

TECHNICAL DOCUMENT



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Okidata OL-1200 Toner Cartridges

DOC-0268

OVERVIEW



First introduced in January 1996 as the Okidata OL-1200 and then as the Okipage 16n in February 1997, the Okidata OL-1200 engine is a beefed up version of the Okidata OL-400/800 engine. The OL-1200 is rated at 12ppm and the Okipage 16n is rated for 16ppm. Both are 600dpi machines with a max monthly duty cycle of 24,000 pages.

As with most other Okidata printers these are LED (Light Emitting Diode) engines not laser. LED print heads use a single, pixel-size, modulating light source to recreate images. This beam is fired from a stationary array containing thousands of tiny LEDs. Light from each diode passes through a focusing lens onto the image drum. See Diagram #1. Laser printers also use a single light source, but the beam is aimed at a revolving mirror (Scanner) that reflects it through a series of focusing lenses, off a stationary mirror to the drum. The results are basically the same, but the LED printers use hardly any moving parts, and use less power. The main downfall of this type of printer is that the LED array is mounted directly above the drum unit, and tends to get dirty. In fact Okidata recommends that the array be cleaned each time the toner cartridge is changed. New and good aftermarket toner kits come with alcohol wipes and a lens cloth. A dirty LED lens will show up as either light/splotchy prints, white spots where there should be black, or "fuzzy" print. Cleaning instructions will follow at the end of this article.

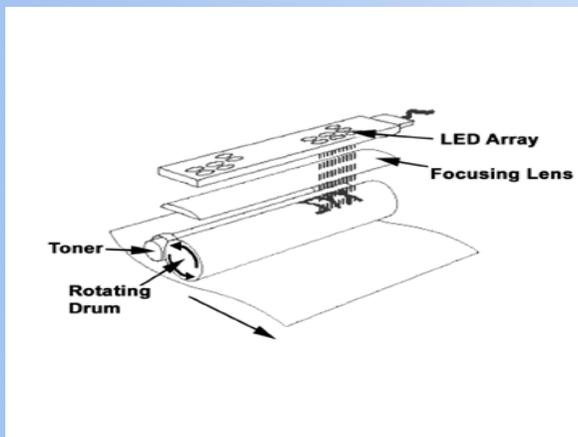


DIAGRAM 1

In true Okidata fashion, these printers must have the "Change Drum" code reset after the drum unit is replaced. Although the machine will continue to print, it is highly recommended that the drum unit be replaced when the message appears. If the user just resets the code, parts inside the cartridge such as the cleaning roller will become so clogged with toner that they will fail, and may not be able to function properly

again even if cleaned. The reset code for these machines is also at the end of this article.

If you are not currently remanufacturing Okidata cartridges, you are missing out on a nice profit center. The drum unit for the OL-1200 (56118801) lists for \$335.00 USD, and wholesales for \$235.11 USD. Even the toner cartridge (52109201) is costly, it lists for \$68.25 USD and wholesales for \$39.95 USD! If you ever tried to remanufacture OL-400/800 drum units, and had problems, don't worry, the OL-1200 drum unit is much easier to do. There are less small parts, and contacts to worry about.

The drum life for these cartridges is not exact. As per Okidata there are a number of factors that will affect the drum life. These are the operating temperature, humidity, type of paper used, and most importantly the number of pages per job. Each time a print job is run or the printer is powered on/off, the drum unit rotates to start up, and wind down. As a result, single page print jobs will wear out the drum much more quickly than multiple page print jobs will. This is why the OPC cartridge is rated from 24,000 pages at 3 pages/job up to 30,000 pages for larger page jobs.

As you can see there are a lot of variables, and each customer is going to get a different yield. One nice thing about this is that the printer will keep printing once the CHG Drum code is on the display. Okidata recommends that the OPC cartridge be replaced once the print quality has degraded.

Another thing to keep in mind is that once you rebuild the OPC cartridge, and place in a new toner tube, the OPC cartridge will draw in most of the toner into it's feed section. This may cause the "Toner Low" message to appear as sooner than normal. This is all stated in the users printer manual, and is considered normal for new OEM as well as rebuilt cartridges.

One major point to check before you start is to check the four legs that the cartridge stands on. If any of them are broken, the cartridge should be kept for parts only. With one leg broken, the cartridge will tend to move during printing and you will at best get uneven prints, at worst a paper jam. See the troubleshooting chart for more information and pictures of the legs.

SUPPLIES REQUIRED



- Long Life OPC Drum
- Cotton Swabs
- Isopropyl Alcohol
- DPP Drum Padding Powder
- Conductive Grease

TOOLS REQUIRED



- Phillips head screw driver.
- Small Common screw driver
- Safety goggles and breathing mask.
- Vacuum approved for toner

WARNING: Always wear safety goggles and breathing mask when working with or around toner. Do not disperse the toner into the air. Use approved toner vacuums and filters at all times.

DISASSEMBLY



1. Vacuum the outside of the cartridge thoroughly, especially the exposed Toner Hopper. If the toner tube is still installed, remove it now.
2. Remove the front two Phillips head screws. See Diagram #2.
3. Remove the two Phillips head screws located inside the toner hopper. See Diagram #3.
4. Release the two front tabs located on either side of the front screw holes. See Diagram #4.
5. Release the two side tabs located on either side of the cartridge. See Diagram #5.

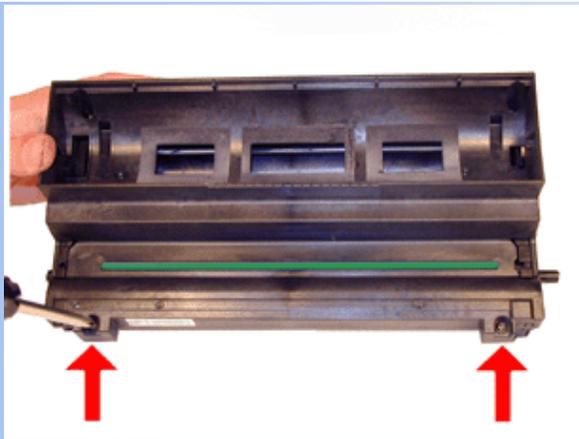


DIAGRAM 2



DIAGRAM 3



DIAGRAM 4

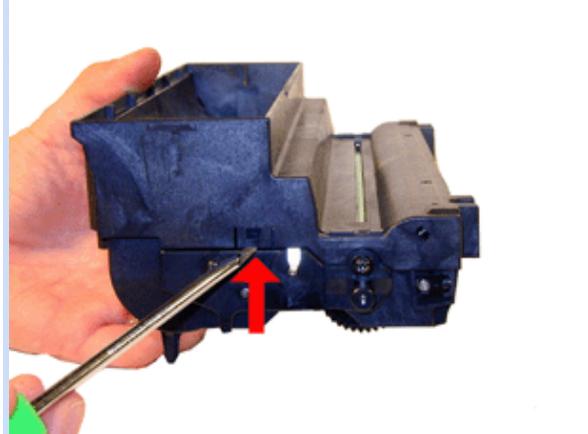


DIAGRAM 5

6. Take off the top cover by lifting up from the toner supply side, and sliding forward. Be careful of the thin gasket on the back rail. It sits loosely in it's slot and can be easily vacuumed up. See Diagram #6.
7. Vacuum the remaining toner out of the supply area. Be careful not to damage the Feed Roller Assembly
8. Carefully remove the PCR/cleaning roller assy. See Diagram #7. Carefully blow off the entire assy. with clean compressed air. Wipe both the rollers down with a clean lint free cloth. The metal roller helps keep the charge even, and helps keep the PCR clean.
9. Remove the three screws on the right side end cap. (two on the side and one on top). See Diagram #8.
10. Remove the right side end cap. See Diagram #9.



DIAGRAM 6

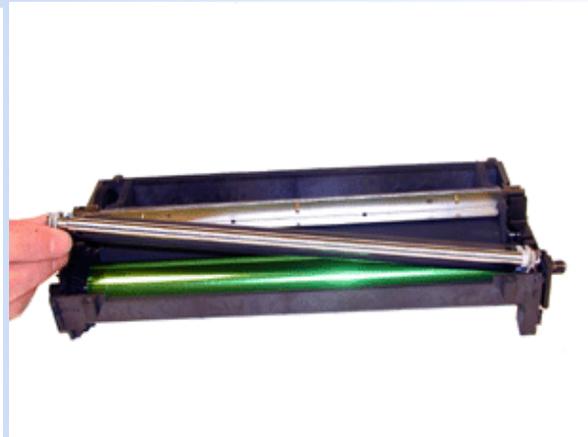


DIAGRAM 7

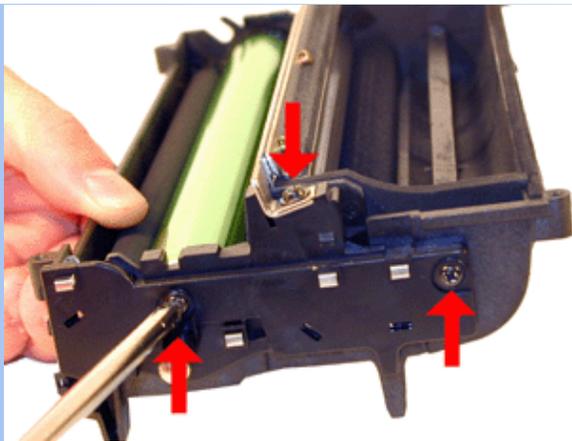


DIAGRAM 8

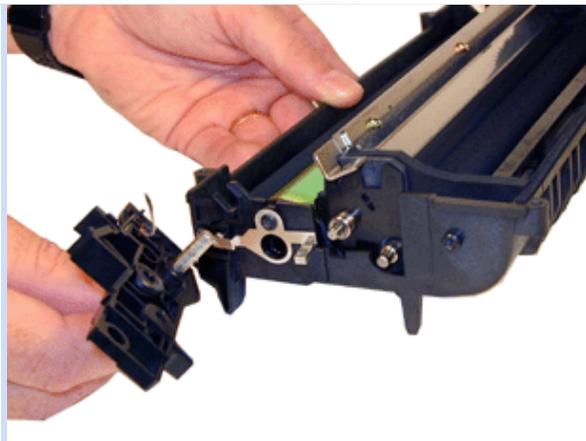


DIAGRAM 9

11. Remove the three screws on the left side end cap. (two on the side and one on top). See Diagram #10.
12. Remove the left side end cap. See Diagram #11.
Be careful of the metal contact plate. It will come loose when the screw is removed. See Diagram #12.
13. From the small gear side. Press the drum up from the bottom. Remove the drum. See Diagram #13.

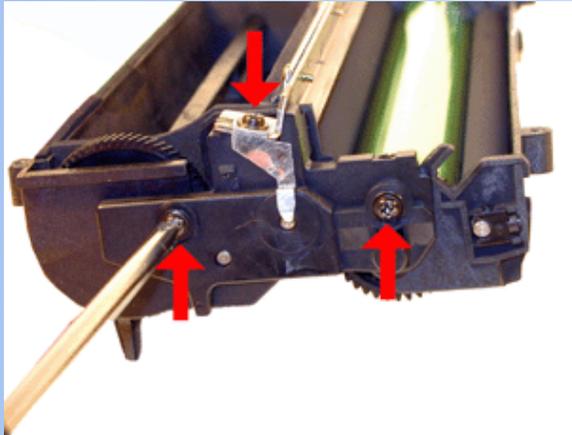


DIAGRAM 10



DIAGRAM 11



DIAGRAM 12

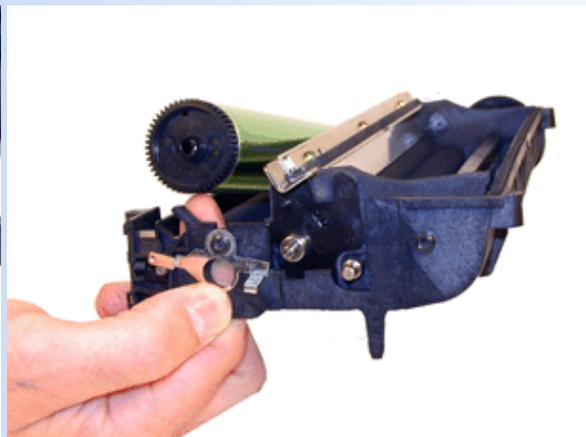


DIAGRAM 13

14. The Static Roller/Dr. Blade/Feed Roller Assy. can be removed as a complete unit by lifting up the vertical foam gasket on each side. See Diagram #14.
15. Carefully blow off the entire assy. with clean compressed air. Pay special attention to the feed roller. Vacuuming is not recommended as the process can create a static field on the feed roller that will cause an uneven flow of toner.

16. If the Static roller has a buildup of toner that will not come off, the bushing can be removed, freeing the roller. Try wiping the roller off with a dry lint free cloth first. If the buildup remains, clean it with a good rubber roller cleaner.
17. Clean the foam cleaning roller. Vacuuming is not recommended as the process can create a static field on the cleaning roller that will cause streaking. The cleaning roller takes the place of the wiper blade. It has an electrical charge placed on that attracts the excess toner to it. Removing and replacing the roller is very difficult. For this reason, we recommend that the roller be cleaned while in the cartridge. See Diagram #15.



DIAGRAM 14

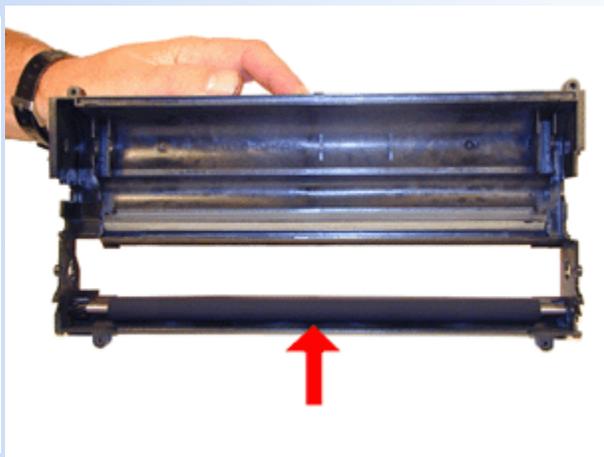


DIAGRAM 15

RE-ASSEMBLE THE CARTRIDGE



1. Install the new drum. NOTE: due to the fact that the OEM drum has at least 24,000 pages on it, we highly recommend that the drum be replaced. See Diagram #16.
2. Replace the PCR/Cleaning roller Assembly. Make sure to put the white bushing on the left, and the black bushing to the right. See Diagram #17.
3. Install the right side (Large) end cap. Make sure that all the posts fit into the end cap bushings correctly. Do not force the end cap on! If the end cap does not fit easily, take it off, look for a bushing out of place and re-install. See Diagram #18.



DIAGRAM 16

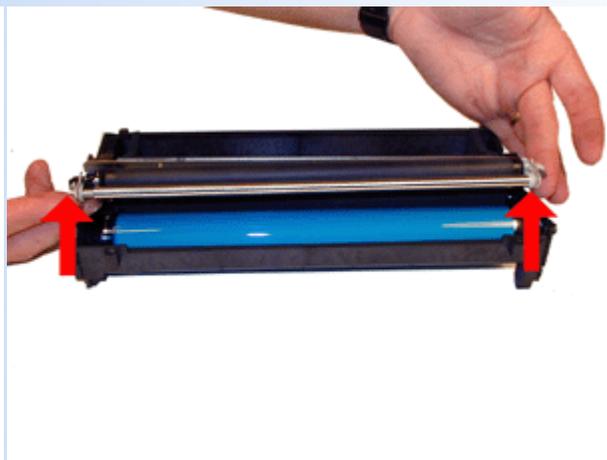


DIAGRAM 17

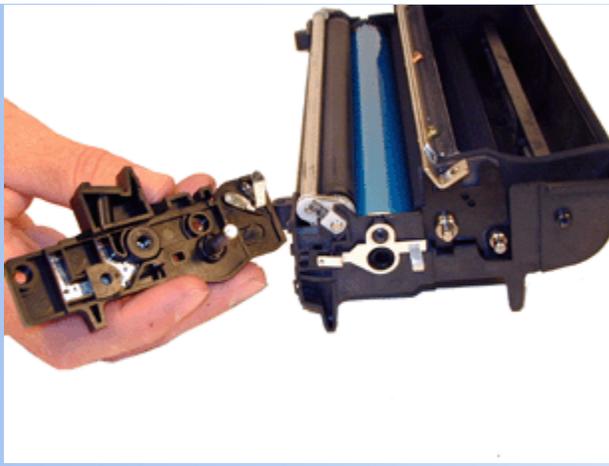


DIAGRAM 18

4. Install the left side end cap. Place the loose gear in first, make sure the end cap shaft fits into it properly. Do not force the end cap on! If the end cap does not fit easily, take it off, look for a bushing out of place and re-install. See Diagram #'s 19, 20,& 21.

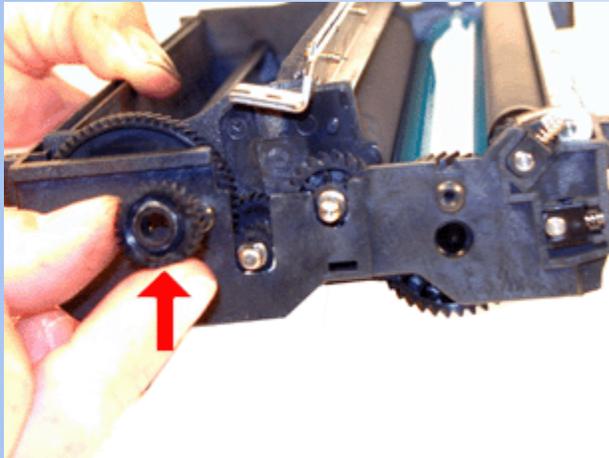


DIAGRAM 19

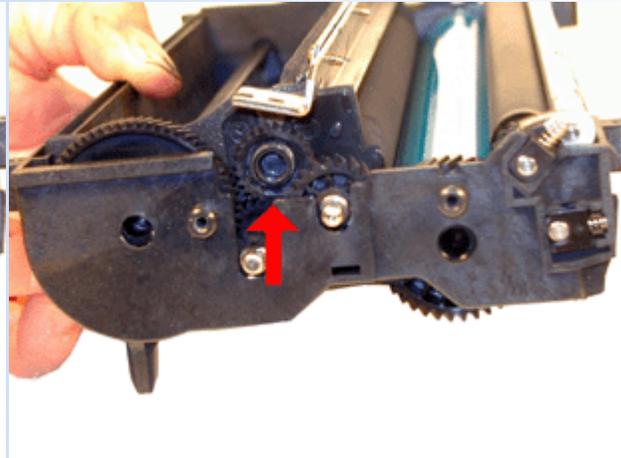


DIAGRAM 20

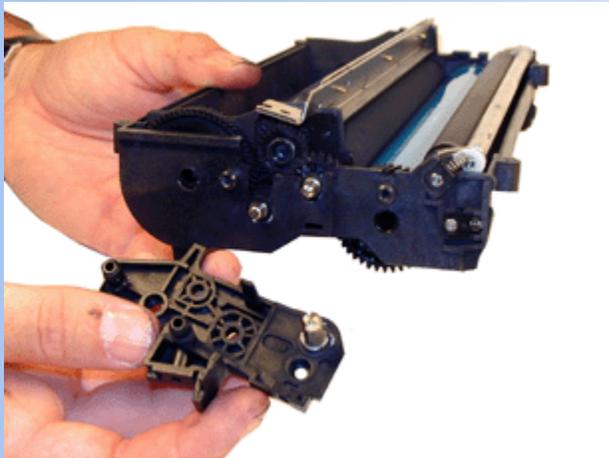


DIAGRAM 21

5. Check to make sure the thin foam gasket is in the correct place. Replace the top cover and four screws. Make sure that the four tabs lock into place. As with the end caps, do not force the cover in place. If it doesn't fit correctly, take it off and try again. Note that the front edge of the cover locks the PCR springs in place. See Diagram #'s 22 & 23.

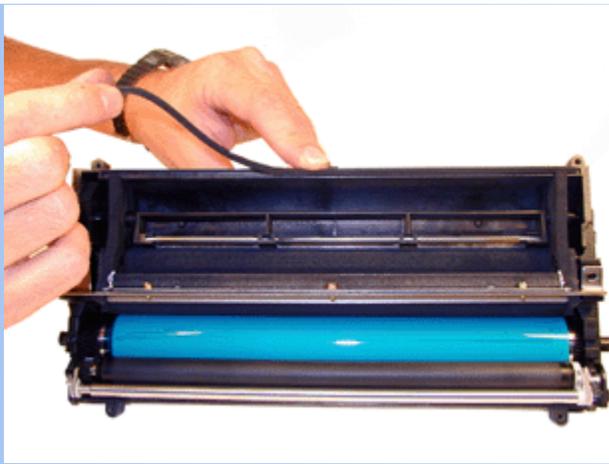


DIAGRAM 22

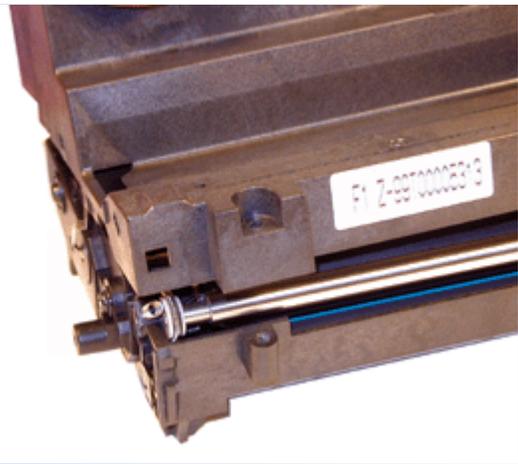


DIAGRAM 23

RESET THE DRUM COUNTER



NOTE: The procedure for this is in the users manual, and comes with new OEM drum cartridges.

Even though the printer may say to change the OPC cartridge, there is no preset page count where the printer will stop working. The message is there only as a reminder, the printer will continue to print. At this point the OPC Drum is also very close to the end of its useful life, the print quality will start to deteriorate.

RESET PROCEDURE



1. Turn off the printer
2. While holding the MENU1/MENU2 button down, turn the printer back on. Keep holding the button down until you see "USER MNT" on the display panel. Release the button.
3. Press the MENU1/MENU2 button three times. The display will read "DRUM CTR RESET".
4. Press the ENTER button. Then press the ON-LINE button.

The counter is reset!

NOTE: Remember, once a new toner tube is installed, it is possible that the Toner Low signal will appear fairly soon. So keep an extra toner tube on hand.

TROUBLE SHOOTING



1. A very common problem with Okidata drum cartridges, is a band of toner across the top of the page, usually 1" thick. The band can be either solid black, or shades of gray. This problem has been known to occur in new OEM cartridges as well as rebuilt cartridges. The cause of this problem is a bad contact in the drum ground circuit. This is usually located at (but not limited to) the contact gear in the OPC Drum where it meets the metal drum axle. See Diagram #20. Depending on the severity, sometimes all that will print is the solid black band, or in less serious cases, a gray band will show across the printed page and some text will also print. See diagram # 24.
2. Another common problem is a build up of toner on the cleaning roller or the Static Roller. In either case there will be dark black toner smears on the page. These smears can show up as being either vertical or horizontal. The only way to fix this problem is to take the cartridge apart and clean these items.
3. If you are experiencing uneven print that does not seem to follow any sort of pattern, one of the cartridge legs are probably broken. If this is the case the cartridge should not be used, save it for parts only. There is no reliable way to fix a broken leg. See diagram # 25.

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DIAGRAM 24

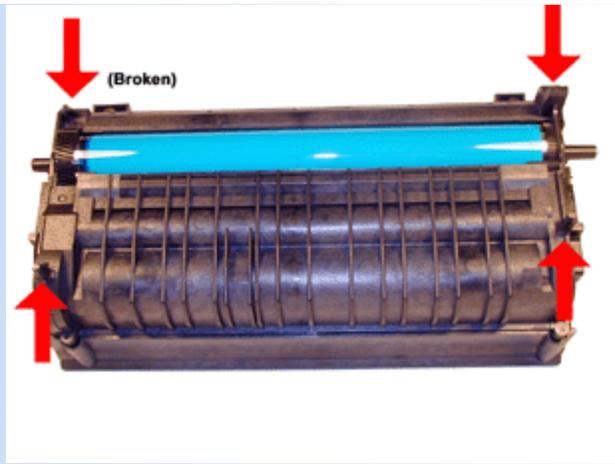


DIAGRAM 25

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RECOMMENDED SUPPLIES



Microsoft OLE DB Provider for ODBC Drivers error '80004005'

[Microsoft][ODBC Microsoft Access Driver]General error Unable to open registry key 'Temporary (volatile) Jet DSN for process 0x2de8 Thread 0x1ee4 DBC 0x3f3b014 Jet'.

/script/catSearch.asp, line 58