4.6 Reset Carriage Menu

Description
The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Carriage:

- 4.6.1 Carriage Cycles: Reset the cycles of the Carriage
- 4.6.2 New Line Sensor: Reset the Line Sensor (hours)
- 4.6.3 Cutter Cycles: Reset the cutter cycles (number of times substrate has been cut)
- 4.6.4 Color Sensor: Reset the SOL (hours)
- 4.6.5 Carriage Lubrication: Resets the Carriage lubricant

4.7 Reset Service Station Menu

Description
The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Service Station:

- 4.7.1 Aerosol fan and filters: Resets the Aerosol fan (hours) and Aerosol Filter (liters)
- 4.7.2 SS Rack Cycles: Resets rack motor
- 4.7.3 Spit plate Replacement
- 4.7.4 Drop Detector: Resets Drop Detector (hours)
- 4.7.5 Complete Service Station: Resets the Service Station motor (cycles), Aerosol Fan (hours), Rack Motor (Cycles), Split plate spittoon (liters), Aerosol Filters (liters), Spit plate DD (liters), Drop Detector (hours)
- 4.7.6 Maintenance Cartridge
- 4.7.7 Primer Cycles: Resets the Primer

4.8 Reset Heating & Curing

Description
The purpose of this Service Utility is to check the service part usage and/or reset the life counter for the Heating and Curing:

- 4.8.1 Curing Lamps: Resets the Curing Resistors (hours)
- 4.8.2 Reset Curing Sensor: Resets Curing IR Sensor
- 4.8.3 Heating Lamps: Resets the Heating Resistors (hours)
- 4.8.4 Reset Heating Sensor: Resets the Heating IR Sensor
- 4.8.5 IR Sensors Cleaning: Resets the Curing IR Sensor and Heating IR Sensor

5. Service Calibrations

Service calibrations allow you to calibrate printer components and settings to ensure optimal performance. This section guides you through the calibration procedures and provides information about each calibration.
5.3 Substrate Path Menu

5.3.1 Substrate Advance Calibration

Description
The purpose of this Service Calibration is to calibrate the nominal advance of the media. This calibration is necessary to control the exact movement of the media in order to avoid print quality problems like banding. Perform the Service Accuracy Calibration whenever:

- Banding is detected in prints.
- Drive Roller is disassembled or replaced.
- Paper-axis Assembly is disassembled or replaced.

![NOTE: Before starting the process, make sure that HP Coated Paper is loaded and ready to print. You could use the service part CQ869-67069 that contains 5 sheets of HP Coated Paper.]

The 2 first options of the test (print calibration Pattern and Scan Calibration Pattern) are obsolete and must be used. They are in the test for historical reasons but now are not working properly.

The Substrate Advance Calibration performs a calibration in order to obtain a new set of calibration values. The printer makes a series of paper advances, and the OMAS sensor registers the distance covered in each advance.

When all the paper advances have been performed, the calibration values are calculated based on the data obtained.

The Paper Advance Calibration is split into three parts and should always be done in this order:

1. Perform advance Calib
2. Check Advance Calib
3. Clean Drive Roller

Procedure
1. Go to Service Menu >5. Service Calibration Menu>5.3. 1 Substrate Advance Calibration.
2. Select Perform Advance Calibration.
3. If there is paper ready, the printer performs the zero search for the Paper Motor. During this phase, the following message is displayed.
4. When the Paper Motor has been initialized, the printer starts to perform the series of paper advances. During this process, the front panel displays the current iteration number and the total number of iterations.

<table>
<thead>
<tr>
<th>Perform Calibration Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performing paper advance calibration...</td>
</tr>
<tr>
<td>Iteration 32 of 90</td>
</tr>
<tr>
<td>Press ✕ to exit</td>
</tr>
</tbody>
</table>

You can cancel the calibration process at any time by pressing Cancel. In this case, the previous calibration values are restored and the cancelled process has no effect on the printer.

5. If the calibration process finishes without errors, the new calibration values are checked. If the values are considered valid, they are displayed and saved for use in future. Press OK to return to the main screen.

<table>
<thead>
<tr>
<th>Perform Calibration Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLOPE: 0.001672</td>
</tr>
<tr>
<td>AMP1: 13.000000</td>
</tr>
<tr>
<td>PH1: 3.359320</td>
</tr>
<tr>
<td>FREQ1: 1.000000</td>
</tr>
<tr>
<td>AMP2: 0.000000</td>
</tr>
<tr>
<td>PH2: 0.000000</td>
</tr>
<tr>
<td>FREQ2: 2.000000</td>
</tr>
<tr>
<td>AMP3: 0.000000</td>
</tr>
</tbody>
</table>

**NOTE:** Both the Automatic and the Manual Paper Advance Calibration (which can be launched from the user menu), if they exist, are automatically set to zero for each type of paper.

6. If the calibration values are not valid, the front panel displays the reason (for example, the percentage of good navigations is less than 90%). In this case the calibration process has no effect on the printer. Press OK to return to the main screen.

<table>
<thead>
<tr>
<th>Perform Calibration Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>The obtained calibration values are not valid</td>
</tr>
<tr>
<td>GOOD NAVS (17.6) &lt; 90%</td>
</tr>
<tr>
<td>Press ✕ to continue</td>
</tr>
</tbody>
</table>

**Check Calibration Status**
This option tests whether the current calibration values are valid. The process is very similar to the calibration process. The printer makes a series of paper advances, and the OMAS sensor registers the distance covered in each advance.

**NOTE:** Before starting the process, make sure that HP Coated Paper is loaded and ready to print.

**Procedure**
1. Go to Service Menu > 5. Service Calibration Menu > 5.3.1 Substrate Advance Calibration.
2. Select Check Advance Calibration.

3. At the end of the process, the printer checks whether the current calibration values are valid, using the data obtained during the paper advances. If the values are considered valid, then the following message will be shown.

4. If they are not valid, the front panel displays the reason (for example, the AMP1 parameter value is greater than the maximum allowed).

5. Press OK to return to the main screen.

6. You will need to re-enter the Paper Advance Calibration submenu and scroll to “Clean Drive Roller” and press OK.

7. When the following message displays on the front panel, you must select whether you would like to continue with the cleaning of the Drive Roller by pressing the OK key. Press Back or Cancel to exit the calibration.
The Printer will begin the Drive Roller Cleaning procedure. This could take several minutes during which the following message will be displayed on the Front Panel.

8. Reboot the printer after performing the tests.

5.3.2 OMAS calibration

Description
The purpose of this Service Calibration is to calibrate the OMAS Module. The calibration process consists of printing a special calibration plot and then scanning it with the printer. The scanned result values are compared with the actual printed values to obtain a PASS/FAIL result.

In the first step, the test prints a pattern navigating (measuring the movements) with the OMAS and creates in the hard disk a file with the navigation information from the OMAS system.

In the second step, the test scans the printed pattern with the line sensor measuring the distance between the lines of the pattern, and stores in the hard disk a file with the information from the line sensor.

Finally the test compares the information from the OMAS and the information from the line sensor scan, if the comparison is meaningful (there is no problem with the files stored in the hard disk) the firmware calculates what is the necessary compensation to be applied to the measurements of the OMAS to match the values measured by the line sensor.

Then, the firmware saves the OMAS compensation value in the NVM.

From this moment on, the measurements of the OMAS system will be compensated providing a better accuracy.

Perform the OMAS Module Calibration as follows:

**NOTE:** Before starting the process, make sure that HP Coated Paper is loaded and ready to print. You could use the service part CQ869-67069 that contains 5 sheets of HP Coated Paper.

**NOTE:** Disabling the Heaters ‘1.8.2’ will significantly speed up this procedure.

Procedure
1. Go to Service Menu > 5. Service Calibration Menu > 5.3 Substrate Path Menu > 5.3.2 OMAS Calibration.
2. When the following message displays on the front panel, select the **OK** key.
3. If media is already loaded, the following message displays on the front panel and the media is unloaded.

```
Trimming roll edge.
Please wait
```

4. If the media cannot be unloaded automatically, the Front Panel will show the following message.

```
Unloading roll
Unable to unload roll automatically.
Press & to rewind paper or lift blue lever to unload paper manually
```

5. Follow the instructions and unload the media.

6. The Front Panel prompts you to load media.

    **NOTE:** During this calibration process you have to load the media with the Carriage positioned in the print path.

```
Print OMAS Calib. Pattern
Press ENTER to load paper.
```

- Raise the Media Lever.
- Load the media.
- Lower the medial lever.

7. Select the media (HP Paper Aqueous).

```
Select substrate category

☐ Self-Adhesive
☐ Banner
☐ Film
☐ Fabric
☐ Mesh
☐ Paper-Aqueous
☐ Paper-Solvent
```

8. The media calibration process starts and front panel shows the following messages:

- Calibrating paper advance.
- Trimming roll edge. Please wait.
9. The Front Panel then prompt you to unroll 1 meter of media to avoid back tension. Unroll 1 meter of media and press OK.

10. The Printer will start to print the OMAS Calibration Pattern. This could take several minutes during which the following message will be displayed on the Front Panel.

11. Once the OMAS Calibration Pattern has been printed successfully, the following message will be displayed on the Front panel. Press the OK key to continue.

If the OMAS Calibration fails for any reason, a warning message will display on the Front Panel. In this case, try the following:

• Retry the Paper Advance Calibration.

**NOTE:** Remove the pattern from the printer and leave it to dry for a few minutes before continuing with the Calibration.

**NOTE:** MAKE SURE MEDIA IS NOT LOADED INTO THE PRINTER BEFORE STARTING TO SCAN THE OMAS CALIBRATION PATTERN.

Scan OMAS Calibration Pattern

1. You will need to re-enter the OMAS Calibration submenu and scroll to “Scan Calibration Pattern” and press OK.
2. When the following message displays on the front panel, you must select whether you would like to continue with the calibration by pressing the **OK** key. Press **Back** or **Cancel** to exit the calibration.

![Scan OMAS Calib. Pattern](image)

Press ENTER to proceed with Scan OMAS Calib. Pattern or BACK/CANCEL to exit.

3. A message will display advising you that you will need to load the OMAS Calibration Pattern in to the Printer. Make sure that you rotate the printed pattern 90° clockwise and reload it printed-side down. Press the **OK** key to continue.

![Scan Calibration Pattern](image)

Press ENTER to proceed with the load of the printed pattern out sheet as roll for scanning. Rotate the sheet 90 degrees clockwise and press ENTER to proceed.

4. Load the OMAS Calibration Pattern following the instructions on the Front Panel.

![Load Direction](image)

5. Once the OMAS Calibration Pattern is loaded correctly, the following message will be displayed on the Front Panel. Press the **OK** key to continue.

![Scan Calibration Pattern](image)

Press ENTER to proceed with pattern scanning.
6. The Printer will scan the OMAS Calibration Pattern which could take several minutes. Once the calibration is completed successfully, the following message will be displayed on the Front Panel. Press the OK key to continue.

<table>
<thead>
<tr>
<th>Paper advance calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibration successfully completed.</td>
</tr>
<tr>
<td>Press 1 to continue</td>
</tr>
</tbody>
</table>

If the OMAS Calibration fails for any reason, a warning message will display on the Front Panel. In this case, try the following:

- Check that the OMAS Calibration Pattern was not incorrectly cut (trimming the actual pattern) during the media load process. If this is the case, perform the OMAS Calibration again from step 1.
- Replace the OMAS Sensor ⇒ page 437.
- Replace the OMAS Controller Card ⇒ page 450.
- If the problem continues, replace the Media-Axis Motor ⇒ page 435.

### 5.3.3 Vacuum Calibration

**Description**

The purpose of this test is to set the default nominal and real values of the Vacuum Fan Assembly.

**NOTE:** This Service Calibration should ONLY be performed when the Vacuum Fan Assembly has been replaced.

**Procedure**

1. Go to Service Menu >5. Service Calibration Menu>5.3 Substrate Path Menu>5.3.4 Vacuum Calib.
2. When the following message displays on the front panel, select the OK key.

<table>
<thead>
<tr>
<th>Paper Advance Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Print Calibration Pattern - Scan Calibration Pattern</td>
</tr>
<tr>
<td>Clean Drive Roller</td>
</tr>
</tbody>
</table>

3. The Printer will set the default nominal and real values of the Vacuum Fan.

<table>
<thead>
<tr>
<th>Print Calibration Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press ENTER to proceed with Print Calibration Pattern or BACK/CANCEL to exit</td>
</tr>
</tbody>
</table>

4. Once the calibration is completed, OK will be displayed on the Front Panel.
5.3.4 Rewinder Voltage Calibration

Description
This test must be performed whenever the Rewinder Assembly has been replaced or one of the rewinder gears have been replaced. The test calculates the optimum power required to move the rewinder system.

Procedure
1. Go to Service Menu >5. Service Calibration Menu>5.3 Substrate Path Menu>5.3.5 Rewinder CO Voltage Calib.
2. The front panel displays the following screen, press ok to continue.

![Rewinder Voltage Calibration Screen]

The front panel displays the following screen.

![Shuttle - Close Loop]

When the procedure is finished the following screen is displayed.

![Shuttle - Close Loop]

5.5 Scan Axis Menu

5.5.1 Scan Axis Calibration

Description
The purpose of this Service Calibration is to carry out a PWM check, calibrate the intensity of the Line Sensor and calibrate the Line Sensor position to the Black Printhead.

Perform the Scan Axis Calibration whenever:

- Carriage is disassembled or replaced.
- Encoder Strip is disassembled or replaced.
• Center Platen is disassembled or replaced.

**NOTE:** Make sure you load one of the following media into the Printer before performing this calibration. If none of them are available use the service part Q1273-60296:

- HP Bond Paper.
- HP Glossy Media.
- HP Coated Paper.
- HP Productivity Photo Gloss.
- HP Heavyweight Coated Paper.
- HP Super Heavyweight Coated Paper.
- HP Bright White Inkjet Paper.

**NOTE:** Disabling the Heaters ‘1.8.2’ will significantly speed up this procedure.

---

### Procedure

1. Go to Service Menu >5. Service Calibration Menu>5.5 Scan Axis Menu>5.5.1 Scan Axis Calibration.

2. When the following message displays on the front panel, select the **OK** key.

   ![Scan Axis Calibration](image1)

   **Press ENTER to proceed with Scan Axis calibration or BACK/CANCEL to exit.**

3. If media is not loaded, the following message displays on the front panel. Load media in to the Printer and start again from **step 1**.

   ![Scan Axis Calibration](image2)

   **Scan Axis Calibration**

   **Paper not detected**

   **Please, load media and start again.**

   Before continuing, the Printer will check the following:

- The Media Lever is in the lowered position.
- The correct paper type is loaded (check list on previous page).
- The correct paper size (minimum paper size 24 inches).

   If these conditions are **not** met, a warning will be displayed on the Front Panel and you will need to restart the Calibration from **step 1**.

**NOTE:** In order to perform this Calibration, you should order the Paper Advance Calibration Kit (Part Number Q1273-60296) which contains two sheets of HP Productivity Gloss Media.
4. The Printer will start to check the PWM. Once the PWM has been checked, the results will be displayed on the Front Panel. Press OK to continue or press Back or Cancel to exit the calibration.

5. The Printer will start to calibrate the Line Sensor. Once the Line Sensor has been calibrated, the results will be displayed on the Front Panel. Press OK to continue or press Back or Cancel to exit the calibration.

If the values are not within the range specified, an error will display on the Front Panel. In this case, try the following:

• Try the Scan-Axis Calibration again.
• Replace the Line Sensor ⇒ page 498.

6. The Printer will start to calibrate the Line Sensor position to the Black Printhead. It will print a line of black dots and then scan them:

7. Once the Line Sensor has been calibrated, the results will be displayed on the Front Panel. Press OK to finish the calibration or press Back or Cancel to exit the calibration.
8. The Printer will now perform the Printhead Alignment.

9. When the following message displays on the front panel, you must select whether you would like to continue with the calibration by pressing the OK key. Press Back or Cancel to exit the calibration.

10. Once the Printhead Alignment is completed, the following message will be displayed on the Front Panel. Press the OK key to continue.

If the Printhead Alignment fails for any reason, a warning message will display on the Front Panel. In this case, try the following:

- Go to the Front Panel menu and retry the Printhead Alignment. If the Alignment completes successfully, perform the Color Calibration
  –.
- If the Alignment fails again, check the Alignment pattern to see if any of the Printheads are printing incorrectly. If necessary, perform a Printhead Recovery through the Front Panel and retry the Printhead Alignment.

11. Once the complete Scan Axis calibration is completed successfully, OK will be displayed on the Front Panel.

5.5.2 Drop detector calibration

Description
The purpose of this Service Calibration is to calibrate the Drop Detector in relation to the Carriage Assembly.

Perform the Drop Detector Calibration whenever:

- Drop Detector is removed or replaced.

Procedure
1. Go to Service Menu >5. Service Calibration Menu>5.5 Scan Axis Menu>5.5.2 Drop Detector Calibration.
2. When the following message displays on the front panel, you must select whether you would like to continue with the calibration by pressing the **OK** key. Press **Back** or **Cancel** to exit the calibration.

3. The Printer will start to calibrate the Drop Detector. Once the Drop Detector has been calibrated, the results will be displayed on the Front Panel. Press any key on the Front Panel to finish the calibration.

4. Once the calibration is completed, **OK** will be displayed on the Front Panel.

### 5.6 Carriage Menu

#### 5.6.1 Line Sensor Calibration

**Description**
The purpose of this service calibration is to calibrate the intensity of the line sensor in the Carriage PCA. An incorrect calibration can result in edge-detection failures during media loading and incorrect reading of prints that are used for alignment or calibration.

Perform the Line Sensor Calibration whenever:

- Edge detect procedure fails during media loading.
- Carriage is disassembled or replaced.
- Line Sensor is disassembled or replaced.
- Banding is detected in prints.
- Misalignment between colors is detected.

**NOTE:** Make sure you load one of the following media into the Printer before performing this calibration. If none of them are available use the service part Q1273-60296:

- HP Bond Paper.
- HP Glossy Media.
- HP Coated Paper.
- HP Productivity Photo Gloss.
- HP Heavyweight Coated Paper.
- HP Super Heavyweight Coated Paper.
- HP Bright White Inkjet Paper.

**NOTE:** Disabling the Heaters ‘1.8.2’ will significantly speed up this procedure.
Procedure
1. Go to Service Menu > 5. Service Calibration Menu > 5.6 Carriage Menu > 5.6.1 Line Sensor Calibration.

2. When the following message displays on the front panel, you must select whether you would like to continue with the calibration by pressing the **OK** key. Press **Back** or **Cancel** to exit the calibration.

   ![Line Sensor Calibration](image1)

3. If media is not loaded, the following message displays on the front panel. Load media in to the Printer and start again from step 1.

   ![Line Sensor Calibration](image2)

Before continuing, the Printer will check the following:

- The Media Lever is in the lowered position.
- The correct paper type is loaded (check list on previous page).
- The correct paper size (minimum paper size 24 inches).

If these conditions are **not** met, a warning will be displayed on the Front Panel and you will need to restart the Calibration from step 1.

**NOTE:** Make sure you keep your hands away from the Print Platen as the Carriage will be moving at high speed and you could injure yourself or damage the Carriage Assembly.

4. The Printer will start to calibrate the Line Sensor. Once the Line Sensor has been calibrated, the results will be displayed on the Front Panel. Press **OK** to continue or press **Back** or **Cancel** to exit the calibration.

   ![Scan Axis Calibration](image3)

If the values are not within the range specified, an error will display on the Front Panel. In this case, try the following:

- Try the Scan-Axis Calibration again.
- Replace the Line Sensor ⇒ page 498.
5. The Printer will start to calibrate the Line Sensor position to the Black Printhead. It will print a line of black dots and then scan them:

6. Once the Line Sensor has been calibrated, the results will be displayed on the Front Panel. Press **OK** to finish the calibration or press **Back** or **Cancel** to exit the calibration.

<table>
<thead>
<tr>
<th>Scan Axis Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y Offset Range: 30 to 59</td>
</tr>
<tr>
<td>Y Offset got: 47</td>
</tr>
<tr>
<td>X Offset Range: -20 to 20</td>
</tr>
<tr>
<td>X Offset got: 3</td>
</tr>
</tbody>
</table>

   Press ENTER to accept or CANCEL to reject values.

7. The Printer will now perform the Printhead Alignment. When the following message displays on the front panel, select the **OK** key.

<table>
<thead>
<tr>
<th>Scan Axis Calibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y Offset Range: 30 to 59</td>
</tr>
<tr>
<td>Y Offset got: 43</td>
</tr>
<tr>
<td>X Offset Range: -24 to 24</td>
</tr>
<tr>
<td>X Offset got: 14</td>
</tr>
<tr>
<td>X SVS Offset: -1050 to 1050</td>
</tr>
<tr>
<td>X SVS Offset got: -944</td>
</tr>
</tbody>
</table>

   Press any key to continue.

8. Once the Printhead Alignment is completed, the following message will be displayed on the Front Panel. Press the **OK** key to continue.

   Pen Alignment calibrating...

   • If the Printhead Alignment fails for any reason, a warning message will display on the Front Panel. In this case, try the following:
   
   • Enter the Front Panel menu and retry the Printhead Alignment. If the Alignment completes successfully, then perform the Color Calibration.
   
   • If the Alignment fails again, check the Alignment pattern to see if any of the Printheads are printing incorrectly. If necessary, perform a Printhead Recovery through the Front Panel and retry the Printhead Alignment.

9. Once the complete Line Sensor calibration is completed successfully, **OK** will be displayed on the Front Panel.
5.6.2 Primer Calibration

Description
The purpose of this Service Calibration is to find the optimum position of the Primer Assembly with respect to the Carriage.

The calibration is a visual procedure so you will have to remove the Right Hand cover before starting.

Procedure
1. Go to Service Menu > 5. Service Calibration Menu > 5.6 Carriage Menu > 5.6.2 Primer Calibration.
2. Remove the Right Cover ⇒ page 331).
3. Block the Printhead Cleaning Cartridge door switch in the closed position.
4. When the following message displays on the front panel, press any key to continue.

```
PrimerCalibration
Primer Calibration is going to start.
Computing the real ScanAxis Nominal offset.
Press any key to continue.
```

5. The front panel displays the following message.

```
PrimerCalibration
Please Remove the Service Station Cover Carefully and Hold Service Station Door Sensor pressed to avoid messages
Beware of moving parts
Press any key to continue
```

6. The calibration process starts and front panel shows the following messages:
   - Homing Primer.
   - Uncapping SVS.
   - Homing Carriage.
   - Computing the Left Scan-Axis Offset.

7. Once the Left Scan-Axis Offset has been calculated the Front Panel prompts you use the **Up/Down**
   keys to move the carriage until the **RIGHT** edge of the Left Alignment Mark on the Carriage Cover is
   perfectly aligned with the Primer positioning indicator.

```
PrimerCalibration
Use the up/down buttons to move the carriage until the long piece of plastic falls from the metal piece of the latch
Press Ok when done.
```
8. Use the **Up** (move left) and **Down** (move right) keys to move the Carriage until the RIGHT edge of the Left Alignment Mark is correctly aligned with the Primer Positioning Indicator and press **ENTER**.

![Diagram showing Carriage and Primer alignment](image)

**NOTE:** To more easily detect the exact position while aligning the Carriage to the Primer it is a good idea to lightly press down on the Primer while you are moving the Carriage.

While the Carriage is moving the Front Panel shows the actual position and the direction of movement and prompts you to press **ENTER** when done.

9. The Front Panel shows the actual left offset value and the system calculates the Fight Scan-Axis Offset.
10. Once the Right Scan-Axis Offset has been calculated the Front Panel prompts you use the **Up**/ **Down** keys to move the carriage until the LEFT edge of the Right Alignment Mark is correctly aligned with the Primer Positioning Indicator and press **ENTER**.

11. Use the **Up** and **Down** keys to move the Carriage until the LEFT edge of the Right Alignment Mark is correctly aligned with the Primer Positioning Indicator and press **ENTER**.

**NOTE:** To more easily detect the exact position while aligning the Carriage to the Primer it is a good idea to lightly press down on the Primer while you are moving the Carriage.
While the Carriage is moving the Front Panel shows the actual position and the direction of movement and prompts you to press ENTER when done.

<table>
<thead>
<tr>
<th>PrimerCalibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving Left...</td>
</tr>
<tr>
<td>Currently position 95168</td>
</tr>
<tr>
<td>Press OK when done</td>
</tr>
</tbody>
</table>

12. The Front Panel shows the actual right offset value.

<table>
<thead>
<tr>
<th>PrimerCalibration</th>
</tr>
</thead>
<tbody>
<tr>
<td>The right offset between nominal and real value was 13</td>
</tr>
</tbody>
</table>

13. The calibration process continues and front panel shows the following messages as the new nominal offset value is read and saved to NVM:
   - Reading Nominal Offset.
   - New Nominal Offset is [ActualValue].
   - Saving to nvm.
   - Saved.

14. Once the calibration is completed, OK will be displayed on the Front Panel.

15. Replace the Right Hand Cover (page 331).

### 5.6.3 Open/Close SOL

**Description**
The purpose of this Service Utility is to open and close the Color Sensor shutter to verify correct operation.

**Procedure**
1. Go to Service Menu > 5. Service Calibration Menu > 5.6 Carriage Menu > 5.6.3 Open/Close SOL.
2. When the following message displays on the Front Panel, select OK.

<table>
<thead>
<tr>
<th>Open/Close SOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press ENTER to proceed with SOL actuator test or BACK/CANCEL to exit.</td>
</tr>
</tbody>
</table>

3. The Printer will perform the Open/Close SOL test and the Front Panel will display the following messages:
   - Performing SOL Full Calibration.
   - Checking ColorSensor Status.
   - Reading Lab values with SOL Shutter Closed.
• Opening SOL Shutter
• Reading Lab values with SOL Shutter Open
• Analyzing SOL Shutter Open status.

If there is a failure at this point, the Front Panel will display system error code 58:10 ⇒ page 127.

4. If the utility exits correctly, OK will be displayed on the Front Panel.