Waygate Technologies

Everest Mentor Flex VideoProbe™

OS 1.7 Release

November 9, 2023

Copyright 2019 Baker Hughes Company. This material contains one or more registered trademarks of Baker Hughes Company and its subsidiaries in one or more countries. All third-party product and company names are trademarks of their respective holders.

Baker Hughes

OS 1.7 | Everest Mentor Flex

On **July 7th** we announced the launch of Everest Mentor Flex OS 1.7, available to download from our support site (inspectionworks.com) or over the air directly to your device

Copyright 2019 Baker Hughes Company. All rights reserved.
Baker Hughes Confidential

Agenda

- Real3D Stereo measurement
- Push2IW
- InspectionWorks Store
- USB probe connectivity
- On-device software release notes
- Miscellaneous UX improvements
- Part numbers & quoting
- Demo equipment
- Real3D promotion
- Entytle pipeline
- OS 1.6 reminders

Copyright 2021 Baker Hughes Company. All rights reserved.
Baker Hughes Confidential

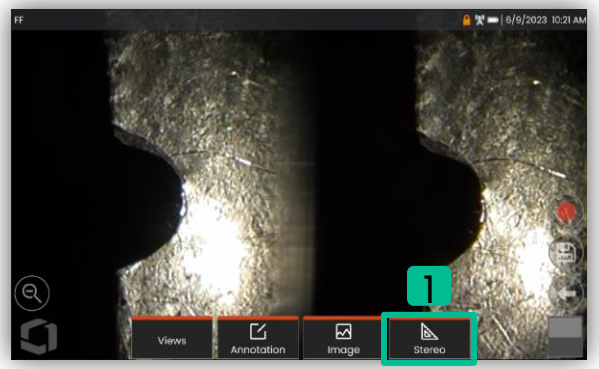
Real3D Stereo Measurement

Copyright 2019 Baker Hughes Company. All rights reserved.

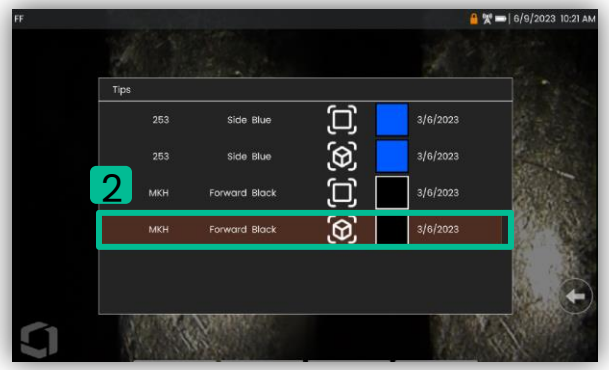
Waygate Technologies
a Baker Hughes business

OS 1.7 | Real3D Stereo Measurement

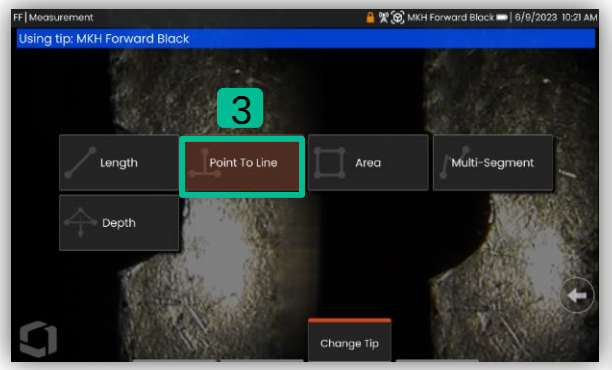
Step-by-step procedure



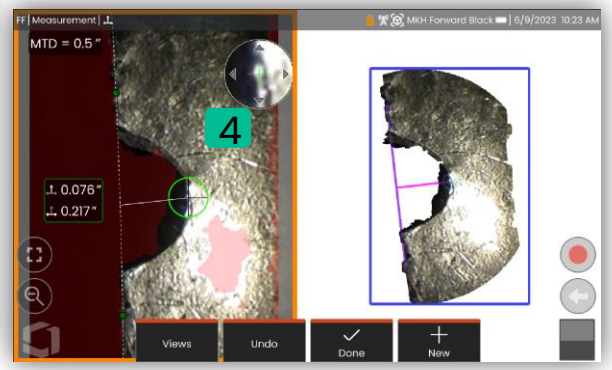
Enter into FF and press Stereo



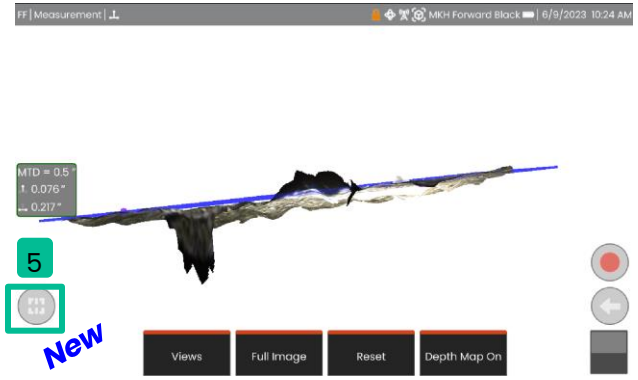
Select tip with 3D cube icon



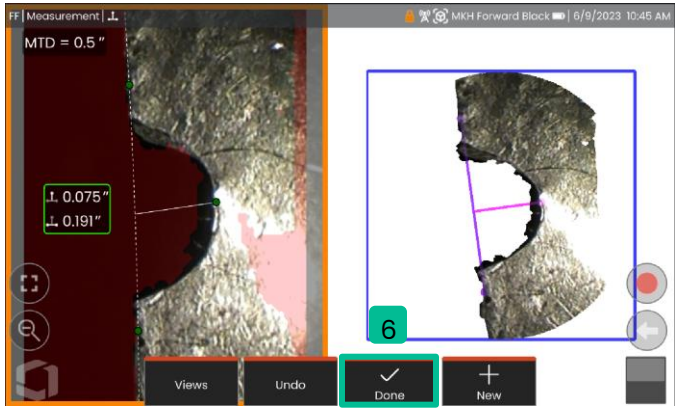
Choose measurement type



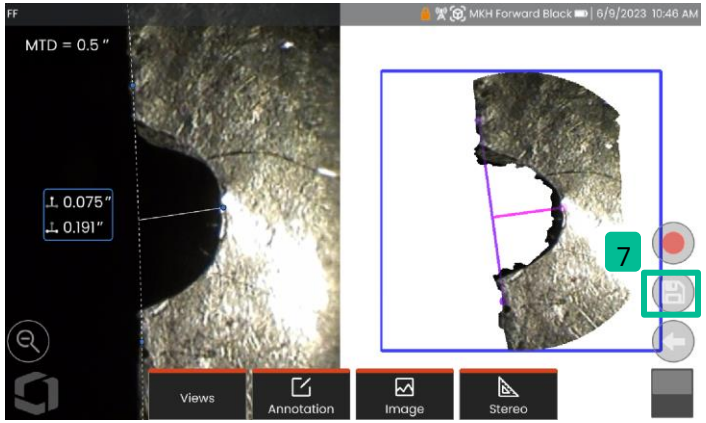
Position cursors on indication



Tap point cloud to highlight
Check point cloud in full screen



Tap live image and select Done



Save image

Copyright 2022 Baker Hughes Company. All rights reserved.

Baker Hughes Confidential

Waygate Technologies
a Baker Hughes business

OS 1.7 | Real3D Stereo

Real3D Stereo Measurement

- **Fully surfaced point cloud** measurement
- Point To Line, Depth, Length, Area, Multi-Segment
- Includes 3D Surface Masks (green, blue, and red), Depth Map, and MTD

Available for 4.0mm, 6.1mm, and 8.4mm diameter probes. Tips must be calibrated for 3D Stereo and have feature key enabled (or active 90-day trial)

Note: 3D Stereo not available for 3.9mm probes (same as MViQ)

Check out the updated "***Samples***" folder in the File Manager. Now includes Real3D Stereo images and videos

Copyright 2019 Baker Hughes Company. All rights reserved.

OS 1.7 | Dynamic Advisory System

User interface delivers status messages that are **measurement-context sensitive**.

Analysis based on 3 variables:

1. **Measurement Type** – Length, Point To Line, Area, Multi-Segment, Depth
2. **Tip-to-target distance**
3. **Defect size**

Status bar message

Flame advisory band around result

*Dynamic Advisory System launched in OS 1.5

Measurement	MTD	Defect Size	Measurement Type	Status Message
A	0.4"	-0.008"	Depth	*"Move closer to target or move cursors for better results"*
B	0.4"	0.047"	Length	None

Real3D Stereo Live Demo

Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

Push2IW

Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

OS 1.7 | Push2IW

Save time and never upload data AFTER an inspection. Inspect + upload simultaneously

1. Log into IW
2. Toggle switch to 'on' and assign folder
3. (if non-MDI, ensure device save to same path or folder)
4. Perform inspection and capture data as normal

- Data remains saved on local drive but now also pushed to IW Insight
- Legacy 'manual upload' feature remains

Push2IW accommodates:

- Overwriting or saving new images e.g., re-file naming or altering annotation of measurement etc.
- Network disconnection
- Power disruption e.g., battery change
- MDI compatible

www.inspectionworks.com

Copyright 2019 Baker Hughes Company. All rights reserved.

InspectionWorks Store

Copyright 2019 Baker Hughes Company. All rights reserved.

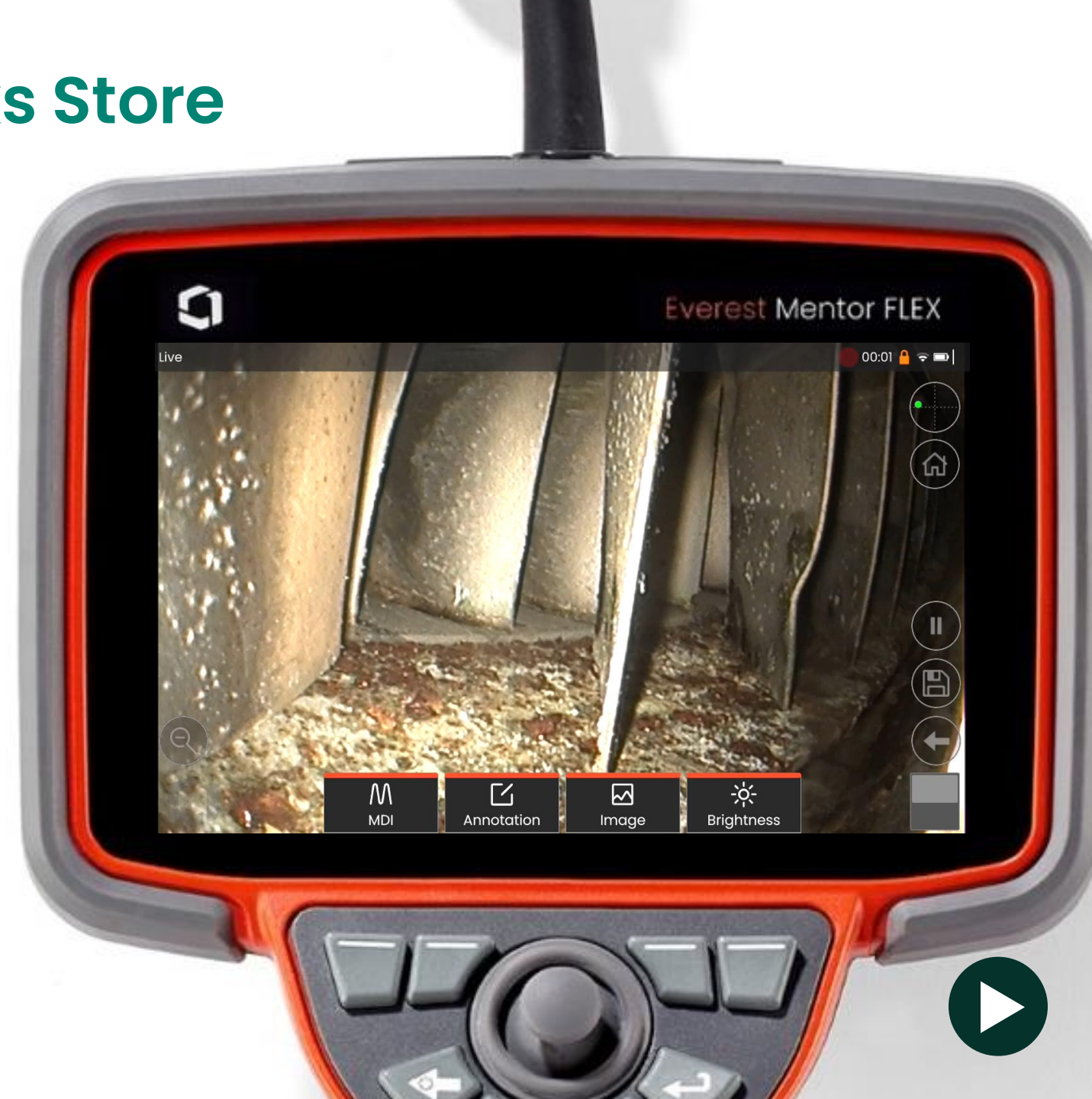
Waygate Technologies
a Baker Hughes business

OS 1.7 | InspectionWorks Store

Access the latest NDT related content shared by Waygate Technologies and our partners such as device apps, software updates, training materials, and more.

- **Now access the InspectionWorks Store directly** from your Everest Mentor Flex system
- **Safe and secure** method to access device apps (MDI), software updates, training materials and more
- **Public store** contains manuals, reference materials, datasheets, MDI's
- **Private store** secure space for customers to share proprietary content, apps (MDI), training materials, more…
- Compatible with all MFLEX models
- Let us know what you would you like to access in public or private (Waygate-demo) stores?

www.inspectionworks.com



Copyright 2019 Baker Hughes Company. All rights reserved.

USB probe connectivity

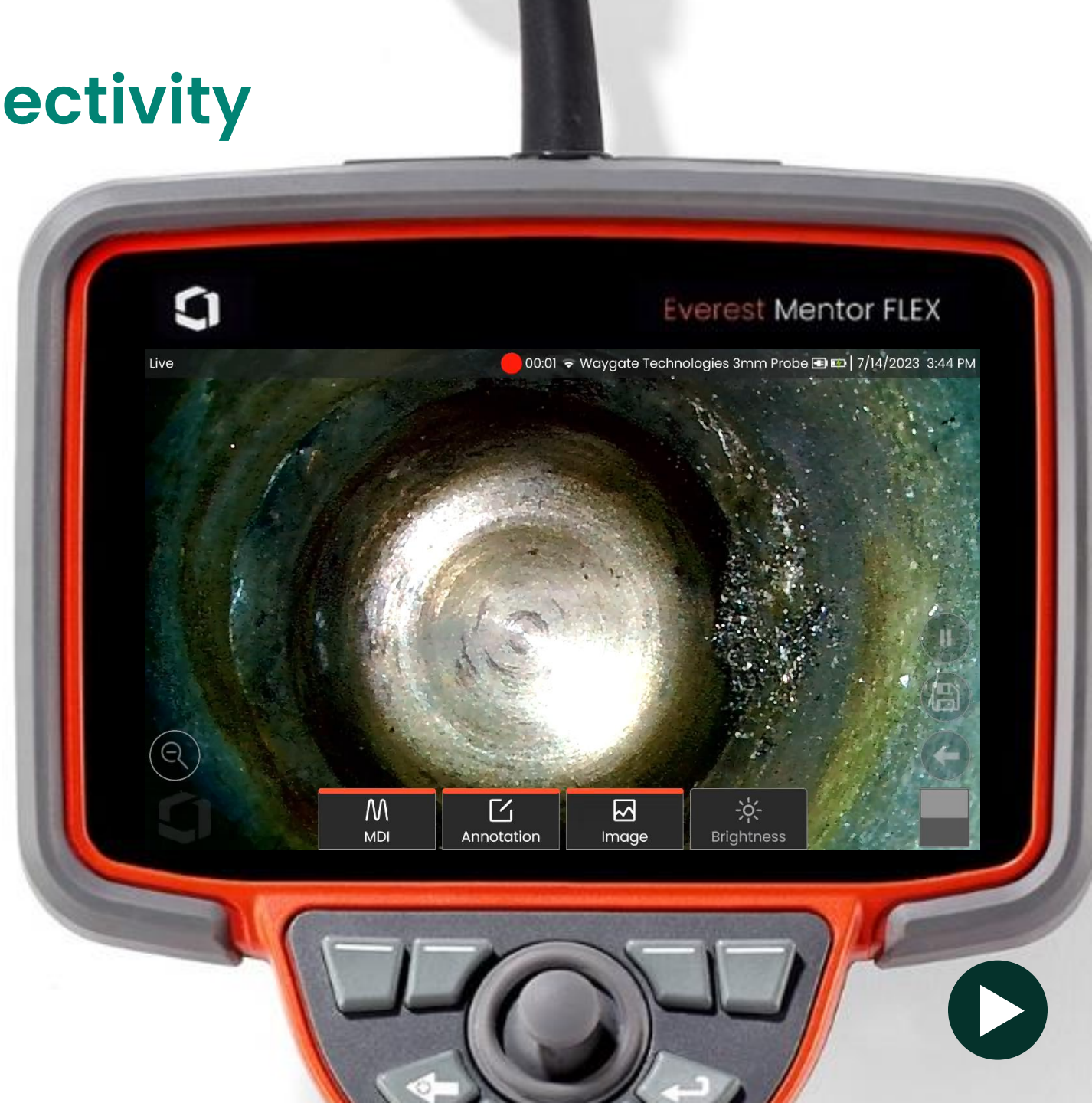
Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

OS 1.7 | USB Probe Connectivity

2.2mm and 3.0mm probes now connect to Everest Mentor Flex

- 2-way and 4-way articulation
- Up to 1024 x 768 still and video image resolution
- Compatible with IW Local video streaming
- Compatible with MDI
- Will connect to most PCs



Copyright 2019 Baker Hughes Company. All rights reserved.

OS 1.7 | USB Probe Applications

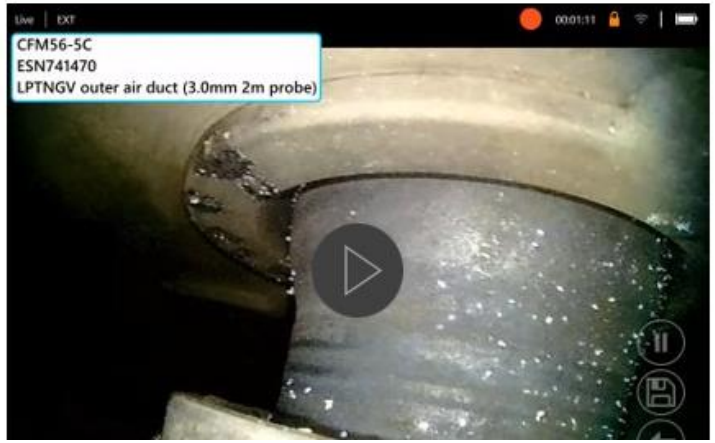
Aviation Application for 3mm VPA3020SYS

CFM56-3 Borescope Inspection of the Stage 1 LPT Nozzle Outer Air Duct Condition

Where? A318/A319/A320/A321. 72-53-00-290-802-B : Borescope Inspection of the Stage 1 Low-Pressure Turbine Nozzle Outer Air Duct Condition
SUBTASK 72-53-00-290-055-A

Why? CAUTION: DO NOT USE A FLEXIBLE BORESCOPE WITH A DIAMETER LARGER THAN 0.15 IN (3.8 MM). THE BORESCOPE CAN BE BLOCKED IN THE CAVITY.

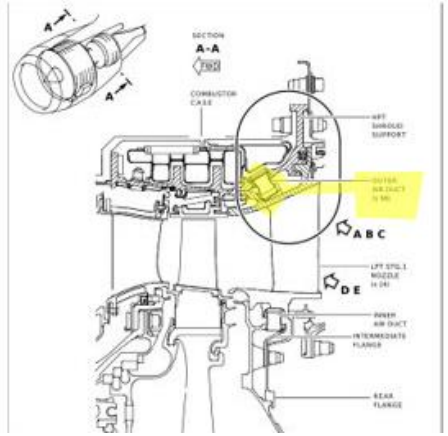
What? Inspect the full set of stage 1 LPT nozzle outer air ducts and use the limits that follow (no measurement needed)

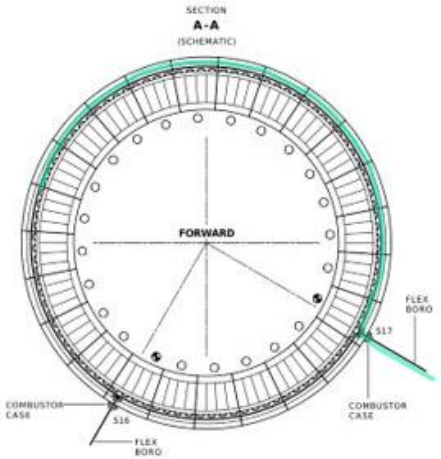


How? Insert 3mm BORESCOPE through the S16 or S17 port, access between the LPT Stage 1 blade platform and the LPT Stage 2 Nozzle, perform a 180° travel (lower and upper sides), need 3m to complete 360°, but 2m is good for 2 x 180°. Visually inspect the Air Duct.

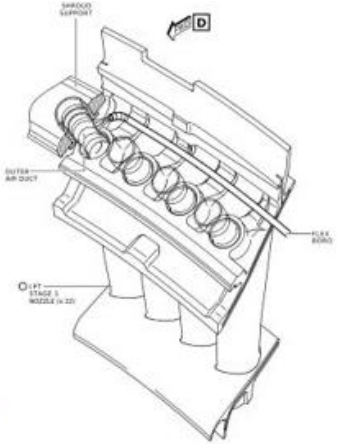
Why? Due to longer fixed length of HA vs. Oly 4mm, it is sometimes commented that using Oly to do 360 deg is okay and our 4mm is too "soft" as it buckle when pushing through

INSPECT/CHECK	MAXIMUM SERVICEABLE LIMITS	REMARKS
1.Stage 1 LPT nozzle outer air duct:		
A.Outer air duct found blocked, dislodged, missing.	Any number but not more than 1 outer air duct.	If more than 1 outer air ducts are impacted, contact CFM.





Additional Note: MVIQAP3930-8897 and MVIQAP3920-8896 is not a good option, risk entrapment when making initial 90 deg turn into the cavity, and during its extraction for the same reason for 4mm



Copyright 2019 Baker Hughes Company. All rights reserved.
Baker Hughes Confidential
Waygate Technologies
a Baker Hughes business

OS 1.7 | USB Probe Applications

Aviation Application for 3mm VPA3020SYS

Leap 1A: Visual Inspection of LPT stage 1 retainer ring

Where? Leap 1A/1B in AMM Leap-1b-72-00-0074-01A-930A-D. Perform a borescope visual inspection of the LPT stage 1 retainer ring. Subtask C

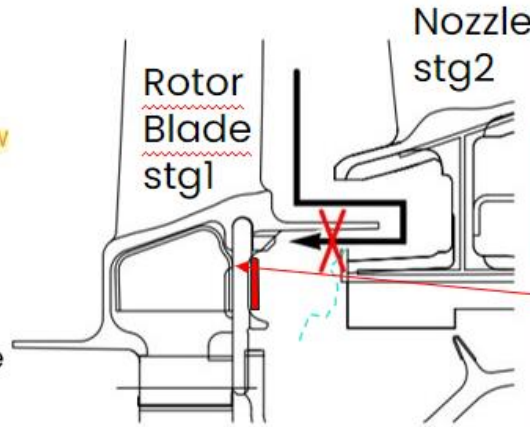
CAUTION: TO PREVENT ANY BORESCOPE SEIZURE, FOLLOW INSTRUCTION W AND TURN THE ROTOR SLOWLY.

(1) Do a 360° borescope inspection of the stage 1 retainer ring.

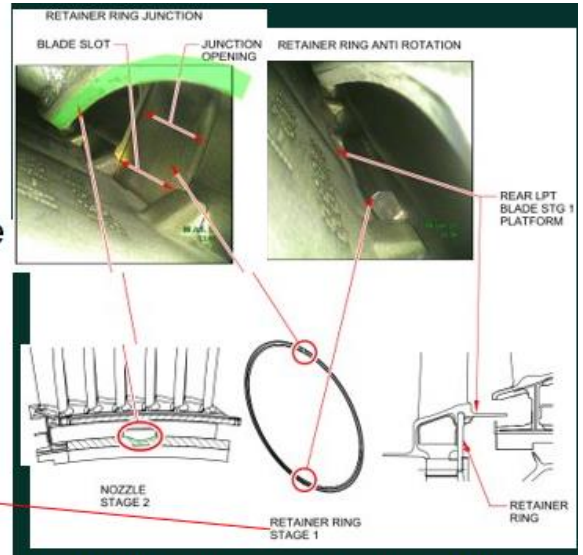
NOTE: *Use a 0,153 inch (3,9 mm) flexible borescope.*

(2) Do the borescope inspection from borescope port U.

Why? Get stuck easily if use a 4 mm borescope for the SB due to rigid portion of HA. Normally no measurement needed. So, we advise customer to use a 3.0 mm VPA3020SYS in order to avoid damaging the parts, but mostly to avoid any borescope seizure.



DO NOT PASS THROUGH THE NOZZLE FWD BAFFLE HOLE TO PREVENT ANY BORESCOPE SEIZURE

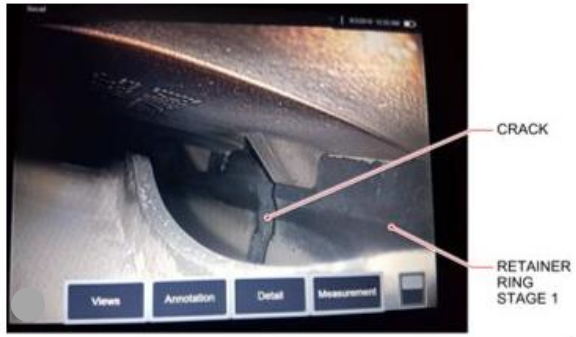


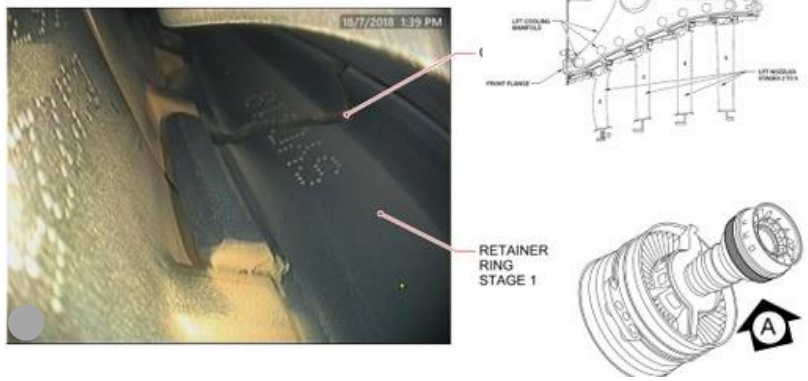
How? Put the borescope between LPT stage 1 blades trailing edge and LPT stage 2 nozzles leading edge and go under LPT stage 1 blades root platform. Look forward and find the hole in the nozzle FWD baffle allowing to see the LPT stage 1 retainer ring.

Turn the rotor, make a 360° turn, look for radial cracks, anti-rotation pin bent, or pin missing. Help with Invert+ where crack is suspected.

Note: Engines with post SB72-0176 LPT stage 1 retainer ring do not have anti-rotation pin.

Baker Hughes





Copyright 2019 Baker Hughes Company. All rights reserved.
Baker Hughes Confidential
Waygate Technologies
a Baker Hughes business

On-device software update release notes

Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

OS 1.7 | Release Notes

See what's new with each software release on-device

- On-device release notes allow users to view new features and bug fixes during installation and after the software is installed
- A list of new features will appear on screen after pressing the Install button in Settings
- Release Notes button in Settings allows users to view all features that were released through the current software version

Copyright 2019 Baker Hughes Company. All rights reserved.

Miscellaneous UX Improvements

Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

OS 1.7 | Miscellaneous Updates

- Boot up time reduced (~1:20)
- Clear “recent entries” lists on virtual keyboard
- Automatically set InspectionWorks Insight uploads to “Published” status
- Live mode zoom toggle mode now remembers default zoom level across boot up cycles
- Display of free space remaining when viewing drive selection icons in File Manager
- “FF” status bar icon changed to flame color
- MDI video recordings now have an associated XML file
- Measurement cursor visibility improvements
- Measurement result positioning improvements
- Fixed zoom toggle icon when non-4x3 images are recalled
- Extended measurement cursor placement bounds when still image is at 0.8x zoom
- In-progress MDI video recordings end automatically when the inspection is stopped
- Display of device Ethernet and Wi-Fi MAC addresses in Settings

Copyright 2019 Baker Hughes Company. All rights reserved.

OS 1.6 Reminders

Copyright 2019 Baker Hughes Company. All rights reserved.

Waygate Technologies
a Baker Hughes business

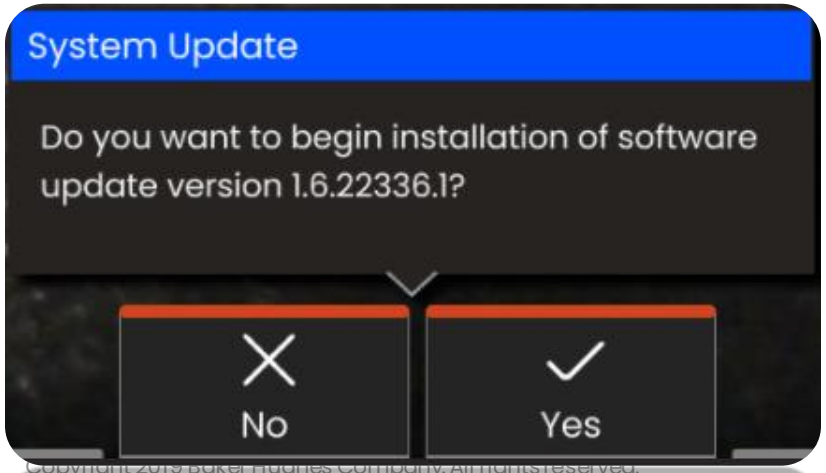
OS 1.6 Reminder | Auto Updates

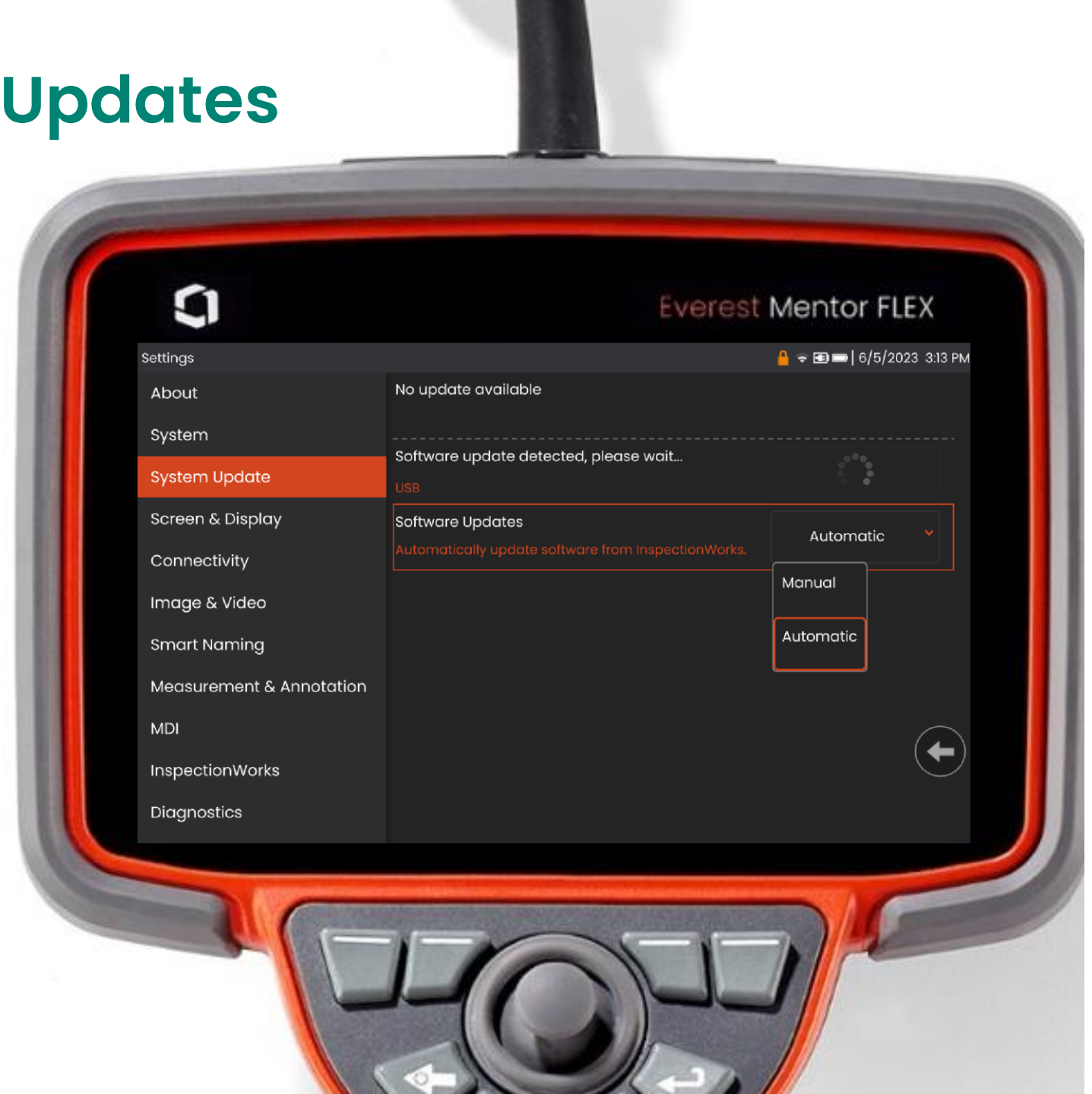
- Once the system has been updated to OS 1.6, it will default to Auto Install for all future SW releases
- Users can opt out of Auto Install in the Settings menu

Step 1: Connect to Wi-Fi

Step 2: Wait for latest OS to auto-download

Step 3: Select ***Yes*** when prompted





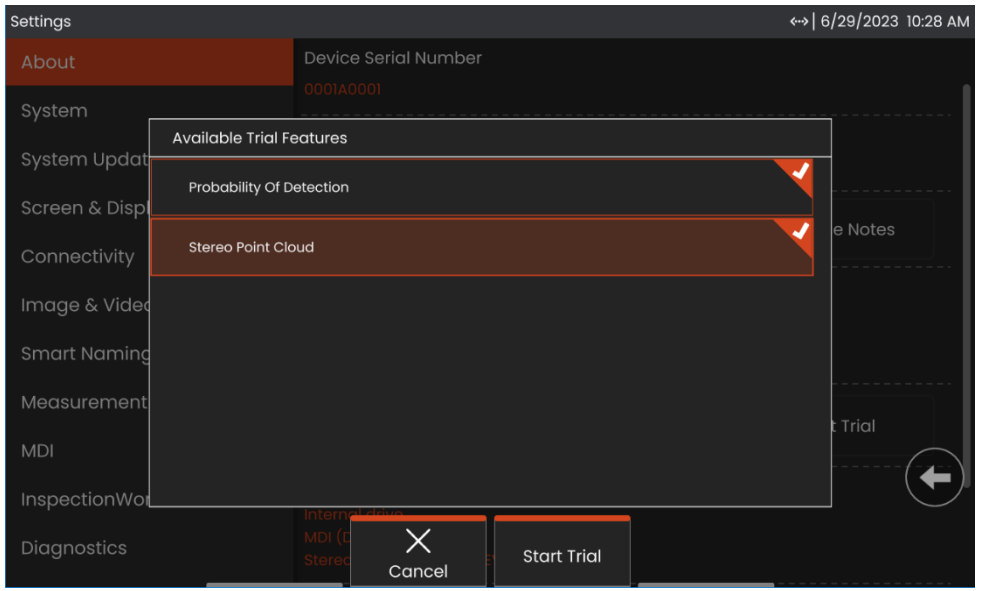
Copyright 2019 Baker Hughes Company. All rights reserved.

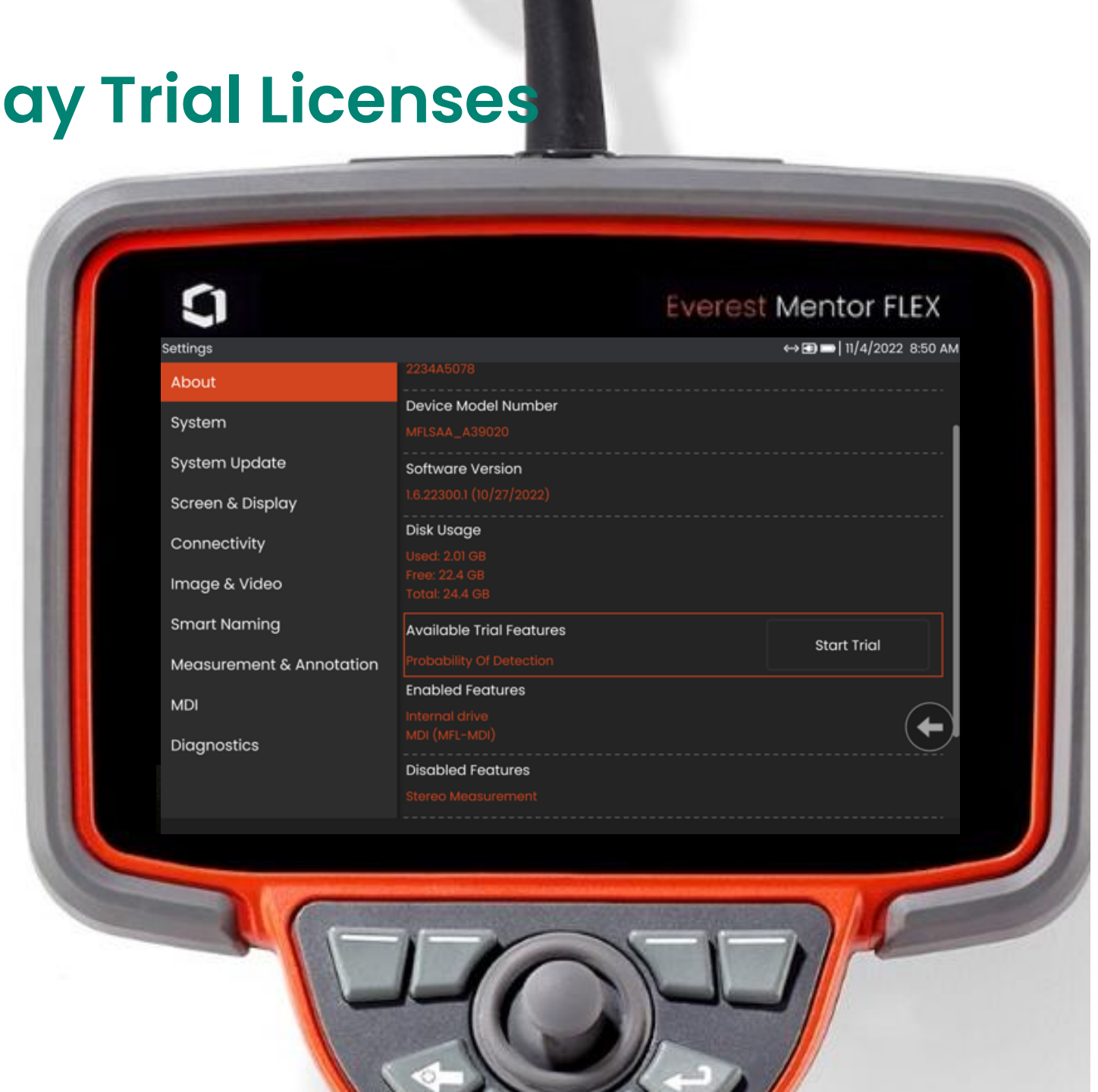
OS 1.6 Reminder | 90-day Trial Licenses

- All devices now offer a free 90-day trial of the POD package
- Now with the flexibility to choose when the trial begins
- To activate the trial, the user must select “Start Trial” in the Settings menu

Operating steps:

1. Navigate to Settings > About
2. Select “Start Trial”





Waygate Technologies