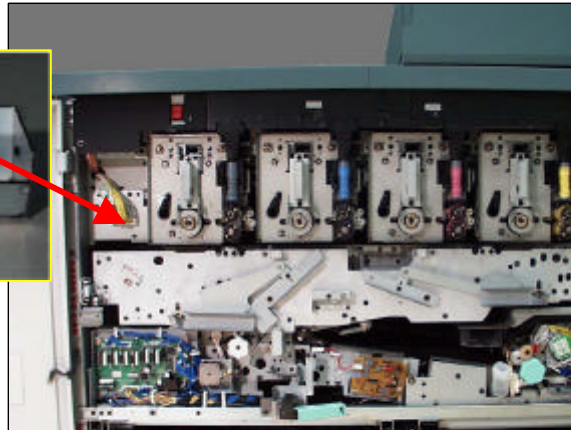## Image Registration Control

Registration Control correctly aligns the 4 ROS outputs on the drums. The images are aligned in both the lateral and the process direction to eliminate color to color skew and differences in magnification.

Registration is centered on the cyan ROS. The other 3 colors are adjusted to cyan. All ROS Registration Control is managed by the IOT PWB.

All registration measurements are taken by the MOB (Mark On Belt) Sensor. The MOB Sensor Assembly is positioned to the left of the K (black) drum above the IBT. The MOB Sensor Assembly is an analog device containing five sensors (see next page).
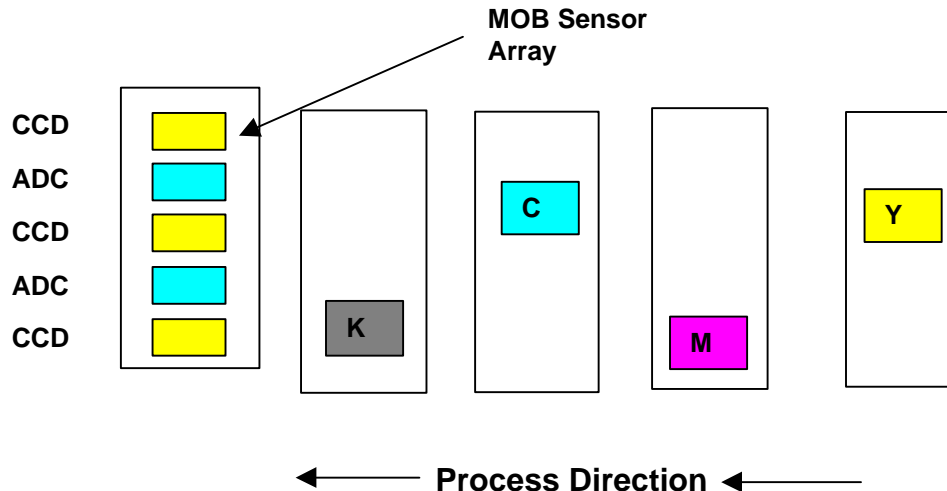

MOB Sensor Assembly

Image Registration Control (continued)

The Registration Control Process has 5 steps:
 Skew adjustment (adjusts the mirrors in the ROS)
1.   Magnification
2.   Lateral Alignment
3.   Process Direction Alignment
4.   Magnification Balance (this is new to this product and is used to balances the 3 readings for inboard / outboard and center)
There are three CCD sensors for registration control and two ADC sensors for density measurements.

MOB Sensor Array

CCD

ADC

CCD

ADC

CCD

C

K

M

Y

Process Direction

Image Registration Control (continued)

Alignment (registration) is measured in three positions, inboard / outboard and in the center of the belt by the CCDs. Three readings are taken to increase accuracy. The information from the MOB Sensor is fed back to the IOT PWB. The Hyper Reg PWB makes the necessary calculation to change the angle of the mirrors inside each ROS unit to achieve alignment. The Registration Control patterns are generated in the H/T PWBs.