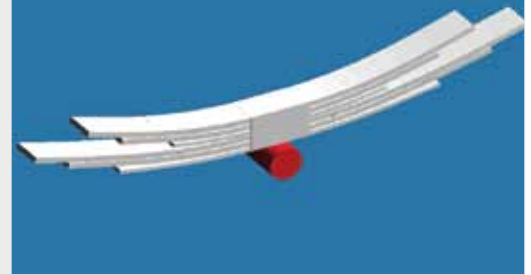


Adams/Leafspring

Application to Adams/Car of a Leafspring Model



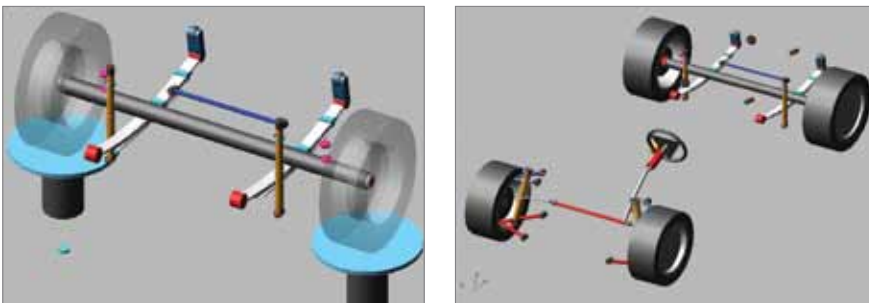
Overview

Leafspring Toolkit provides a study environment which supports detailed design condition. It enables users to model leaf-spring suspensions using an advanced discrete beam approach. This approach has been well tested and validated in many successful suspension design projects already carried out by MSC Software.

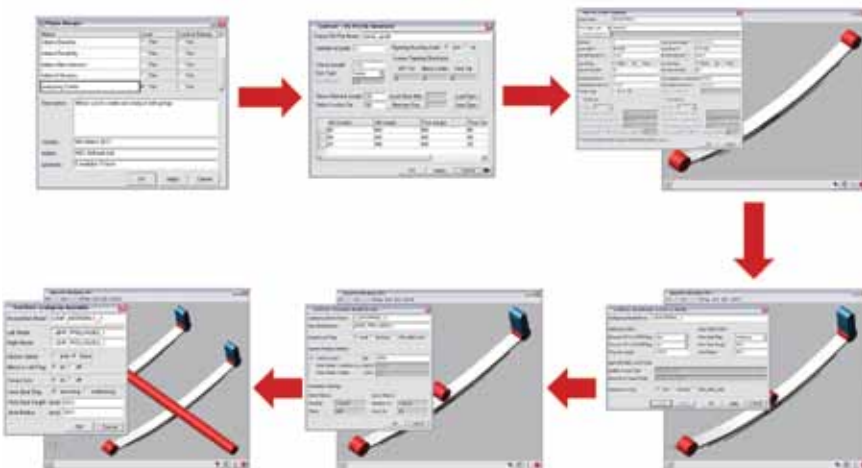
With this Toolkit, users can study the model by making the best use of the analytical capabilities of Adams.

Adams users can create a detailed leaf-spring model, study the simple leaf-spring suspension performance, and then to easily incorporate them into the vehicle models in Adams/View or Adams/Car.

Application to the Full Vehicle & Suspension Analysis of a Leafspring Model



Model Creation Process



Geometry Options

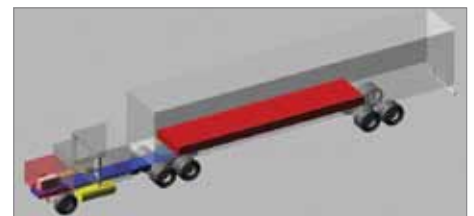
- Initial geometry creation feature (automatically create a geometry by specifying the camber height from a flat geometry)
- Symmetric or Unsymmetrical leaf-spring
- Single or Multistage
- Constant Thickness or Tapered leaf-spring
- Compression or Tension Shackle
- Upturned, Down turned, or Berlin Eye Types
- Spring/Frame Connection
- Shackle/Frame Connection
- Number and position of clip, clearance with the main leaf

Modeling Options

- Variable Number of Beam Elements
- Variable Number of Contact Forces
- Material Properties
- Contact and friction between pad and leaf
- Contact and friction between clip and leaf
- Contact and friction between leaves
- Axle Mount or Frame Mount
- Parameter of Mount
- Joint or Bushing Attachments
- Convert to Adams/Car Templates

Analysis Options

- Study the Design Parameters
- Test using built-in test-rig (Adams/Car)
- Validation of load-deflection curve
- Modeling of Loaded Leafspring (model of 1G state, design weight condition)
- Interleaf friction studies



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