

The normal operation of the output diverter is under control of the FFIU. The "unpowered" state of the solenoid corresponds to the bypass path. In this way, a partial interlock on the stacker door would remove power from this clutch and still allow bypass exit.

### ***The Bypass Exit Sensor (B42)***

The bypass exit sensor is used for jam detection purpose.

## **The Sheet Flipper Mechanism**

The sheet flipper mechanism is responsible for delivering sheets to the stacking table.

The sheet flipper mechanism consists of :

- motorisation clutch solenoid
- sheet flipper path sensor
- sheet flipper motor
- sheet flipper home sensor
- flipper mechanism safety sensor
- sheet flipper baffle sensor

### ***The Motorisation Clutch Solenoid (Y51)***

When activated, Y51 provides motorisation to the paper path leading to the flipper mechanism.

Y51 is activated whenever the bypass exit (controlled by Y37) leads to the flipper mechanism. This solenoid is under the control of a partial interlock governed by the stacker door.

### ***The Sheet Flipper Path Sensor (B53)***

The sheet flipper path sensor is used for jam detection and flipper motor timing.

A missing lead edge, or a late trail edge are used to declare a jam.

After detecting a lead edge, an accurate delay is started after which the flipper motor is started.

### ***The Sheet Flipper Motor (M52)***

The sheet flipper motor is a stepper motor. The sheet flipper motor starts after a calculated delay that is initiated by the sheet flipper path sensor (B53).

The velocity profile of the motor is such that the lead edge of the sheet is inserted as far as possible into the flipper wheel, while not touching the bottom of the flipper wheel sheet guide.

When the sheet has been delivered to the stacking edge, the flipper wheel resumes its home position to be ready for the next sheet.

### ***The Sheet Flipper Home Sensor (B54)***

The flipper home sensor detects the proper positioning of the flipper wheel.

The sensor is used for positioning at power-on and before any upward movement of the registration table.

The sensor is used for monitoring purpose while stacking to detect missed steps in the flip movement.

### ***The Flipper Safety Sensor (S55)***

This sensor detects that the tray reached a position where it could damage the flipping equipment.

### ***The Sheet Flipper Baffle Sensor (B57)***

The sheet flipper baffle (deflector F) sensor monitors the closed state of the flipper baffle and reports this state to the FFIU.