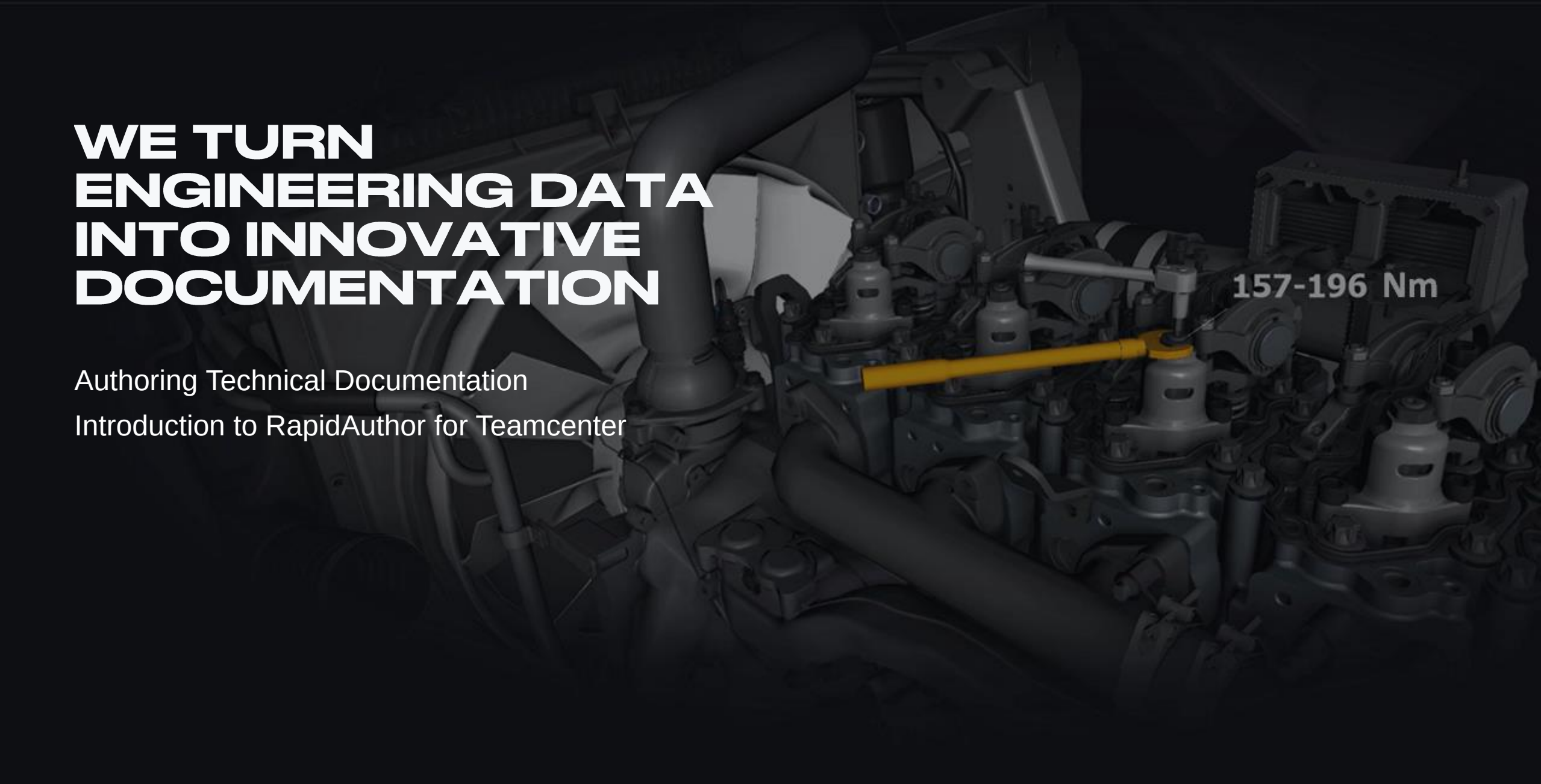
Cortona3D

WE TURN ENGINEERING DATA INTO INNOVATIVE DOCUMENTATION



Authoring Technical Documentation

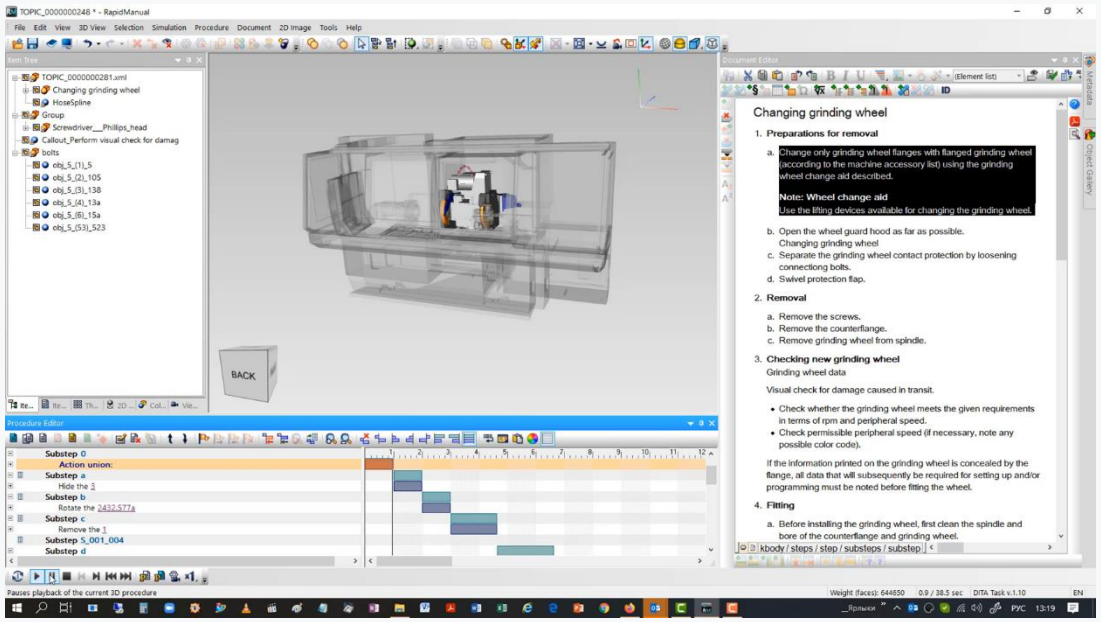
Introduction to RapidAuthor for Teamcenter

Why RapidAuthor?

- A single solution for animated 3D, AR and PDF
- Use existing design data and documents
- Automate authoring process
- Publish to open standards for all platforms
- Publish superior future proof 3D documentation
- Full integration with Teamcenter

What we do

- Manuals & Work Instructions
- Parts catalogs
- Training courses



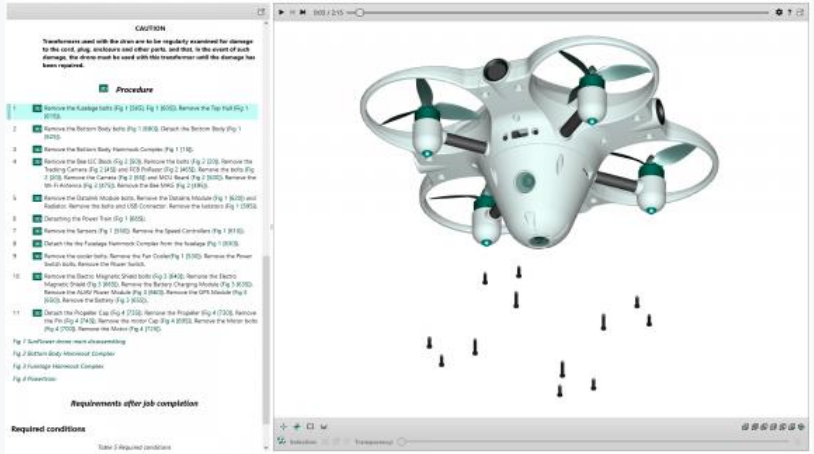
Reuse & Enrich

Based on CAD, the RapidAuthor tools suite semi-automatically turns engineering and manufacturing data into innovative

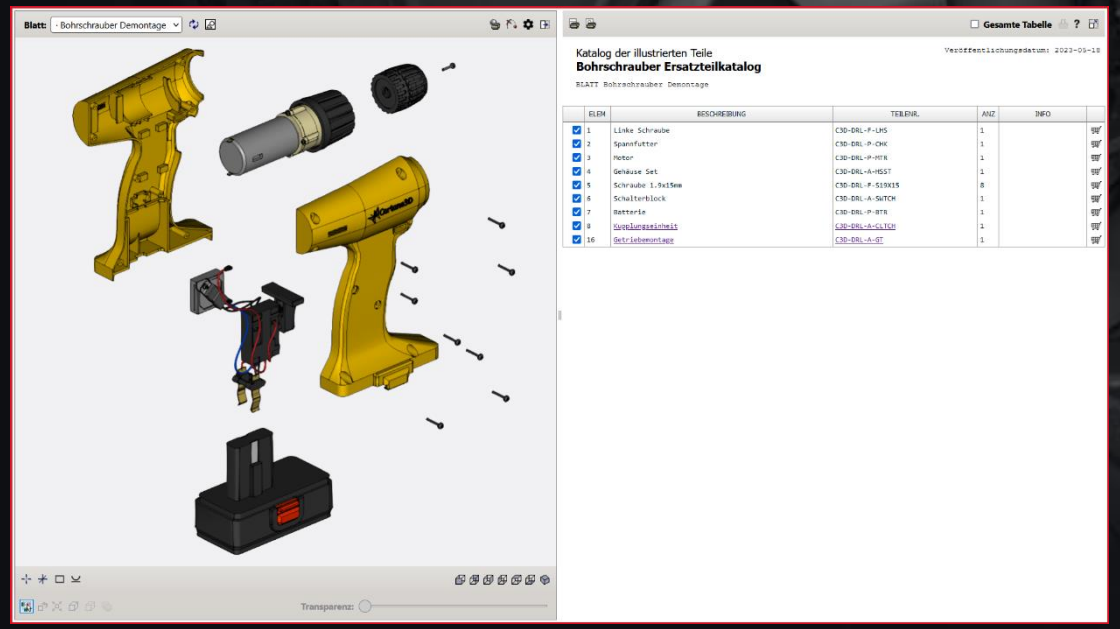
- Maintenance and Repair Manuals
- Parts Catalogs
- Trainings
- Other kinds of Technical Documentation

Save time in the creation as well as the usage of technical documentation:

Text and 2D/3D illustrations are generated, and documentation produced with RapidAuthor improves on traditional PDF documentation by providing interactivity.

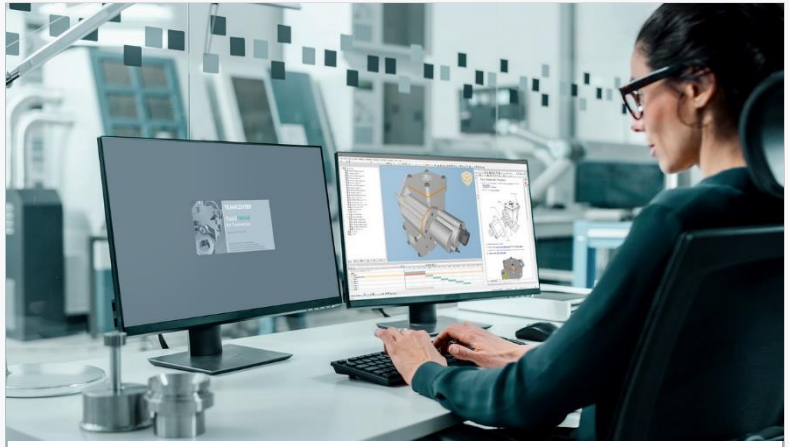


EXAMPLES OF INTERACTIVE PUBLICATIONS



- Drill Parts Catalog
- Wheelchair Assembly Procedure
- Elevator assembly Work Instruction
- Motorcycle Composite Publication
- Rear Drive Unit Work Instruction
- Compressor Reservoir Removal
- Lean Technic

Flexible and Updatable

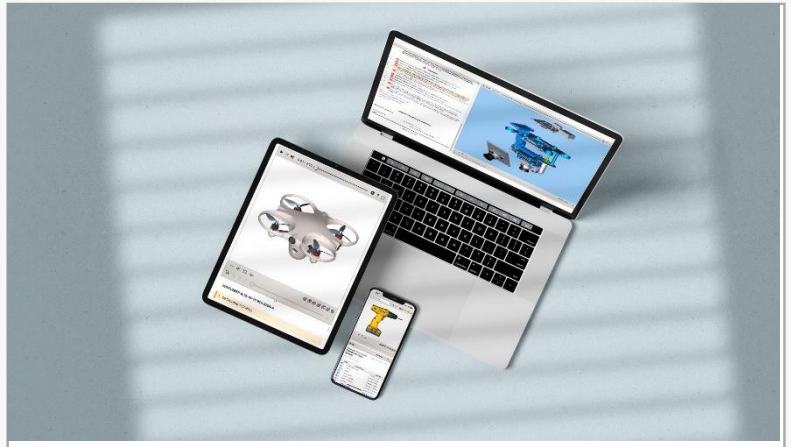


Source Data

More than 30 CAD formats, BOM/BOP meta-data and other existing xml texts, vector and raster illustrations are used by RapidAuthor as a source data

Tech Docs development

RapidAuthor is a full featured suite of tools for generation of Manuals, Parts Catalogs, Work Instructions, 2D illustrations, e-Learning courses

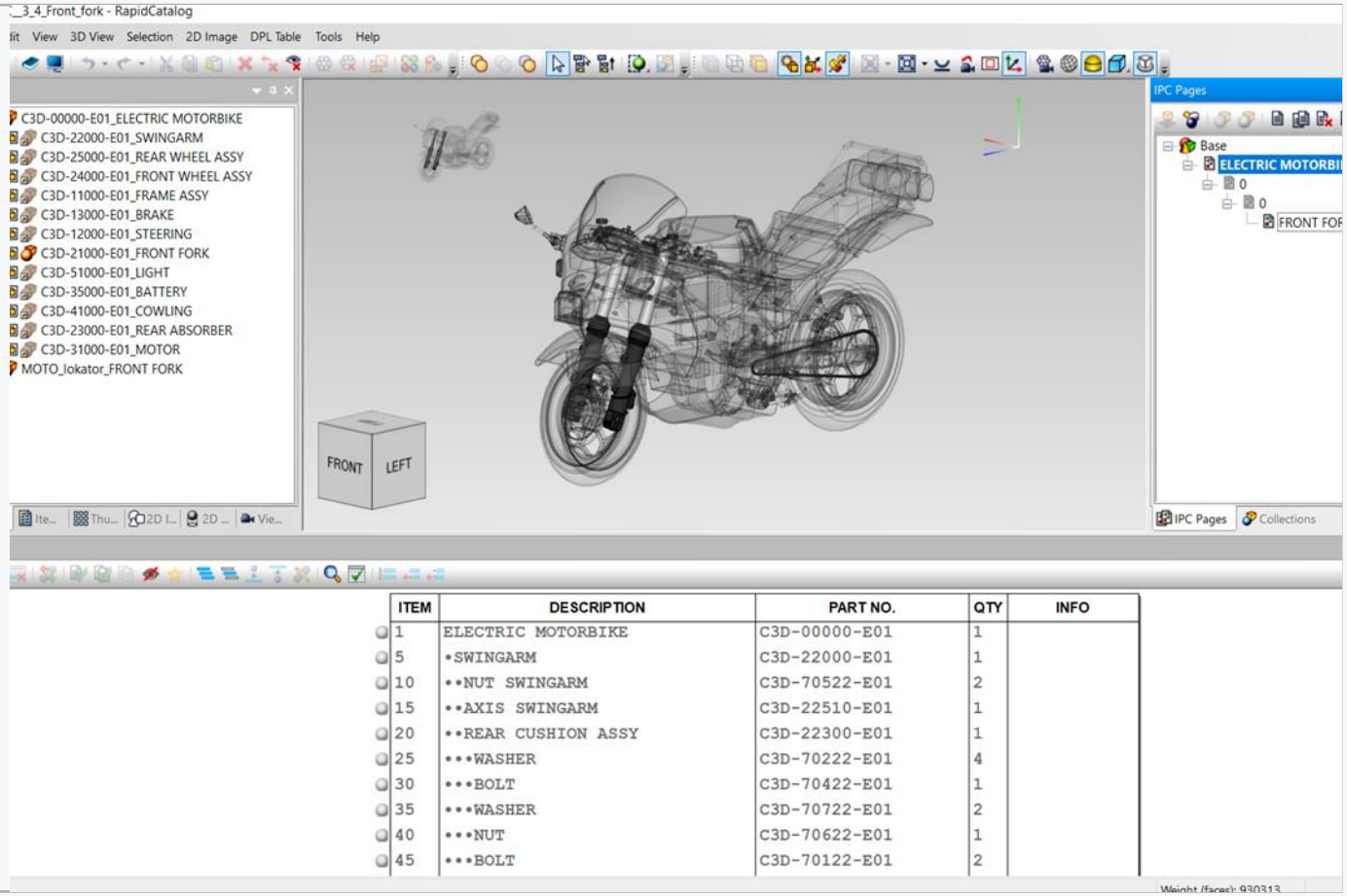


Publication

The once created content can be formatted according to any standards, published in 3D HTML5 for any platform, AR/VR/MR or can be provided in traditional PDF format

Parts Catalogs

- 3D Explode and Cross-sectioning
- Full 2D graphics creation, editing and update
- Generate hotspotted 2D from 3D graphics
- Automatic generation of Detailed Parts List
- Map metadata from CAD/BOM source
- Customization and integration of publications



ITEM	DESCRIPTION	PART NO.	QTY	INFO
1	ELECTRIC MOTORBIKE	C3D-00000-E01	1	
5	•SWINGARM	C3D-22000-E01	1	
10	••NUT SWINGARM	C3D-70522-E01	2	
15	••AXIS SWINGARM	C3D-22510-E01	1	
20	••REAR CUSHION ASSY	C3D-22300-E01	1	
25	•••WASHER	C3D-70222-E01	4	
30	•••BOLT	C3D-70422-E01	1	
35	•••WASHER	C3D-70722-E01	2	
40	•••NUT	C3D-70622-E01	1	
45	•••BOLT	C3D-70122-E01	2	

Cortona3D

Parts Catalog

Gesamte Tabelle

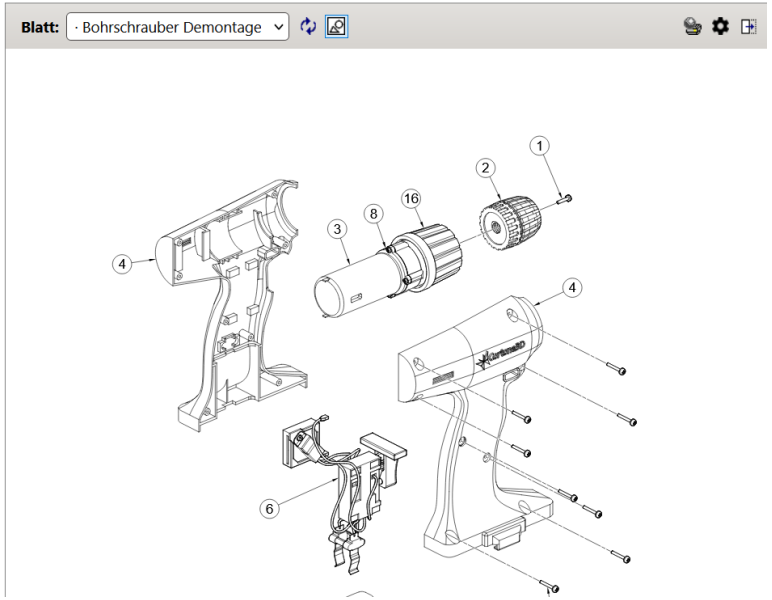
Katalog der illustrierten Teile

Bohrschrauber Ersatzteilkatalog

Veröffentlichungsdatum: 2023-03-06

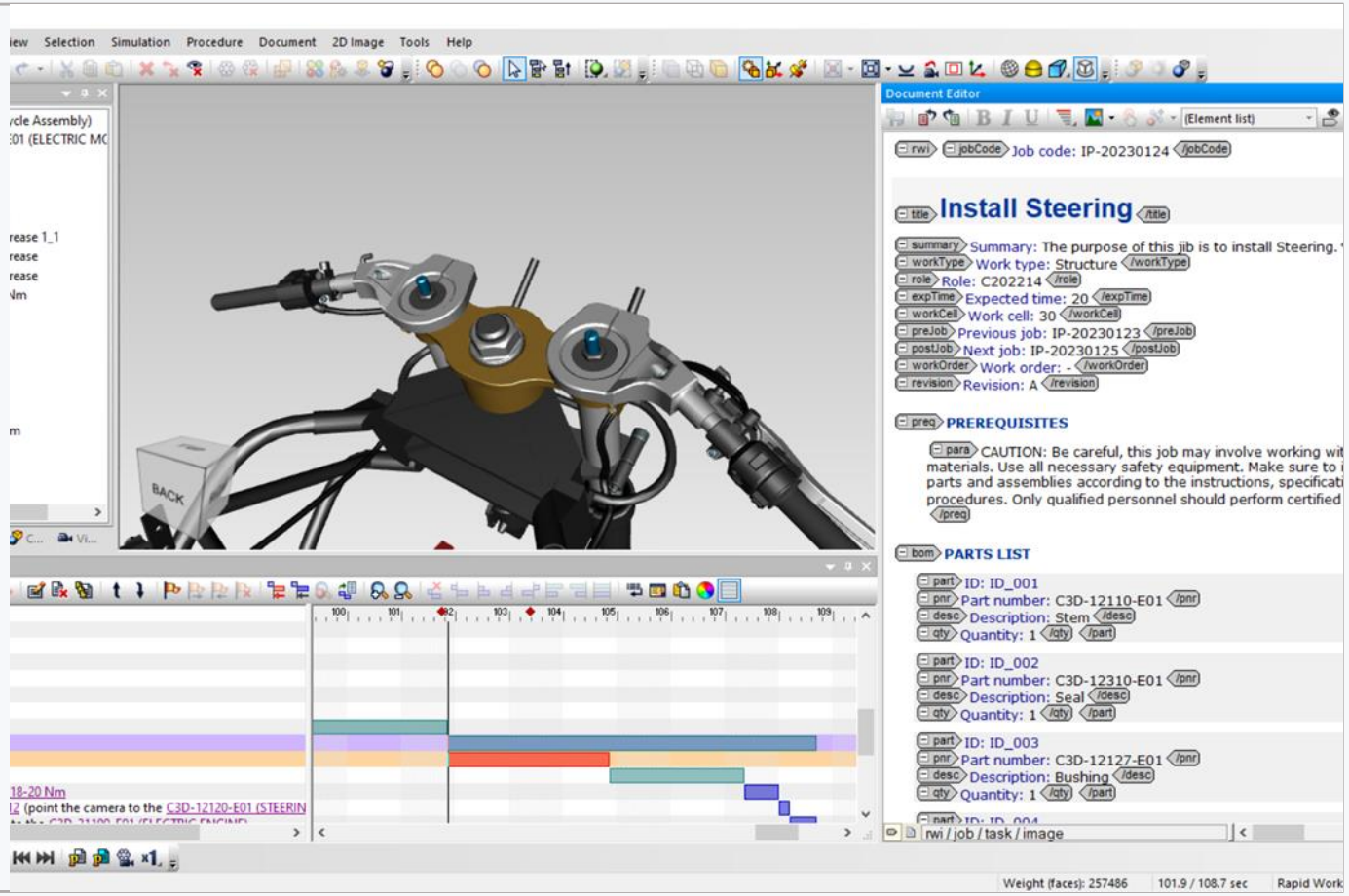
BLATT Bohrschrauber Demontage

	ELEM	BESCHREIBUNG	TEILENR.	ANZ	INFO	
☑	1	Linke Schraube	C3D-DRL-F-LHS	1		
☑	2	Spannfutter	C3D-DRL-P-CHK	1		
☑	3	Motor	C3D-DRL-P-MTR	1		
☑	4	Gehäuse Set	C3D-DRL-A-HSST	1		
☑	5	Schraube 1.9x15mm	C3D-DRL-F-S19X15	8		
☑	6	Schalterblock	C3D-DRL-A-SWTCH	1		
☑	7	Batterie	C3D-DRL-P-BTR	1		
☑	8	Kupplungseinheit	C3D-DRL-A-CLTCH	1		
☑	16	Getriebemontage	C3D-DRL-A-GT	1		



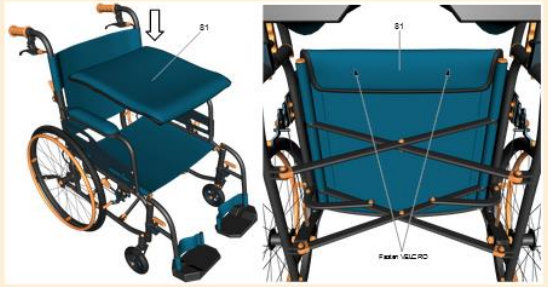
Service Manuals & Work Instructions

- Automatic generation of work instructions for service & maintenance
- STE-based 3D animations
- Reverse procedures
- Easily add audio
- Embedded XML editor
- Embedded 2D illustrations editor
- All XML/DTD schemas supported



c. 3D **SEAT CUSHIONS INSTALLATION**

Put the cushion [81] on the seat [80] and secure it with Velcro. Install the cushion [82] on the backrest [77] and secure it with Velcro.



5. 3D **THE WHEELCHAIR REVIEW**

Cortona3D

Work Instructions

Job code: XXXX-XX
Title: INSTALLATION OF MACHINE ROOMLESS ELEVATOR (MRL ELEVATOR)
Summary: Assembly and installation of elevator equipment
Work type: Assembly, installation
Role: Installer
Expected time: 3 business days
Work cell: XXX
Previous job: XXXX-XX
Next job: XXXX-XX
Revision: 001
Work order:

Prerequisites | BOM | Task | **Job**

Install counterweight. See the counterweight assembly manual for a more detailed description of counterweight assembly and installation process.

5 **Installation of tension device**

Install tension device (Refer to Fig 5.1) on the second car guide rail through tension device bracket using clamps and bolting from the side of speed limiter.

Figure 5.1

Tension device is installed according to the installation drawing (Refer to Fig 5.2). A fragment of the installation drawing with dimensions is provided as a sample.

Figure 5.2

6 **Installation of hydraulic buffers and counterweight chain guides**

6.1

Use anchor fasteners to install stand for counterweight hydraulic buffer (Refer to Fig 6.1 [2]).

Figure 6.1

Stands for car and counterweight hydraulic buffers are installed in the center of the car and counterweight according to the installation drawing (Refer to Fig 1.2). A fragment of the installation drawing with dimensions is provided as a sample.

6.2

Place and fix hydraulic shock absorber (Refer to Fig 6.1 [1]) on the stand.

6.3

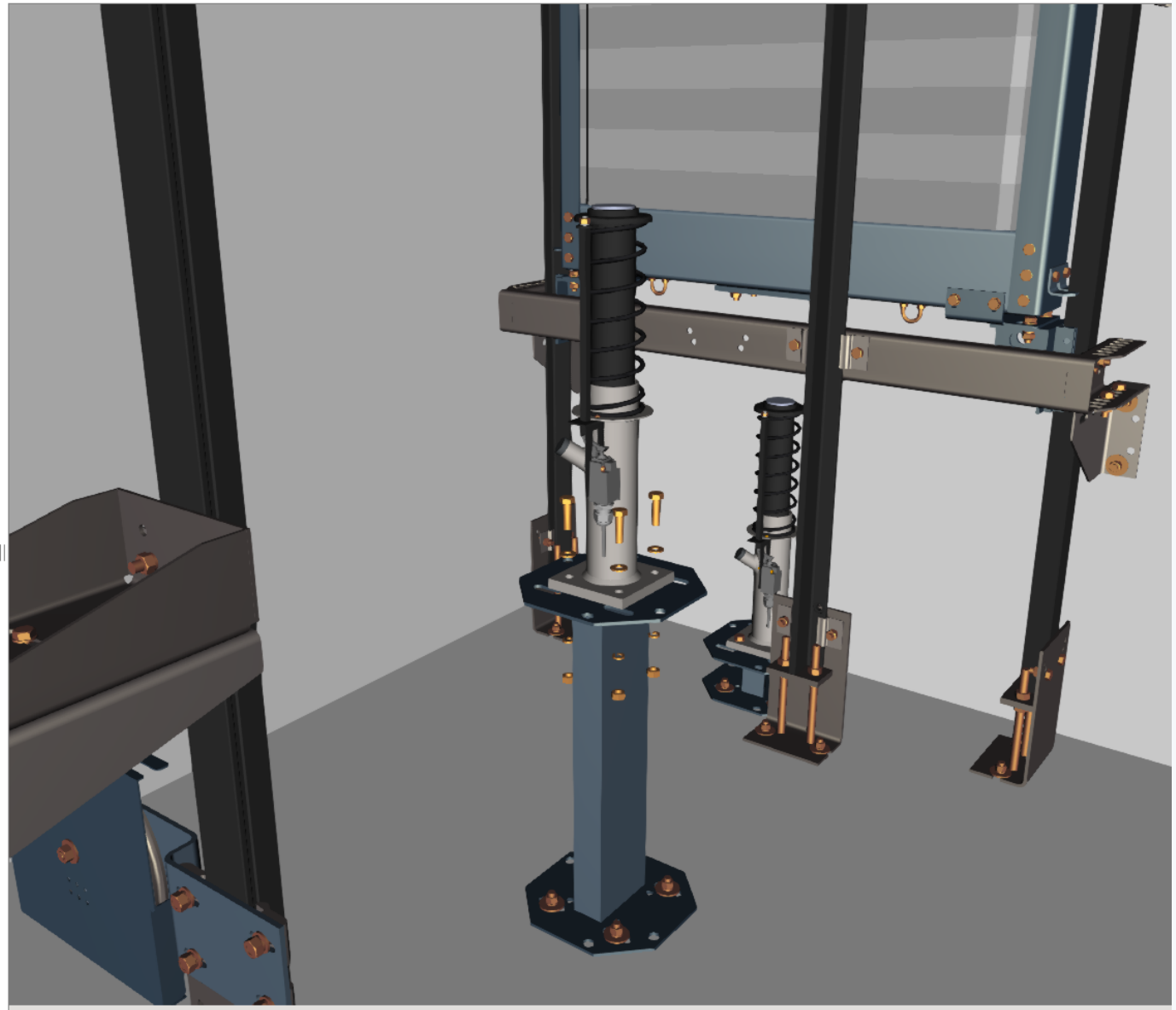
Use anchor fasteners to install stand for car hydraulic buffer (Refer to Fig 6.1 [4]).

Stands for car and counterweight hydraulic buffers are installed in the center of the car and counterweight according to the installation drawing (Refer to Fig 1.2). A fragment of the installation drawing with dimensions is provided as a sample.

6.4

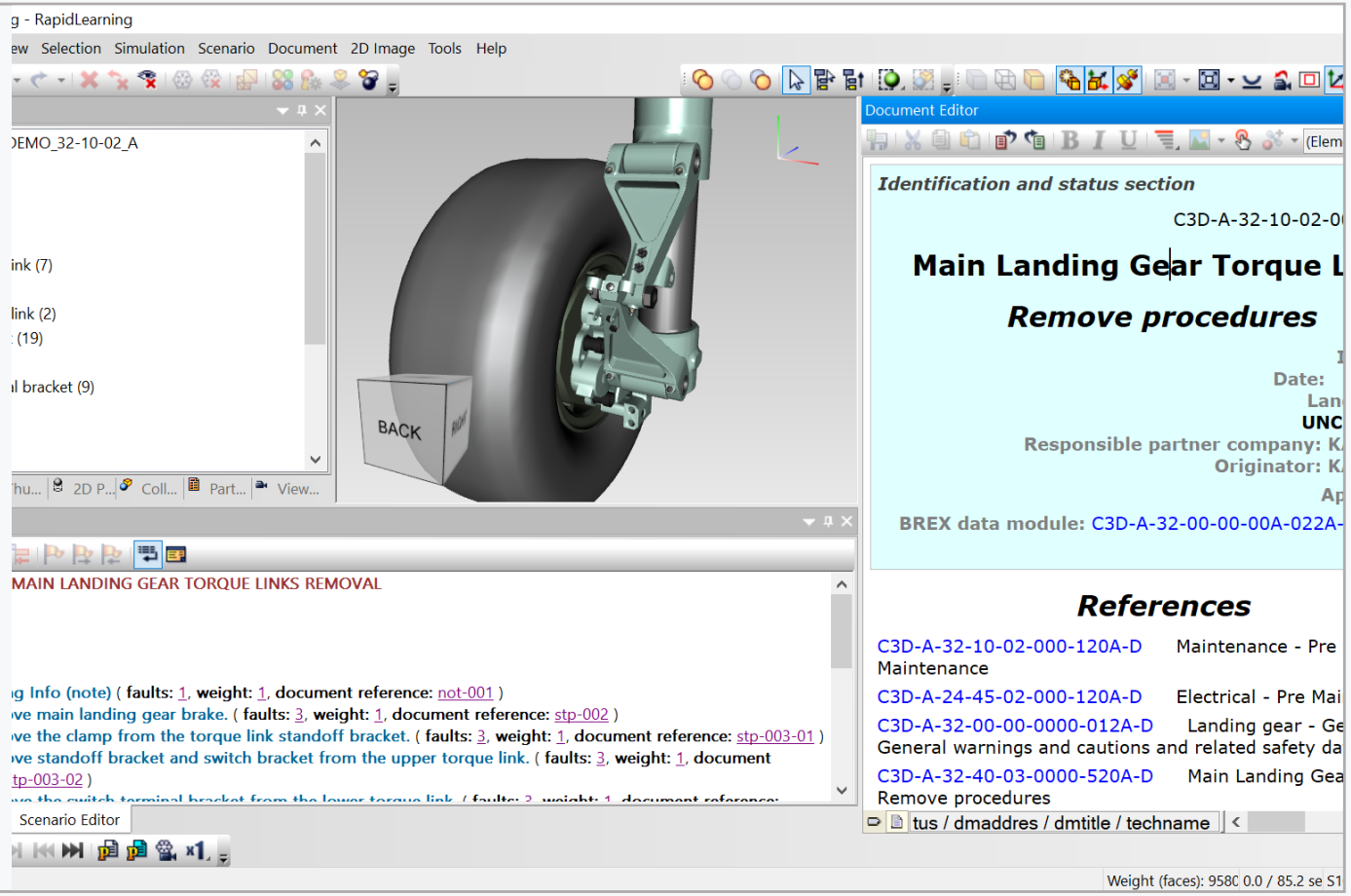
Place and fix hydraulic shock absorber (Refer to Fig 6.1 [1]) on the stand.

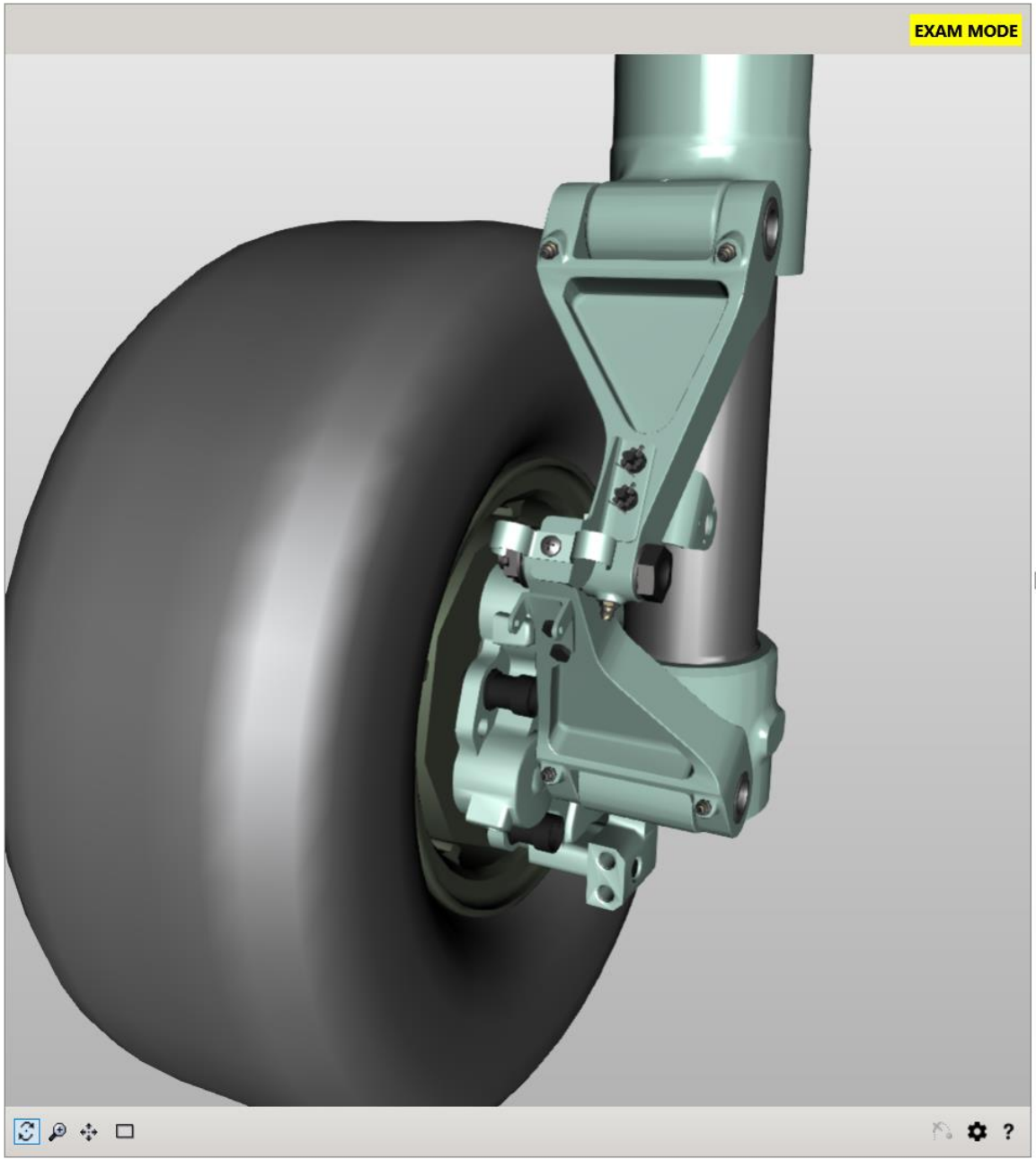
Preview mode | Job mode



e-Learning course

- STE based 3D animation
- Reuse existing procedures & animations
- Training scenarios
- Identify Parts
- Multiple choice questions
- Procedure branching
- SCORM package
- Demo, Study and Exam modes





Torque Links Removal

Document | Instructions | **Parts** | Parameters

☐	BACP10AD02C09P	Meta
☐	BACP10AD02C09P	Meta
☐	BACP10AD02C09P	Meta
☐	BACP10AD02C09P	Meta
☐	BACP20BC01D07P	Meta
☐	BACP20BC01D07P	Meta
☐	bolt (10)	Meta
☐	bolts (20)	Meta
☐	bolts (20)	Meta
☐	bolts (8)	Meta

Remove the wheel assy

Choose the correct answer in the Choice list(s).

Click **Submit** to confirm when you are ready to continue.

Perform the procedure

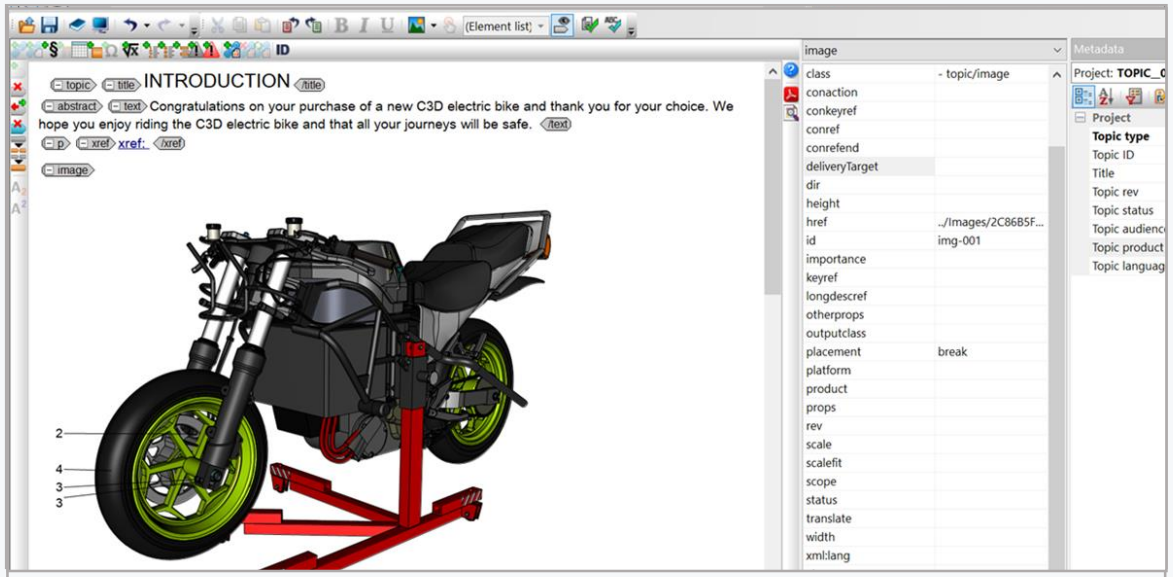
- ◉ MAIN LANDING GEAR SHOCK STRUT REMOVAL
- ○ MAIN LANDING WHEEL ASSY REMOVAL
- ○ DRAG BRACE ASSY REMOVAL
- ○ MAIN LANDING GEAR BRAKE ROD REMOVAL

Submit

Test result:

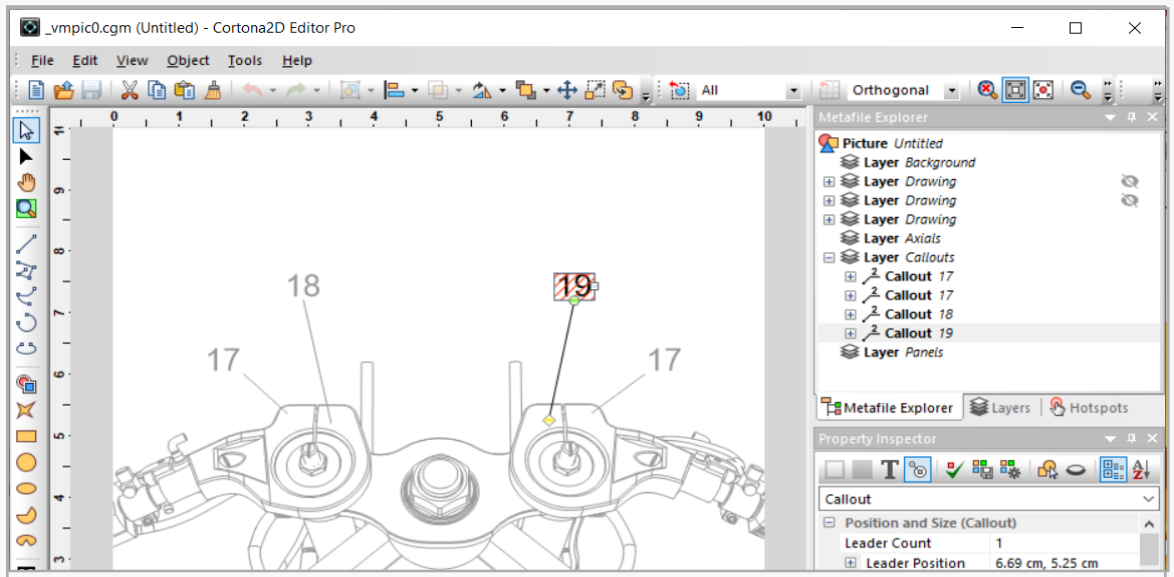
Switch off mode

XML Text & 2D illustration



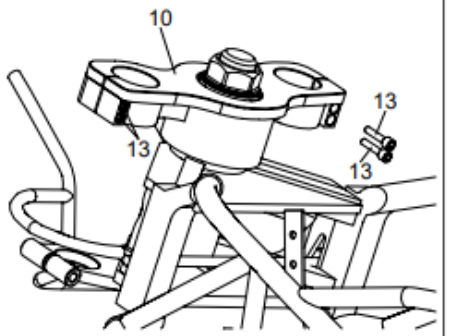
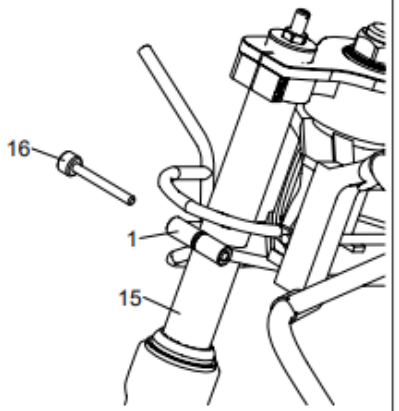
Advanced text editor

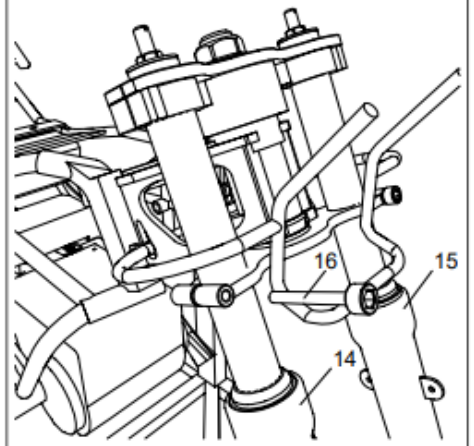
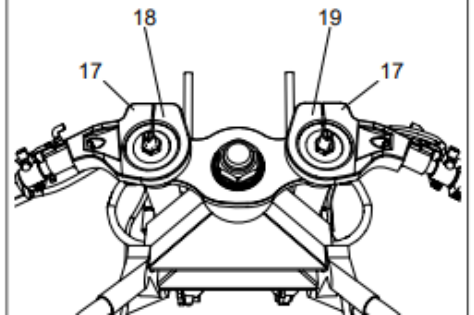
Powerful set of functions for the creation of traditional 2D documentation. Integrated with RapidManual and RapidLearning.



Powerful editor for 2D illustrations

Wide range of functionality for editing of 2D vector and raster graphics. Integrated with RapidManual and RapidLearning. Supports automated Update process.

№	Task	Illustration
5	Install the four Bolts (13) in the Top Bridge (10) without tightening.	 Figure 5
6	Install the Left Front Fork Assy (15) into the Top Bridge and screw in the Flange Bolt (16) into the Stem (1) .	 Figure 6

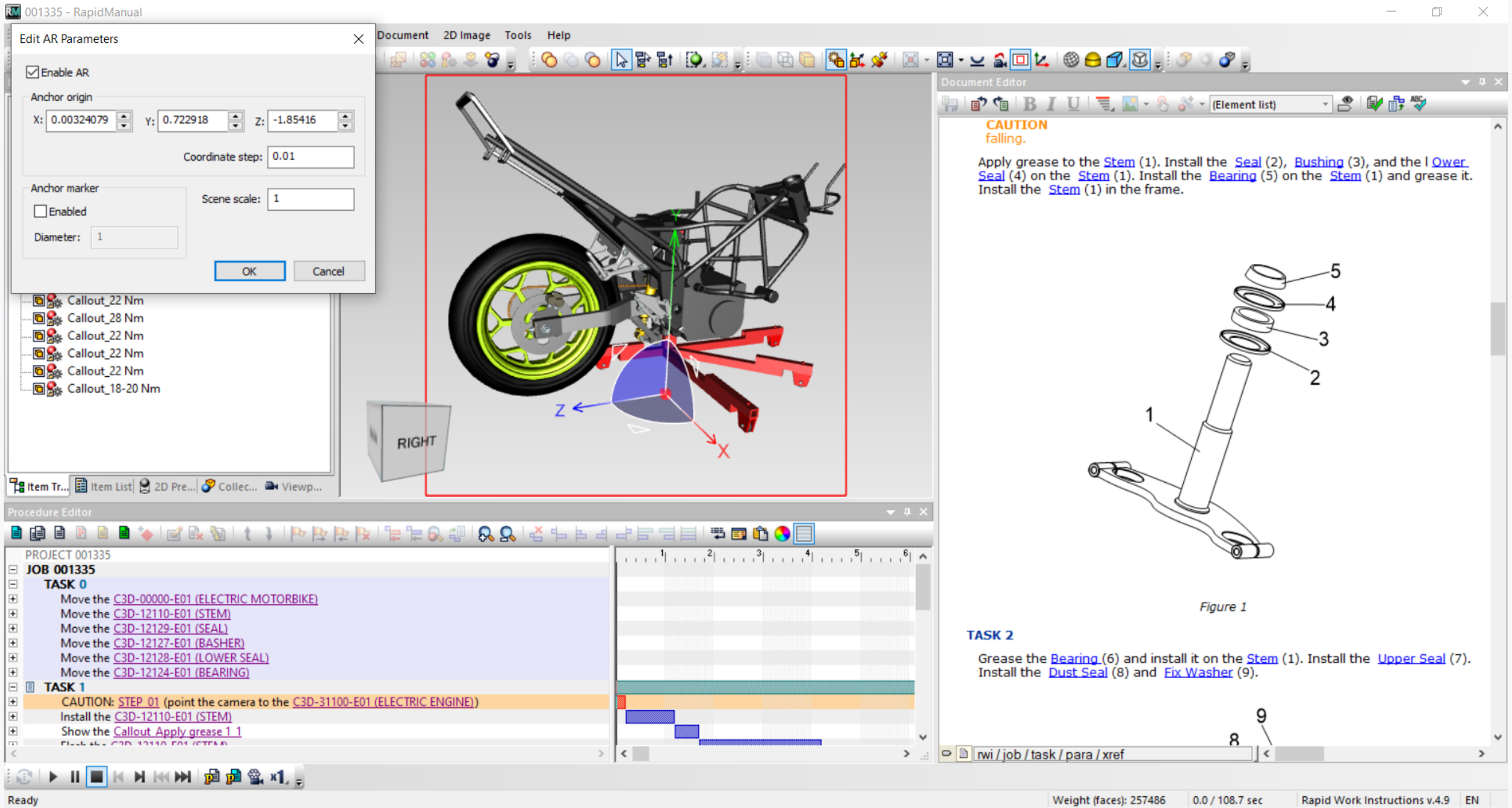
№	Task	Illustration
7	Install the Right Front Fork Assy(14) into the Top Bridge and screw in the Flange Bolt (16) in the Stem.	 Figure 7
8	Tighten the Flange Bolt (16) on the right side of the Stem to 28 Nm and the Bolts on the right side of the Top Bridge to the recommended torque of 22 Nm.	
9	Tighten the Bolts on the left side of the Top Bridge to the recommended torque of 22 Nm and the Flange Bolt (16) on the left side of the Stem to 28 Nm.	
10	Install the Left Handlebars(18) and Right Handlebars (19) and screw in the Bolts (17) by hand.	

Augmented Reality

Publish to iOS and display your content in Augmented Reality.

We collaborate with partners to cover more involved mixed reality use-cases.

RapidAuthor Augmented Reality



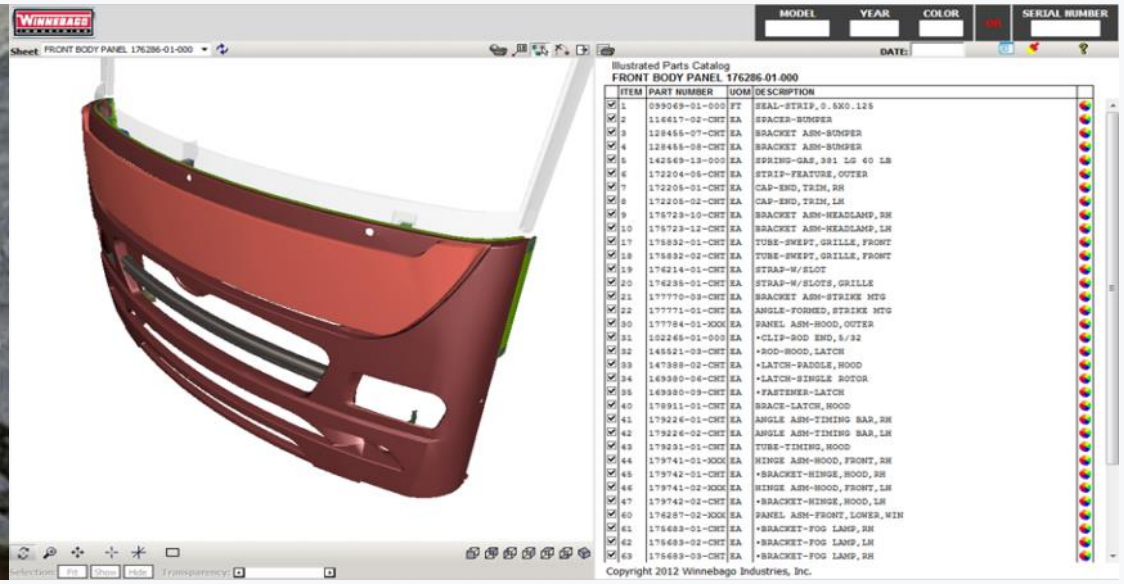
The World Leader in 3D visual communication software

Cortona3D RapidAuthor is used by more than 400 major manufacturing companies worldwide, and our worldwide team has many years experience with complex software products and solutions

Rolls-Royce
Winnebago Industries
TATA
MERCURY #1 On The Water
Schlumberger
HONDA The Power of Dreams
PILATUS
EVERDIGM
Pratt & Whitney A United Technologies Company
COBHAM
CSIC
HAL
NASA
esa
EMBRAER
GOODRICH
Raytheon
POWERINK Power Systems
B/E AEROSPACE
nexter SYSTEMS
BAE SYSTEMS
中国航空工业集团公司 Aviation Industry Corporation of China
WÄRTSILÄ
BOEING
AIRBUS AN EADS COMPANY

- 2000 — Foundation
- 2004 — AIRBUS
- 2005 — RapidAuthor standalone sales
- 2006 — Siemens Software & Technology Partnership
- 2011 — Siemens DISW roadmap development & integrations
- 2023…

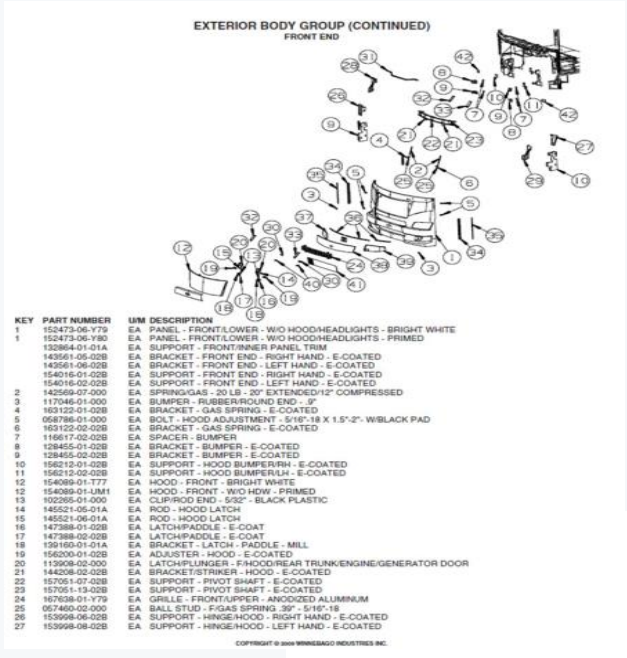
Case study: Winnebago



Cortona3D's RapidAuthor suite creates interactive part catalogs for Winnebago Industries. This approach allows:

- to process and complete the parts catalog 33% faster
- reduce manpower requirements by 40%

The most substantial costs savings have been derived by the re-use of the existing 3D geometry which has shortened the production process considerably.

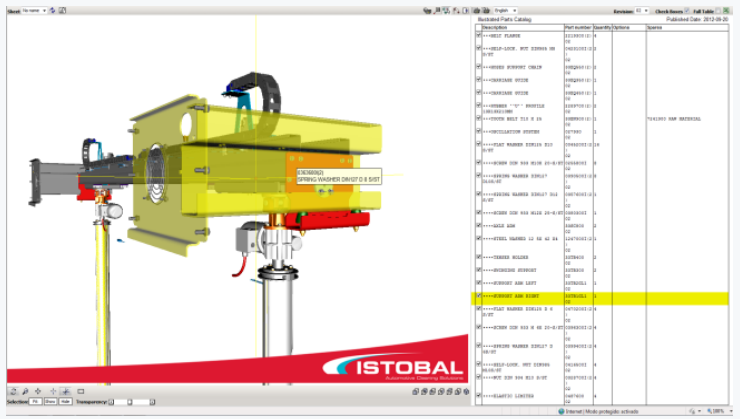


Case study: Atlas Copco

Cortona3D makes it possible to merge the list of materials with CAD information and JPEG images to compile a complete catalogue

“Atlas Copco was already implementing Teamcenter in a separate project. They found us because we are able to make the connection with Cortona3D,”

Case study: Istobal

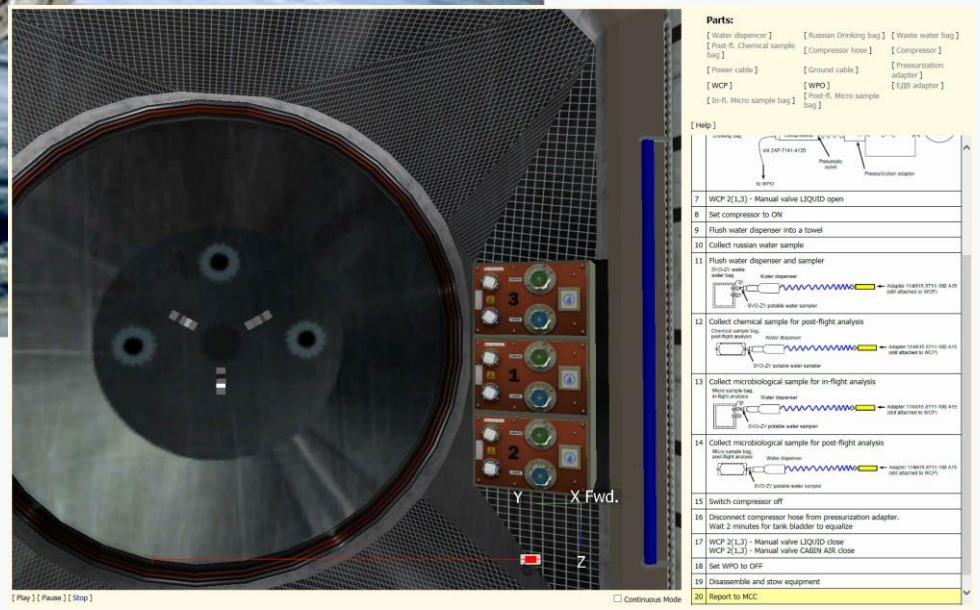


Cortona3D's RapidAuthor suite is using for production of the spare parts catalogs.

They have succeeded:

- in reducing the parts catalog production time by 80%.
- in saving 60% of their costs over a very aspect of their process

Case study: ESA



Cortona3D SW assists astronauts in their daily execution of procedures onboard the International Space Station

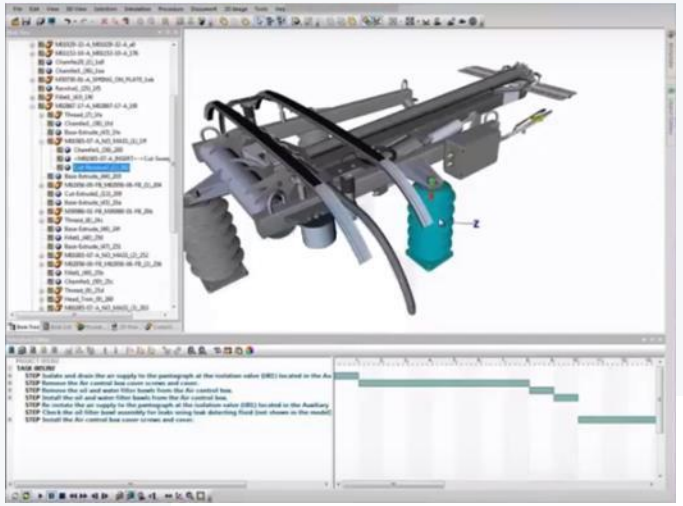
Cortona3D provides the system for training astronauts and on International Space Station and on the ground

Cortona3D products for iOS

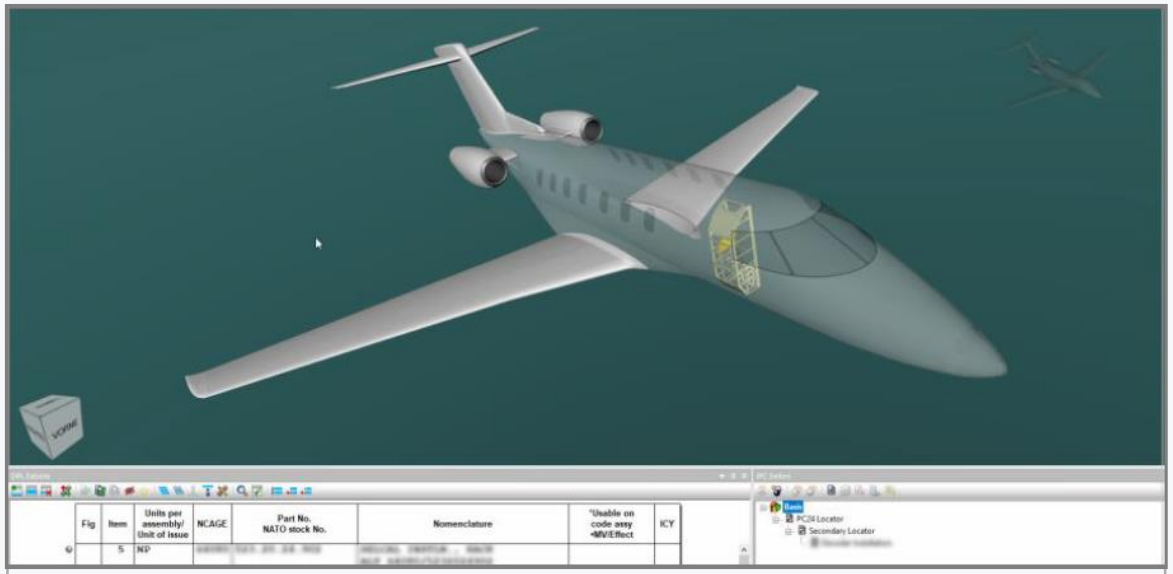
Case study: Siemens Mobility

Teamcenter and Cortona3D optimize on-time train performance
Integrated service lifecycle management solution
Maintenance manuals based on core engineering data
Interactive, visual instructions

- 700 documents produced by a team of four in 14 months
- 50 percent less time to produce maintenance tasks
- Significantly lower cost
- Publications available six months before first train delivery
- 30 percent reduction in time spent on maintenance
- Effective change control
- Easy re-use of information

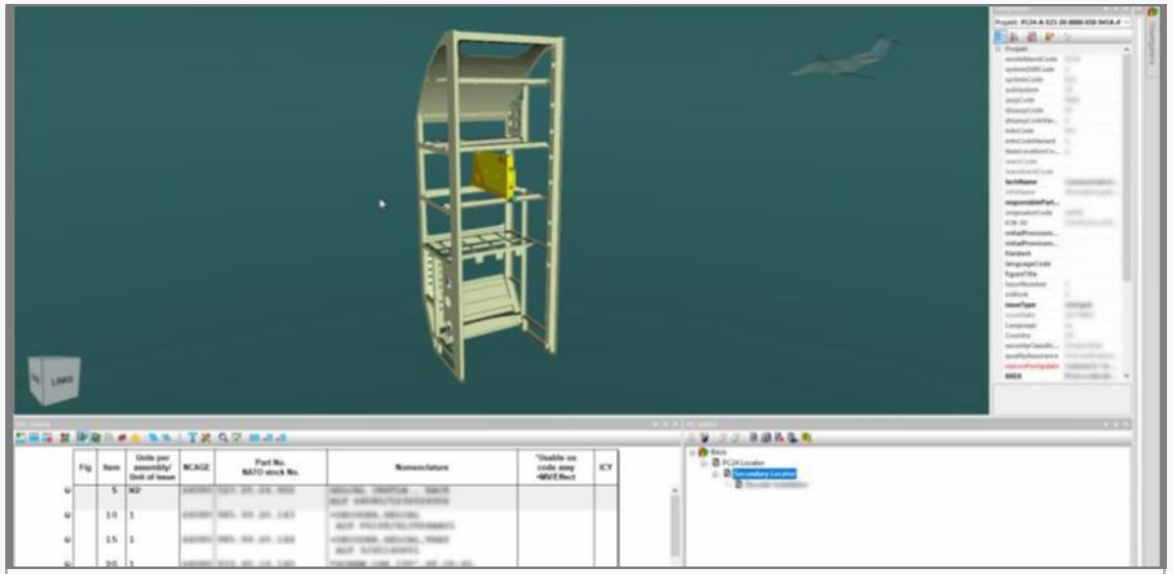


3D IPD & Structural Repair Manual



Development and Production time

Development time of 3D IPD and SRM was cut by an estimated 40% due to the simultaneous capability of compiling and illustrating and enhanced functionality. Software customization has brought its results too: it has reduced production time and increased efficiency by approximately 30%



3D IPD & SRM

Pilatus Aircraft Ltd uses RapidAuthor for Teamcenter for the production of interactive Illustrated Parts Data and the item identification part of Structural Repair Manuals for its latest model, the PC-24 Super Versatile Jet

Case study: Boeing

Cortona3D solutions

Integration 3D AMM in existing Portable Maintenance Aid service.

- Participation in development of Boeing Maintenance Performance Toolbox (MPT), single online-service consisting necessary documentation for information support of repair and maintenance.
- Content preparation for MPT.

Aircraft Engine

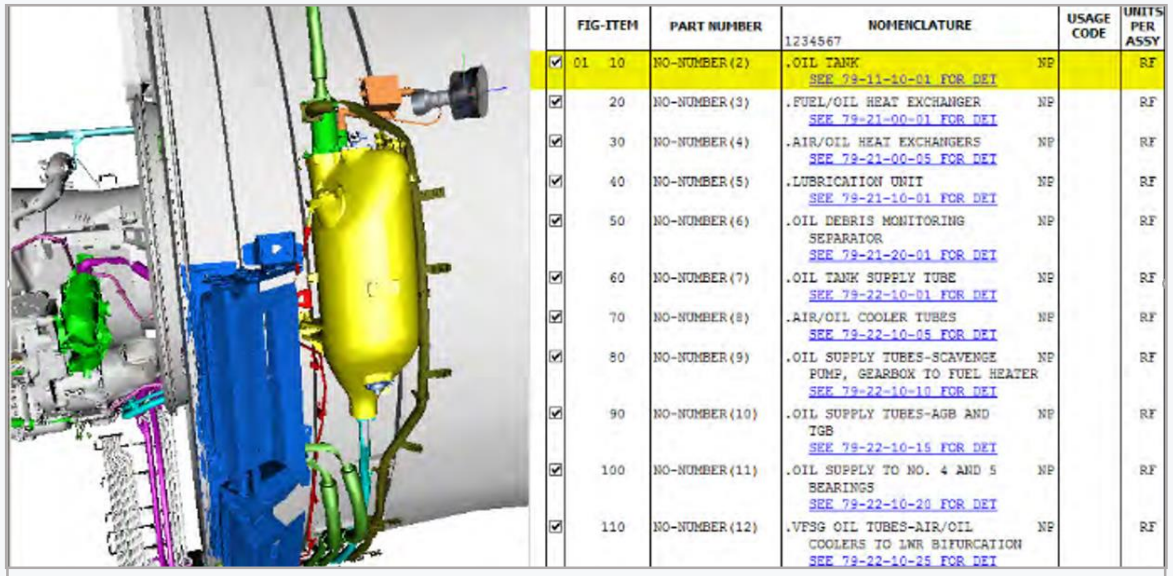
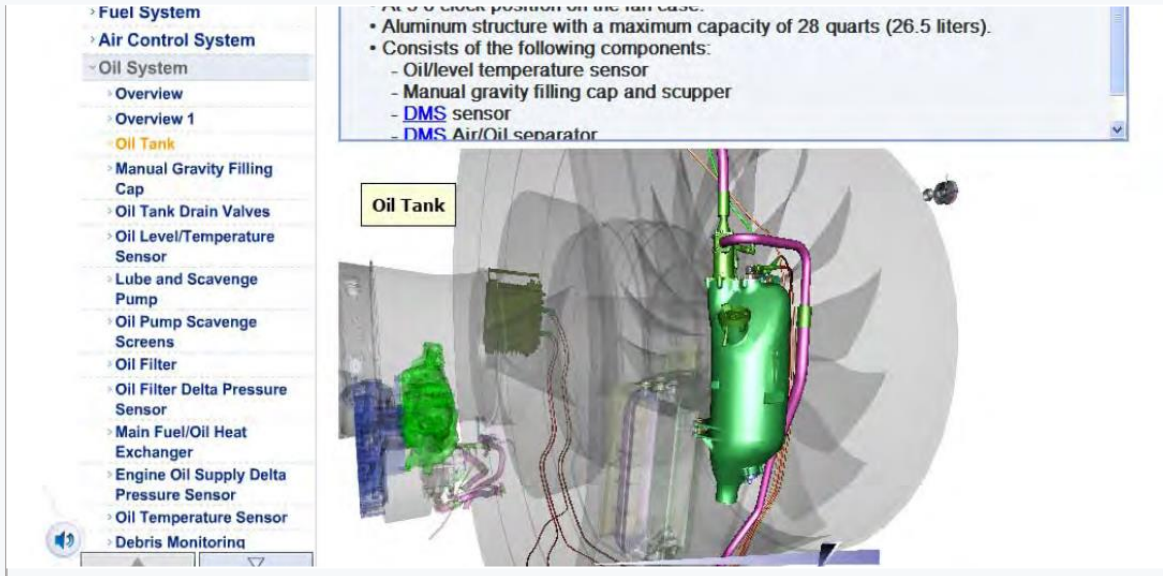


	FIG-ITEM	PART NUMBER	NOMENCLATURE 1234567	USAGE CODE	UNITS PER ASSY
☑	01 10	NO-NUMBER(2)	.OIL TANK NP SEE 79-11-10-01 FOR DET		RF
☑	20	NO-NUMBER(3)	.FUEL/OIL HEAT EXCHANGER NP SEE 79-21-00-01 FOR DET		RF
☑	30	NO-NUMBER(4)	.AIR/OIL HEAT EXCHANGERS NP SEE 79-21-00-05 FOR DET		RF
☑	40	NO-NUMBER(5)	.LUBRICATION UNIT NP SEE 79-21-10-01 FOR DET		RF
☑	50	NO-NUMBER(6)	.OIL DEBRIS MONITORING SEPARATOR NP SEE 79-21-20-01 FOR DET		RF
☑	60	NO-NUMBER(7)	.OIL TANK SUPPLY TUBE NP SEE 79-22-10-01 FOR DET		RF
☑	70	NO-NUMBER(8)	.AIR/OIL COOLER TUBES NP SEE 79-22-10-05 FOR DET		RF
☑	80	NO-NUMBER(9)	.OIL SUPPLY TUBES-SCAVENGE PUMP, GEARBOX TO FUEL HEATER NP SEE 79-22-10-10 FOR DET		RF
☑	90	NO-NUMBER(10)	.OIL SUPPLY TUBES-AGB AND TGB NP SEE 79-22-10-15 FOR DET		RF
☑	100	NO-NUMBER(11)	.OIL SUPPLY TO NO. 4 AND 5 BEARINGS NP SEE 79-22-10-20 FOR DET		RF
☑	110	NO-NUMBER(12)	.VFSG OIL TUBES-AIR/OIL COOLERS TO LNR BIFURCATION NP SEE 79-22-10-25 FOR DET		RF

3D IPD

“What we once redrew and re-described, we now import and link.” Training and review is faster, more memorable and intuitive as maintenance staff can rotate, explode, zoom in on equipment parts.



3D Computer Based training courses

87% cost savings Authoring time drops from 8 hours per page to 1 hour. Changes can be instantly disseminated worldwide in a variety of formats. Users manipulate images on-screen for greater clarity and ease of learning.

THANK YOU!

Parallel Graphics Ltd t/a Cortona3D
Block B, Unit 2,
Broomfield Business Park,
Malahide, Dublin, Ireland.

grafov@cortona3d.com