

Panasonic® KX-P4450 Developer Unit



Oasis Imaging Products, Inc. Technical Support: (888) 627-6555

Reference Information:

OEM PN: KX-PDP1
 OEM Yield: 20,000 prints (5.5% image area)
 (10 pages repetitive printing)

Operational Theory (Figure 1):

The developer unit holds approximately 320 grams of developer in the mixing unit. The developer is a mixture of toner and carrier. The mixing paddle rotates clockwise to stir the developer which creates a friction charge called a triboelectric charge. The toner is negatively charged and the carrier is positively charged. The magnetic roller consists of magnets mounted inside a rotating aluminum sleeve. The sleeve rotates at 80rpm and the magnets inside attract the developer to the surface of the sleeve, forming a magnetic brush. A doctor blade mounted in the developer housing trims the brush to 1.0mm. Where the magnetic brush lightly touches the drum, the negatively charged toner is attracted to the latent image on the drum. The latent image is then converted to a visible image on the OPC drum. A bias voltage is applied to the sleeve to achieve maximum print quality. Any developer remaining on the sleeve is removed by the scraper and returned to the mixing paddle for new toner. A toner barrier catches loose developer which is then re-attracted to the magnetic roller.

The developer first-use sensor is used to tell the CPU when a new developer unit is installed. An electronic counter on the logic board tracks developer life. At 20,000 prints, "CHANGE DEV U26" is displayed.

Approximate Remanufacturing Time:

30 min

Recommended Tools:

Phillips head #1 screwdriver
 Flathead (3mm) screwdriver
 Soldering iron and wick

CAUTION: Do not test your unit with the new fuse board installed. Your printer will blow the fuse. Test with the old fuse board then install the new fuse board. This will insure that your customer's page counts are properly reset.

Instructions (Figure 2):

1. Remove the developer unit flange (3 screws).
2. Remove the toner density connector (2 screws).
3. Remove the developer unit top cover (5 screws).
4. Remove the old developer from the mixing paddle area and the magnetic roller sleeve. Be sure to remove **all** the old developer.
5. Locate the toner density/developer first-use sensor unit on the bottom of the developer unit. Remove the cover. De-solder the two center leads (Fig. 3) on the green circuit board and remove the screw. Flip the green circuit board over and remove the old fuse. Insert and solder new fuse. Secure green circuit board to developer unit and replace the cover.
6. Refill the developer unit with new developer. Spin the magnetic roller sleeve gear counter clockwise to coat the sleeve. (**Note:** Spin the roller so that it comes out of the bottom and into the top of the unit).
7. Re-assemble in reverse order (3,2,1).

Note:The magnetic roller has an angle of graduation adjustment for (Fig. 4) print density. When using Oasis 4450 developer perform the following steps:

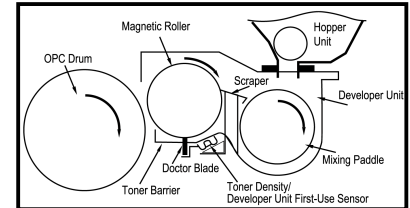


Figure 1

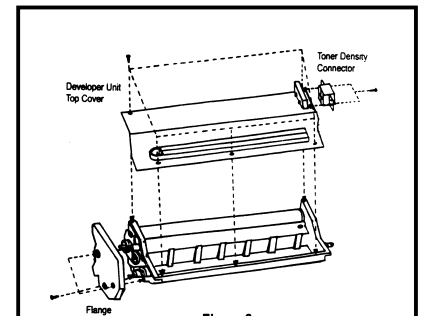


Figure 2

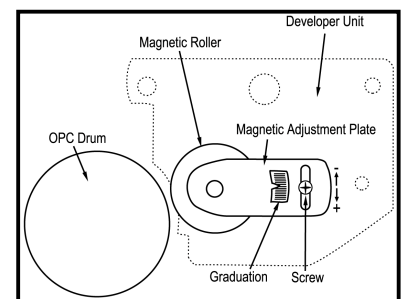


Figure 3

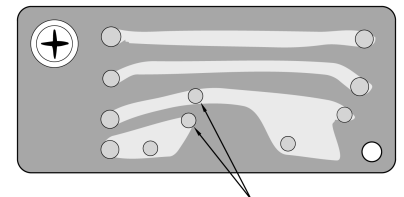


Figure 4

- a. Loosen the adjustment screw on the magnetic roller through the flange.
- b. Set the pointer to the mid-scale position.
- c. Tighten the screw (be sure that the pointer does not move).
- d. Watch your test prints **very** carefully.

NOTE: If you notice a grainy feeling to the paper or any scattered dumping on the page, stop the test immediately. Remove the developer unit and adjust the pointer again (clean the printer if necessary). Move the scale so that the pointer is one notch to the right of center. Continue this process, making fine adjustments until you are able to run 20 to 25 clean crisp prints. It is very common to print 75 to 100 test pages per developer unit. Be sure to make your adjustments in small increments (no more than one notch at a time).