

NGRAIN VIEWER QUICK START GUIDE

VERSION 4.2

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PROPRIETARY INFORMATION

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1.0 WHAT IS NGRAIN VIEWER?

NGRAIN® Viewer provides real-time, unscripted interactivity with 3D equipment simulations, enabling virtual hands-on practice of tasks and procedures (see Figure 1.1).

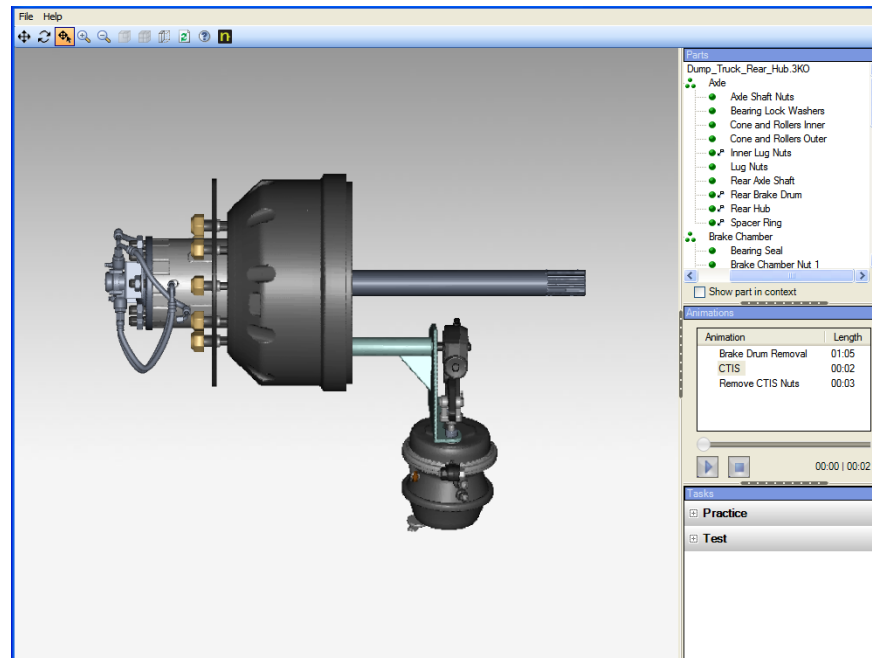


Figure 1.1 A 3D equipment simulation in NGRAIN Viewer

After you install NGRAIN Viewer, you can interact with virtual equipment as if you were using live equipment.

NGRAIN Viewer can be embedded in an:

- NGRAIN® Virtual Task Trainer™ (VTT™)
- NGRAIN® Virtual Task Refresher™ (VTR™)
- Adobe® PDF file
- HTML program
- Windows® Forms program
- Microsoft® Word document
- Microsoft® PowerPoint® presentation

When NGRAIN Viewer is embedded, it may look slightly different in each program but still provides the same powerful functionality. Figure 1.2 on page 2 shows how NGRAIN Viewer looks embedded in a Word document.

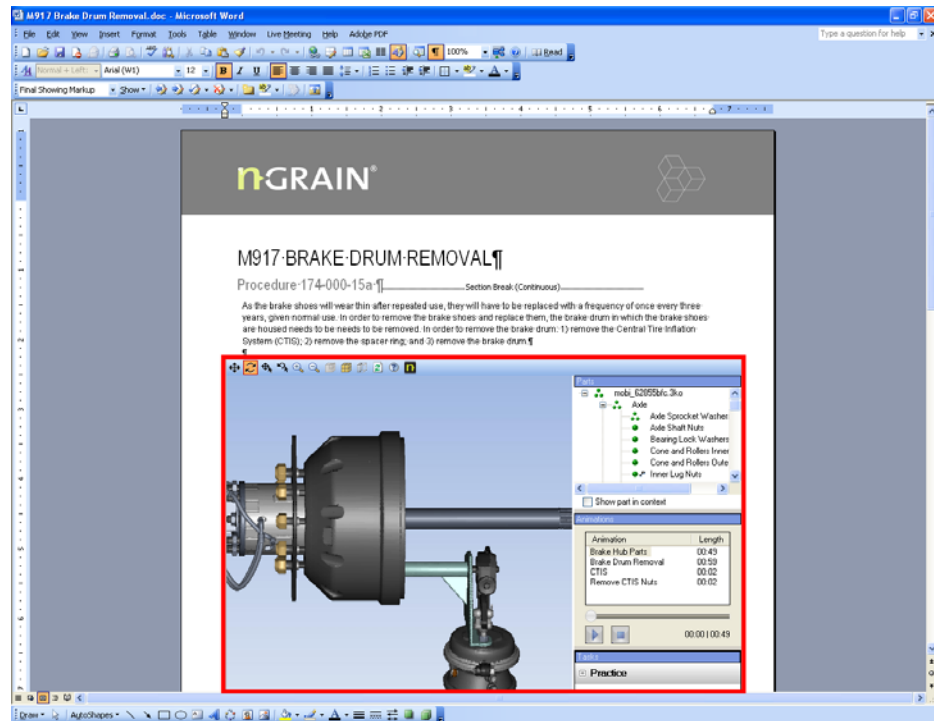


Figure 1.2 NGRAIN Viewer embedded in a Word document

Figure 1.3 shows how NGRAIN Viewer looks embedded in a Virtual Task Trainer.

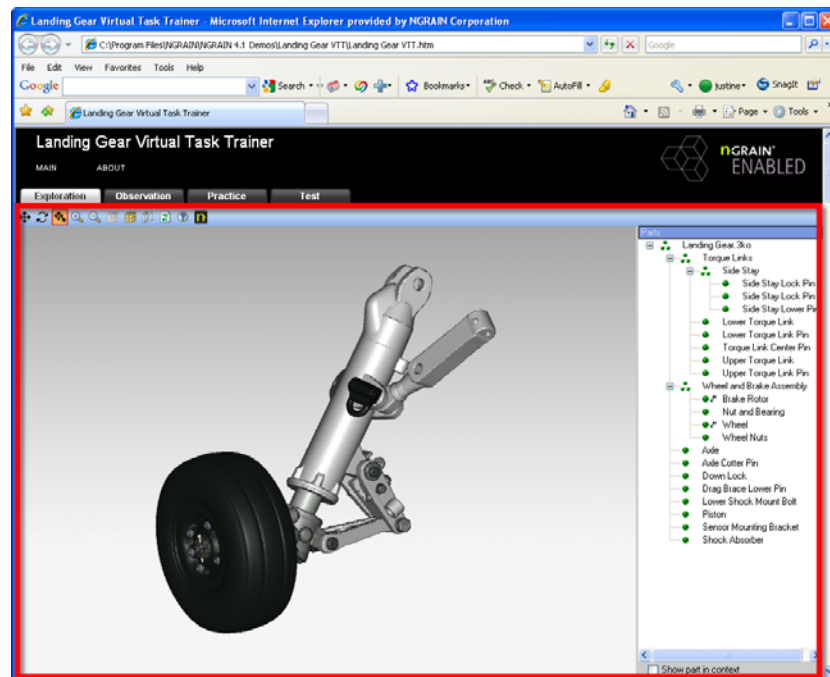


Figure 1.3 NGRAIN Viewer in a Virtual Task Trainer

2.0 WHAT CAN I DO WITH NGRAIN VIEWER?

In NGRAIN Viewer, you explore 3D equipment simulations by using the toolbar, the **Parts** panel, and your mouse to interact with the simulation in the workspace (see Figure 2.1). The *workspace* is the portion of the program window where the simulation is displayed.

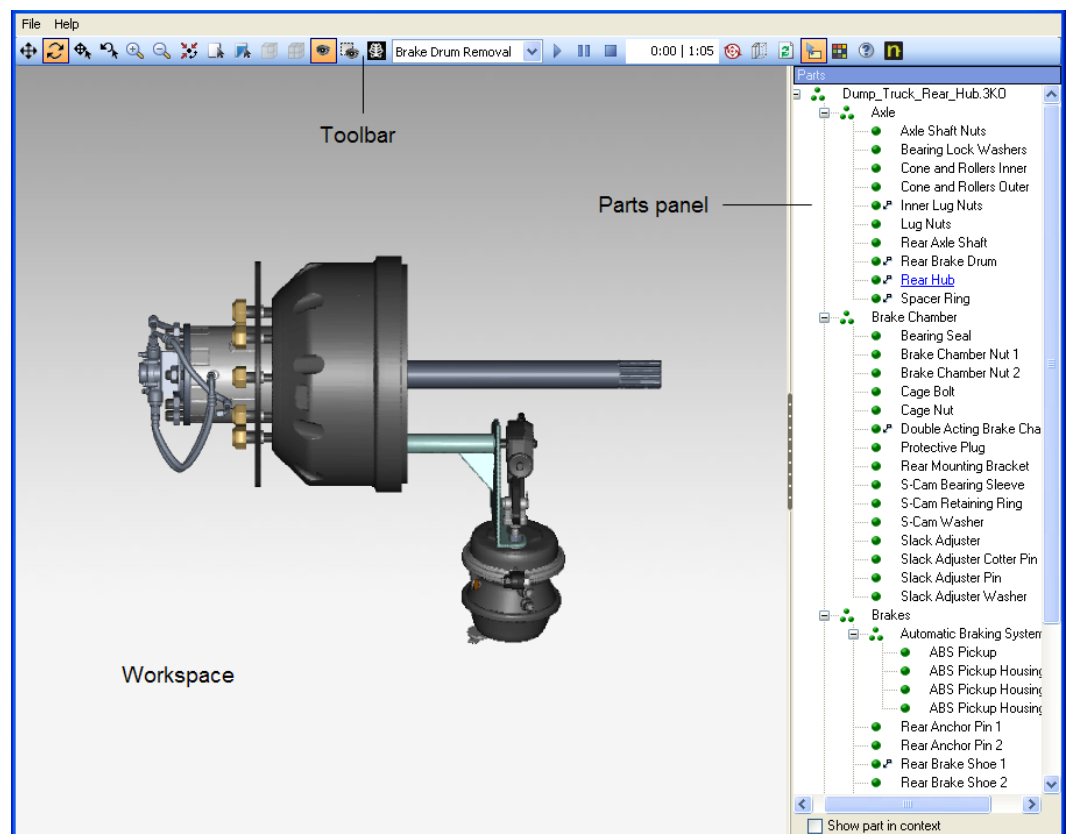


Figure 2.1 NGRAIN Viewer environment

Depending on how NGRAIN Viewer is configured, it may include the following:

- The **Properties** panel, which allows you to view the properties of selected parts and assemblies.
- The **Animations** panel or the Animation Slider, which allows you to view animations. For more information, see “Watch Procedural Animations” on page 11.
- The **Tasks** panel or the **Tasks** bar, which allows you to practice procedures. For more information, see “Practice Operation, Maintenance, and Repair Procedures” on page 14.

The following pages describe the features that will help you get started using NGRAIN Viewer.

Note Some of the features that are described may not be available in the variation of NGRAIN Viewer that you are using.

RESTORE THE 3D EQUIPMENT SIMULATION TO ITS ORIGINAL STATE

After you start interacting with a 3D equipment simulation, it's important to know how to restore the simulation to its original state.


To restore a simulation to its original state:

- On the toolbar, click the **Reset** button .

CENTER PARTS, ASSEMBLIES, OR THE WHOLE 3D EQUIPMENT SIMULATION


You can center parts, assemblies, or the whole model in the workspace. This allows you to rotate a part or assembly, or rotate the whole model, around its center.

To center parts, assemblies, or the whole simulation:

- 1 Select the parts or assemblies that you want to center. If you want to center the whole model, do not select any parts or assemblies.
- 2 On the toolbar, click the **Center** button .


MOVE THE WHOLE 3D EQUIPMENT SIMULATION

To move the whole simulation:

- 1 On the toolbar, click the **Move All** button .
- 2 Drag the pointer in the workspace.

ROTATE THE WHOLE 3D EQUIPMENT SIMULATION FREEHAND

To rotate the whole simulation freehand:

- 1 On the toolbar, click the **Rotate All** button .
- 2 Drag the pointer in the workspace.
The model rotates (see Figure 2.2).

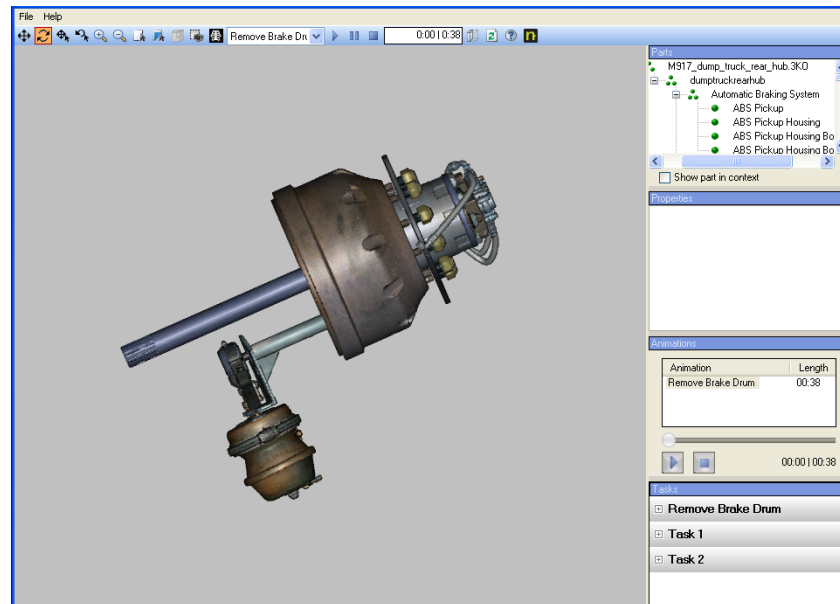


Figure 2.2 The rotated model

Tip You can also rotate the whole model, by pressing and holding the right mouse button while you drag the pointer over the workspace.

ROTATE THE WHOLE 3D EQUIPMENT SIMULATION PRECISELY


To rotate the whole simulation precisely:

- 1 On the toolbar, click the **Rotation Tool** button
- 2 On the Rotation tool (see Figure 2.3), click or click and hold the buttons to rotate or zoom the model.






Figure 2.3 Rotation tool

- 3 If you want to change the number of degrees by which the model rotates each time one of the buttons is clicked, click the **Rotation Increment** button , and then click the number of degrees that you want. The default value is 5 degrees.

- 4 If you want to view the model from the front, back, left, right, top, or bottom, click the **Rotation Increment** button , and then click one of the preset views.

SELECT PARTS

To select a part:

- 1 You can only select parts in the workspace when you're in *move part* mode or *rotate part* mode. On the toolbar, click the **Move Part** button  or the **Rotate Part** button .
- 2 In the workspace or the **Parts** panel, click the part.
Tip To select multiple parts, hold down the CTRL key and click each part.
- 3 If you want to select all but a few parts, sometimes it's easier to invert your parts selection. For example, if you want to select everything except for two parts, select the two parts, and then click the **Invert Selection** button .

VIEW PART INFORMATION

To view part information:

- Pause your mouse pointer on a part.

A ScreenTip appears, displaying information about the part (see Figure 2.4).

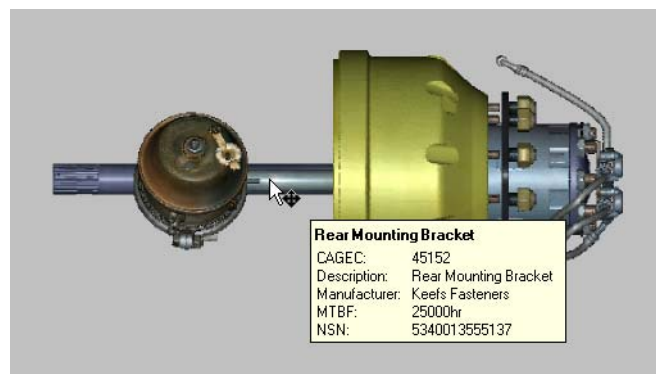



Figure 2.4 Part information appears in ScreenTips

MOVE PARTS

To move a part:


- 1 On the toolbar, click the **Move Part** button .
- 2 In the workspace or the **Parts** panel, click the part.

Tip To select multiple parts, hold down the CTRL key and click each part.

- 3 In the workspace, position the pointer over the part you want to move, and then drag it to a new location.


ROTATE PARTS

To rotate a part:

- 1 On the toolbar, click the **Rotate Part** button .
- 2 In the workspace or the **Parts** panel, click the part.
- 3 In the workspace, position the pointer over the part you want to rotate, and then drag it to rotate it.

ATTACH PARTS

To attach a part:

- 1 Select the part you want to attach.
- 2 Do one of the following:
 - Drag the part to its attach location. When you move the part close to its attach location and release the mouse button, the part will snap to attach.
 - On the toolbar, click the **Attach** button .

Tip To attach all parts, click the **Attach All** button .

VIEW INTERNAL PARTS IN A 3D EQUIPMENT SIMULATION

You can view parts so that their position or context within the model can be seen. This is useful for viewing internal parts (see Figure 2.5).

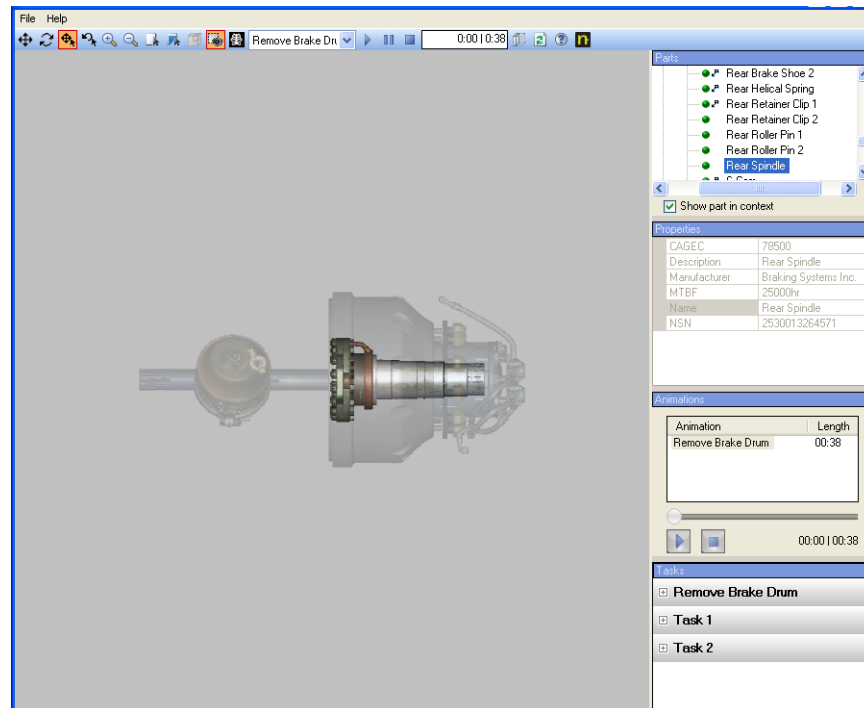



Figure 2.5 Internal parts shown in context view.

To view internal parts in a simulation:

- 1 In the **Parts** panel or the workspace, select the part you want to view in context.
- 2 Do one of the following:
 - On the toolbar, click the **Context View** button .
 - In the **Parts** panel, select the **Show part in context** check box.
- 3 To return to normal view, repeat step 2.

VIEW A CROSS SECTION OF A 3D EQUIPMENT SIMULATION

You can view the internal arrangement of a 3D equipment simulation by using the cross-section feature (see Figure 2.6).

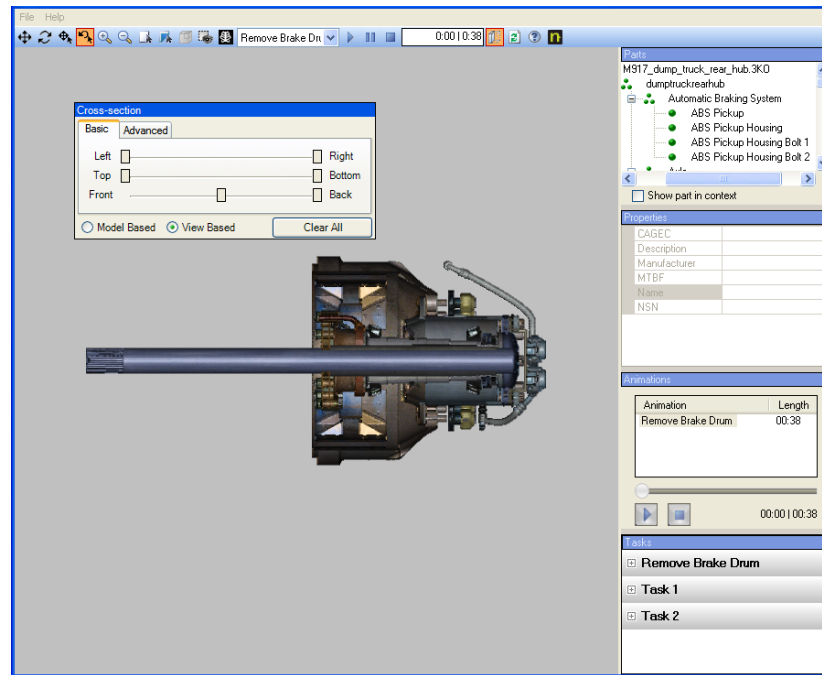


Figure 2.6 A cross section of a 3D equipment simulation

To view a cross section of a simulation:

- 1 On the toolbar, click the **Cross-section** button . The **Cross-section** palette appears (see Figure 2.7).

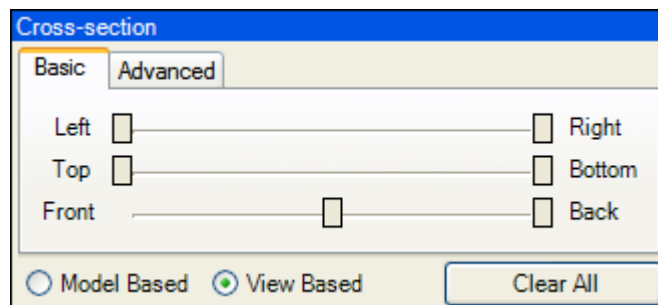


Figure 2.7 The Cross-section palette

- 2 Select whether you want to cross-section based on the model or the view angle. Model Based means that the cross-sectioning will occur from the left, right, top, bottom, front, and back of the selected parts, despite the view angle. View Based means that the cross-sectioning will occur from the left, right, top, bottom, front, and back of the current view angle.

- 3 Drag one or more of the sliders to cut away a section of the simulation.

Tip If you want to cross-section more precisely, click the **Advanced** tab, and type or select numbers between zero (0) and 97.5 in any of the **Left**, **Right**, **Top**, **Bottom**, **Front**, and **Back** boxes.

- 4 If necessary, rotate the simulation to view the cross section.
- 5 To undo a cross section, on the **Cross-section** palette, click **Clear All**.

VIEW AN X-RAY IMAGE OF A 3D EQUIPMENT SIMULATION

You can view an X-ray of the 3D equipment simulation (see Figure 2.8).

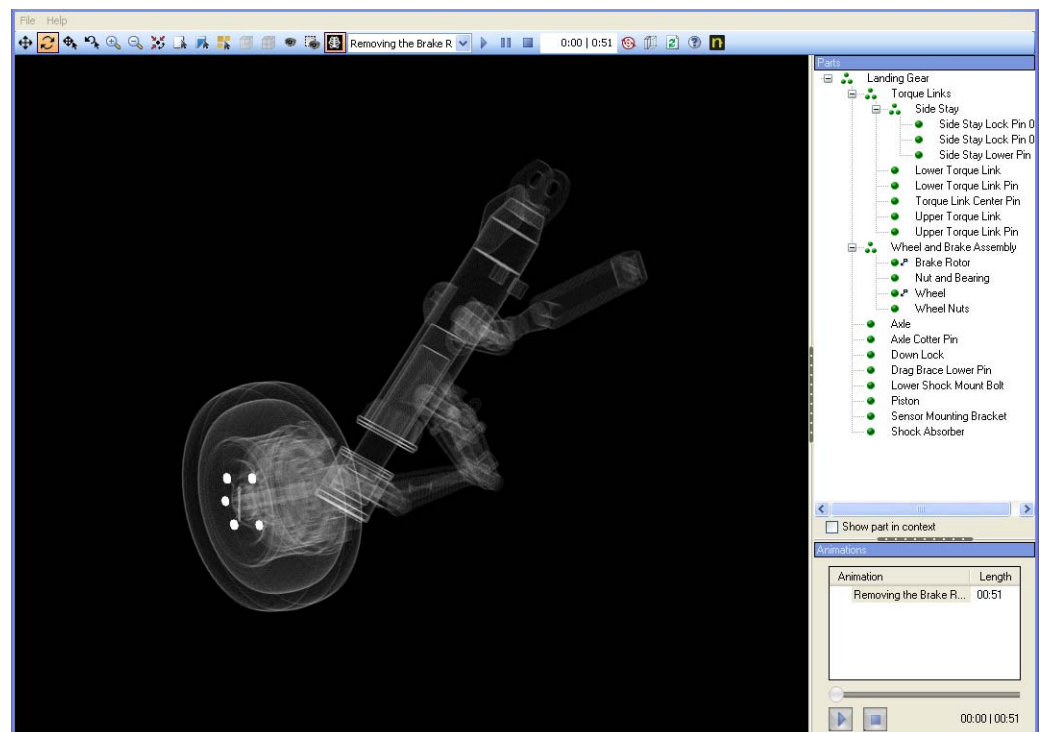





Figure 2.8 A 3D equipment simulation in X-ray view

To view an X-ray image of a simulation:

- 1 On the toolbar, click the **X-ray View** button .
- 2 To return to normal view, repeat step 1.

ZOOM IN AND OUT

To zoom in or out:

- To increase magnification, on the toolbar, click the **Zoom In** button .
- To decrease magnification, on the toolbar, click the **Zoom Out** button .

Tip You can also use your mouse wheel to zoom in and out. Rolling the wheel forward zooms in and rolling it backward zooms out.

WATCH PROCEDURAL ANIMATIONS

You can watch procedural animations that show specific tasks or procedures, such as an assembly procedure.

To watch a procedural animation:

- 1 Select the animation you want to view from the **Animations** panel (see Figure 2.9) or the Animation Selector on the toolbar (see Figure 2.10).

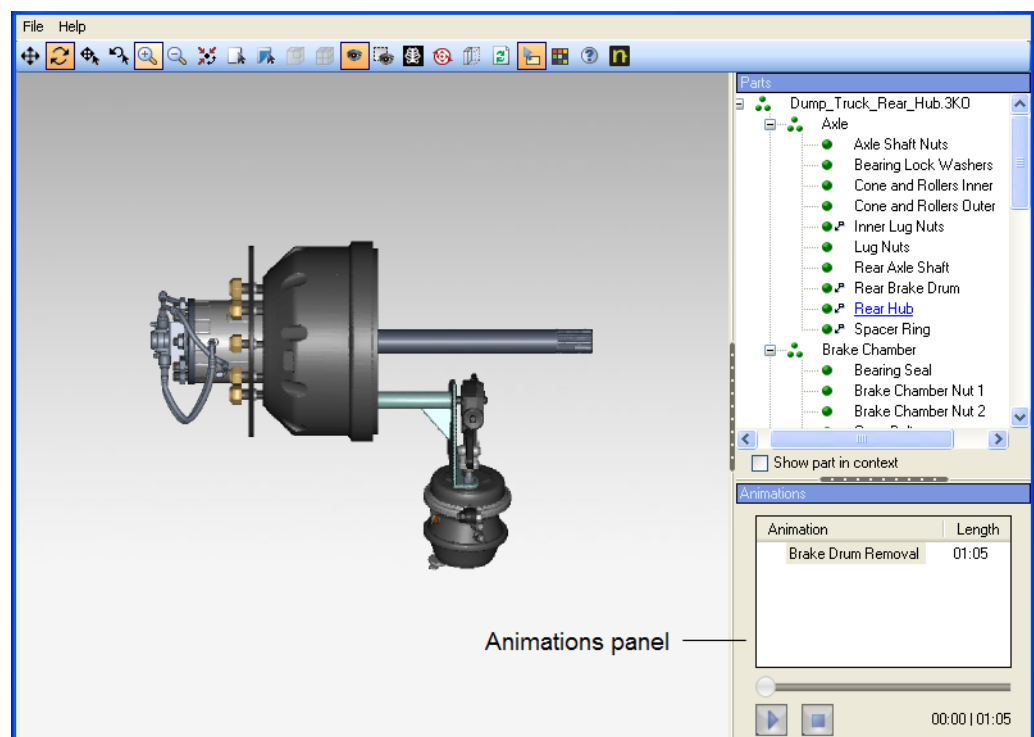


Figure 2.9 Select animations from the Animations panel, if included.

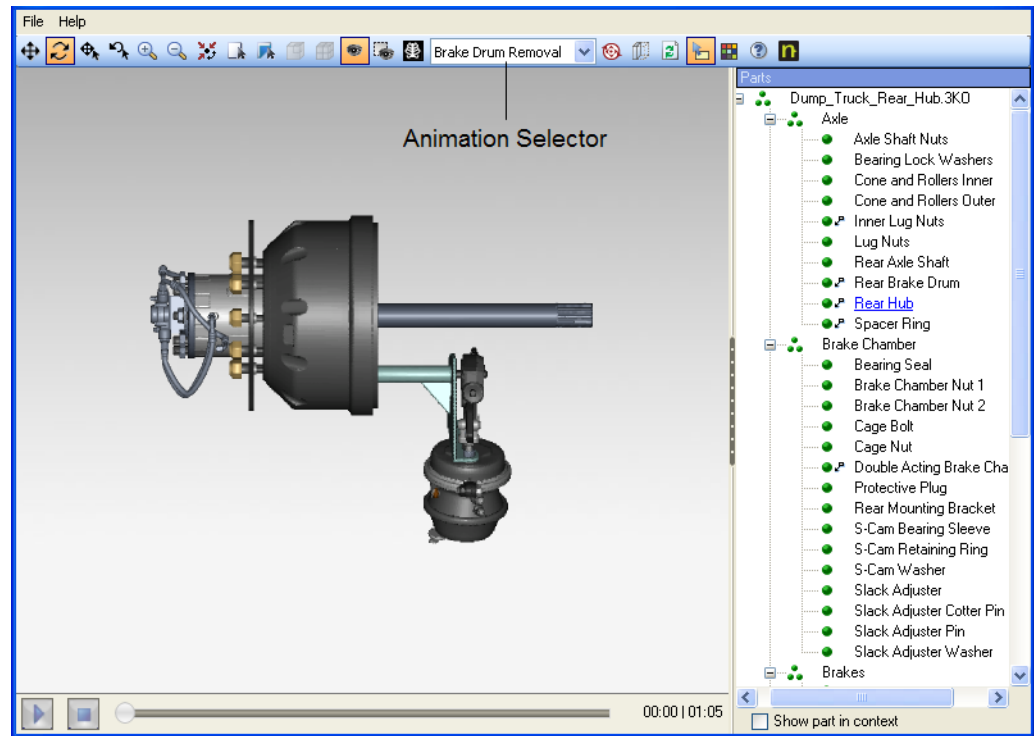



Figure 2.10 Select animations from the Animation Selector, if included.

Note An audio symbol  appears next to animations that contain audio.

- 2 Click the **Play** button  in the **Animations** panel (see Figure 2.11) or on the Animation Slider (see Figure 2.12).

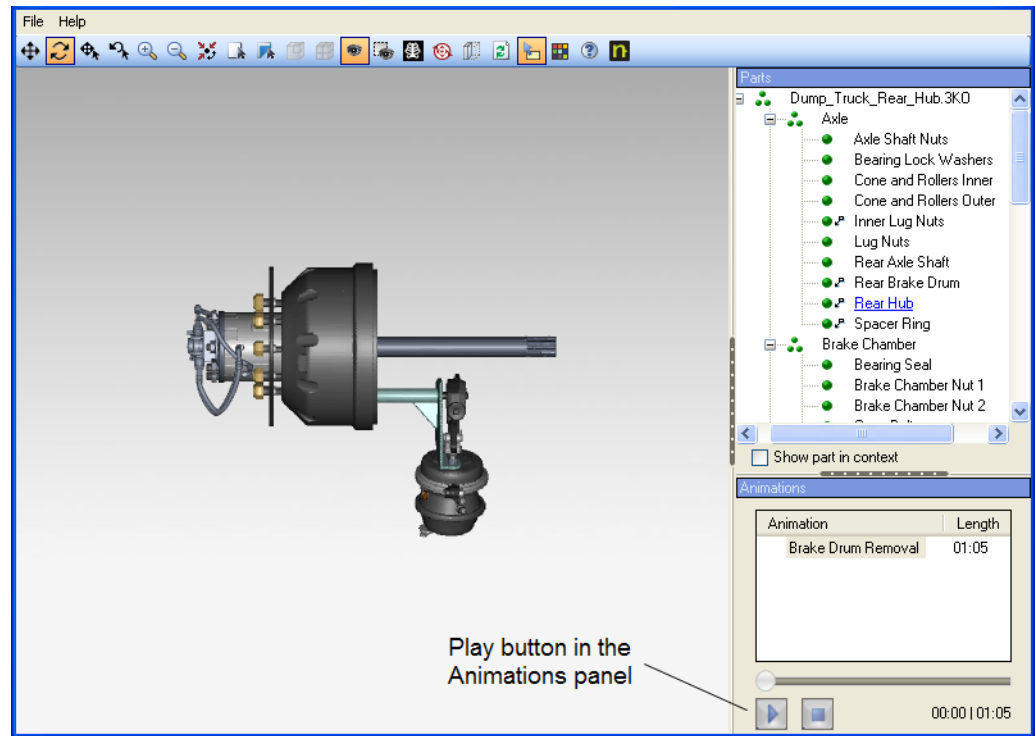


Figure 2.11 Click the Play button in the Animations panel, if included.

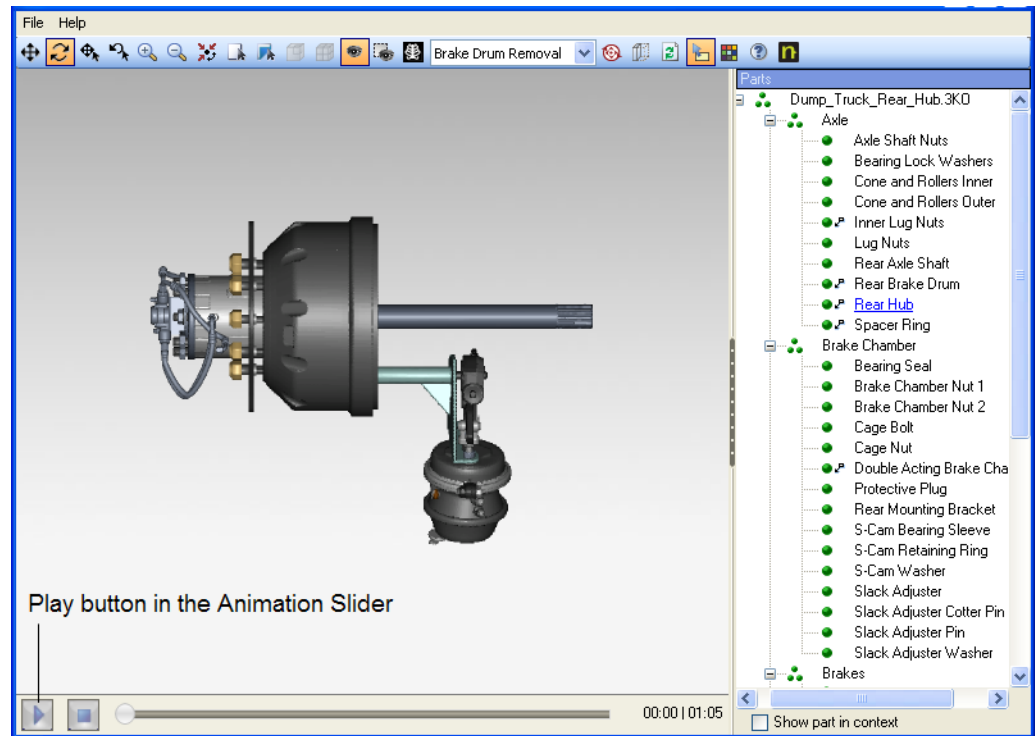





Figure 2.12 Click the Play button on the Animation Slider, if included.

- 3 If you want to interact with the simulation at any time during the animation, press the **Pause** button . When you are ready to continue watching the animation, press the **Play** button .
- 4 If you want to stop the animation, press the **Stop** button .

Note You may be able to play, pause, and stop animations by using the buttons and slider that display at the bottom of the workspace.

PRACTICE OPERATION, MAINTENANCE, AND REPAIR PROCEDURES

You can practice procedures virtually by completing step-by-step tasks that may include attach steps, remove steps, select steps, move steps, multiple-choice question steps, or short-answer question steps.

If you perform tasks that are designed to assess your skills, they may not include the guided hints and tips that practice tasks include.

If you are performing a task in a practice environment, you may be able to restart the task from the beginning of any step.

To practice a procedure:

- 1 Depending on how Viewer is configured, select the task that you want to practice from the **Tasks** panel (see Figure 2.13) or the **Tasks** bar (see Figure 2.14).

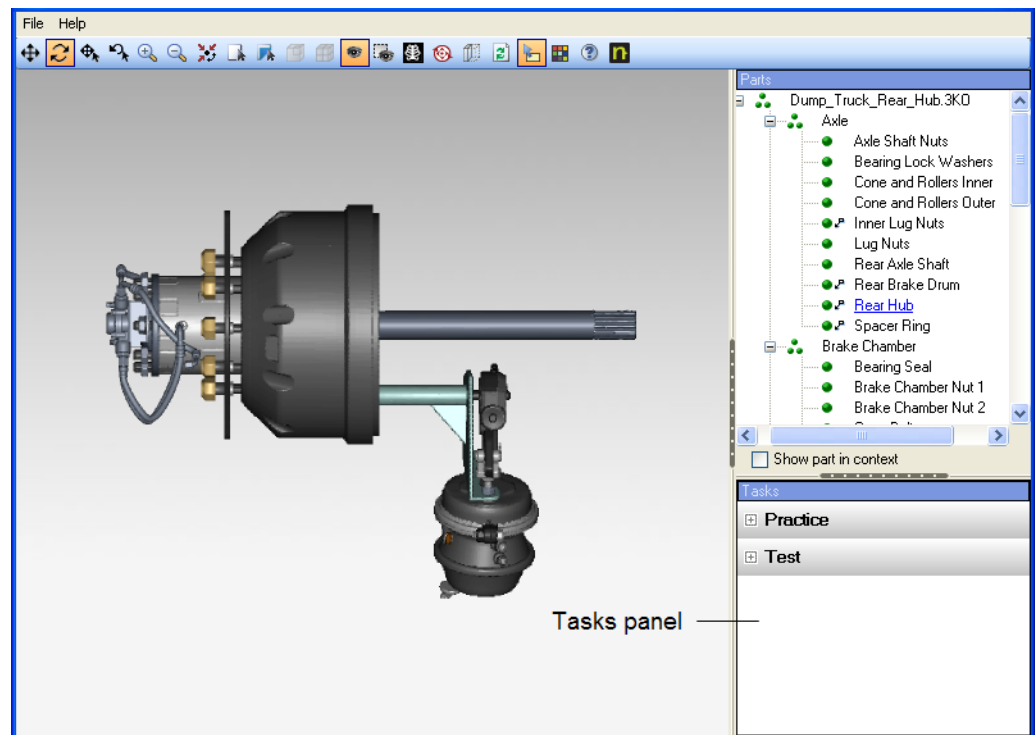


Figure 2.13 Select tasks from the Tasks panel, if included.

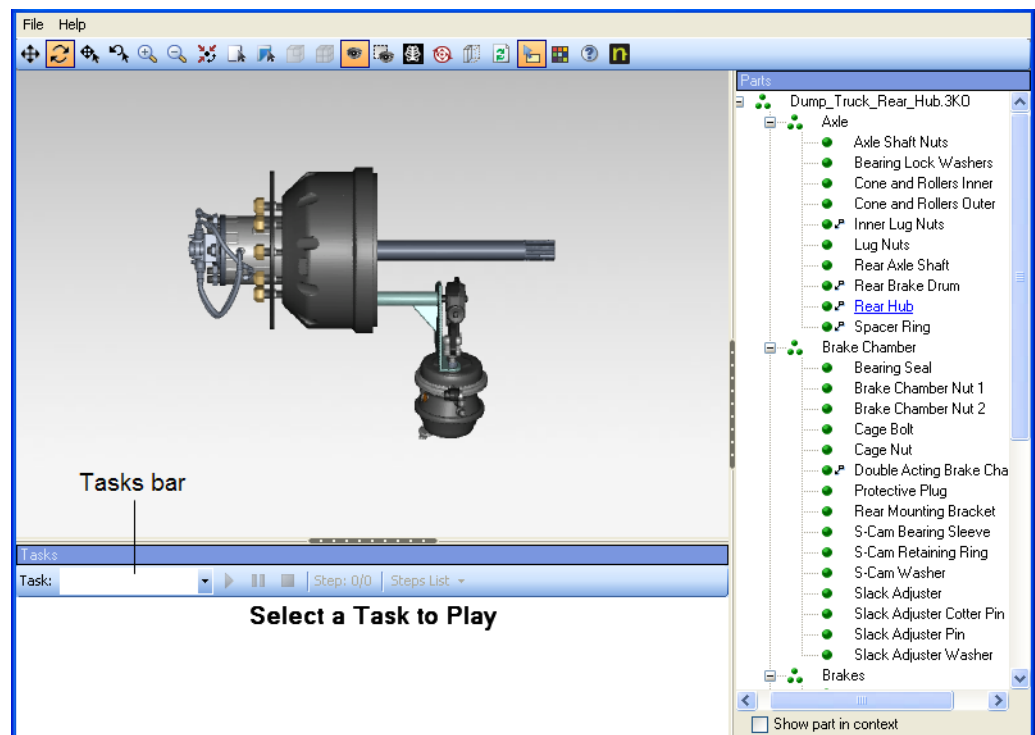


Figure 2.14 Select tasks from the Tasks bar, if included.

2 Follow the steps that appear:

- For attach steps, drag parts or assemblies from the parts bin and attach them to the main model or subassemblies in the simulation.
- For remove steps, remove parts or assemblies from the main model or subassemblies in the simulation and drag them into the parts bin (see Figure 2.15).

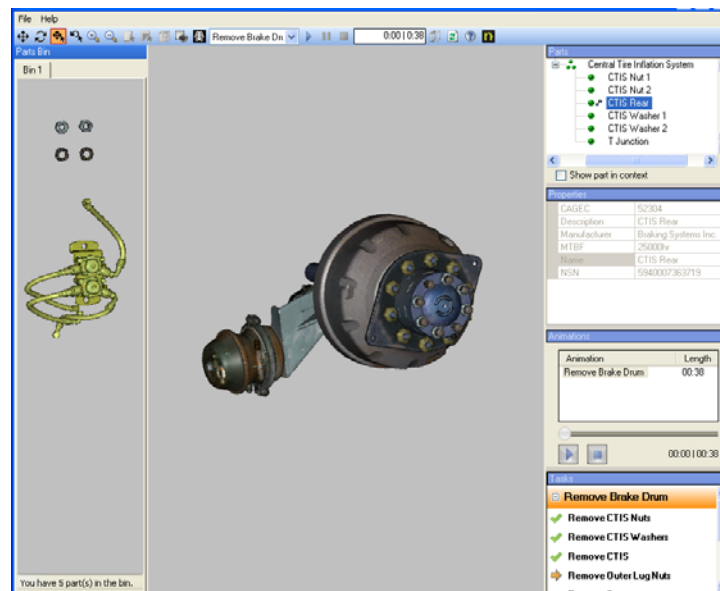


Figure 2.15 Remove the parts and drag them to the parts bin

- For select steps, click the part or assembly. To select multiple parts or assemblies, click the first part or assembly, hold down the CTRL key, and then click the next part.
- For move steps, move the part or assembly.

Tip During a task, you can freely interact with the model, for example, you can rotate the model or use context view to help you locate parts.

In the **Tasks** panel, a check mark  appears next to a step when it's complete (see Figure 2.16).

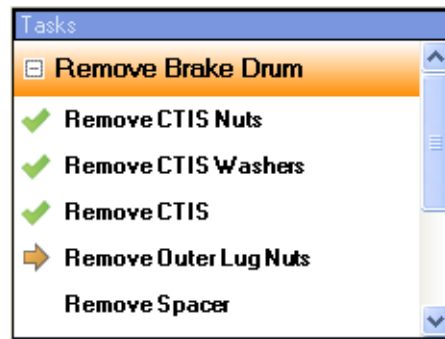


Figure 2.16 A check mark appears next to completed task steps

If you fail to complete a task step you might have to try again, or, depending on how the task is configured, you might instead proceed automatically to the next step or a different step.

Note A task may contain clickable callouts. Clickable callouts require you to click a button in the callout before the task will proceed (see Figure 2.17).

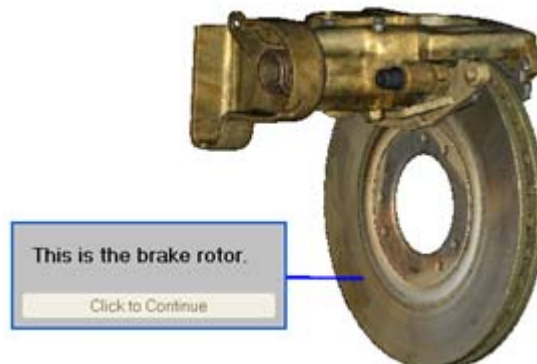


Figure 2.17 A clickable callout

APPENDIX A: INSTALLING NGRAIN VIEWER

To install NGRAIN Viewer:

IMPORTANT You must have administrator rights on the computer.

- 1 Close any programs that are running.
- 2 Go to www.ngrain.com/products/viewer/.
- 3 Click the **Download** tab, enter your contact information, and then download and save the appropriate program file.
- 4 Double-click the program file and click **Run**.
- 5 Follow the instructions in the InstallShield® Wizard.

Note If Microsoft Word, Microsoft PowerPoint, or Adobe Acrobat 9 Pro Extended is installed on the computer, the NGRAIN Viewer plug-in for that program will be installed. The plug-ins allow 3D equipment simulations to be embedded in documents and presentations.

APPENDIX B: TROUBLESHOOTING FAQ

This appendix contains answers to the most frequently asked questions about NGRAIN Viewer.

WHICH 3D FILE FORMATS DOES NGRAIN VIEWER SUPPORT?

You can open NGRAIN® 3D Knowledge Object (3KO®) files in NGRAIN Viewer. The file name extension for 3KO files is *.3ko*.

WHY CAN'T I VIEW THE NGRAIN DEMOS?

To view the NGRAIN demos, NGRAIN Viewer must be installed on the computer that you are using. For installation instructions, see Appendix A: on page 18.

IF I UPGRADE TO NGRAIN VIEWER 4.2, CAN I OPEN FILES CREATED IN PREVIOUS NGRAIN VERSIONS?

Yes, you can open files created in Producer 3.2 and later.

WHY CAN'T I EMBED 3KO FILES IN WORD, POWERPOINT, OR ACROBAT?

If you don't see the option to insert *NGRAIN 3KO* on the **Insert** menu in Acrobat, Word, or PowerPoint, the NGRAIN Viewer plug-ins are not installed on the computer. The plug-ins are installed only if these programs were installed on your computer before NGRAIN Viewer was installed.

To install the plug-ins, you must run the NGRAIN Viewer 4.2 InstallShield Wizard.

WHY CAN'T END USERS SEE THE 3KOS I EMBEDDED?

If you embedded a 3KO in a Word document, PowerPoint presentation, or PDF file but end users see only an empty NGRAIN box (see Figure B.1), they do not have NGRAIN Viewer installed on their computers. NGRAIN Viewer must be installed on their computers.

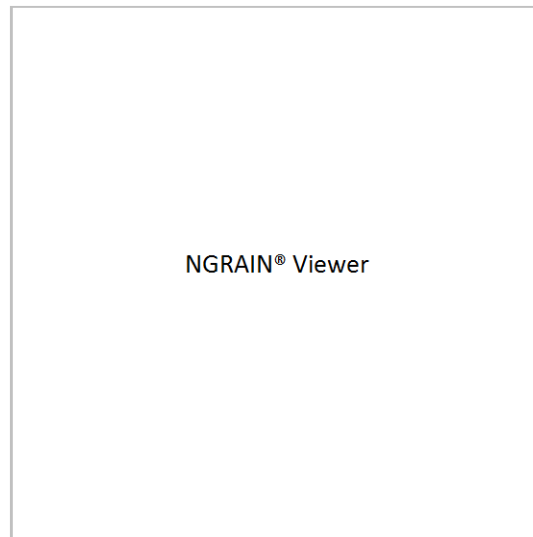


Figure B.1 If you see a box like this, NGRAIN Viewer is not installed.

IN WINDOWS EXPLORER, WHY DOESN'T A THUMBNAIL SHOW FOR SOME 3KO FILES?

When you are in Thumbnails view in Windows Explorer, thumbnails show for all 3KOs in which a startup snapshot was captured in NGRAIN® Producer® 4.1 and later. Producer is the program that is used to create and edit 3KO files.