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Rimage ProducerV Diagnostic Tests

This document provides the information needed to access, select, and perform the ProducerV diagnostic tests for firmware versions 10.000 or higher.

The 8300N and 8300 are part of the Rimage ProducerV family of products. The terms 'ProducerV,' 'system,' and 'autoloader' are used throughout this document to refer to these products.

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This document provides the information needed to access, select,
And perform the ProducerV diagnostic tests. These tests apply to the ProducerV 8300N and ProducerV 8300.

The terms 'ProducerV', 'system', and 'autoloader' are used throughout this document to refer to these products.

Important! Make sure that the ProducerV system is not in an error state before you perform any of the diagnostics tests. For information about ProducerV system operation and maintenance, refer to the Rimage ProducerV User Guide

The **system button** used throughout these tests is pictured here.

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 **system button** until [INDEX CAROUSEL, RESET BINS, DIAGNOSTICS MODE] display on the display panel
   Note: Other status messages display on the display panel while the system button is being held in. Do not release the button until the display panel displays [INDEX CAROUSEL, RESET BINS, DIAGNOSTICS MODE]
5. Release the **system button** when the arrow is to the left of DIAGNOSTICS MODE.

Select a Diagnostic Test
1. Press the **system button** the same number of times as the test number (indicated in the test title).
2. Hold the **system button** on the last press for five seconds to start the select test.
   For example: To start diagnostic test 3 (calibrate diagnostic test), press the **system button** three times and hold on the third press.
   Tip: To display each diagnostic test number and name, press the **system button** at a rate that is slow enough to read the test on the display panel. If you pass the desired diagnostic test, release the **system button,** and wait for the autoloader to return to diagnostic mode. The display panel displays [CHOOSE DIAGNOSTIC].
3. Continue with the desired diagnostic test.

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Exit Diagnostic Mode

1. If a Diagnostic test is currently in process, press the **system button** once to stop the test.
   Note: To exit diagnostic test 1 (solenoid test), press and hold the **system button** for three seconds then release to return to the diagnostic mode
2. When the diagnostic test is stopped, press the **system button** six times and hold it on the sixth press. The display panel displays [EXIT DIAGNOSTIC].
3. Release the **system button**. The autoloader exits diagnostic mode and the system resets.
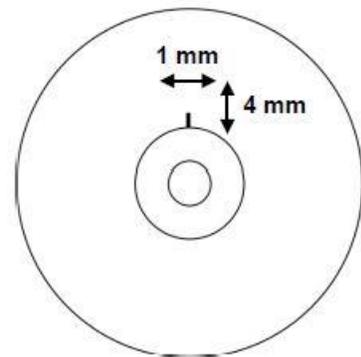
Use a Disc with an Index Mark

If your ProducerV system uses a Prism printer with the Perfect Print function, you can use a disc with an index mark during the diagnostic test cycles that involve the printer. During certain cycles of diagnostic test 2 (cycle diagnostic test), the lift arm rotates to locate the index mark on the disc, if one is present.

If your ProducerV system does not use a Prism printer with the Perfect Print function, you do not need to use a disc with an index mark during any of the diagnostic tests.

Create a Disc with an Index Mark

If you need to create a disc with an index mark for the Prism Perfect Print function, use a black permanent marker to draw a line on a disc near the center, as shown.
Note: The mark should be at least 1mm wide and 4mm long.

Perform Diagnostic Tests

Diagnostic Test 1 – Solenoid Diagnostic Test

This test powers on and off the gripper solenoid, which actuates the gripper flex springs. It is used to verify proper mechanical alignment of the solenoid and test gripping functionality.

1. Make sure that the autoloader is in the diagnostic mode. Follow the instructions in the *Access and Select Diagnostic Tests* section on page 3.
2. Press the **system button** one time and hold it in on the first press until the display panel displays [01 SOLENOID SELECTED].
3. Release the **system button**. The solenoid actuates and releases the gripper flex springs. Each time the solenoid actuates, the cycle count increments by one on the display panel.
4. Press and hold the **system button** for three second, upon release solenoid test will end.
5. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

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Diagnostic Test 2 – Cycle Diagnostic Test

This test has seven modes. The mode selected is determined by the open/closed state of the printer, recorders, and diverter elements, and the placement of discs at the start of the test. The cycle begins when the autoloader detects an open printer tray or recorder tray, or the disc diverter in the down position. The lift arm moves to the location of the disc, if one is present.

Important! Before you cycle media, make sure that the printer and recorder(s) are properly aligned.

Note: After diagnostic test 2 is selected, the autoloader pauses, allowing you to load media and select the device(s) to use during the test cycle.

Cycle a Disc between the Carousel Bins

This tests cycles media between the carousel bins.
1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the recorder and printer trays are closed, and output bin is empty.
5. Place one or more **discs** in bins 1 and/or 2 and/or 3, with bin 4 empty.
    Important! Make sure bin 4 is empty before you begin this test
    Tip: If you need to rotate the carousel to load media into bin 1, rotate it manually. Pressing the system button prompts diagnostic test 2 to begin.
6. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLE = 000000]
    Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
    *   The lift arm picks a disc from bin 1 and releases it into bin 2.
    *   The lift arm checks bin 1 for more discs.
    *   If no discs are found in bin 1, the lift arm proceeds to bin 2.
    *   The lift arm picks a disc from bin 2 and releases it into bin 3.
    *   The left arm checks bin 2 for more discs
    *   If no discs are found in bin 2, the lift arm proceeds to bin 3.
    *   The lift arm picks a disc from bin 3 and releases it into bin 4.
    *   The lift arm checks bin 3 for more discs.
    *   If no discs are found in bin 3, the lift arm proceeds to bin 4.
    *   The lift arm picks a disc from bin 4 and releases it into bin 1.
    *   The lift arm checks bin 4 for more discs.
    *   If no discs are found in bin 4, the lift arm proceeds to bin 1.
        Note: Cycle continues until you press the system button to stop the test
7. Press and hold the **system button** for 3 seconds to stop the test and return to diagnostic mode.
8. Remove the **disc(s)** from the carousel.
9. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

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Cycle a Disc between the Carousel Bins and the Output Bin

This test cycles media from the carousel bins to the output bin.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the recorder and printer trays are closed, and output bin is empty.
5. Place one or more **discs** in bins 1 and/or 2 and/or 3 and/or 4.
6. Lower the **output tray** so that it is horizontal.
   Tip: If you need to rotate the carousel to load media into bin 1, rotate it manually. Pressing the system button prompts diagnostic test 2 to begin.
7. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLE = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   - The lift arm picks a disc from bin 1 and releases onto the tray.
   - The lift arm checks bin 1 for more discs.
   - If no discs are found in bin 1, the lift arm proceeds to bin 2.
   - The lift arm picks a disc from bin 2 and releases onto the tray.
   - The left arm checks bin 2 for more discs
   - If no discs are found in bin 2, the lift arm proceeds to bin 3.
   - The lift arm picks a disc from bin 3 and releases onto the tray.
   - The lift arm checks bin 3 for more discs.
   - If no discs are found in bin 3, the lift arm proceeds to bin 4.
   - The lift arm picks a disc from bin 4 and releases onto the tray.
   - The lift arm checks bin 4 for more discs.
   - If no discs are found in bin 4, the lift arm proceeds to bin 1.
   Note: Once all bins are empty the arm will cycle between all bins until the test is stopped.
   Important! If output bin is full the machine will continue to places discs there
8. Press and hold the **system button** for 3 seconds to stop the test and return to diagnostic mode.
9. Remove the **disc(s)** from the carousel and output bin.
10. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

Cycle a Disc between the Carousel Bins and the Printer

This test cycles media between the carousel bins and the printer tray.
Note: During each cycle, the lift arm locates the index mark on the disc, if one is present. Refer to the *Use a Disc with an Index Mark* section on page 4.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the recorder and printer trays are closed, and output bin is not full.

5. Place one or more **discs** in bins 1 and/or 2 and/or 3, with bin 4 empty.
   Important! Make sure bin 4 is empty before you begin this test.
   Tip: If you need to rotate the carousel to load media into bin 1, rotate it manually. Pressing the system button prompts diagnostic test 2 to begin.
6. Press the **printer button** to open the printer tray.
7. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLE = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   - The lift arm lowers to bin 1 and picks up a disc.
     Note: The lift arm starts to pick discs from bin 1. If a disc is not in bin 1, the lift arm proceeds to the next bin.
   - The lift arm moves to its home position above the printer. The printer tray opens.
   - The lift arm rotates the disc to locate the index mark if one is present.
   - The lift arm releases the disc onto the printer tray.
   - The lift arm picks up the disc from the printer and releases it into bin 4.
   - The cycle count increments by one on the display panel.
     Note: The cycle continues until you press the system button to stop the test
8. Press and hold the **system button** for 3 seconds to stop the test and return to diagnostic mode.
9. Remove the **disc(s)** from the carousel and output bin.
10. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

Cycle a Disc between the Carousel Bins, the Printer, and the Output Bin

This test cycles media between the carousel bins, the printer tray, and the output bin.
Note: During each cycle, the lift arm locates the index mark on the disc, if one is present. Refer to the *Use a Disc with an Index Mark* section on page 4.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the recorder and printer trays are closed, and output bin is empty.
5. Place one or more **discs** in bins 1 and/or 2 and/or 3 and/or 4.
   Tip: If you need to rotate the carousel to load media into bin 1, rotate it manually. Pressing the system button prompts diagnostic test 2 to begin.
6. Lower the **output tray** so that it is horizontal.
7. Press the **printer button** to open the printer tray.

8. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLES = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   - The lift arm lowers to bin 1 and picks up a disc.
     Note: The lift arm starts to pick discs from bin 1. If a disc is not in bin 1, the lift arm proceeds to the next bin.
   - The lift arm moves to its home position above the printer. The printer tray opens.
   - The lift arm rotates the disc to locate the index mark if one is present.
   - The lift arm releases the disc onto the printer tray.
   - The lift arm picks up the disc from the printer and releases it onto the output tray.
   - The cycle count increments by one on the display panel.
     Note: The cycle continues until you press the system button to stop the test
9. Press and hold the **system button** for 3 seconds to stop the test and return to diagnostic mode.
10. Remove the **disc(s)** from the carousel and output bin.
11. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

Cycle a Disc between a Recorder and the Printer

This test cycles media between a recorder tray and the printer tray.
Note: During each cycle, the lift arm locates the index mark on the disc, if one is present. Refer to the *Use a Disc with an Index Mark* section on page 4.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Open one **recorder tray**.
5. Place one disc on the open recorder tray.
   Important! Do not close the recorder tray.
6. Press the **printer button** to open the printer tray.
7. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLES = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   - The lift arm lowers and picks disc from the recorder tray and rotates the disc to locate the index mark if one is present.
   - The lift arm moves to its home position above the printer.
   - The printer tray opens, and the lift arm places the disc on the printer tray.
   - The lift arm picks up the disc from the printer tray and the printer tray closes.
   - The lift arm places the disc on the recorder tray.
   - The cycle count increments by one on the display panel.
     Note: The cycle continues until you press the system button to stop the test
8. Press the **system button** to stop the test and return to diagnostic mode.
9. Remove the **disc** from the recorder or printer.
10. Close the printer tray and recorder.
11. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

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Cycle at a Recorder

Important! Before you cycle media, make sure that the printer and recorder(s) are properly aligned.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the **printer tray** is closed.
5. Open one **recorder tray**.
6. Place one disc on the open recorder tray.
   Important! Do not close the recorder tray.
7. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLES = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   • The lift arm picks up the disc from the recorder tray and places the disc back down on the recorder tray.
   • Each time that the disc is picked up and placed on the recorder tray, the cycle count increments by one on the display panel.
      Note: The cycle continues until you press the system button to stop the test
8. Press the **system button** to stop the test and return to diagnostic mode.
9. Remove the **disc** from the recorder tray.
10. Close the recorder tray.
11. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

Cycle the Lift Arm and the Printer

Important! Before you cycle media, make sure that the printer and recorder(s) are properly aligned.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** two times and hold it in on the second press until the display panel displays [02 CYCLE SELECTED].
3. Release the system button.
4. Make sure that the **recorder tray(s)** are closed.
5. Open the **printer tray.**
6. Place a **disc** on the printer tray.
   Important! Do not close the printer tray.
7. Press the **system button**. The autoloader checks all the devices. When the test begins, the display panel displays [02 CYCLE CYCLES = 000000]
   Tip: The cycle count shows the total number of cycles for the system and does not reset to 0 for any reason.
   • The lift arm picks up the disc from printer tray and rotates the disc to locate the index mark, if one is present.
   • The lift arm places the disc back on the printer tray.
   • Each time that the disc is picked up and placed on the printer tray, the cycle count increments by one on the display panel.
      Note: The cycle continues until you press the system button to stop the test

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8. Press the **system button** to stop the test and return to diagnostic mode.
9. Remove the **disc** from the printer tray.
10. Close the **printer tray.**
11. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

Diagnostic Test 3 – Calibrate Diagnostic Test

Important! Do not perform this test unless recommended to do so by a Rimage technician. Performing this test could negatively impact system performance.
This test calibrates the lift arm, carousel, and output tray.

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.
    Tip: If you need to rotate the carousel to remove media from the bins, rotate it manually. Pressing the system button prompts diagnostic test 3 to begin.
2. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
3. Press the **system button** three times and hold it in on the third press until the display panel displays [03 CALIBRATE SELECTED].
4. Release the system button. The display panel displays [EMPTY BIN 1 DISC ON GRIPPER]

5. Place a **disc** on the gripper.
    Note: Hold a disc against the picker hub, press and release the white button on the bottom of the gripper. Use the picture to the right as reference.
6. Press the **system button**. The arm moves the disc down so it's just above bin 1. The display panel displays [ADJUST CAROUSEL]
7. Rotate the carousel by hand until bin 1 is centered under the disc in the gripper. The gripper can be moved by hand into the carousel to compare the disc edge to the carousel walls.
8. Press the **system button** once the bin is centered.
    *   The system will drop the disc into bin 1 then automatically measure the lift and gripper length. It will then pick the disc up from bin 1. When finished the display panel will show [ARRANGE GRIPPER AND SLIDE]
9. Lower the output tray so it lays horizontal.
10. Lower the arm with the disc on it, so the disc is barely resting on the tray.
11. Press the **system button**.
    *   The arm will lift the disc to its home position.
    *   The output tray will raise and then lower.
    *   The arm will place the disc on the tray.
    *   The tray will lift and eject the disc to the output tray.
    *   The arm will lower and check bin 1.
12. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

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Diagnostic Test 4 – Sensors Diagnostic Test

This test verifies that the various sensors used in the autoloader function correctly.

Note: A beep sounds each time the status of a sensor changes.

Access and Start the Sensors Diagnostic Tests

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

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** four times and hold it in on the fourth press until the display panel displays [04 SENSOR SELECTED].
3. Release the system button.

Sensor Results

The display panel shows the status of each sensor and the location of the carousel and lift arm.

```
L+00000      O   D   C   G   T   R   I   J
C+00000      0   0   0   0   0   0   0   0
M+00000
```

- L+00000 is the 5-digit lift position count. It increments/decrements if the lift is moved by hand.
- C+00000 is the 5-digit carousel position count. It increments/decrements if the carousel is moved by hand.
- M+00000 is the 5-digit output slide count. It increments/decrements if the carousel is moved by hand.

The right half of the display shows the status of individual sensors, with each sensor identified by a single letter.

- 0 indicates that the sensor is triggered.
- 1 indicates that the sensor is not triggered.

The sensors are represented with:

O – Out bin full
D – Door open/close
C – Carousel home position
G – Gripper disc detected
T – Gripper tray detected
R – Perfect Print rotator home – Only applies to systems with Perfect Print option
I – Index mark sensor – Only applies to systems with perfect print option
J – Mailbox jammed – Not currently used

4. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.

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Diagnostic Test 5 – Status Intensity

This mode changes the status light brightness.

1. Make sure that the autoloader is in the diagnostic mode. Refer to the *Access and select Diagnostic Tests* section on page 3.
2. Press the **system button** five times and hold it in on the fifth press until the display panel displays [05 INTENS SELECTED].
3. Release the system button. The display panel display should read [STATUS INTENSITY 100%].
4. Press and release the system button to change the intensity percentage.
5. Refer to the *Exit Diagnostic Mode* section on page 4 to exit diagnostic mode.