

Producer™ III and Producer™ IIIN Perform Diagnostic Tests

This document provides the information needed to access, select, and perform the Producer III and Producer IIIN diagnostic tests for firmware versions 3.601 or higher. If your system has firmware versions lower than 3.601, refer to <http://www.rimage.com/support.html> for the proper diagnostic test instructions.


The Producer III and Producer IIIN are part of the Rimage Producer III family of products and include the 6100, 6100N, 7100, 7100N, 8100, and 8100N autoloaders. The terms 'Producer III' and 'autoloader' are used throughout this document to refer to these products.

Important!

- Perform only the diagnostic tests provided below. Do not attempt to perform other diagnostic tests without the assistance of a Rimage trained technician.
- Make sure that the Producer III is not in an error state before you perform any of the diagnostic tests. For information about Producer III operation and maintenance, refer to the Producer III and IIIN User Guide.


Access and Select Diagnostic Tests

Access Diagnostic Mode

1. Power on the **autoloader**.
2. Allow the autoloader to initialize. This may take several minutes.
3. Open the **front door** of the autoloader.
4. Press and hold the **operator button** until [BUTTON DIAGNOSTIC] displays on the operator panel.
 **Note:** Other status messages display on the operator panel while the operator button is being held in. Do not release the button until the operator panel displays [BUTTON DIAGNOSTIC].
5. Release the **operator button**. [CHOOSE DIAGNOSTIC] displays on the operator panel. The autoloader is in diagnostic mode.


Select a Diagnostic Test

1. Press the **operator button** the same number of times as the test number (indicated in the test title).
2. Hold the **operator button** in on the last press for five seconds to start the selected test.
For example: To start diagnostic test 3 (calibrate diagnostic test), press the **operator button** three times and hold it in on the third press.

 **Tip:** To display each diagnostic test number and name, press the **operator button** at a rate that is slow enough to read the test on the operator panel. If you pass the desired diagnostic test, release the operator button and wait for the autoloader to return to diagnostic mode. The operator panel displays [CHOOSE DIAGNOSTIC].

3. Continue with the desired diagnostic test.

Exit Diagnostic Mode

1. If a diagnostic test is currently in process, press the **operator button** once to stop the test.
 **Note:** To exit diagnostic test 1 (carousel diagnostic test), press and hold the operator button to stop the test and return to diagnostic mode.
2. When the diagnostic test is stopped, press the **operator button** six times and hold it in on the sixth press. The operator panel displays [EXIT DIAGNOSTIC].
3. Release the **operator button**. The autoloader exits diagnostic mode and the system resets.



Perform Diagnostic Tests

Diagnostic Test 1 – Carousel Diagnostic Test

This test has two modes. The first mode evaluates the position of the carousel. The second mode evaluates the alignment of the lift arm to the carousel.

Check the Position of the Carousel

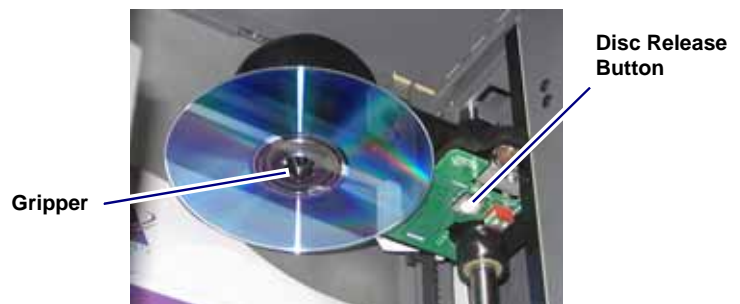
This test verifies that the carousel is positioned correctly in the autoloader.

1. Make sure that the autoloader is in diagnostic mode. Refer to the [Access and Select Diagnostic Tests](#) section on page 1.
2. Press and hold the **operator button** until the operator panel displays [01 CAROUSEL CHK DIAGNOSTIC].
3. Release the **operator button**.
4. Press the **operator button** to rotate the carousel from the current bin position to the next bin position.
 -  **Note:** Each time the carousel rotates, the operator panel displays the actual carousel position and the target carousel position on the operator panel. The actual carousel position number is displayed as [A+00000], and the target carousel position is displayed as [T+00000].
5. Repeat **step 4** for each of the four carousel bins.
 -  **Note:** After the carousel rotates clockwise from bin 1 to bin 4, it rotates counterclockwise from bin 4 to bin 1.
6. Press and hold the **operator button** to exit the test and return to diagnostic mode.


Check the Alignment of the Lift Arm to the Carousel

This test verifies that the lift arm aligns properly with each carousel bin.

1. Make sure that the autoloader is in diagnostic mode. Refer to the [Access and Select Diagnostic Tests](#) section on page 1.
2. Press and hold the **operator button** until the operator panel displays [01 CAROUSEL CHK].
3. Release the **operator button**.
4. Place a disc on the **lift arm**. Press the disc into the gripper while you press the disc release button.
5. Release the **disc release button**. The gripper holds the disc.



6. Press the **operator button** to rotate the carousel to bin 1.
7. Manually move the **lift arm** and **disc** down into bin 1. Make sure that the disc does not interfere with the carousel as it moves into the bin.

 **Important!** If the disc interferes with the carousel in step 7, the lift arm may be miscalibrated or there may be an issue with the hardware that positions the carousel. Perform diagnostic test 3 on page 3 to calibrate the lift arm and the carousel.

8. Manually move the **lift arm** out of bin 1.
9. Repeat **steps 6 – 8** for bins 2, 3, and 4.
10. Press the **disc release button** to release the disc and remove it from the lift arm.
11. Press and hold the **operator button** to exit the test and return to diagnostic mode.
12. Refer to the [Exit Diagnostic Mode](#) section on page 1 to exit diagnostic mode.

Diagnostic Test 3 – Calibrate Diagnostic Test

This test has two modes. The first mode calibrates the lift arm to accurately detect the number of discs in the carousel bins. The second mode calibrates the carousel.

-  **Important!** If you are updating the autoloader firmware, you must prompt the system to run the carousel calibration test immediately after the lift arm calibration test.

Calibrate the Lift Arm


This test calibrates the lift arm to accurately detect the number of discs in the carousel bins.

1. Remove all **discs** from the carousel bins.
2. Make sure that the autoloader is in diagnostic mode. Refer to the [Access and Select Diagnostic Tests](#) section on page 1.
3. Press the **operator button** three times and hold on the third press until the operator panel displays [03 CALIBRATE].
4. Release the **operator button**. The lift arm moves to the home position and the light on the operator button flashes.

 **Important!**


- If you are updating the autoloader firmware, you must prompt the system to run the carousel calibration test immediately after the lift arm calibration test. Move the lift arm to the top of the lift column at this time and then continue to step 5.
- If you want to proceed with the lift arm calibration test only, continue to step 5 at this time.

5. Place one **disc** in bin 1.

 **Important!** Place only one disc in bin 1.

 **Tip:** If you need to rotate the carousel to load media into bin 1, rotate it manually. Pressing the operator button prompts diagnostic test 3 to begin.

6. Press the **operator button**.
 - The lift arm moves down into bin 1.
 - The lift arm picks up and releases the disc.
 - The lift arm moves up to its home position.
 - The lift arm moves back down into bin 1, picks up the disc, and releases the disc into bin 2.
 - The carousel rotates back to bin 1.

 **Important!** If you moved the lift arm to the top of the lift column in step 4, the lift arm moves to the carousel and the operator panel displays [CAL CAROUSEL POS PUT DISC ON GRPR]. Place one disc on the lift arm and continue to step 8 in the [Calibrate the Carousel](#) section.


- The autoloader exits diagnostic test 3 and the system restarts.

 **Note:** Diagnostic test 3 causes the autoloader to exit diagnostic mode. To continue the diagnostic tests, refer to the [Access and Select Diagnostic Tests](#) section on page 1.

Calibrate the Carousel


This test measures the position of the carousel, as well as the gear-train backlash of the carousel.

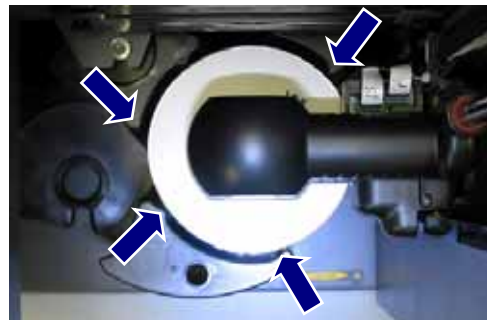
1. Remove all **discs** from the carousel bins.
2. Make sure that the autoloader is in diagnostic mode. Refer to the [Access and Select Diagnostic Tests](#) section on page 1.
3. Press the **operator button** three times and hold on the third press until the operator panel displays [03 CALIBRATE].
4. Release the **operator button**. The lift arm moves to the home position and the light on the operator button flashes.
5. Move the **lift arm** to the top of the lift column.
6. Place one **disc** on the lift arm. Press the **disc** into the gripper while you press the **disc release button**.
7. Press the **operator button**. The carousel rotates and the lift arm lowers to bin 1.
8. Manually, slowly lower the **lift arm** and the **disc** into the bin. The autoloader will not allow the disc to move below about 0.25 inches from the top of the carousel.

 **Note:** The autoloader measures the position of the carousel, and the operator panel displays [CAL CAROUSEL POS O+00000 N+00000], where O+00000 is the old offset value and N+00000 is the new offset value based on the current position of the carousel.





9. Manually, slightly rotate the **carousel** so that the distance between the edges of the carousel and the edge of the disc is equal on all four points, as shown.

 **Note:** The edge of the disc should not touch any part of the carousel. If you cannot center the carousel in this step, the lift arm may need to be readjusted.



10. Press the **operator button**.
 - The lift arm lowers and pins the disc into the bottom of bin 1 to measure the gear-train backlash of the carousel.

 **Note:** The operator panel displays [BACKLASH O+00000 N+00000], where O+00000 is the old offset value and N+00000 is the new offset value based on the current position of the carousel adjusted for backlash.
 - The lift arm releases the disc into bin 1.
 - The autoloader exits diagnostic test 3 and the system restarts.

 **Note:** Diagnostic test 3 causes the autoloader to exit diagnostic mode. To continue the diagnostic tests, refer to the [Access and Select Diagnostic Tests](#) section on page 1.