DEC P/N:

**FD-W0396-01**

Part No: 5112 292 37910

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● a) Disengage the drive belt (A) from the drive wheel of the horizontal motor by pressing the belt tension element (B), which is located at the left side of the engine, upwards
  - b) Pull off the belt from the wheel
  - c) Disconnect the two pin motor cables (C) from the motors connector (D)
  - d) Remove the two cables from the motor fixing plate (E)
  - e) Remove the horizontal motor Assy

**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

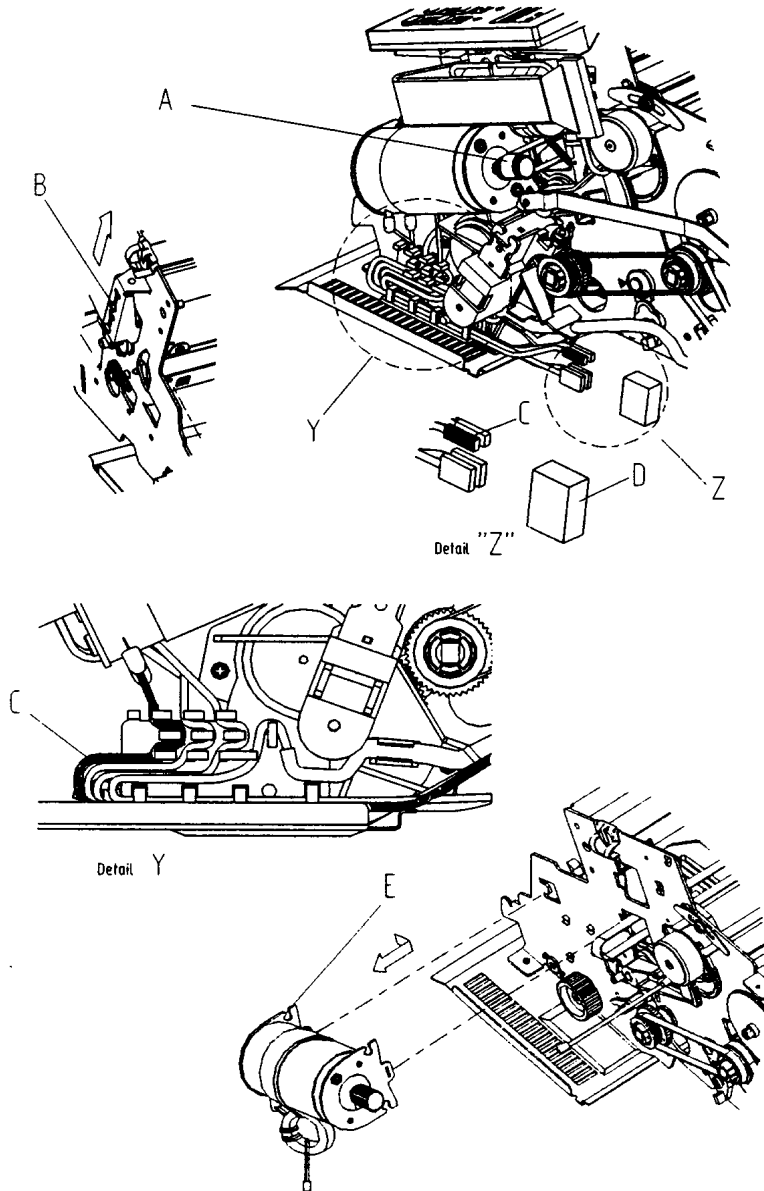
**Note: Pay attention that the cable installation is correct (Detail Y)**

Part: **Carriage 40A Assy**

DEC P/N:

**FD-W04JL-01**

Part No: 5112 292 40940

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
- Remove the encoder strip Assy (see Part **Encoder Strip Assy**)
- Remove operator panel, but leave the interface cable connected (see Part: **Operator Panel**)
- Remove the cable print head Assy from the print head carriage (see Part: **Cable Print Head Assy**)
  - ⇒ ● a) Remove the two guide rail springs (A)
  - b) Remove the upper guide rail (B)
  - c) Pull the lever (C) from the lock pin and remove the lever
  - d) Release spring (F) and remove lever (G) inclusive springs
  - e) Remove the screw (H). Push the shaft (I) including the plastic segment (J) out towards the right hand side of the chassis
  - Note: the PCC lever (J) can not be removed**
  - f) Slide the carriage out of the guide rail

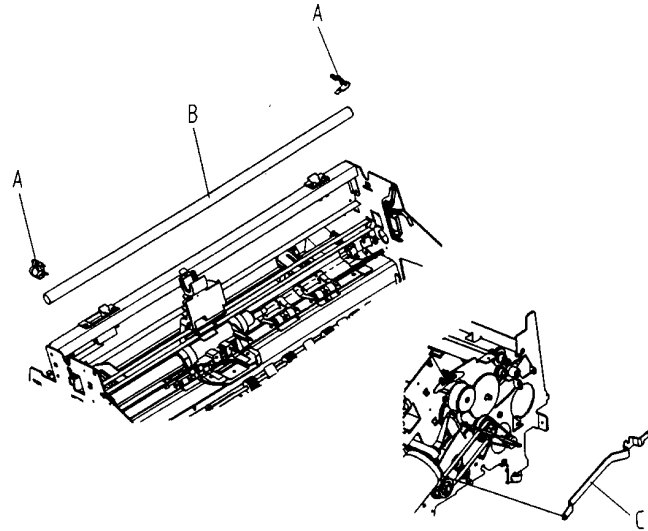
**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

**!** Note: Engage the plastic segment such, of the guide rail (J) that the marker (K) aligns with the marker (L) on the PCC gear (Detail "Z").

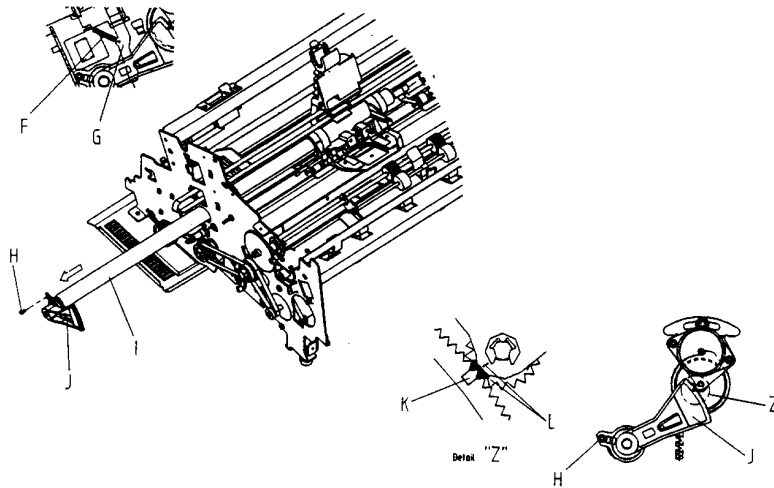
Part: **Protection Shield**  
 Part No: 5112 292 38390

DEC P/N: **FD-W041W-01**



## REMOVAL

- Disconnect mains cable
- Open top cover
- Remove Ink Ribbon
- Remove Platen
  - ⇒ ● Dismount protection shield (B) by loosening the two screws (A). This can easily be done by inserting of a torx screwdriver of at minimum 110 mm length through the holes (C) in the bottom plate and the platen channel



## REASSEMBLING

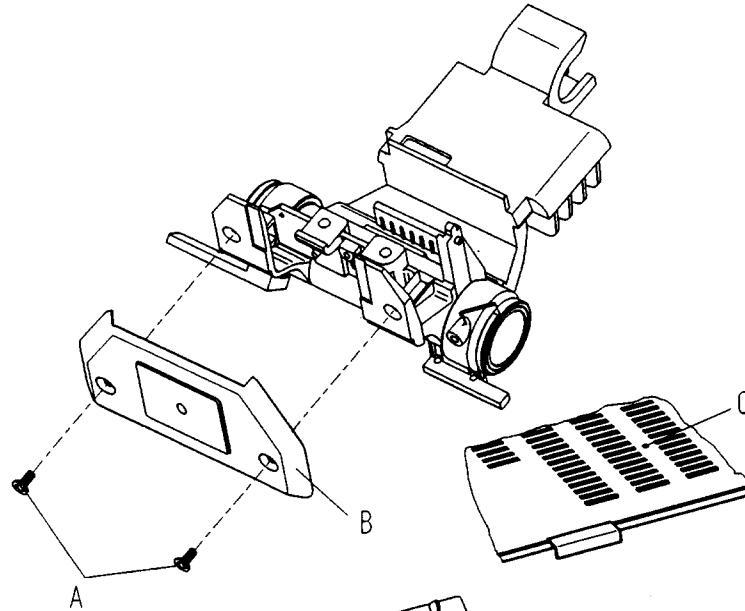
Execute the REMOVAL procedure in reverse sequence

Part: **Ribbon Gear 40B Assy**

DEC P/N:

**FD-W045W-01**

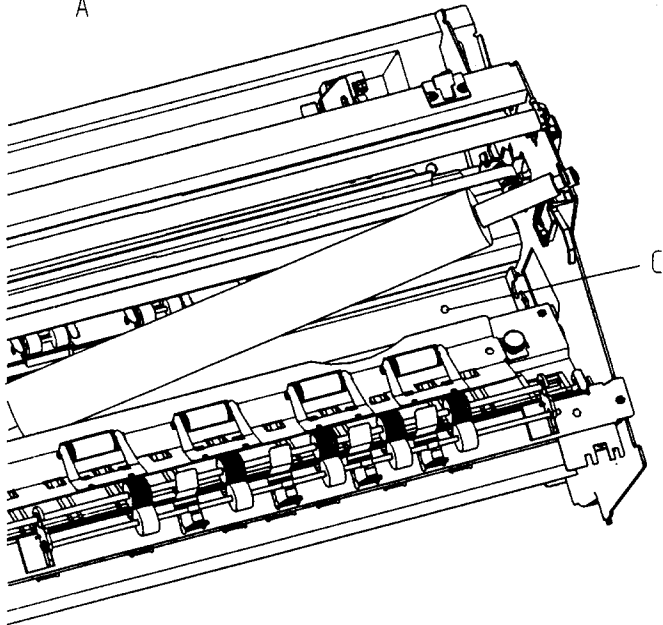
Part No: 5112 292 63840

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● Locate the Ribbon Gear 40B Assy (A)
  - ⇒ ● a) Loosen the cable (F) from the cable guide
  - b) Loosen the spring (B), remove lever (C) from (D)
  - c) Disconnect the 2 pin motor cable from the motor connector (F)
  - d) Push the lock tab (E) and remove the Ribbon Gear 40B Assy

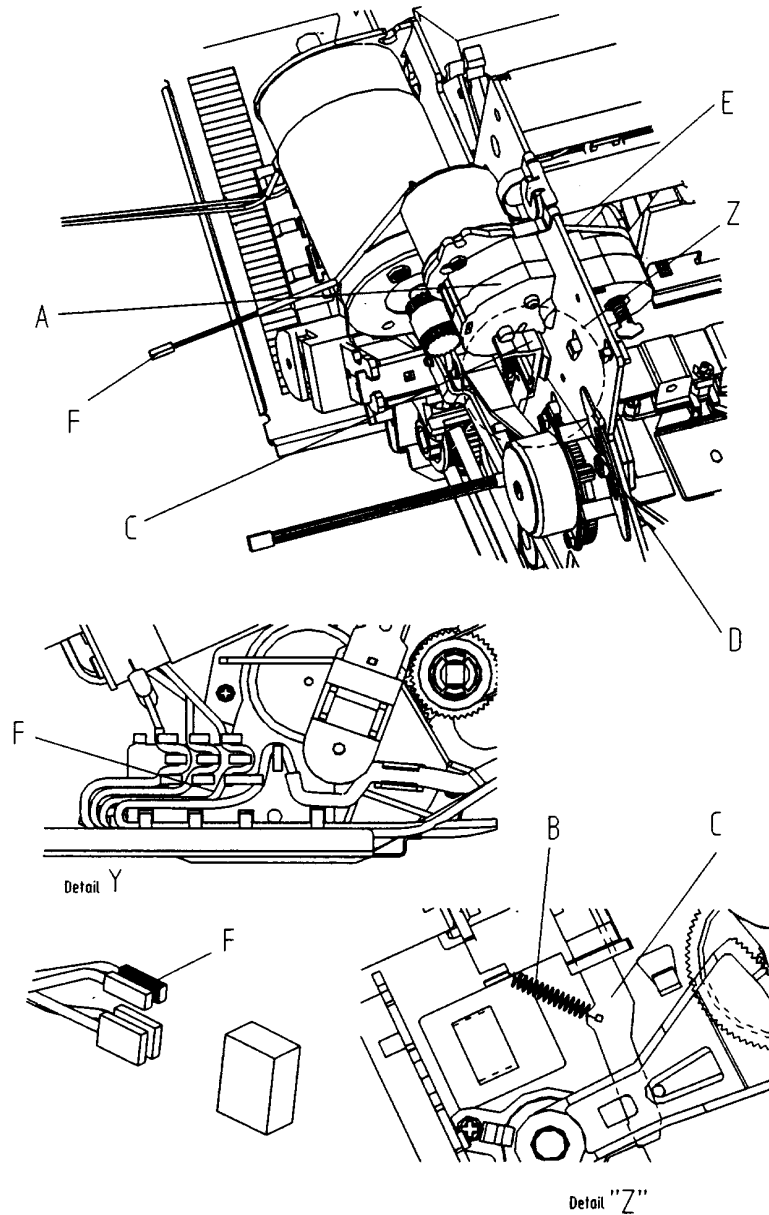
**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

**Note: Pay attention that the cable installation is correct (Detail Y)**

Part: **Rep. Kit Ribbon Gear**  
 Part No: 5112 292 41091

DEC P/N: **t. b. f.**

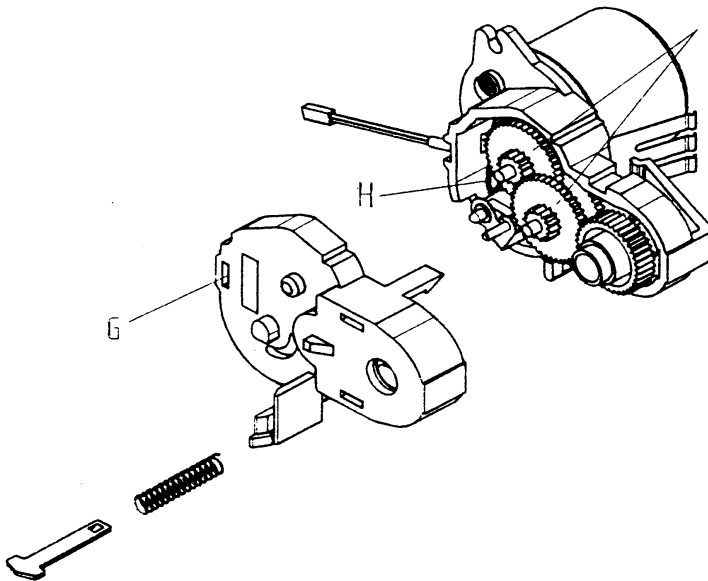
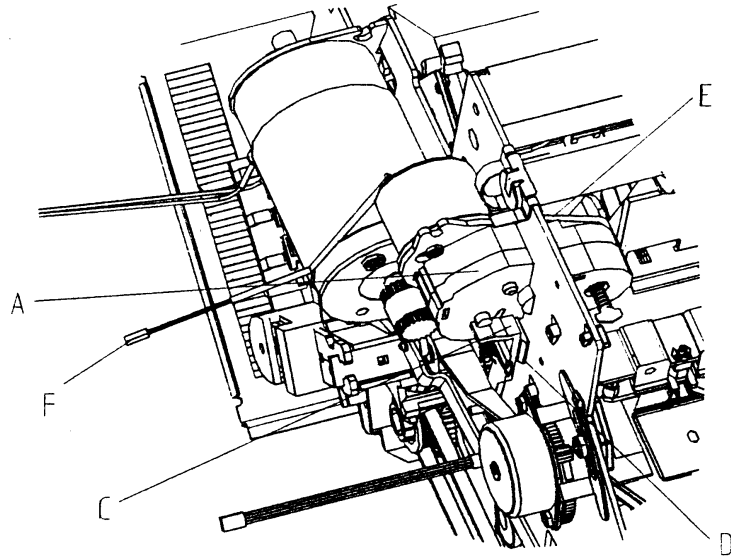


## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40A Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● Locate the Ribbon Gear 40B Assy (A)
  - ⇒ ● a) Loosen the cable (F) from the cable guide
  - b) Loosen the spring (B), remove lever (C) from (D)
  - c) Push the lock tab (E) and remove the ribbon gear 40A Assy
  - d) Open the gear box cover by loosening the 3 clips. Insert a screwdriver in (G) for clip 1
  - e) Remove the 2 gear wheels (I)
  - f) Replace the o-ring (H) by the spare part
  - g) Replace the 2 gear wheels (I) by the spare part

## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence



Part: **Stepping Motor 7.5 DEG**      DEC P/N: **FD-W0394-01**  
**(Platen gap control)**  
 Part No: 5112 209 24460

## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40A Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● Disconnect the four pin motor cables from the motors plug
  - ⇒ ● Remove the two screws (B) fixation of the stepper motor

**Warning:** Do not loosen the screw (A). This is a factory adjustment; field adjustment is impossible

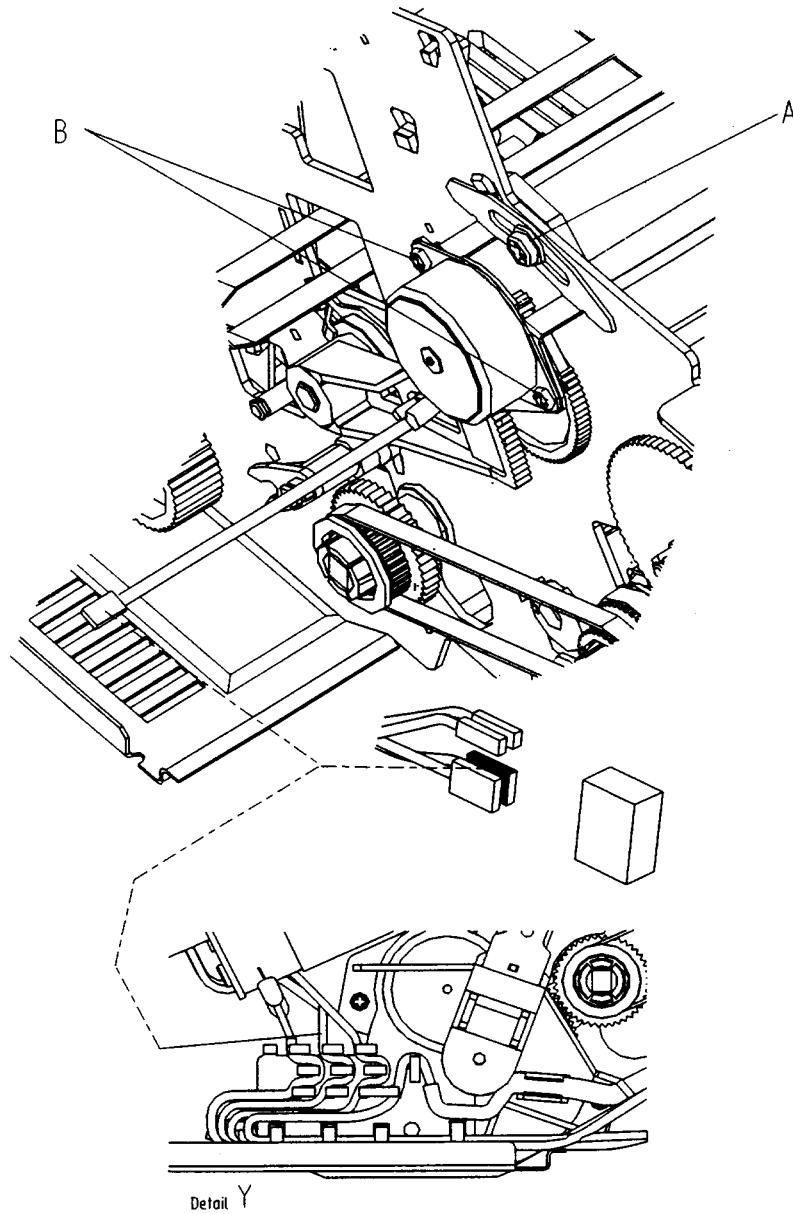
- ⇒ ● Remove the stepper motor

## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

**Note:** Make sure that the cable installation is correct (Detail Y)

Part: **Stepping Motor 1.8 DEG**      DEC P/N: **29-31798-01. A01**  
**(Vertical Paper Transport)**  
 Part No: 5112 292 62411



## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● Remove the motor cable guide from the DEV-40 Assy
  - ⇒ ● Remove the four pin motor cable (A) from the cable guide
  - ⇒ ● a) Remove the two screws (B), of the vertical drive motor
  - b) Turn the motor anti-clockwise and remove it from the mounting clamp
  - c) Disengage the drive belt (C) from the drive pinion
  - d) Remove the motor (D)

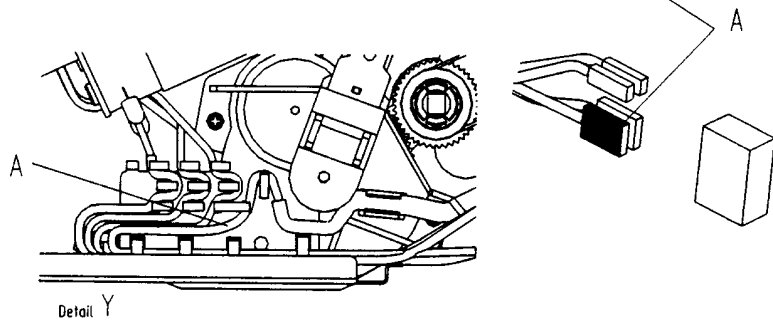
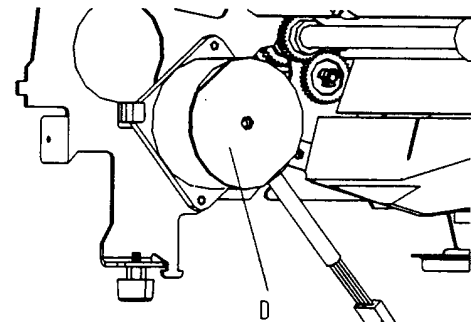
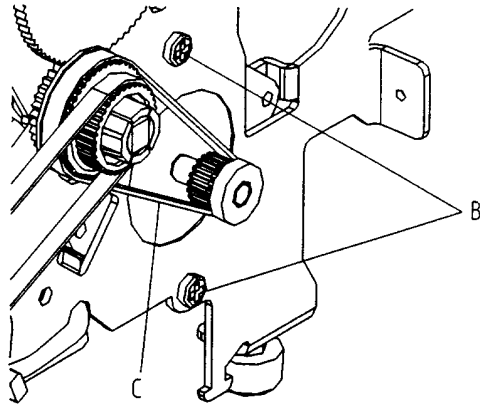
## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

**Note:** Pay attention that the cable installation is correct (Detail Y)

Part: **Tractor Gear 40A**  
 Part No: 5112 292 38030

DEC P/N: **FD-W045N-01**



## REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
- ⇒ ● a) The paper path for output must be set to tractor. By moving the carriage to the uppermost right position the paper path will be changed (an audible "click")
- b) The axle (A) must be turned to the position as shown in detail by turning on the minipitch belt (C) in clockwise direction
- c) Remove all cables from the cable guide
- d) Remove the three screws (E) and remove the tractor gear 40A Assy

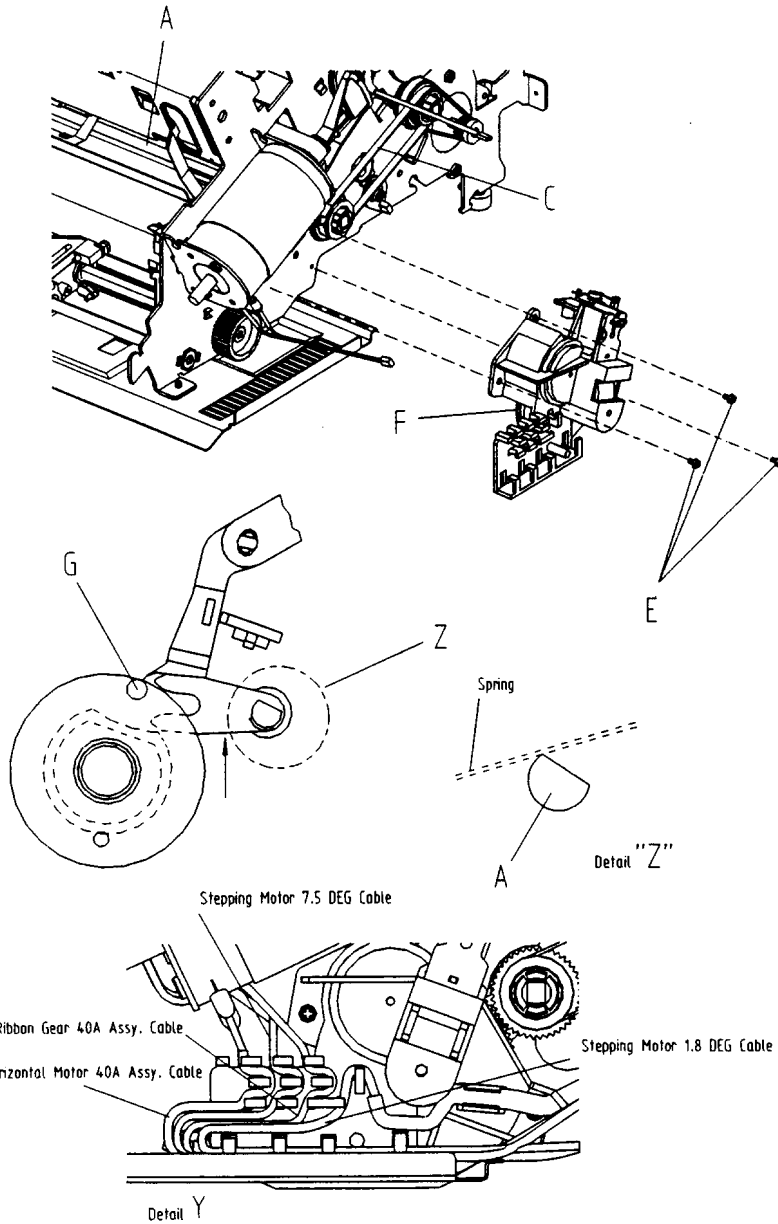
## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

- Note:** - Before the new assy. can be mounted, turn the gearwheel (F) in such a way that the bold (G) reaches the uppermost position
- Observe that the cable installation is correct (Detail Y)



Part: **Stacker Elements 40B Assy** DEC P/N: **FD-W04KK-01**  
 Part No: 5112 292 40990



**REMOVAL**

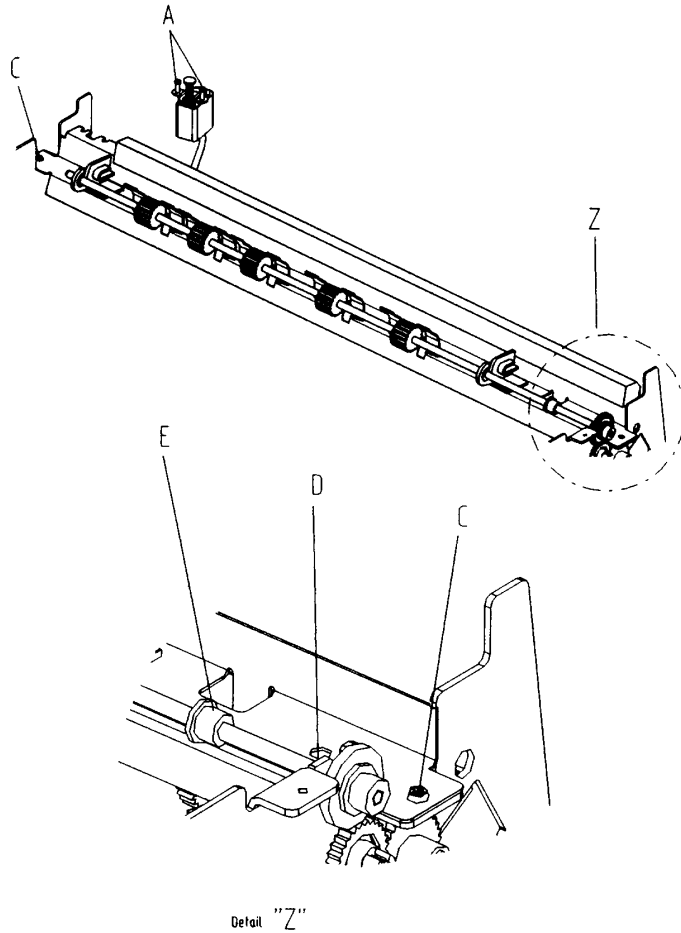
- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● Loosen the two screws (A) securing the Power ON/OFF switch and put it away
  - ⇒ ● Remove the two screws (C) which secure the stacker elements plate
  - ⇒ ● a) Remove the circlip (D) which secures the bearing (E)  
 b) Slide the bearing (E) to the left and remove the Stacker Elements Assy

**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

Part: **Print Head LA600**DEC P/N: **29-31807-01. A01**

Part No: 5112 292 62761

**Removal of the print head (5)**

⚠ **Caution:** print head may be very hot immediately after printing!

- Lift and remove the output stacker (1)
- Switch the printer ON, lift and remove the top cover (2), switch the printer OFF
- Remove the ribbon cassette (3)
  - ⇒ ● Disconnect the print head cable (4)
  - ⇒ ● Using the supplied tool (7), loosen the two captive screws (6), retaining the print head (5)
  - ⇒ ● Remove the print head (5)

**Note:** Please record on the tag accompanied to the print head replaced:

- **PGCNT** (Number of pages printed can be obtained from print out of 'PRINT TEST 3', parameter 'PGCNT' (see Installation and User Guide, chapter 8))
- **Printer Serial Number**

each time a print head is replaced!

### Installing the new print head (5)

Ensure that the printer is switched OFF. For print head installation, the carriage should be aligned with the cut-out on the paper guide plate (green insert). (Same position as for Removal procedure).

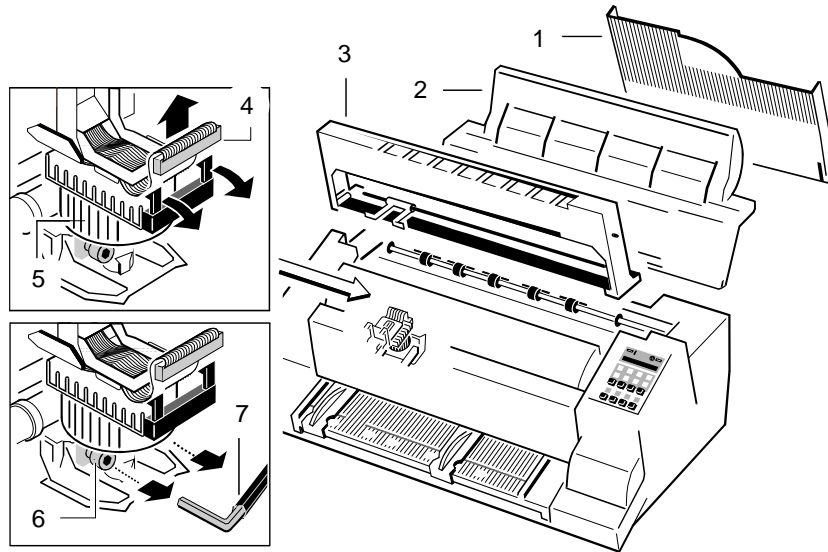
- ⇒ ● Hold the print head (5) in its mounting position and press it against its stop in direction of the platen. The two noses (9) of the adjustment guide (8) support this procedure.

**Note:** Older versions of the print head are mounted with clamps instead of the adjustment guide (8)

- ⇒ ● Now tightening the two captive screws (6) (first left, then right).

- ⇒ ● Reconnect the print head cable (4) and fasten it with the enclosed spring on the on the top of the print head.

- Switch printer ON and insert the ink ribbon cassette (3).
- Refit the top cover (2) and the output stacker (1).



**PM AGC:** (s. Installation and User Guide, Chapter 3)

Run the MENU-function AGC ADJUST with ribbon cassette installed but without paper loaded

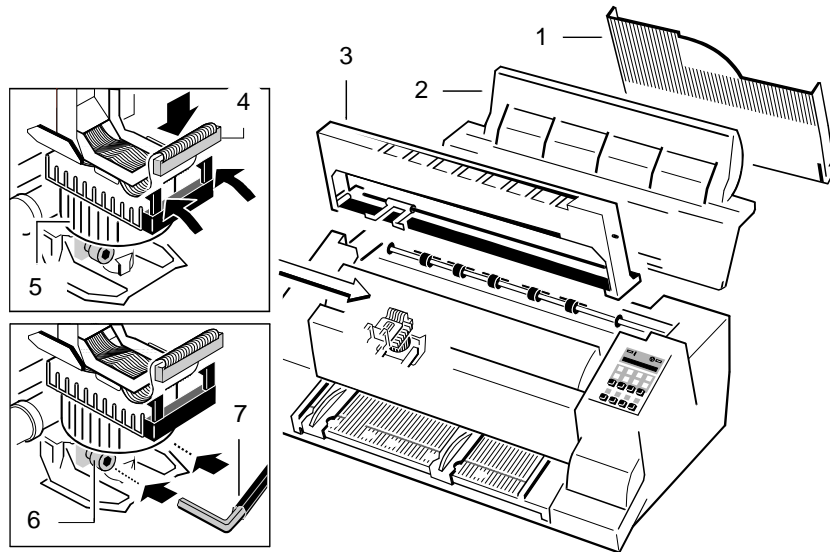
**Note:** Please record on the tag accompanied to the print head replaced:

- **PGCNT** (Number of pages printed can be obtained from print out of 'PRINT TEST 3', parameter 'PGCNT' (see Installation and User Guide, chapter 8))

- **Printer Serial Number**

each time a print head is replaced!

Part: **Paper Run/In Detector Assy** DEC P/N: **FD-W04JJ-01**  
 Part No: 5112 292 38050

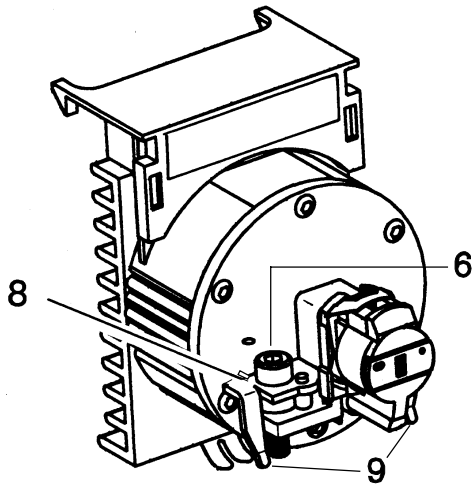


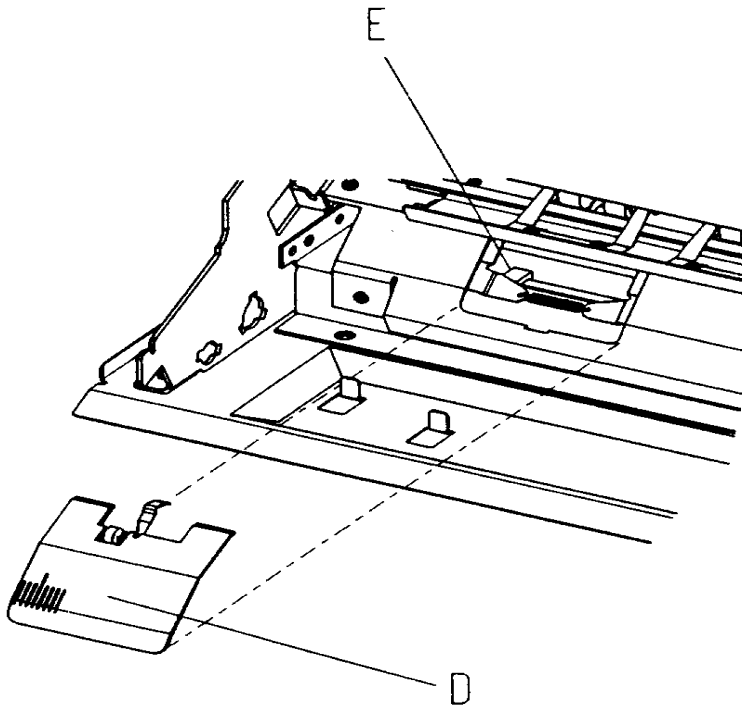
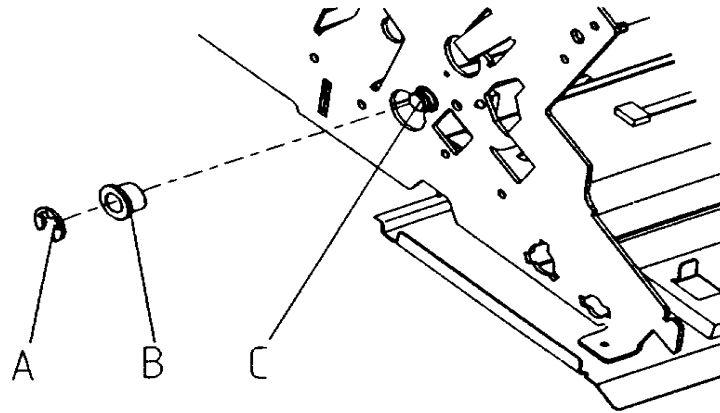
### REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
  - ⇒ ● Remove circlip (A) and bearing (B). The axle falls down
  - ⇒ ● a) Remove the Detector  
b) Disconnect the cable (E)

### REASSEMBLING

Execute the REMOVAL procedure in reverse sequence



Part: **Kit Pressure Roll FF1**

DEC P/N:

**29-31801-01. A01**

Part No: 5112 292 41080

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove the encoder strip Assy (see Part: **Encoder Strip Assy**)
  - ⇒ ● Remove the upper screws (A)
  - ⇒ ● Remove the foam under neath of the printhead cable hooks
  - ⇒ ● Loosen the two screws (B) and remove the metal sheet coner
  - ⇒ ● Snap out the 4 springs (C) using a knife
  - ⇒ ● Remove the pressure roller
  - ⇒ ● Grease the bearings of the pressure roller with Molykote DX or a similar type of grease
  - ⇒ ● Grease the arms of the new springs at the positions which are in contact with the FF1 roll with Molykote DX or a similar type of grease
  - ⇒ ● Insert the new springs by snap in

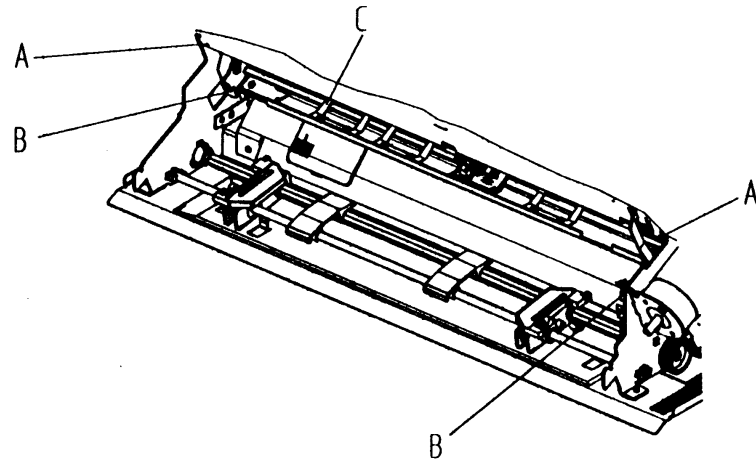
**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

Part: **Kit Vertical Transport 40A** DEC P/N: **FD-W02M6-01**  
 Part No: 5112 292 38450

Part: **Minipitch Belt Stepper** DEC P/N: **FD-W032Y-01**  
 Part No: 5112 200 08780

Part: **Minipitch Belt Form Feed** DEC P/N: **FD-W0330-01**  
 Part No: 5112 200 08790



## REMOVAL

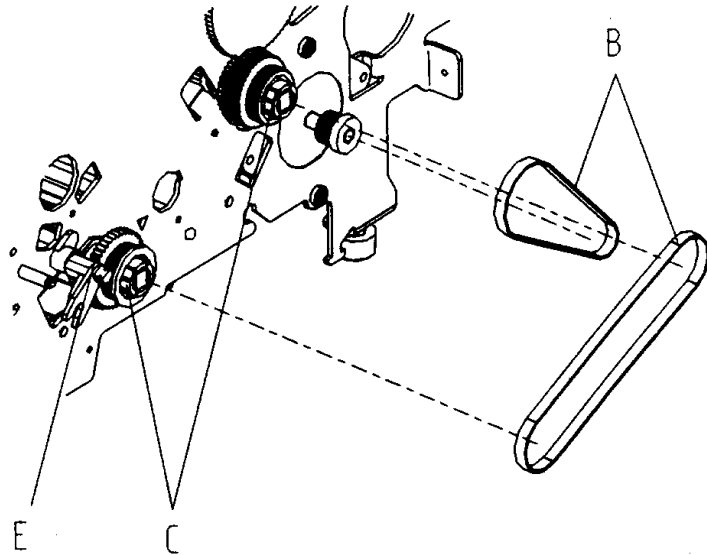
- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● a) Locate the right side of the form feed shaft for exchanging
  - b) Remove both minipitch belts (B)
  - c) Pull the belt pulley (C) from the wheel shaft for exchanging
  - d) If the upper form feed shaft has to be exchanged remove the bearing (E)
  - e) Remove circlip (F) and bearing (G) on the left side from the wheel shaft for exchanging
  - f) Removing the bearings causes the wheel shaft to fall down into the larger holes, for removal slide the wheel shaft to the left side

## REASSEMBLING

Execute the REMOVAL procedure in reverse sequence

Part: **Kit Belt Pulley 40A**  
 Part No: 5112 292 49210

DEC P/N: **FD-W05RM-01**

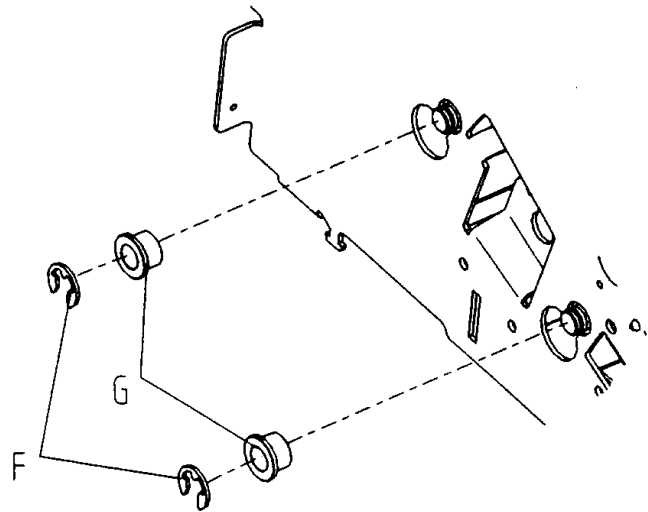


### REMOVAL

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
  - ⇒ ● a) Locate the right side of the form feed shaft for exchanging
  - b) Remove both minipitch belts (B)
  - c) Pull the belt pulley (C) from the wheel shaft to be exchanged

### REASSEMBLING

Execute the REMOVAL procedure in reverse sequence



Part: **Kit Cont. Form Exit 40A**

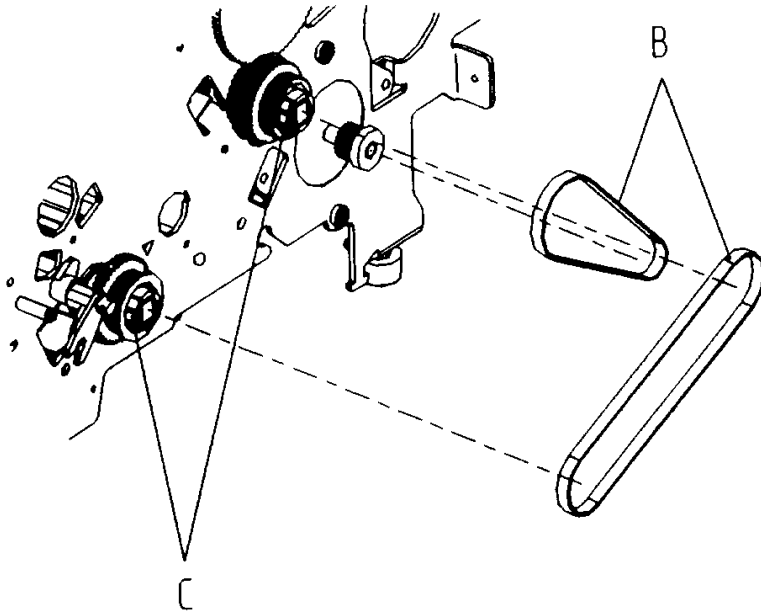
DEC P/N:

**FD-W02M7-01**

Part No: 5112 292 38460

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove DEV-40 Assy (see Part: **DEV-40 LA600 Assy**)
- Remove stacker elements Assy (see Part: **Stacker Elements 40B Assy**)
  - ⇒ ● a) Locate the gearwheel (B), remove the circlip (C) and the washer (D), remove gearwheel (B) and bearing (A) from the wheel shaft
  - b) Remove circlip (E) from the wheel shaft and move it to the left. Remove the shaft
  - c) Prepare the left hand bearing of the pressure roll (H), such that it can be removed
  - d) Remove the pressure roll the Assy. out

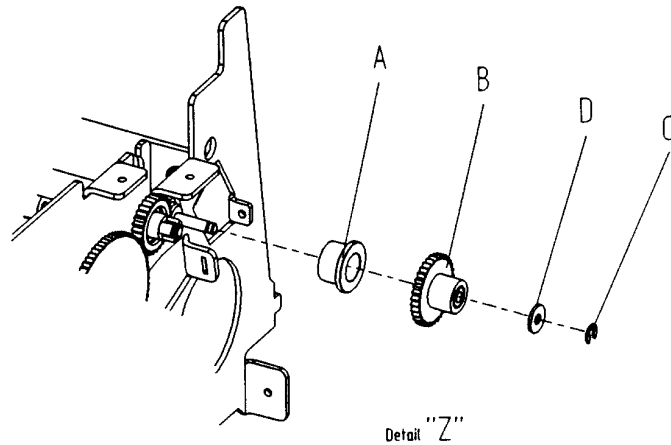
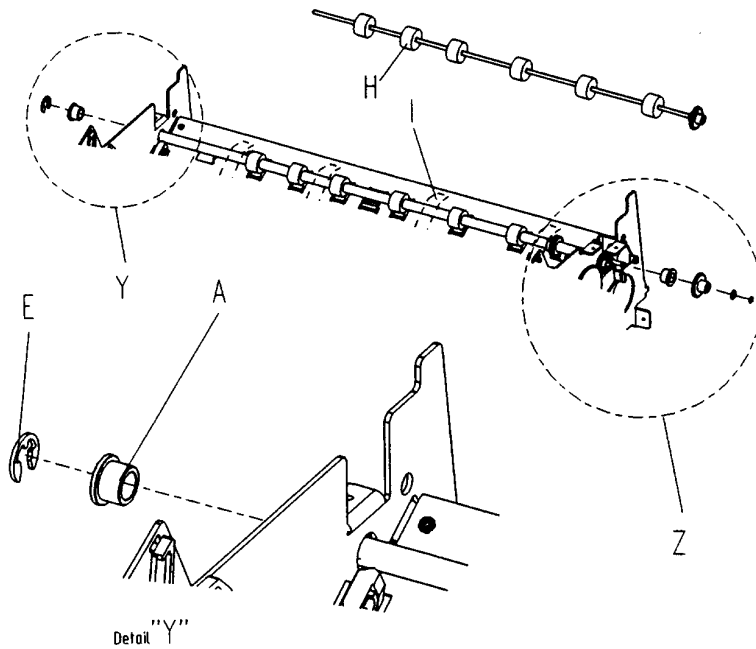
**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence



Part: **Kit Tractor 40A**  
 Part No: 5112 292 38470

DEC P/N: **FD-W02M8-01**



**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Snap out the paper supports (C)
- ⇒ ● a) Locate the bearing (A) and (B) on the left side of the printer
- b) Press the two locking tabs on the bearing (A) and remove it
- c) Press the three locking tabs on the bearing (B) and remove it
- d) For removal slide the entire tractor kit first to the left and then remove it by sliding out to the right.

**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

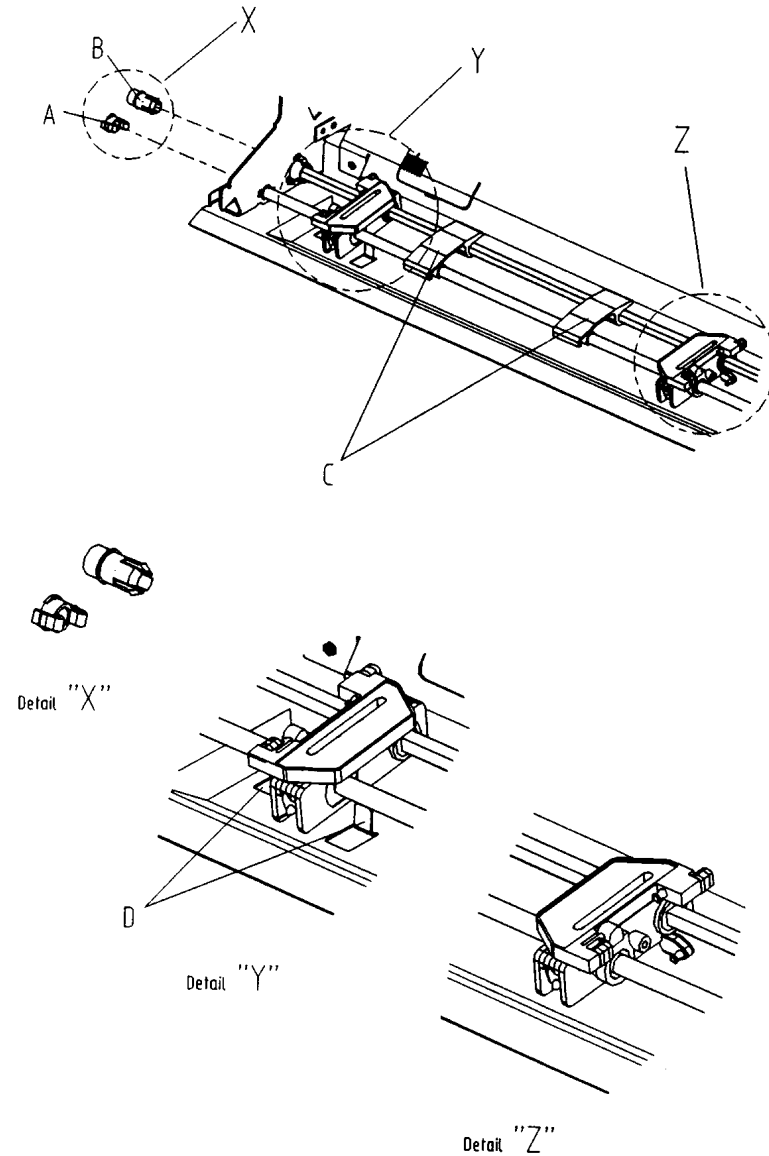
**Note:** Pay attention that the mounting position of the left tractor is between the stoppers (D). When you insert the square shaft, the white dot on the left and right hand tractor must have the same position to ensure synchronous running of the belts

Part: **Kit Belt Tension 40A**

DEC P/N:

**FD-W02M5-01**

Part No: 5112 292 38480

**REMOVAL**

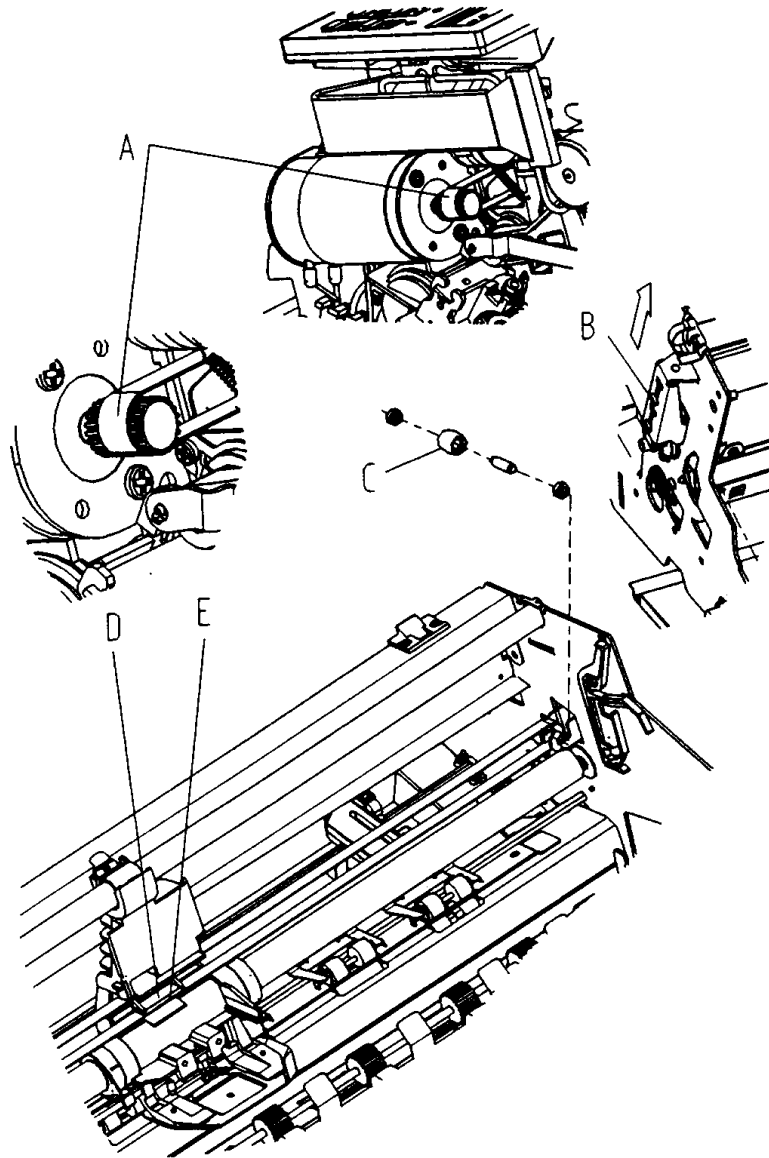
- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
- Remove the print head
  - ⇒ ● a) Disengage the drive belt (A) from the drive wheel horizontal motor by pressing the belt tension elements on pos. (B)
  - b) Slide the drive belt out of the drive wheel
  - c) Remove the drive belt roller bearing (C) from its mounting bracket
  - d) Remove the screw (D) and disengage the wedge (E) from the print head carriage

**REASSEMBLING**

Execute the REMOVAL procedure in reverse sequence

Part: **Kit ASF Lever**  
 Part No: 5112 292 22480

DEC P/N: **FD-W04B7-01**



## REMOVAL

- ⇒ ● Remove the AFS-Cassette from the printer and remove any paper loaded, and the paper support (if mounted).
- ⇒ ● Remove the side cover of the ASF Cassette by releasing of four snaplocks (No. 1 - 4 in figure 1). Use a flat screw driver to do so and keep the sequence of figure 1.
- ⇒ ● Remove the circlip (No. 4 in figure 2) of the lever shaft.
- ⇒ ● Push the bar against the opposite side to release the mounted levers. Snap the levers of the bar using a screw driver.

## REASSEMBLING

- ⇒ ● a) Assemble the three levers together (figure 3). Lever 2 (upper paper release) onto lever 1 (paper pressure lever), and lever (lower paper release) onto lever 2. Observe that the little plug of lever 2 is fitted in the hole provided in lever 3.
- b) Snap the assembled levers into the ASF Cassette. Be careful to mount the snaplock of the paper pressure lever (lever 1) in one of the holes provided in the sidewall of the cassette (figure 4).
- c) Push the bar back into the levers and adjust the flat side of the bar accordingly.
- d) Secure the levers using the circlip and snap the flat side of the ASF Cassette in place again.

Part: **Kit Torsion Spring D-Axis** DEC P/N: **29-31803-01. A01**  
 Part No: 5112 292 41070

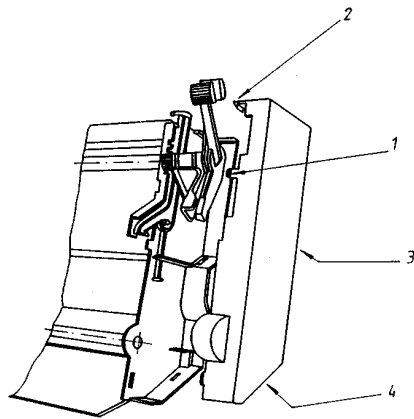


FIGURE 1

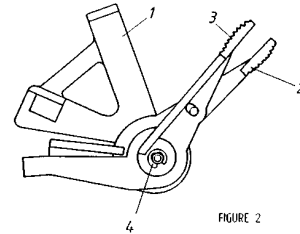


FIGURE 2

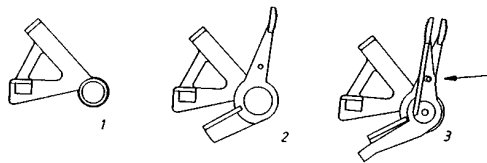


FIGURE 3

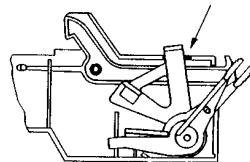


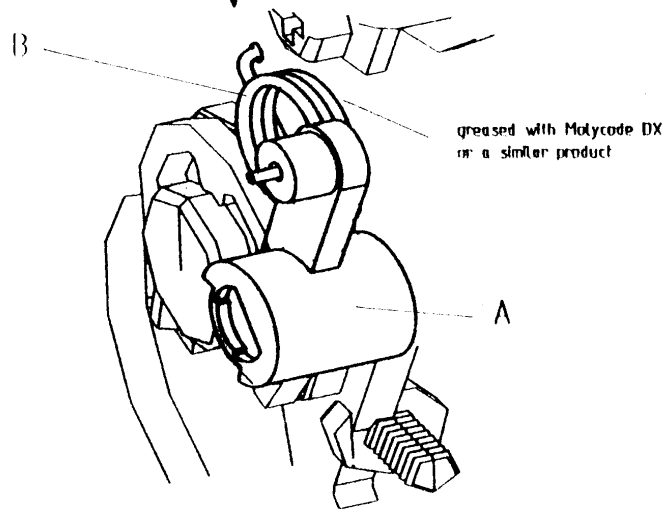
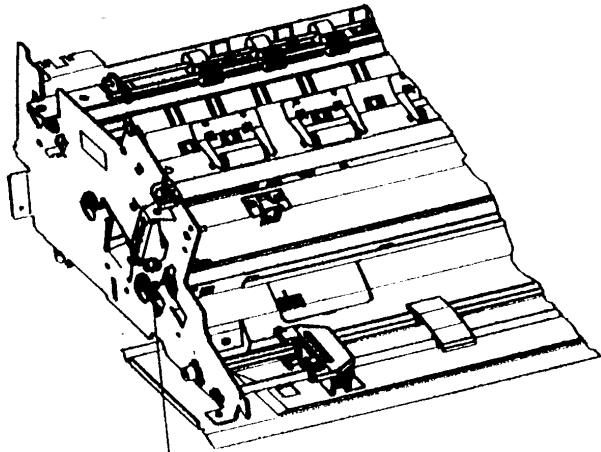
FIGURE 4

**REMOVAL**

- Disconnect mains cable
- Remove all encasing parts (see Part: **Housing**)
  - ⇒ ● Remove lever (A) from D-axis (the plastic snap-in will be destroyed)
  - ⇒ ● Remove the torsion spring (B)

**REASSEMBLING**

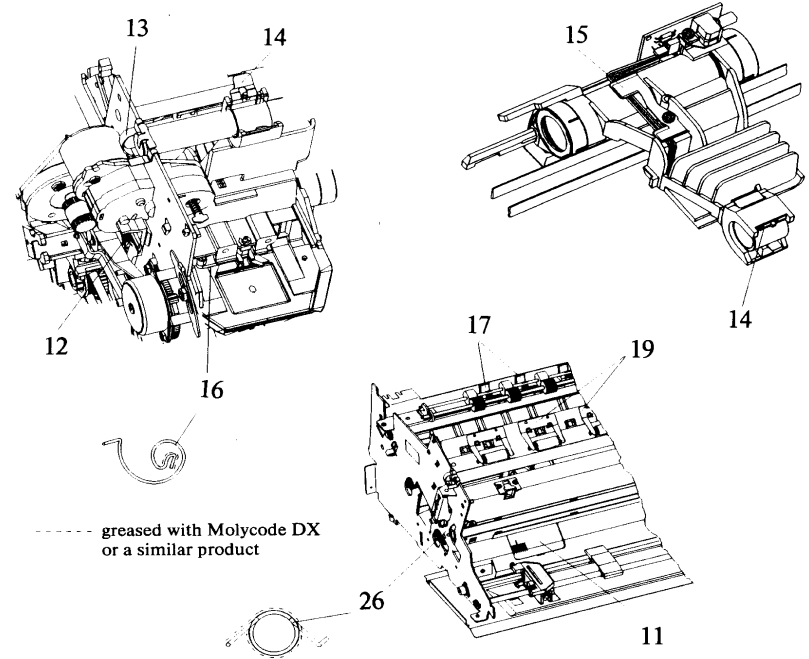
- ⇒ ● a) Insert the new spring and grease the hole in the engine plate and the surface of the spring gliding on the plate
- b) Insert the lever (A) delivered with the spring until the snap-in
- c) Complete the removal procedure in the reverse sequence



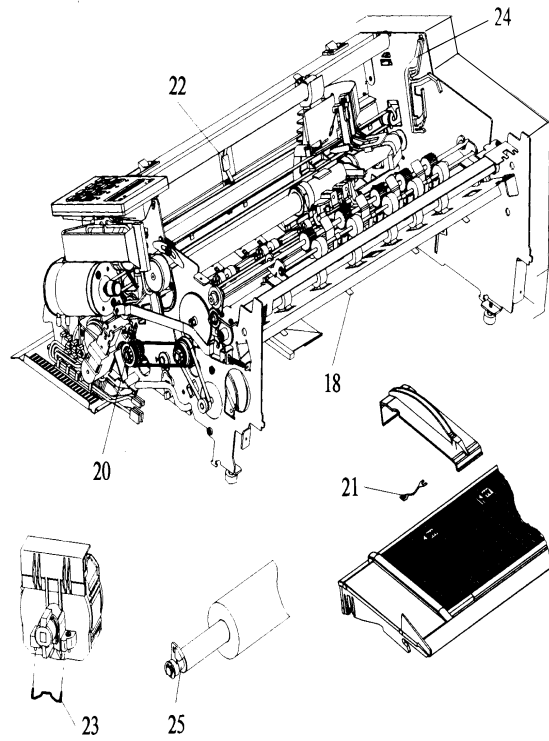
Part: **Kit Screws and Springs**  
 Part No: 5112 292 38490

DEC P/N: **FD-W05RK-01**

**Location of Screws and Springs**



- 11 Spring 0.6x4x23 ST F. Paper Run
- 12 Spring 0.3x4.5x20 ST Ribbon Gear
- 13 Spring Carriage Axis
- 14 Spring Carriage Bearing
- 15 Spring Encoder Cable
- 16 Spring Print Head Shifter
- 17 Spring Paper Stacker Elements
- 19 Spring Paper Transport
- 26 Torsion Spring D Shaped Axis



- 18 Spring Tractor Exit
- 20 Torsion Spring Tractor Gear
- 21 Spring Manual Front Insertion
- 22 Cable clip
- 23 Springs for Print Head Fixation
- 24 Holder right/left (green)
- 25 Bearing Platen (green)

## 4 Wearing Parts

This chapter describes the removal procedures which are necessary for proper handling of the wearing parts of the printer.

### Note:

All removal procedures consists of several steps indicated with a:

- to show preparation and
- ⇒ ● to indicate the main removal steps.

In terms of preventive actions for keeping the printer running, following operation for the life time of wearing parts is given:

- Ribbon Cartridge: 10,000 - 15,000 pages (draft quality)
- Print Head: > 350,000 pages
- Platen Assy: > 800,000 pages
- Pick up Rolls: > 200,000 pages

Recommendation for cleaning:

- Transport Rolls, Platen Assy, and Pick up Rolls every 50,000 Pages

**Note:** Number of pages printed can be obtained from print out of 'PRINT TEST 3', parameter 'PGCNT' (see Installation and User Guide, chapter 8)

Part: **Platen Assy**  
Part No: 5112 292 38010

DEC P/N: **LA60X-PN**

---

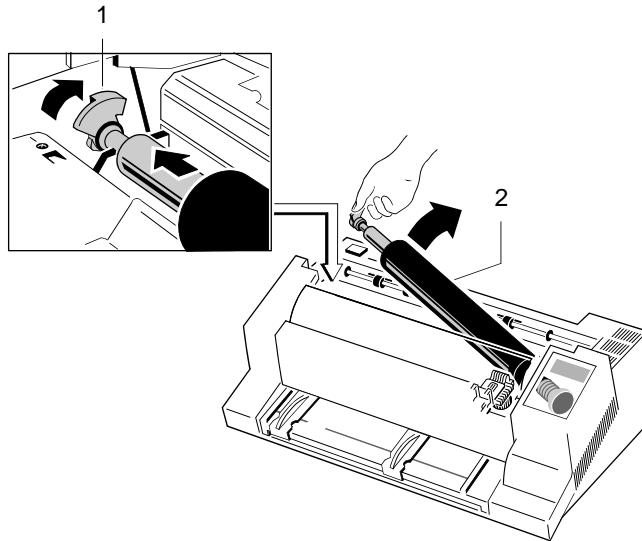
### To Remove the Platen (2)

- Switch the printer OFF.
- Lift and remove the output stacker.
- Lift and remove the top cover.
- Remove the Ribbon cassette.
- ⇒ ● Position the print head to the very right.
- ⇒ ● Release the plastic platen clamp (1) on the left platen mounting.
- ⇒ ● Move platen (2) approximately 10 mm to the left, lift the left end of the platen free of its mounting and withdraw the platen from the right mounting.
- ⇒ ● Lift the platen to the left underneath the print head and take it out.

**To install the Platen Assy (2)**

☞ Ensure that the printer is switched OFF.

- ⇒ ● Place platen (2) in the vacant space between print head and metal bar.
- ⇒ ● Move print head from its right hand position into the centre.
- ⇒ ● Fit the gear wheel end of the platen into the right hand side mounting. Be careful not to damage the gear wheel.
- ⇒ ● Ensure that the plastic platen clamp (1) is in the upright position, push the platen into its mounting and lock in position by pushing the tag on the clamp to the rear.
- Install the ribbon cassette.
- Fit and close the top cover.
- Fit the output stacker.



**PM AGC:** (s. Installation and User Guide, Chapter 3)

Run the MENU-function AGC ADJUST with ink ribbon cassette installed but no paper inserted

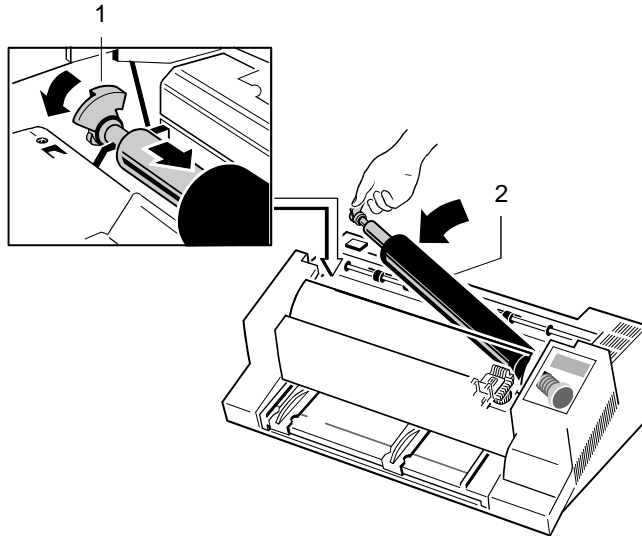


Part: **ASF Pick-up Rollers**

DEC P/N:

**LA60X-PR**

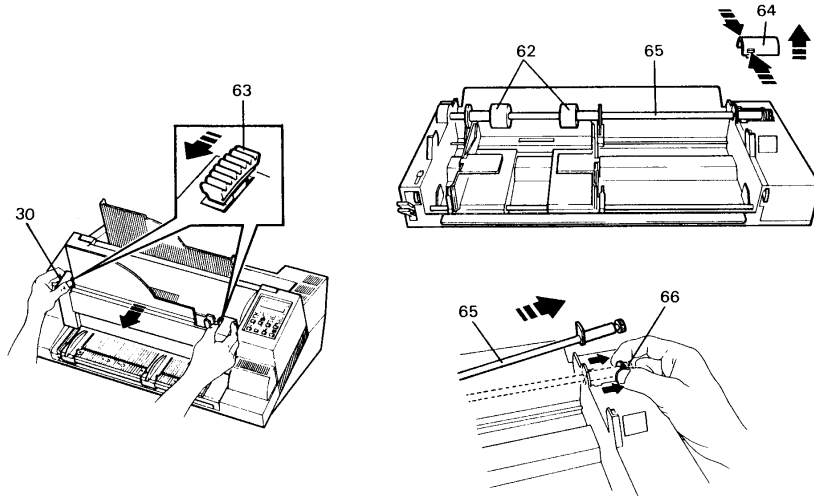
Part No: 5112 292 41000

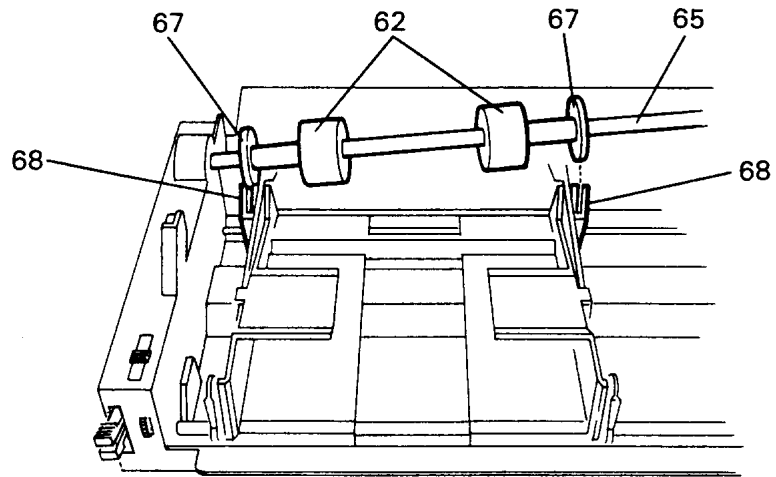
**To Remove the ASF Pick-up Rollers (62)**

- ⇒ ● Remove the ASF cassette (30) from the printer by drawing back the release lever (63), releasing the mounting lugs.
- ⇒ ● Remove the small access cover (64) by squeezing it together as shown.
- ⇒ ● Pull back the retainers (66) as shown and lift up the bar (65).
- ⇒ ● Pull the bar (65) out of the cassette and slide the pick-up rollers (62) off the bar.

**To install the Pick-up Rollers (62)**

- ⇒ ● Slide the new pick-up rollers (62) onto the bar (65).
- ⇒ ● Insert the free end of the bar into its mounting, ensuring that each roller flange (67) is positioned so that they mate with the slots (68) in the paper sleeves.
- ⇒ ● Carefully snap the bar (65) into its mounting and fit the small access cover (64).





## 5 List of Spares and Repairs

Item	Part No.	Digital Part No.	Type <sup>1)</sup>
Housing	5112 292 38200	FD-W03RF-01	S
Front Cover 40A	5112 212 54900	FD-W03RC-01	S
Manual Front Insertion 40A	5112 292 38420	FD-W03RJ-01	S
Output Stacker 40A	5112 212 55000	FD-W03RE-01	S
PSU-40A Assy	5112 292 38110	FD-W02BY-01	R
DEV-40A LA600 Assy	5112 292 62921	29-31791-01.A01	R
CU-40 LA600 Assy	5112 292 62991	29-31792-01.A01	R
EEPROM CU-40-00	5112 208 07590	29-31802-01.A01	S
Operator Panel 40A Assy	5112 292 38150	FD-W00CU-01	S
Power On/Off Switch 40A	5112 292 38820	FD-W02B3-01	S
Cable Print Head Assy	5112 292 38800	FD-W02Y2-01	S
Encoder Strip 40A Assy	5112 292 37970	FD-W0417-01	S
Print-H Encoder 40A Assy	5112 292 43100	FD-W0290-01	S
Horizontal Motor 40A Assy	5112 292 37910	FD-W0396-01	S
Carriage 40A Assy	5112 292 40940	FD-W04JL-01	S
Protection Shield	5112 292 38390	FD-W041W-01	S
Ribbon Gear 40A Assy	5112 292 37930	FD-W045W-01	S
Stepping Motor 7.5 DEG	5112 209 24460	FD-W0394-01	S
Stepping Motor 1.8 DEG	5112 292 62411	29-31789-01.A01	S
Tractor Gear 40A Assy	5112 292 38030	FD-W045N-01	S
Stacker Elements 40B Assy	5112 292 40990	FD-W04KK-01	S
Paper Run/In Detector Assy	5112 292 38050	FD-W4JJ-01	S
Minipitch Belt Stepper	5112 200 08780	FD-W032Y-01	S
Minipitch Belt Form Feed	5112 200 08790	FD-W0330-01	S
Kit Vertical Transport 40A	5112 292 38450	FD-W02M6-01	S
Kit Cont. Forms Exit 40A	5112 292 38460	FD-W02M7-01	S
Kit Tractor 40A	5112 292 38470	FD-W02M8-01	S
Kit Belt Tension	5112 292 38480	FD-W02M5-01	S
Kit Screws and Springs	5112 292 38490	FD-W05RK-01	S
Kit ASF-Lever	5112 292 22480	FD-W04B7-01	S
Kit Belt Pulley 40A	5112 292 49210	FD-W05RM-01	S
Kit Torsion Spring D-Axis	5112 292 41070	29-31803-01.A01	S

Item	Part No.	Digital Part No.	Type <sup>1)</sup>
Kit Lubrication Felt	5112 270 04541	29-31804-01.A01	S
Kit Press Roll FF1	5112 292 41080	29-31801-01.A01	S
Top Cover 40A LA600	5112 270 04861	29-31800-01.A01	S
ASF-A LA60X-SF	5112 292 53331	<b>2)</b>	R
ASF-B LA60X-SG	5112 292 53341	<b>2)</b>	R
PM S/P LA60X-AS	5112 292 38671	<b>2)</b>	R
PM S/P LA60X-SI	5112 292 38681	<b>2)</b>	R
PM IBM Coax LA60X-CX	5112 292 38691	<b>2)</b>	R
PM IBM Twinax LA60X-TX	5112 292 63501	<b>2)</b>	R
PM Ethernet LA60X-ET	5112 292 63511	<b>2)</b>	R
Print Engine LA600	5112 292 62901	29-31790-01.A01	R
Print Head LA600	5112 292 62761	29-31807-01.A01	R

1) Type = S means spare part, non repairable  
Type = R means spare part, repairable

2) to be ordered as commercial item