Overlay

User Guide

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1. Introduction

Waygate Technologies is committed to enhancing the precision and consistency of visual inspections. As part of this commitment, we offer the ability to create and utilize an overlay for the Mentor Visual iQ Flame and the Mentor Visual iQ+ borescopes during live visual inspections.

By providing a visual reference framework directly on the inspection screen, overlays help ensure uniformity across captured images, improving documentation quality and facilitating more reliable comparisons over time.

Repeatable positioning and reduced variability can overall enhance the efficiency during and between inspections.

2. What is the Overlay?

Waygate Technologies has developed a visual alignment aid known as the Overlay, which is a static visual guide designed to assist inspectors in consistently positioning the borescope and the target during live inspections.

The Overlay appears as a semi-transparent graphic on the live video feed, providing a reference framework to ensure that images are consistent in framing, orientation, and scale.

3. Warnings

The Overlay is intended solely as a visual alignment aid during live inspections. It does not perform any measurement or image analysis functions.

Use of the Overlay does not replace standard inspection procedures. Inspectors are responsible for following all applicable protocols and quality standards.

- Do not rely on the overlay for dimensional accuracy. It is not intended for measurement and should not be used to assess size, distance, or scale.
- Ensure the Overlay is correctly aligned before beginning an inspection. Misalignment may lead to inconsistent image framing or misinterpretation of inspection results.

Waygate Technologies is not responsible for inspection outcomes resulting from improper use or misinterpretation of the Overlay. You must review this user guide for its intended use and limitations prior to use.

4. Prescribed usage

The Overlay is useful in situations where precise alignment and repeatability are critical, such as:

- Turbine blade inspections
- Weld evaluations
- Component wear tracking
- Before-and-after comparisons

It is most effective when integrated with a Menu Directed Inspection (MDI) template.

5. Dependencies

- Mentor Visual iQ+ or Mentor Visual iQ (Flame)
- Microsoft PowerPoint (or other image editing tools)
- MDI Builder (if integrated with MDI)

6. Operating Instructions

Users can deploy an Overlay into the handset through either USB or an MDI template.

## 6.1 Creating an Overlay on PC

Note: This can be done with any image editing tool, however, these instructions will utilize PowerPoint as it is a common tool most are familiar with.

1. Open a blank power point presentation (PPT).
2. Change the slide size to 4:3 ratio.
   - (Design → Slide Size)
3. Select an image to be utilized.
   - (Copy/Paste a MViQ image)
4. Draw the desired lines or shapes.
   - (Insert → Shapes)

5. After overlay lines are inserted. Select and delete the MViQ image.

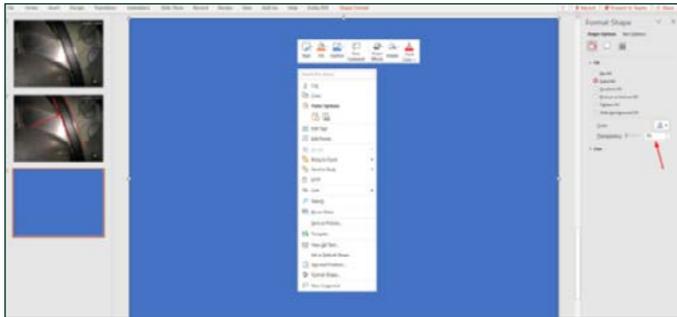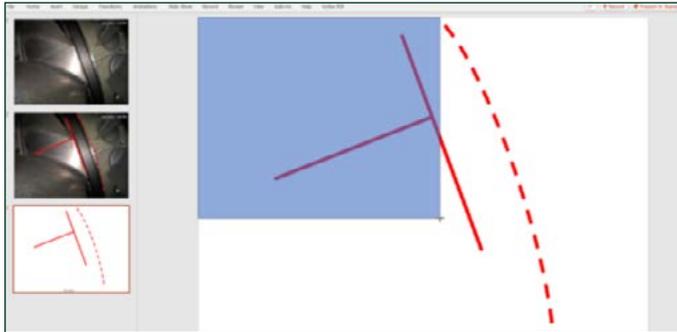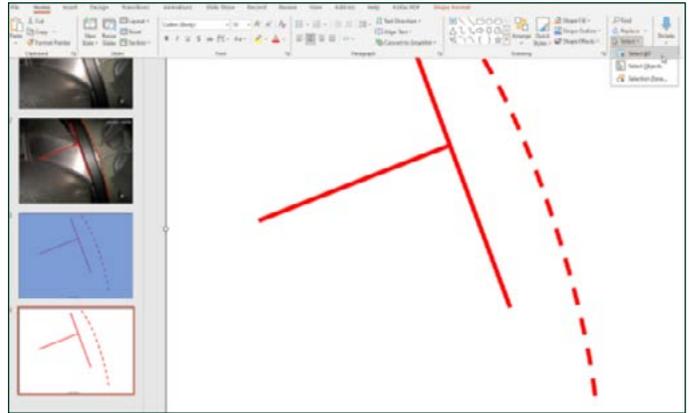**Note:** Select only the image.
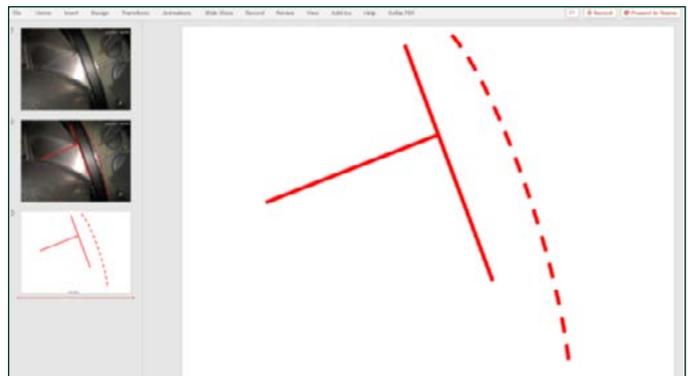
6. Add a rectangle that covers the entire slide containing the overlay lines.

- (Insert → Shapes) This rectangle will need to be 100% transparent.

- (Right click on shape → Format Shape) Set fill transparency to 100%.

**Note:** This step is required to maintain the 4:3 ratio for the transparent background.
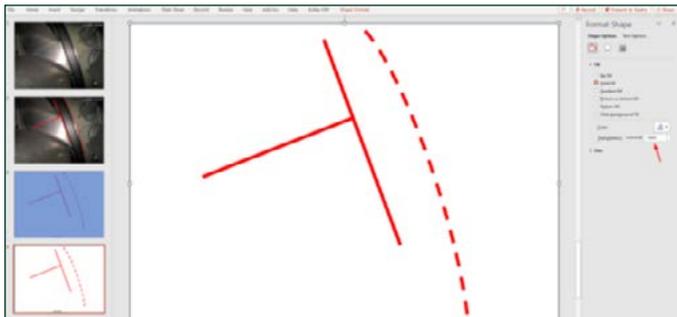
7. Select the lines and transparent rectangle you created. (Select All)

8. Right click on the slide and select "Save as Picture" to ensure your overlay image has a fully transparent background.

Note: Performing a File > Save of the entire PowerPoint will not give you an image with a fully transparent background. You must right click on the slide and select "Save as Picture" for the background to be transparent.

9. Alternatively save as a .JPG if to be used for MViQ (Flame) device. Refer to Section 6.2.2 for further information.

Note: .JPG file will create a semi-transparent background along with the lines contained in the file.
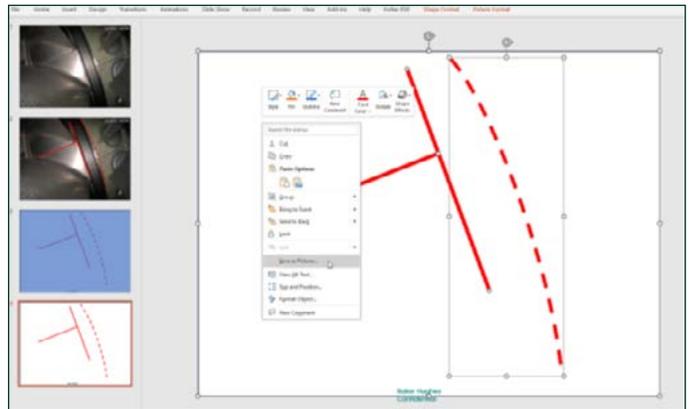
6.1.1 Screen Obstruction Guidance

When designing overlays, it is important to account for areas of the screen that may be obstructed by the device's user interface. Improper placement of overlay elements in these regions may result in reduced visibility or confusion during inspections.

Red Zones: These areas are consistently blocked by UI elements. Avoid placing any overlay content in these regions.

Orange Zones: These areas may be intermittently blocked depending on the active features. Use caution when placing overlay elements here.

Refer to the diagram below for a visual representation of these zones:
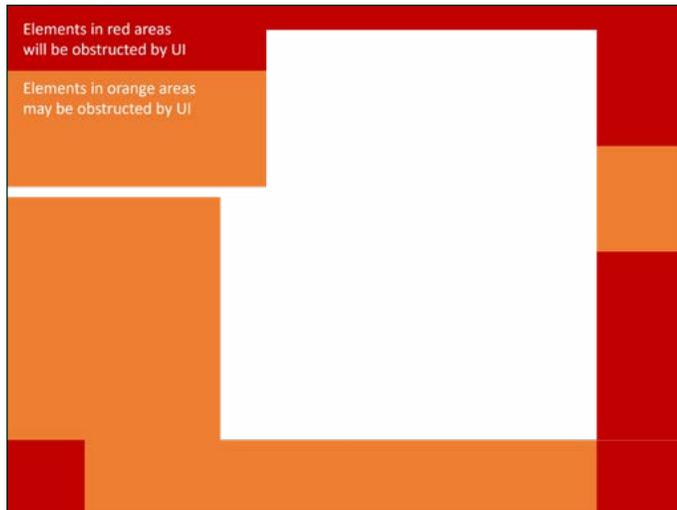
Keep critical alignment guides, labels, and reference images within the safe central viewing area to ensure full visibility during live inspections.

6.1.2 Best Practices

Here are some key considerations that can help to ensure the overlays are effective and easy to use during inspection.

1. Include the recommended tip in the Overlay.

   This can be used to signal to inspectors the optimal tip and maintain consistency throughout viewings.

2. Include Picture-in-Picture (PiP) as a reference image.

   Incorporate a small reference image within the overlay. This supports faster orientation and improves consistency.
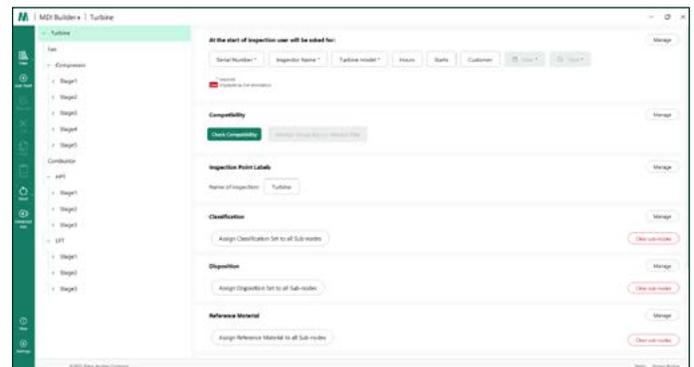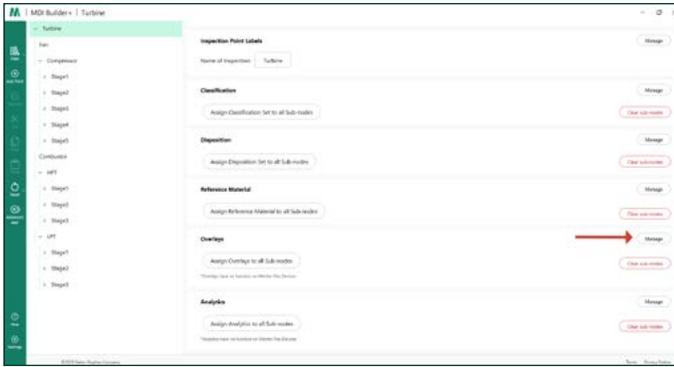
Here is an example:
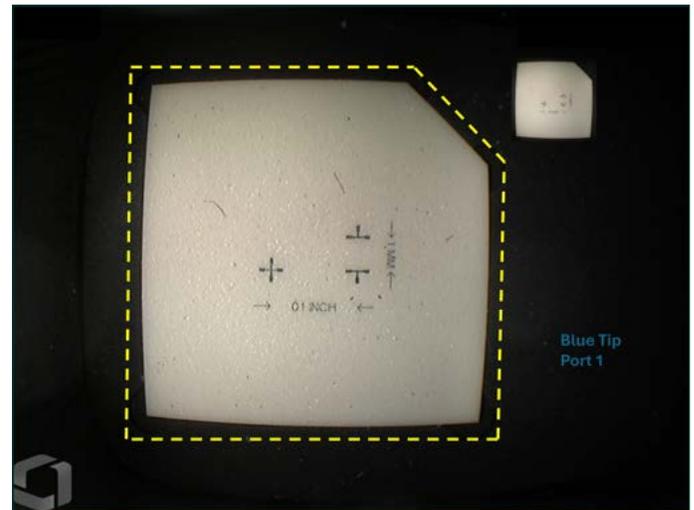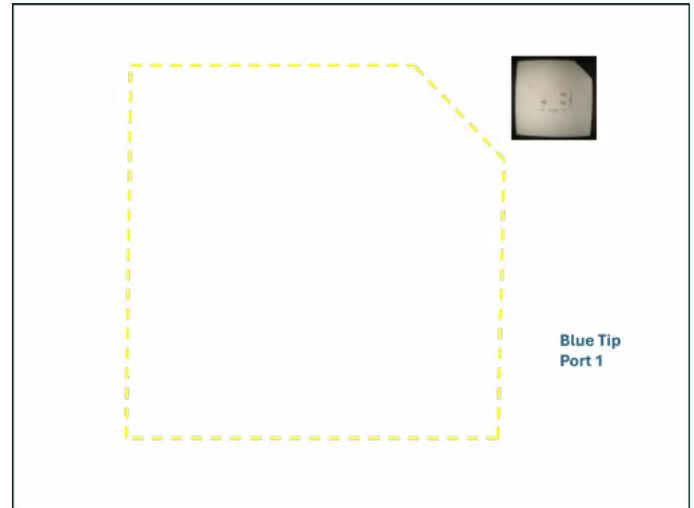
6.2 Deploying an Overlay

6.2.1 Deploying with an MDI template (v4.10 or higher)

1. Open MDI builder plus (rev. 4.10 or higher), select a template or open a file.

2. Navigate to the Overlays section. Select Manage.

3. Select Add New Overlay or drag the overlay file into Builder.

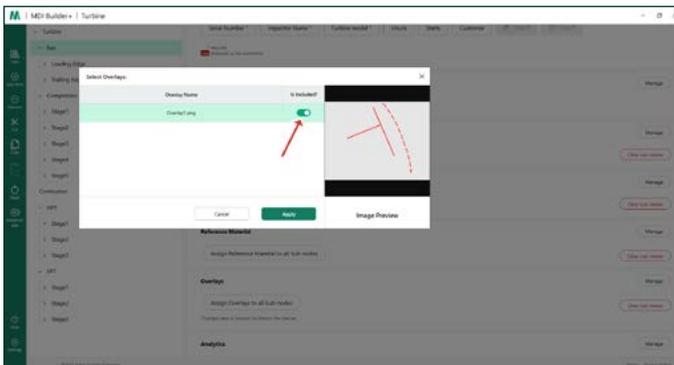4. Select the overlay that you want to deploy in the MDI.

5. Open or drag file as directed. File should be loaded. Select Apply.

6. Assign an Overlay per bottom most node (leaf node).

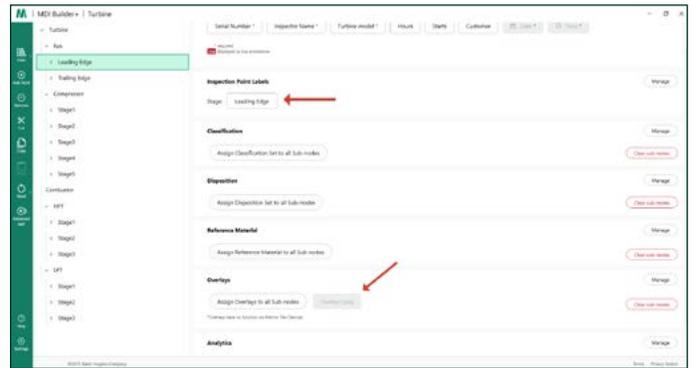   **Note:** Overlays can be assigned to a higher node and propagated down to all sub nodes if desired.
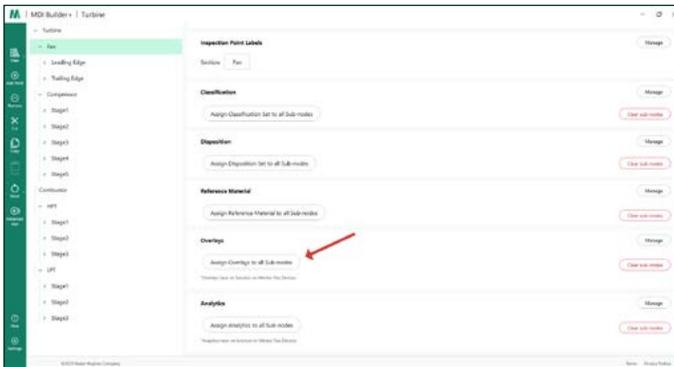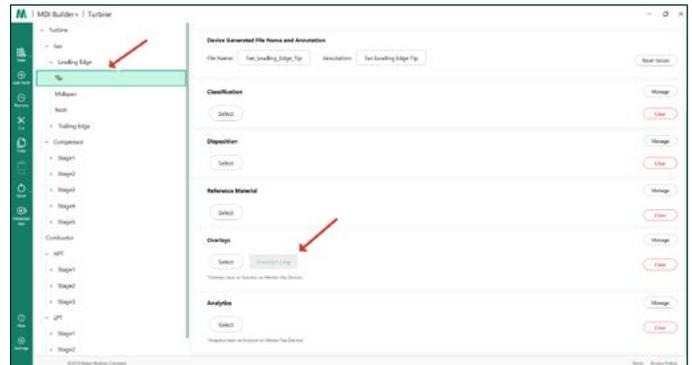

7. Toggle the included button to ON.
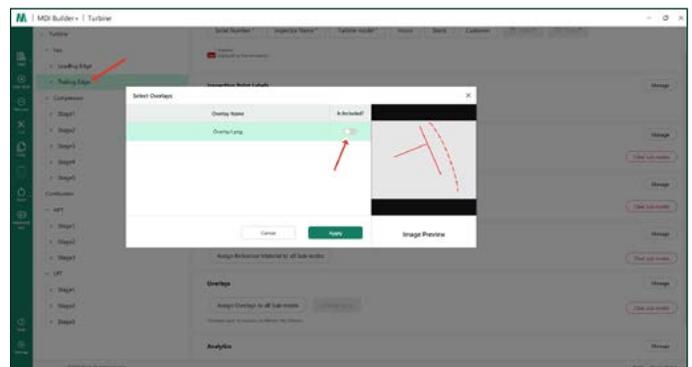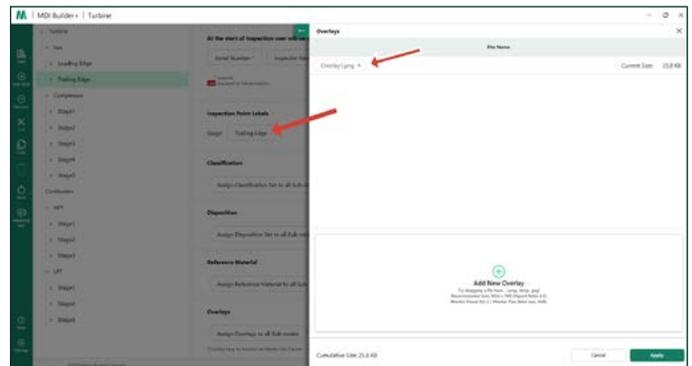

8. Select Apply.

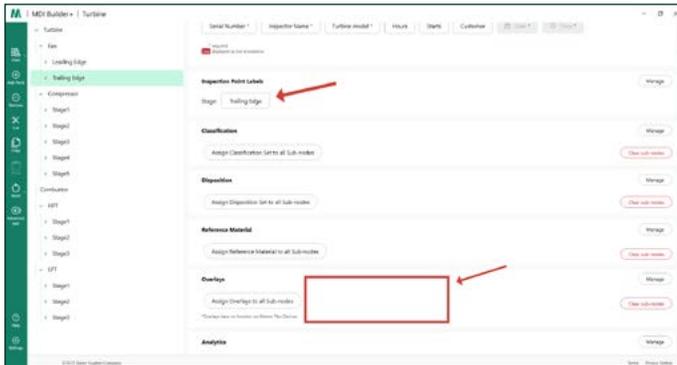9. The Overlays are now present in the MDI (ex. Fan-Leading Edge).

10. Please note the Overlay will be present at all levels in node (ex. Leading Edge – Tip).

11. User will be able to adjust each node as needed to include an Overlay or not by selecting Assign Overlays to all Sub-nodes (ex. Fan-Trailing Edge).
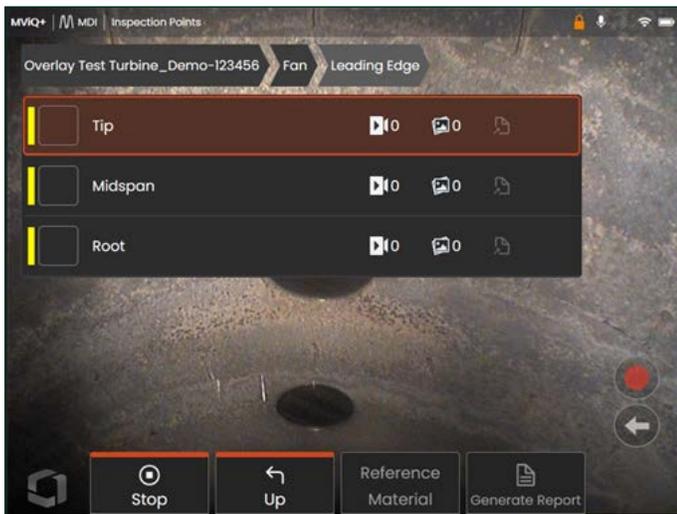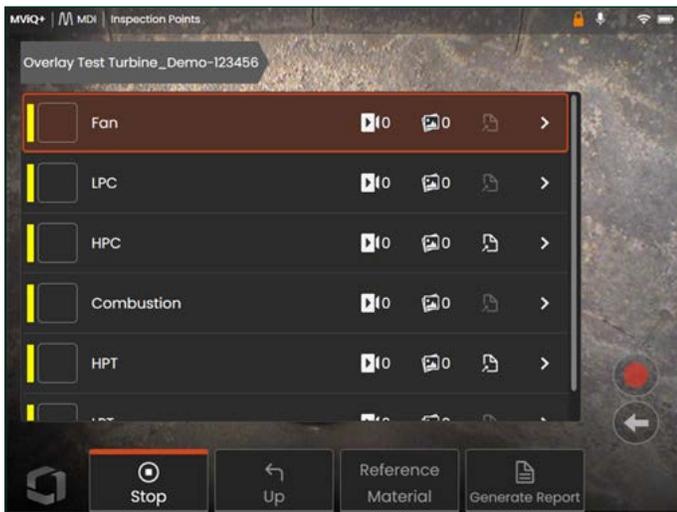
12. On Device (MViQ+) – Start an MDI and navigate to the desired node.

13. The Overlay will be auto generated once the appropriate node in the MDI is selected (ex. Leading Edge).

14. If the Overlay is not applied to a node (ex. Trailing Edge). No Overlay will be displayed.

6.2.2 Deploying with an MDI template (before v4.10)

1. Create the overlay in PowerPoint.

2. Save as .JPG.

3. Name the file "filename_OVERLAY.JPG."

4. Add the file as a Reference Material in MDI Builder (instead of an overlay in MDI Builder like on MViQ+ SW v4.10 or greater).

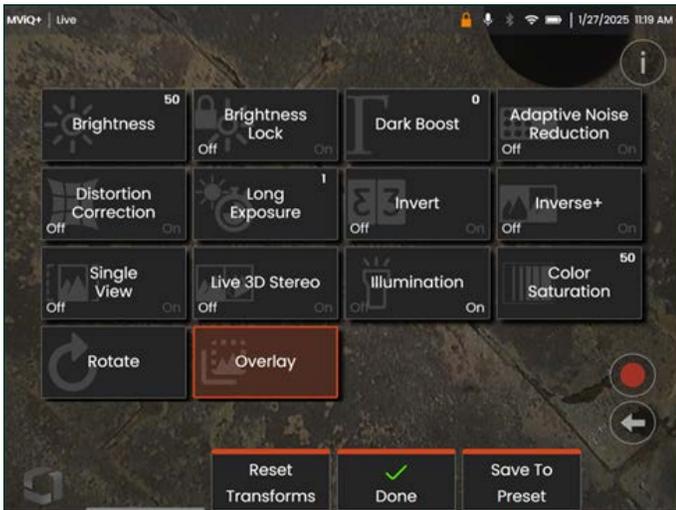**Note 1:** You can use both .png and .jpg methods together in a single MDI.

Note 2: Both methods are required for MDI to be forward and backward compatible.
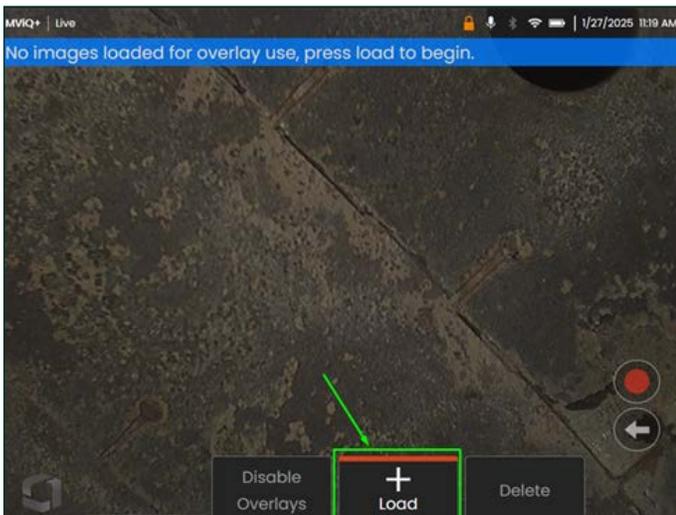
6.2.3 Deploying with a USB drive.

1. Install the USB drive with saved (.PNG) file. Go to Live Screen/Select Image.
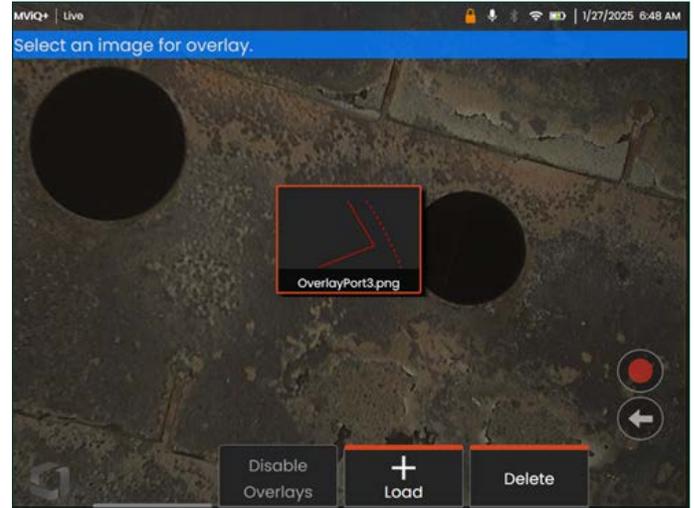

2. Select Overlay.

3. Select Load. Browse and navigate to the saved (.PNG) file on the USB drive. Select the overlay from file manager. Overlay will load and can be selected.

4. Select the Overlay. The overlay will then be displayed on live image.

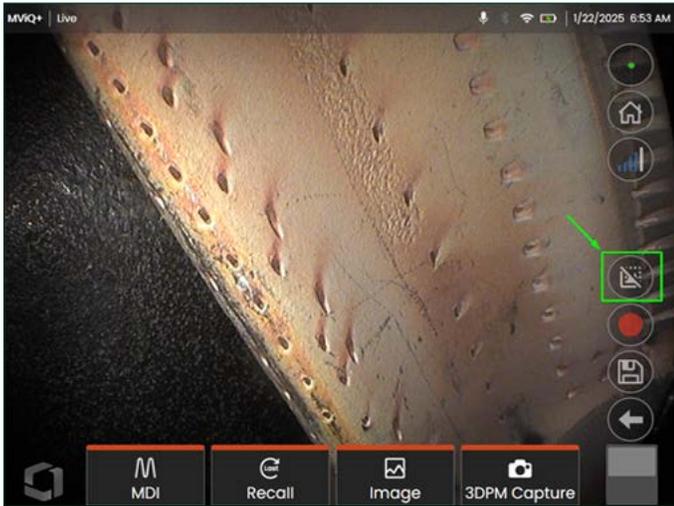5. You will be prompted to adjust the opacity. Press done.

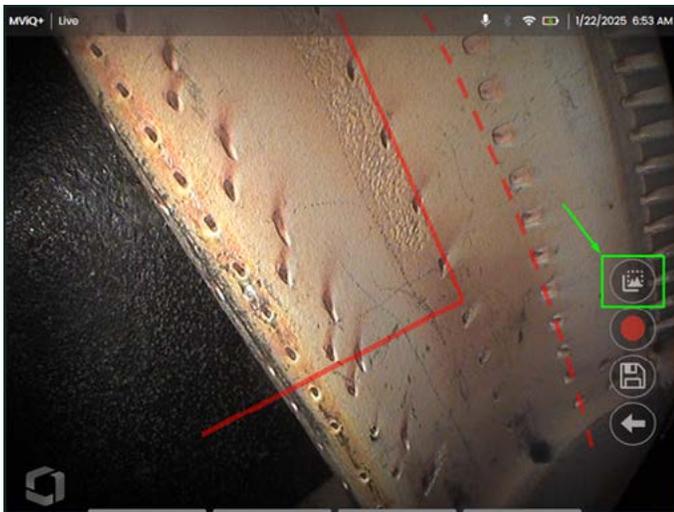6. Overlay will be present on screen.
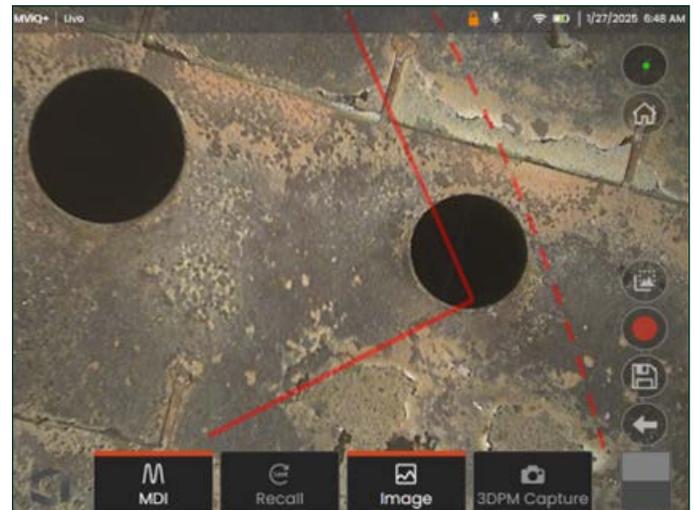
Note 1: User will be able to hide overlay while navigating to desired inspection point. On screen touch icons can be used to hide overlay.

Note 2: If needed – Go to Image Menu → Overlay → To load/disable/delete overlays.

7. Overlay Hidden using onscreen touch icon.

8. Overlay Shown using onscreen touch icon.

9. Navigate to the desired inspection point.

7. Technical Support

Waygate Technologies Remote Service email:
RemoteService@BakerHughes.com

Telephone: 866-243-2638

Website: https://www.waygate-tech.com/rvi

Please also provide the following important details:

• Contact info

• Product model number

• Product serial number

• Your question(s)

8. Frequently Asked Questions (FAQs)

Q: Can I hide the overlay during inspection?

A: Yes. The overlay can be enabled and disabled using the onscreen touch icon, or through the Image Menu → Overlay settings.

Q: Can I use any image editing software to create overlays?

A: Yes, any image editing tool that allows you to draw shapes and export in .PNG or .JPG format can be used.

Q: How do I assign overlays to multiple nodes in MDI Builder?

A: You can assign an overlay to a higher-level node and propagate it to all sub-nodes using the "Assign Overlays to all Sub-nodes" option

Q: What should I do if the overlay doesn't appear during inspection?

A: Check if the overlay was assigned to the correct node in the MDI. If not assigned, it won't display when that node is selected.

9. Revision History

Revision Number	Date Issued	Description
1	December 2025	First issue of user guide.

10. Glossary

Live Screen	Real-time video feed displayed from the borescope onto the screen.
Menu Directed Inspection (MDI)	An inspection template that you build on your computer and install to run on your Mentor video borescope systems.
Opacity	Level of transparency of the overlay graphic on the live screen.
Overlay	Semi-transparent graphic used to assist with consistent positioning and framing during live inspections.
Picture-in-Picture (PiP)	Small embedded reference image within the overlay to aid consistency.
Repeatability	Ability to reproduce inspection images with consistent framing and orientation.
Nodes	In the MDI Builder, the MDI Inspection Tree contains up to five Branch Levels. Sub-branches from the main inspection tree are referred to as Nodes.

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