NIFTI Installation Guide

Installation and Removal of Sensor Nodes

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1 Introduction

This installation guide provides an overview on how to install and remove a NIFTI Sensor Node onto a test body. This guide focuses on the step-by-step procedure of a standard installation of the Sensor Node.

In addition, it is recommended to consider the flight speeds and test body curvature to decide on the most effective installation method. Please refer to section 4 for additional considerations in this regard.

DISCLAIMER: The steps shown in this Installation Guide are for information and guidance purposes only. Consult authorised personal for applicable materials and procedures suitable for your specific installation.

2 Standard Sensor Node Installation

These steps can be followed to ensure adhesion of a Sensor Node to a flat surface for flight speeds of less than 300 knots.

1. Clean the flat back of the NIFTI Sensor Node using a 50% isopropyl alcohol (IPA) and distilled water solution.

Figure 1:
50% IPA and distilled water solution sprayed onto cloth.

Figure 2:
Cleaning back of Sensor Node with cloth and solution.

2. Clean the installation site of the test body.[1]

[1] It is highly advised to consult with authorised personnel to select the cleaning solution appropriate for the installation location.

3. Remove white backing from the NIFTI Mounting Pad and apply it to the bottom of the Sensor Node, ensuring all air bubbles are removed.

Figure 3:
Remove white backing from the Mounting Pad.

Figure 4:
Attach the Mounting Pad to the back of the Sensor Node.

4. Remove red backing from the Mounting Pad and place and hold the Sensor Node to the test body firmly for 10 seconds.

Figure 5:
Remove the red backing from the Mounting Pad.

Figure 6:
Place Sensor Node onto AES.

Figure 7:
Firmly apply pressure to Sensor Node for 10 seconds.

3 Sensor Node Removal

These steps can be followed to remove the Sensor Node from a test body.

1. Remove the NIFTI Removal Tool from the NIFTI pack and unwind it.

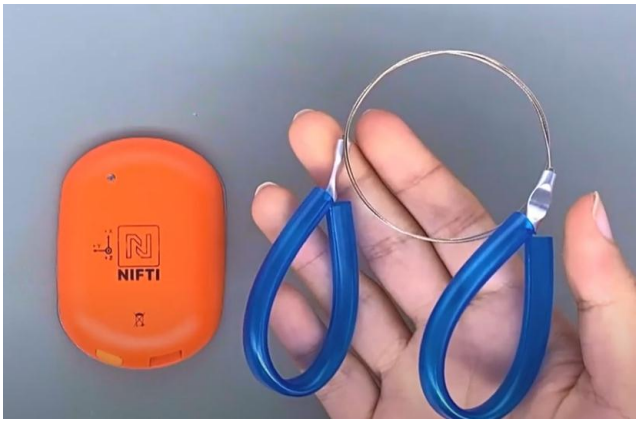

Figure 8: NIFTI Removal Tool.

2. Hold the NIFTI Removal Tool taut and position your hands at the corner of the NIFTI Sensor Node.[2] Position the wire in the middle of the adhesive layer and slowly start sawing through the NIFTI Mounting Pad itself.

Figure 9: Sawing motion through Mounting Pad using NIFTI Removal Tool.

3. Continue to saw through the mounting pad until you pull through the entire adhesive.

[2] You may need to pinch the tool higher up to further tension the wire as shown in Figure 9.

Figure 10: NIFTI Removal Tool sawing through the adhesive

4. Once sawn through, you may then be able to slowly lift the Sensor Node from the installation site.

5. Remove Mounting Pad from the Sensor Node by slowly rolling it back.

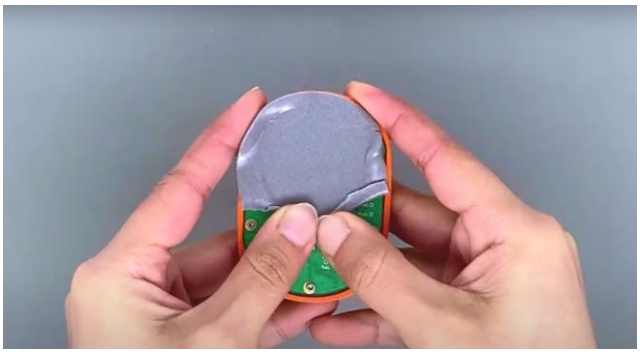

Figure 11: Removal of Mounting Pad from back of NIFTI Sensor Node.

6. After all adhesive is removed, the Sensor Node surface can be cleaned using 50% IPA and water solution. [3]

Figure 12: Final clean of Sensor Node using 50% IPA and distilled water solution.

[3] It is highly advised to consult with authorised personnel to select the cleaning solution appropriate for the installation location.

4 Additional Installation Considerations

4.1 Vacuum Bagging

If the test body is expected to be in flights with speeds greater than 300 knots, then it is highly advised to use a post installation method to further secure the Sensor Node. One option it to utilise vacuum bagging. For more detailed information refer to the *"NIFTI Vacuum Bagging Application Guide"*.

4.2 Support Structures

Additional support structures can be used to increase the contact area of the surface having small radius curvature. An example application is shown in Figure 13. Contact MEMKO for further information on your specific test body fitting requirements.

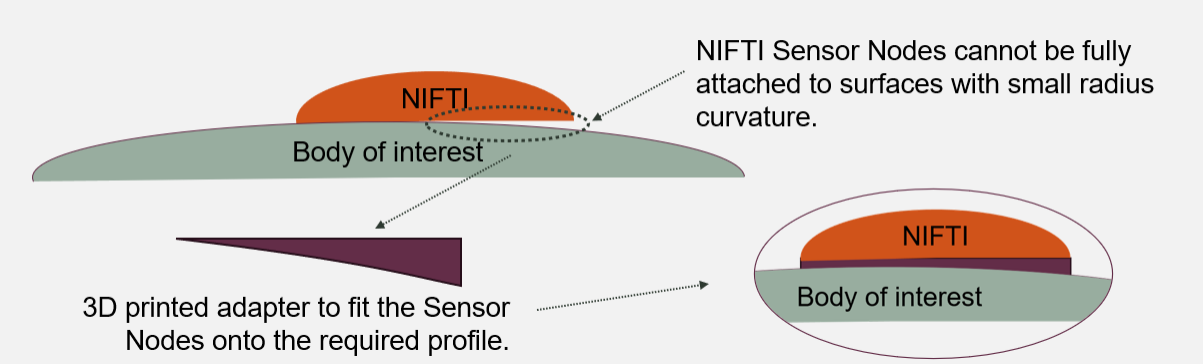

Figure 13: Sensor Node attached to an AES of small radius curvature AES curved surface using a support structure (images not to scale).