

SolidWorks Tools and PDMWorks Vault Tutorial:

1. Download LIGO Customised Tools from the vault/DCC
2. Draw up ECD Attachment Arm on LIGO_Part Data Templates
3. Define ECD Attachment Arm Custom Properties
4. Insert ECD Attach. Arm and 4x4 array into the D040xxx_Test Mass Assembly and add LIGO Customised Bolts.
5. Create .JPG of assembly
6. Create Engineering dwg of Assembly using CAD dwg Templates
7. Using Macro copy across custom properties from part to drawing.
8. Create Bill of Materials (BOM) in Assembly Drawing
9. Create .PDF of Drawing
10. Upload the files to Vault, noting features of the vault.

Referenced Documents

(All on DCC and PDMWorks Vault)

– LIGO-D030382-04

- A Summary of the Drawing & Data Templates, Macros, Bill of Materials and Customized Toolbox created for SolidWorks & an Introduction to the LIGO Caltech PDMWorks Vault
- .pdf and a .zip file

– LIGO-T030143-03

- Designing in Solidworks: Customised Tools for Design & Documentation of LIGO Parts, Assemblies & Drawings

– LIGO-D030383-04

- Customised Toolbox for SolidWorks
- .pdf and a .zip file

– LIGO-D030384-08

- Bill of Materials (.pdf and a .xls)

Caltech PDMWorks Vault

- **File names** File names must be unique.
- **Project names** Both project names and project descriptions must be unique.
- **File storage** Only one copy of a document is stored in the vault, no matter how many other documents reference it.
- **Revisions** Revision numbers can only go forward. Each revision of a document is kept in the Vault.
- **Open** Anyone with access can open & download a document or print after previewing it from the vault
- **Ownership** When you own a document, you can modify it and check it into the Vault. Only the owner can check a modified version of a document into the Vault. Only one person can own a document at a time. When you check a document out of the Vault, the document must have no owner.
- **References** are logical links between documents in the Vault. For SolidWorks files, references are automatically based on assembly hierarchy. You can also assign references manually for non-SolidWorks documents.

Caltech PDMWorks Vault

- PDMWorks compares the age of the local copy of a document with the vault copy, and displays the differences between them:



White line through a blue circle

The document does not exist in the vault.



White upward arrow in a green circle

The local view document is newer than the document in the vault.



White downward arrow in a red circle

The local view document is older than the document in the vault.



White equals sign in a gray circle

The local view document is equal to the document in the vault.



White star in a green circle

This is a new document or new document reference.



Hollow icons

The document is loaded in memory but not in an open window.






Document name in **bold** text.

You need to save the document.

Caltech PDMWorks Vault

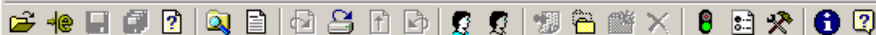
Document Status

The document icon indicates the document status.

	Magenta-colored circle on document icon	You checked out this document.
	Cyan-colored circle on document icon	Another user checked out this document.
	Shortcut icon on or next to a document icon	This is a shortcut reference to the actual document that resides in another project.

Security of the Vault

- The Vault directory is accessible only to the administrator, (he/she installs updates, deletes files, maintains passwords, etc ...) Users should not have any access to the Vault through Microsoft Windows Explorer.
- The vault exists on a server that is backed up onto tape. Each machine with SolidWorks has Client software
 - Access tested from US and UK locations
 - Vault exists on 131.215.115.155
 - Files can be viewed / printed via via the web portal



My Computer (M21)

- Open in SolidWorks
- 3½ Floppy (A:)
- Local Disk (C:)
- Compact Disc (D:)
- Compact Disc (E:)
- Removable Disk (F:)
- ctorie on 'sirius' (G:)
- Removable Disk (H:)
- ligo on '131.215.115.155' (I:)

My Vault (131.215.115.155 / pdmwadmin)

- solid works
 - E030258-06_overallBOM_LIGOMC_13May2003.xls <PRE-01>
 - Blade ECD
 - custom toolbox
 - TEST VAULT FOR MPL CIT TEST
 - MPL, CIT FEB CALTECH
 - D040038_ETM_Assembly_Test_Mass.SLDASM <01>
 - D040038_ETM_Assembly_Test_Mass.SLDDRW <00>
 - D040038_etm_assembly_test_mass.jpg <PRE-02>
 - D040038_ETM_Assembly_Test_Mass.pdf <PRE-01>
 - D040043_ETM_Assembly_Test_Mass_Wire_BreakOff.SLDASM <00>**
 - D040036_ETM_TEST_MASS.SLDPRT <00>
 - D040037_ETM_TEST_MASS_INSERTS.SLDPRT <00>
 - D040046_ETM_Test_Mass_Aluminium_Face.SLDPRT <00>
 - NAS 620 FLAT WASHERS.SLDPRT <PRE-02>
 - SST_setscrew.SLDPRT <01>
 - SST_Socketheadcapscrew.SLDPRT <01>
 - D040048_ETM_Assembly_Test_Mass_WireJig.SLDASM <00>
 - D040050_ETM_Assembly_Sapphire_Test_Mass.SLDASM <01>
 - D040053_ETM_Assembly_Test_Mass_w_Glass_Faces.SLDASM <00>
 - D040072_ETM_Test_&_Penultimate_Mass_V-Clamp.SLDPRT <00>
 - templates, bom etc ...
 - for US UK set up tests
 - Example Project for T030143
 - QUAD ETM
 - sample
 - SEI KM

Show previews

Selected Local Document Information

Document:

File type:

Modified:

Path:

Preview View

Selected vault document information

Document: D040043_ETM_Assembly_Test_Mas

File type: SolidWorks Assembly Document

Modified: 2/6/2004 4:09:12 PM

Project: MPL, CIT FEB CALTECH

Owner: mpjoyd

Revision: 00 (Latest)

Config: [None selected]

Preview View

Properties History/Notes References Where Used Configurations

Property	Value
Description	TWO WIRE BREAK OFF ASSEMBLY
Number	D040043
Revision	00
Author	mpjoyd
Project	ETM CP TEST MASS
ligo	
Alternative	
Asrequired	
Date drawn	28JAN04
Designed	MPL
Drawn	MPL
Finish	---
Material	---
Next assembly	ETM CONT TEST MASS
Reference	
Required	
Spare	
Sub-system	SUS
System	ADVANCED LIGO