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**Persio Lisboa**  
Senior Vice President  
& Chief Procurement Officer

November 25, 2013

To: Navistar Suppliers

This is the 3<sup>rd</sup> in a series of communications to our suppliers. Last May we wrote that we were making progress on our 3D PDF effort to relay part data. Today, we're pleased to announce that Navistar will begin sending 3D PDF files for some parts. And, we will continue to provide all the files you normally have received.

Sending 3D PDF in addition to the regular files, including 2D CGM files, is a slight change from our original approach. We are not eliminating any file format at this time, so that we can ease into this new technology. The new 3D PDFs are for informational purposes with the expectation that you will investigate their usage and benefits in comparison to the 2D image provided (missing dimensions and being able to measure them in the 3D file).

If you have suggestions on how to enhance your ability to use the 3D PDF for quoting, please send these suggestions to [VPD@Navistar.com](mailto:VPD@Navistar.com). In the coming months, you may be selected to participate in a formal feedback process.

As a reminder of the powerful information capabilities of 3D PDF, we have attached as a PDF a part that you can try out the tools and concepts. The two short instructional videos that demonstrate 3D PDF capabilities and title/revision block information are posted on the [eSPEC Homepage](#).

If at any time you have questions, please contact [VPD@Navistar.com](mailto:VPD@Navistar.com) for technical/drawing questions or your Navistar procurement representative.

Thank you.

A handwritten signature in black ink, appearing to read "Persio Lisboa", with a long vertical line extending downwards from the end of the signature.

Senior Vice President  
& Chief Procurement Officer

## Questions and Answers

### 1. Does this impact all Navistar Suppliers?

Initially this will apply only to suppliers supporting Navistar's vehicle production, followed by a rollout to engine parts suppliers. At this time there is no timeline for implementation with Navistar's military suppliers.

### 2. What is the timeline for implementation?

In mid-November, we will be producing 3D PDF files along with 2D CGM and other files per the supplier registration. You do not need to register for 3D PDF. When the 3D PDF technology is proven and stable, we will move away from 2D CGM.

### 3. I currently receive 2D drawings. Will the 3D model contain the same information as I am accustomed to receiving?

Yes, with the possible exception of displayed dimensions. Most 3D models will not extensively call out dimension information; however, enough information is provided to allow you to interrogate the model for dimensions via your current CAD software, or Adobe Acrobat in the case of 3D PDFs.

### 4. Why does the file name have "not for quoting" in it?

At this time, the 2D CGM and the NX file is still the legal record for the part. Once 3D PDF format is proven and stable Navistar will change the legal record to be the 3D PDF and NX file. And, as such, the "not for quote" will drop from the new part and revision naming structure.

### 5. Will the file type I receive change?

Yes, you will receive all of the file type you have registered for, plus the 3D PDF for certain new parts and suffix changes to legacy part numbers.

### 6. What does Navistar want suppliers to do with the 3D PDF file?

Navistar would like suppliers to validate that they can use the 3D PDF for quoting or give feedback on what changes they need so that it could be used for quoting. You may provide this feedback to [VPD@Navistar.com](mailto:VPD@Navistar.com)

### 7. Will training be provided on 3D PDF parts?

Yes. As we get closer to full release, we will provide additional information via a series of instructional videos.

### 8. What software do I need to use the new 3D PDF file?

If you currently rely on 2D prints, the 3D PDF will provide you all the information you are accustomed to receiving and more. Plus, it can be viewed, interrogated, and marked-up via the free Adobe Acrobat Reader, version 9.x or higher.

### 9. Will there be a loss in resolution, fidelity, or precision of the data?

We expect to maintain or even improve data quality with the 3D PDF. That said, translated files are subject to translation errors on rare occasion. PRT (NX) files are the native CAD format, and represent the master record, so there will be no loss of data integrity. CAD files translated from the native NX carry similar resolution as the native file, but are subject to translation errors, like any translated file. PDF files carry similar data resolution as the native NX, but are also translated files and thus subject to translation errors.

#### **10. What is PMI?**

PMI is an acronym for Product and Manufacturing Information. PMI is the non-geometric information associated with a product, and generally contains information such as GD&T, title blocks, material specifications, etc. However, PMI can also contain many other types of information, including notes and annotations. The PMI will be made available within the 3D model files.

#### **11. What is MBD?**

MBD stands for Model Based Design. This is the practice of using 3D models to provide specifications, including PMI, for individual parts and assemblies. This term is used colloquially within Navistar to refer to the initiative about which you are now learning.