Profile: 3030 style (Xerox Engineering Copiers) Part 1
3030, 3040, 3050, 3060

I set out at first to cover these machines in a single article, as I had last month for the 2510 / 2515. Well, scratch that. The 3030 style is a similar machine in some respects but as is the general trend in "improving" things, the newer machines are far more complicated. Rather than try to squish it all into one article, it'll probably work better to cover these in 2 short articles. This month, we'll browse through the Status Codes in an abbreviated fashion and make a few notes on the parts which cross over from the 2510 style.
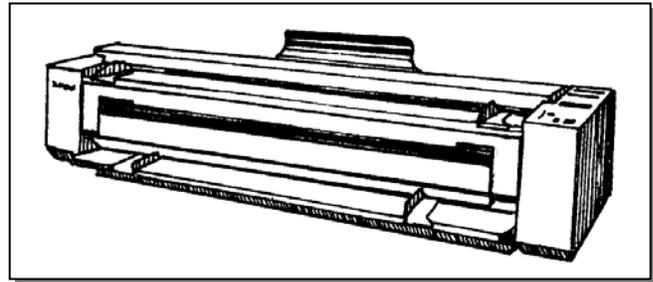
The 2510 style machines used single letters as Status Codes… the 3030, 3050, & 3060 use a letter, a number and a sub code (for example in a 2510, you might see an 'A' code whereas the 3030 would instead display something like 'A1.02' which would mean approximately the same thing).

In the 3030's, here is a list of what the prefix letter indicates:

'A' codes still indicate Document Jams.

'C' codes indicate media feed problems.

'E' codes still mean media jams. There is more sophistication in the media sensing however, as there are now 3 sensors watching the media path.

   'E2.01' codes have to do with the Media Registration Switch.

   'E4.01' & 'E4.02' both indicate trouble at the Media Exit Switch.

   'E4.03' relates to a Stripper Finger Jam. There is a sensor which sees if the stripper assembly is pushed out of position.

'E5' codes are various interlock indicators for doors and covers being open.

'E6.00' means the machine things the Media Supply Drawer interlock is open.

'J1.01' means the machine is out of toner. (note that the '**LL.91'** code listed below can also indicate a low toner condition)

'J2.02' means that the machine didn't see the toner cartridge come around to it's home position in time (or if it didn't see the cartridge leave the home position).

'LL' codes can indicate a wide range of problems…. Here's a quick list:

   'LL.10': Cutter Interlock loop problem (something is wrong in cutter motor circuit).

   'LL.26': Exposure problems (either the Exposure Lamp isn't lighting up, or the exposure sensor doesn't see it).

   'LL.30': Cutter fault.

   'LL.41'through 'LL.45': Fuser problems.

   'LL.50': Problem with "Bulk Power Supply" which provides 26VDC.

   'LL.60' through 'LL.62': NVM (Non Volatile Memory) failure.

   'LL.90': Overtoned condition.

   'LL.91': Low Toner problem.

'U1.01' indicates that the Copy Counter is disconnected.

There are a few key parts which cross over from the earlier 2510 machines. The Drum and Cleaning Blade are identical as is the Exposure Lamp. The toner material is

the same material, but the toner cartridges are shaped differently and are not interchangeable. The developer material is also interchangeable except for the fact that the 3030 machines use just over twice as much developer material as the 2510 style machines. I'm afraid that is where the similarities end. The Fuser Roll, Heat Lamp, Stripper Fingers, Corotrons and Feed Components are different from the 2510's.

Next month we'll delve into the diagnostic tests and adjustments… where there are almost no similarities to the 2510's to be found.

3030 style Part 2… Diagnostic Tests and adjustments

Last month's article began an introduction to the 3030 style engineering copiers… We hit the basics of the Status Codes and also covered similarities and differences to the 2510 style (2510/15/20) as regards codes as well as parts. This month we'll delve into the diagnostic tests and adjustments. Here you'll find few if any similarities to the 2510's.

To enter the diagnostic mode first make sure all interlock switches are made *(right door interlock, media supply drawer interlock, document handler interlock, cut sheet feed shelf interlock, and upper rear door interlock)*, then, hold the '0' button while powering up the copier. Next enter the first two digits of the code you wish to enter (called the "chain") and press 'Start', then enter the second two digits and press 'Start' again to begin the test.

You can use the diagnostics to test sensors and switches. These are considered "Input Component Codes". Once you enter the code, if you actuate and deactuate the component you are testing, you'll see the message display toggle between displaying a '1' and a '0'.

Following is an abbreviated list of the Input Codes:

0101: Right Door Interlock
0110: Media Supply Drawer Interlock
0500: Document Handler Interlock
0502: Document Front Sensor
0503: Document Rear Sensor
0701: Media Transport Interlock
0702: Cutter Drawer Interlock
0707: Roll Position Sensor
0710: Roll Motion Sensor
0721: Cutter Home sensor
0801: Cut Sheet Feed in Switch
0803: Media Registration Sensor
0807: Copy Exit Sensor
0901: Cartridge Home Sensor
0910: Cut Sheet Feed Shelf Interlock
0911: Upper Rear Door Interlock
1005: Stripper Finger Jam Switch
1008: Fuser Overtemperature Sensor

The second category of diagnostic codes would be the "Output Component Codes". These we'll cover in an abbreviated fashion. To enter multiple codes (chaining), you'll enter the first code and then if the code can be 'chained', the display

will show "Roll to Chain". Press the 'Roll / Cut Sheet' button and enter the second code.
Here are some of the 'Output Codes' available:
0203: Billing Meter Index
0210: Control Panel LED's
0403*: Main Drive Motor *: Warning: Make sure that the fuser is at operating temperature before the main drive motor is turned on to avoid damaging the fuser (cold fuser oil can cause some serious damage).
0601: Document Drive Motor
0703: Roll Drive Motor (counterclockwise)
0704: Roll Drive Motor (clockwise)
0716: Roll Drive Motor and Roll 1 Feed Clutch
0720: Cutter Brake
0723: Cutter Drive Motor
0905: Toner Dispense Motor
0913: Cleaning Blade Positioning Motor
0914: Cooling Fans
0917: Registration Roll
0925: Toner Cartridge (1 revolution)
0966: Erase LED board
1006: Fuser Temperature Display
1009: Fuser Power Relay On
1235: Document Scan / Rescan (5 times)

There are also other Special Tests and Memory Adjustments available from the diagnostic mode. Following are a few select codes which are most likely to be of value:
0360: Resets all NVM (non volatile memory) settings to the defaults
0361: Exits Diagnostics
0363: Resets NVM settings to backup file (checksum) settings
0364: Sets the backup file to the current NVM settings
0371: Changes the Auditron Administrator's password
0601: Adjusts speed of the Document Drive Motor (adjusts lead to trail magnification)
0860: Document registration
0862: Time to Auto Cut (changes length of media before it gets cut)
0921-1: Turns on Transfer & Detack voltages
0921-2: Turns on Charge voltage
0921-3: Exposure Adjustment (range is from '0' to '9')
0921-4: Toner Dispense rate adjustment
0922: Allows tech to run copies in spite of a toner fault (use 0361 to leave diagnostics and then run copies even if an LL code is present)
1004: Fuser Temperature Test (Fuser Lamp comes on and heats up to operating temperature… display will show degrees Fareinheit and celsius).
1060: Fuser temperature setpoint
        The Charge, Transfer & Detack adjustments are controlled by VR's (variable resistors) on the High Voltage Power Supply. The layout of the 3030's VR's are the same as the "New style" 2510's which were detailed in the January 2003 article.
        That about covers the Engineering copiers for the time being. Hope it helps you to be more comfortable around these long critters.