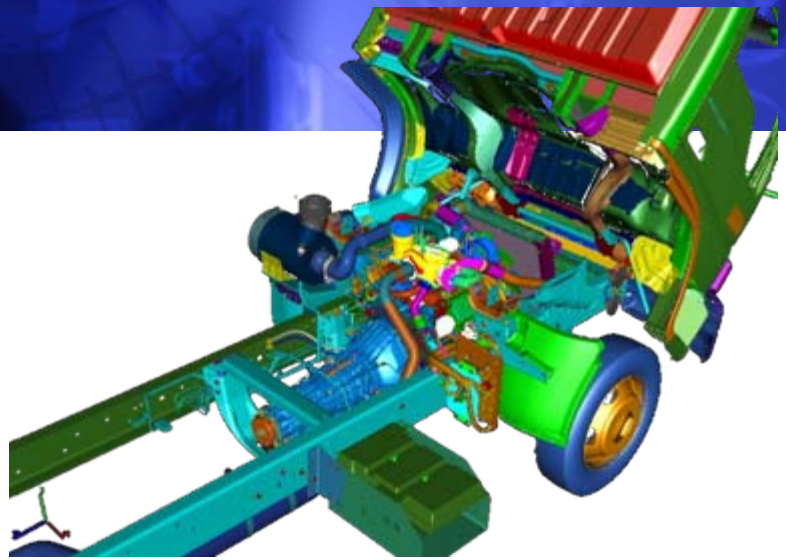
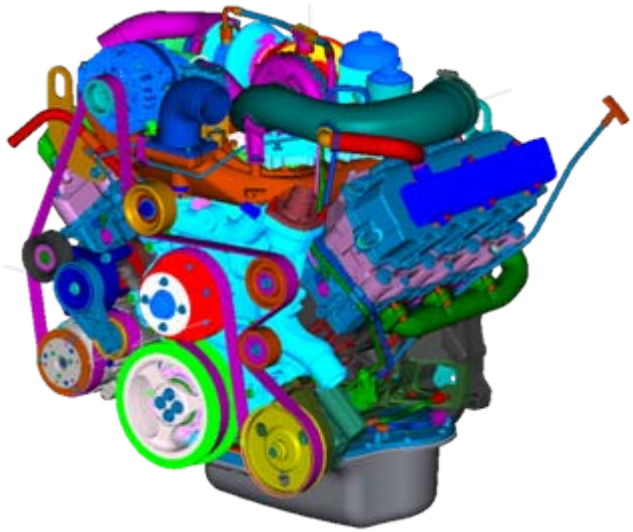
Use of JT files in I-DEAS for Multi-CAD for design.





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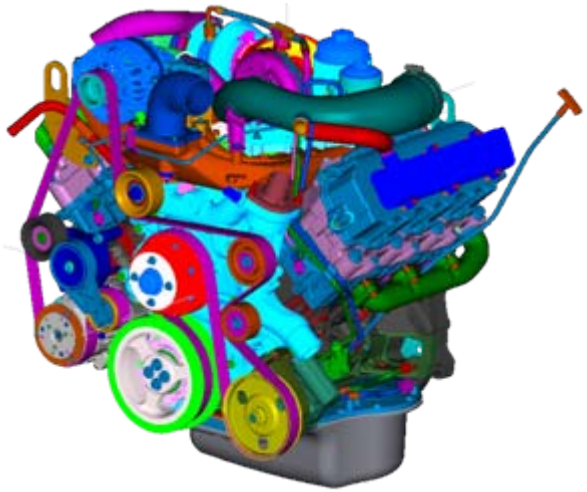
Premium Partners:

Use of JT files in I-DEAS

- Agenda
  - Company Overview
  - VisMockup/JT Overview
  - JT files at **INTERNATIONAL®**
  - JT files in I-DEAS
    - Advantages/Disadvantages
  - JT file challenges with I-DEAS
  - Summary



International Truck and Engine Corporation

- Highlights…
- 14,000+ employees worldwide
  - Engine Group produced 376,000+ OEM engines from plants in North and South America

CXT

International Trucks

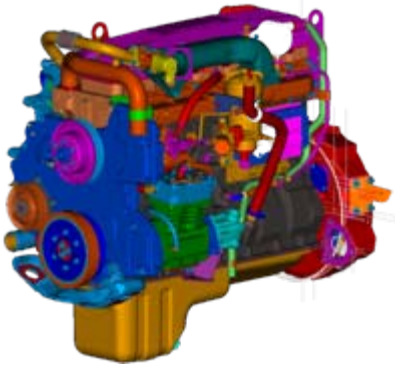
RXT

MXT

Ford Trucks

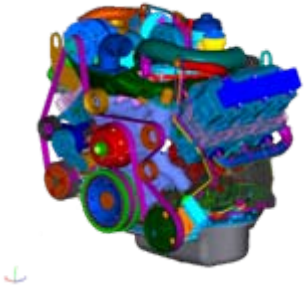
International Truck and Engine Corporation

- Engine Products
  - DT 466, DT 530 & DT 570: In-line 6 cylinder 466, 530 and 570 cubic inch displacement
    - 210-330 HP 520-1150 ft-lb



  - VT 365: V-8 6.0 liter displacement
    - 235-325 HP 460-620 ft-lb

  - VT 275: V-6 4.5 liter displacement
    - 200HP 440 ft-lb

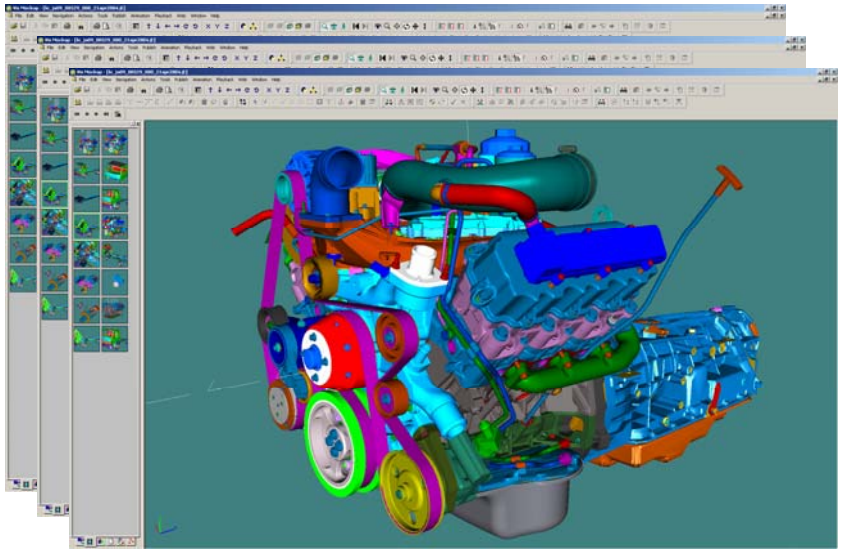


Engine Group Software Usage

- Engine Group
  - I-DEAS 10
    - Main CAD software package
  - NX2
    - Supplement design group with added functionality
  - VisMockup 4.1 and 5.1
  - Team Center 9

Use of JT files in I-DEAS

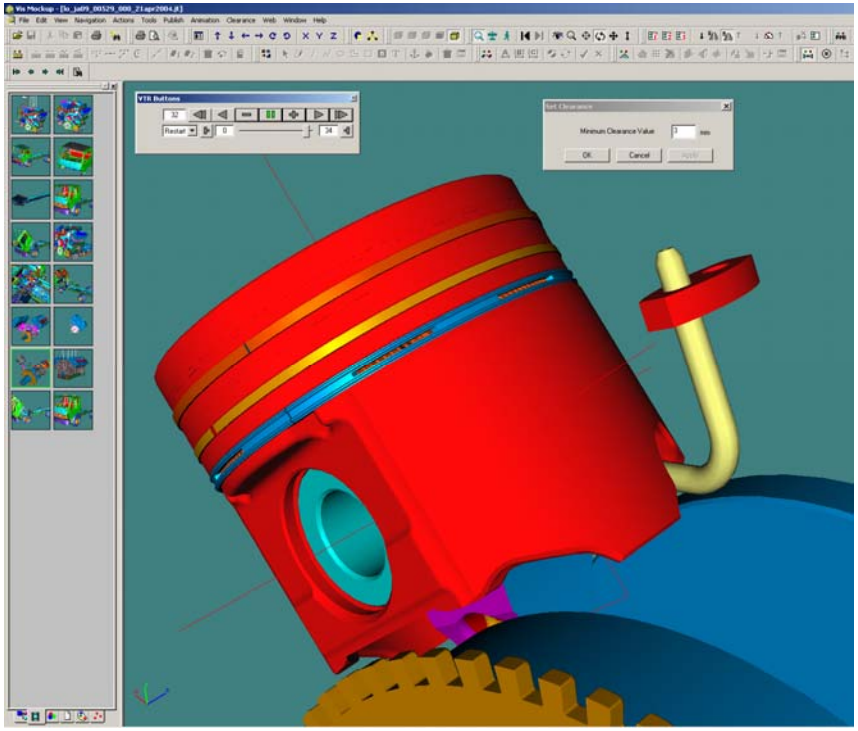
- VisMockup/JT Overview
  - Team Center Visualization Suite
  - Virtual prototyping tool
  - Multiple CAD sources
    - Publish
    - Assembly manuals
  - Conceptual designs
    - Prototype assembly
  - Collaboration
    - Team Center Community



Use of JT files in I-DEAS

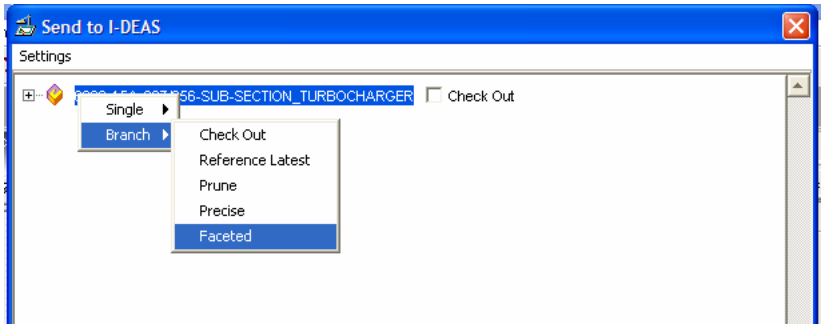
JT Files at **INTERNATIONAL®**

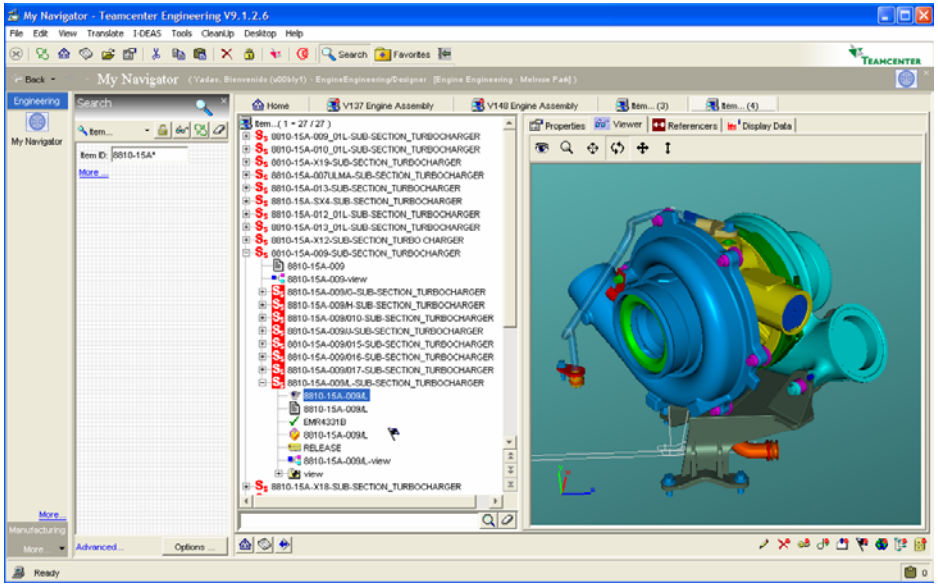
- Virtual Engine Assembly
  - Internal component design verification
- Virtual Engine Packaging
  - Clearance
  - Motion
  - Serviceability
- Conceptual Design
- Downstream users
  - Publications
  - Build Manuals

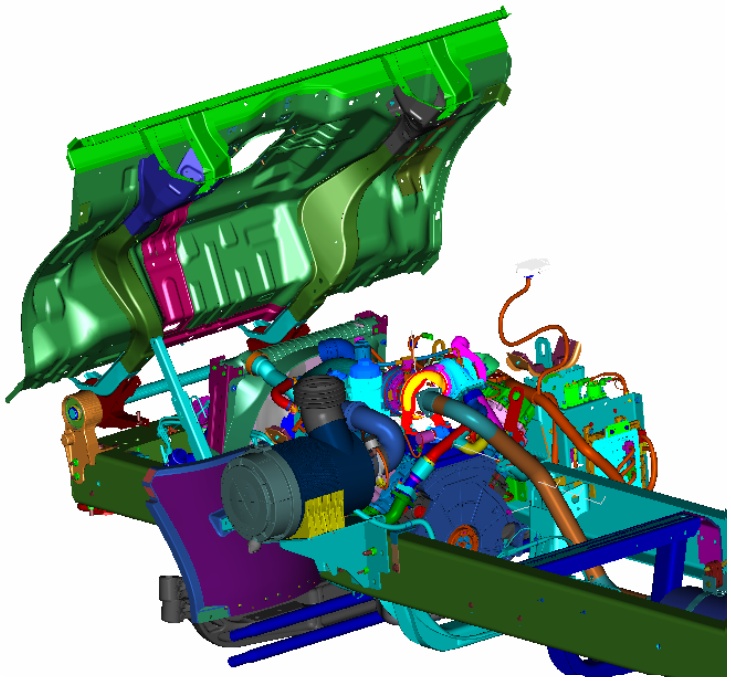


Use of JT files in I-DEAS

- JT files in I-DEAS
  - From Team Center
  - Convenient light weight files
  - Packaging
  - Alignment in I-DEAS

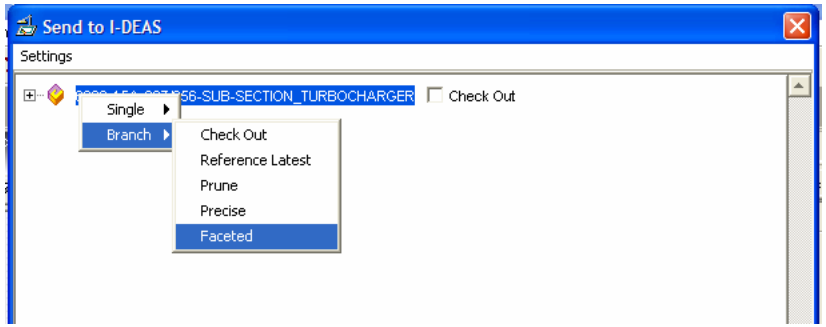


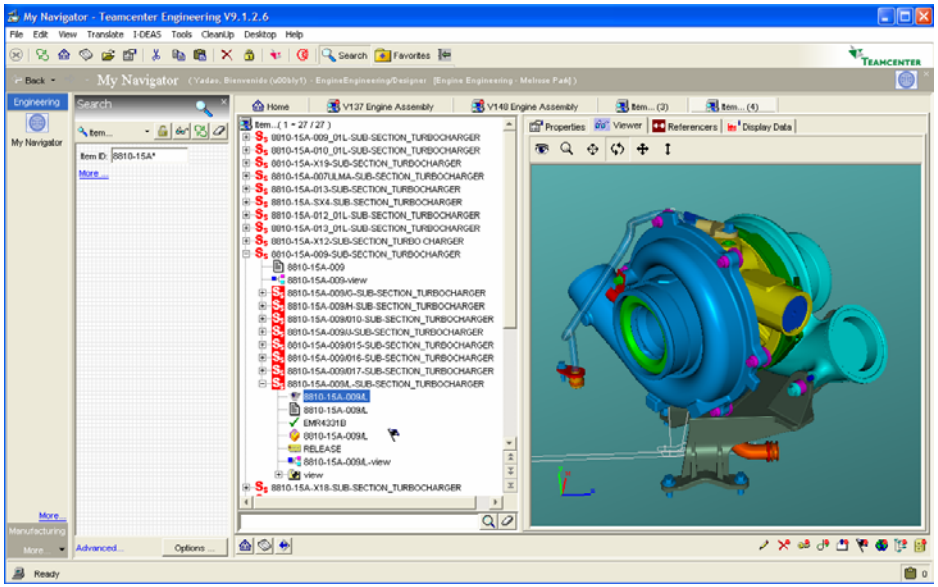


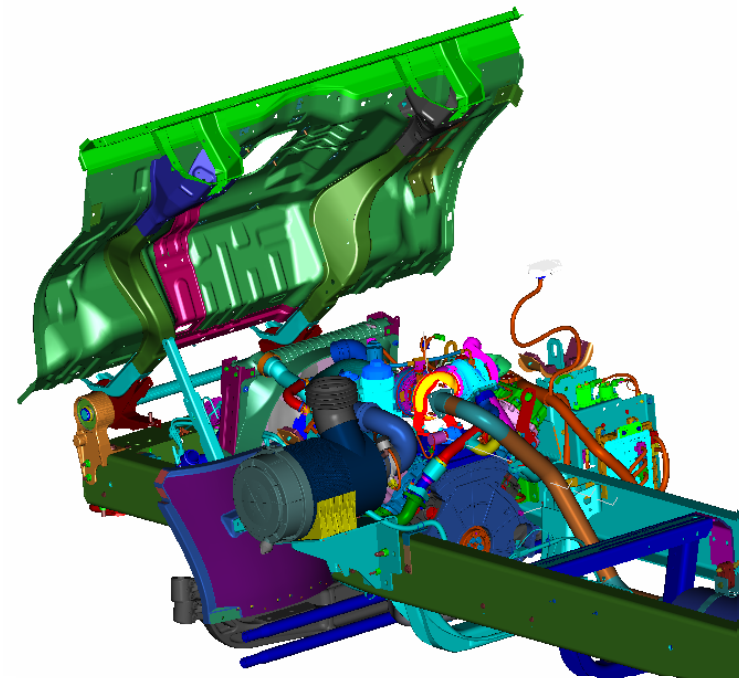


Use of JT files in I-DEAS

- JT files in Team Center
  - “Faceted” reference
  - Lightweight Viewer
    - Vis View

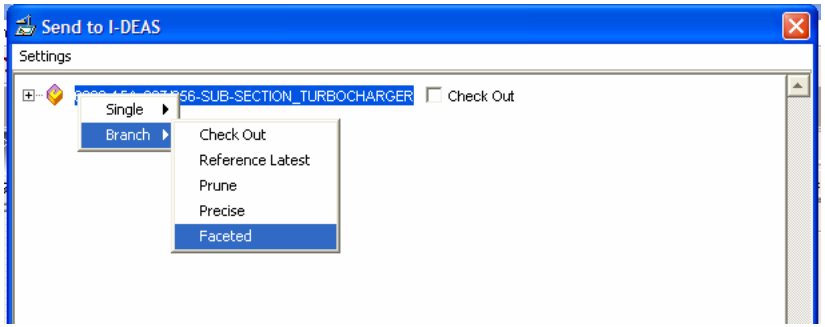


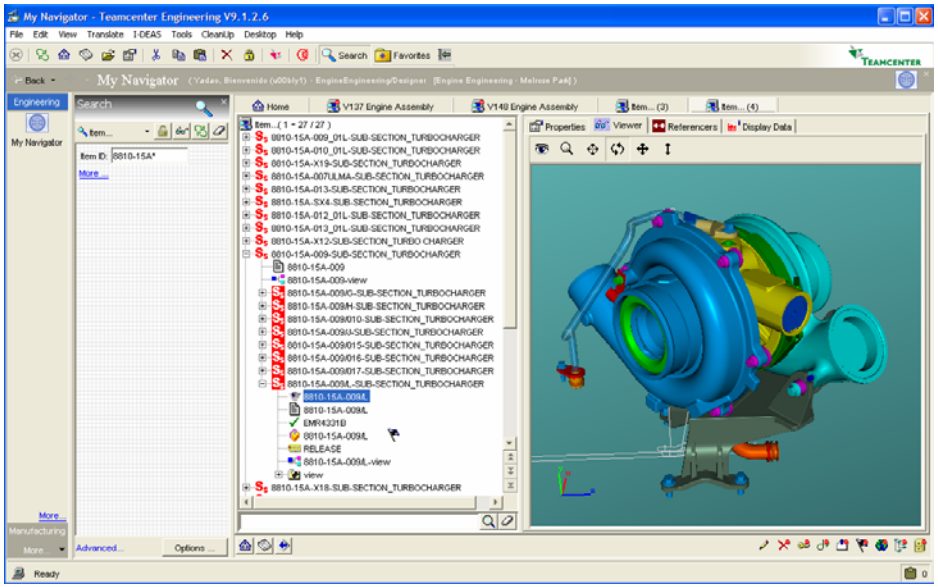


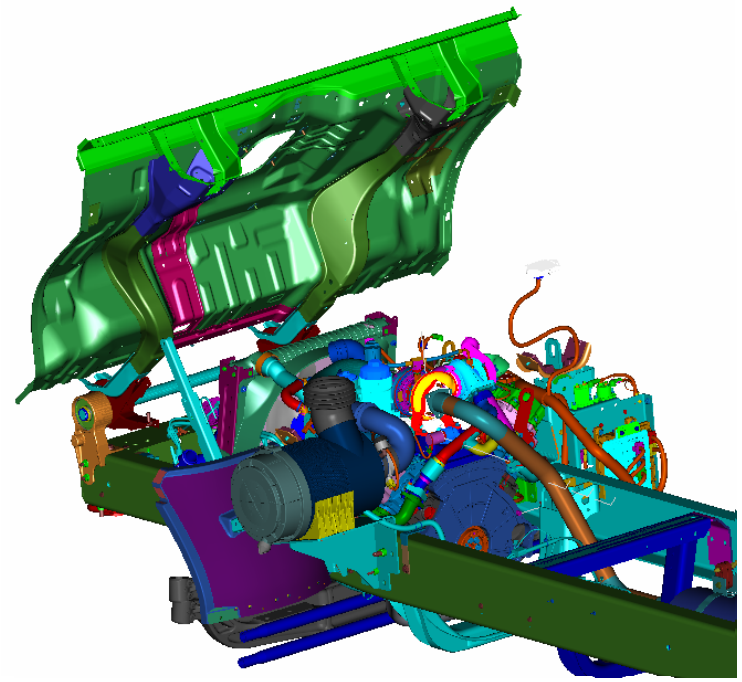


Use of JT files in I-DEAS

- JT files in I-DEAS
  - “Faceted” reference
  - Lightweight Viewer
    - Vis View







Use of JT files in I-DEAS

- Packaging
  - JT files in I-DEAS
    - Quick visual interference check.
    - Un-prune JT files to get I-DEAS orphan parts.
      - Orphan parts can then be modified from base orphan.
    - Use of orphaned parts for quick study design.
  - Better JT file interactions in later releases of I-DEAS
    - Ver. 11
      - Faceted part interference/clearance check
    - Ver. 12
      - JT file alignment with other parts.

Use of JT files in I-DEAS

- Challenges with JT files in I-DEAS
  - Must extract orphaned data to become part.
  - If needed to be checked into TeamCenter orphaned part must be checked in individually before assembly.
    - Team Center has issues with orphaned parts from JT when checking in.
  - JT Assembly imports in regards to position
    - Original JT versus I-DEAS → JT → I-DEAS (position)
    - JT assemblies “Blow Up”…

Use of JT files in I-DEAS

- JT File Challenges
  - JT file size
    - Smaller vs. Larger JT files
  - I-DEAS translations
    - Polylithic vs. Monolithic?
  - VisMockup translations
    - JT from JT
  - JT logistics and distribution
    - Unix/Windows access
  - Updates

Use of JT files in I-DEAS

- Summary
  - Quick use of JTs versus large I-DEAS assemblies
  - Faster design verification in I-DEAS
  - 3D part/assembly verification with large light weight assemblies without bringing in full CAD data