



2017.2 Release

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## NUCARS® 2017.2

### Release Notes

This installation includes all previously released updates, as well as upgrades and bug fixes to the following programs:

- NUCARS
- TrackVu
- NUCARS User Interface
- User Manual
- User Example Files

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### New Features

#### NUCARS

- Updated contact table
  - A new creep force calculation table, generated by VORtech CMCC using the latest CONTACT program, is implemented in this release. The table format and subroutines were modified based on the original Kalker's USETAB program released in 1996. Hunting simulations show penetration model results using the new extended USETAB creep force generally match test data better than those from wnt model using previous creep force table.
  - Optional usage of the previous creep force table is made possible by using new keywords regardless of the wheel/rail contact model (wnt or penetration). See section 4.8 of the manual for more information.
- Improved error messaging
  - Note: Improved error checks may cause a previously working file to now display an error. TTCI recommends always checking the .log file for simulation errors.*
  - Body connection order (See section 5.8 of the manual for more information.)
  - Flexible body modes with single mode of bending



### **TrackVu**

- Batch processing for exporting to text format and automated processing of Trimble Trolley files.

### **NUCARS User Interface**

**v17.2.4**

- Redesigned Wheel/Rail Element entry.
- Type 8 connection and characteristic data, and more comment locations can now be read-in from existing .sys files.

### **User Example Files**

- New wheel profile (.fit) AAR-2A narrow flange is located at C:\Program Files (x86)\NUCARS\Wheel\_Rail\_Geometry\Theoretical\Wheels

### **User Manual**

- Improvements to Section 5.10.1 regarding interpreting type 1.3 shear connection results.

## **Bug Fixes**

### **NUCARS**

- Fixed a bug when using multiple rail .fit files with \RESTRAINING RAIL keyword where the simulation ignored the end of the restraining rail. See Section 11.6.5 of the manual for information on this feature.

### **TrackVu**

- Improved precision in calculations for converting file units between metric and English.

### **NUCARS User Interface**

- Errors regarding read-in of scientific notation and WHEEL/RAIL ELEMENT header.

### **User Manual**

- Corrected \FLEXIBLE MODES example in Figure 5-7 with single mode of bending.



## Providing Feedback

When requesting support, please visit our webpage at <http://nucars.aar.com/submit.php>  
Please include all necessary files and information to reproduce your problem.

The screenshot shows a web browser window with the URL [www.aar.com/nucars/submit.php](http://www.aar.com/nucars/submit.php). The page features a navigation bar with links for Home, About, Downloads, and Support, and a "project phoenix" logo. The main content area is titled "User Support Request Form" and contains the following fields:

- Name:
- Email:
- Company or Organization:
- Phone Number:
- Key Number:
- Security or License related?:  Yes  No
- Sub program:

The "Bug Report" section includes:

- Program Version:
- (Example: TrackVu 2014.2.1, you can find this information in the about box.)
- Description of unexpected behavior:
- Attach simulation files necessary to recreate the issue. (Your file will be used only to support your issue and must be a .zip)
- Browse... No file selected.

The "Feature Request" section is currently empty.