DUK #2: Impulse Jet Automatic Cleaning System (ACS)

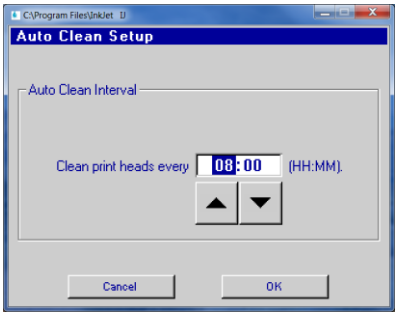
Did you know.....?

Did you know that the Automatic Cleaning System (ACS) in Diagraphs impulse jet printers provides reliable high resolution print in production environments that are typically dusty and dirty? The area around the ink nozzles is naturally wet with ink and airborne dust will stick to it when it comes in contact. The picture at right shows the orifice plate with a buildup of corrugate dust. It's easy to see how this buildup would affect jetting from the nozzles. This debris must be removed to restore print quality. The ACS automates this cleaning function to maintain high print quality while reducing maintenance effort for plant operations staff.

The ACS function is simple and cost effective. When initiated, ink is pushed out of all nozzles at once, loosening and floating the debris off of the orifice plate. Debris and waste ink are pulled away at the bottom of the channel by vacuum. The ACS cycle uses a minimal amount of ink, approximately 18 cents/cycle.

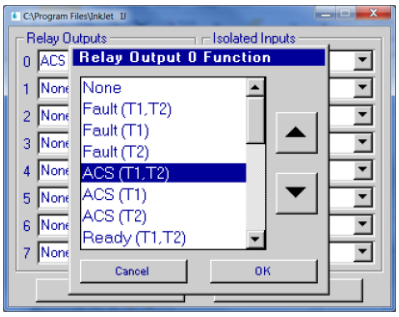
Before and after pictures below from an actual test show a printed barcode with multiple channels blocked by corrugate dust and then after the ACS cycle has restored print quality.

The ACS can be programmed to run as frequently as the environment requires, initiated manually or even triggered by external plant systems through the I/O board giving flexibility in harnessing this important feature.



Programmed Times

Manually Activated



Triggered thru I/O board