

The best way to explain the contents is with a chronology:

1. ValveCage-20.STEP is the original import
2. ValveCage-20.SLDPRT is as-imported from the STEP file, but it gets modified later on
3. ValveCage_20_3DPM.SLDPRT is created from an inserted ValveCage-20.SLDPRT to define the process plan.
4. ValveCage_20_3DPM.SLDDRW is created from ValveCage-20-3DPM.SLDPRT
5. ValveCage 20 Fixture.SLDASM is the fixture for operation 70.
6. ValveCage-15.STEP is the revised import
7. ValveCage-15.SLDPRT is as-imported from the STEP file, but it gets modified later on
8. ValveCage20-15.dcv.xml is saved by the DCV application to save the recognized the difference between ValveCage-20.SLDPRT and ValveCage-15.SLDPRT. At the same time, DCV modifies ValveCage-20.SLDPRT to assure that every face has a unique identifier assigned as a name. ValveCage-15.SLDPRT is modified to assure that every matched face has the same name as in ValveCage-20.
9. DcvFolderMgr.xml is created by the DCV application as a rudimentary effort to manage DCV files and their relationship to the analyzed SolidWorks files.
10. ValveCage-20-15.SLDPRT is created by DCV. The geometry is the same as that in ValveCage-15.SLDPRT, but it can be used to replace ValveCage-20.SLDPRT with associativity intact.
11. ValveCage_20-15_3DPM.SLDPRT is created by renaming a copy of ValveCage_20_3DPM.SLDPRT then replacing the reference to ValveCage-20.SLDPRT with a reference to ValveCage-20-15.SLDPRT.
Replace inserted part is done per: https://www.youtube.com/watch?v=AauP_Jzbbu4
12. ValveCage_20-15_3DPM.SLDDRW is created by making a copy of ValveCage_20_3DPM.SLDDRW replacing the reference to ValveCage_20_3DPM.SLDPRT with a reference to ValveCage_20-15_3DPM.SLDPRT
13. ValveCage 20-15 Fixture.SLDASM is the fixture for operation 70. It is created by replacing ValveCage_20_3DPM.SLDPRT with ValveCage_20-15_3DPM.SLDPRT.
Replace component is done per: https://www.youtube.com/watch?v=YN1I96kr_nI
14. ValveCage 20 Fixture.SLDDRW is the drawing file for ValveCage 20 Fixture.SLDASM and ValveCage 20-15 Fixture.SLDASM.

The actual chronology was slightly different as some steps were redone to fix minor issues.

Some TIF files may be present. They were created for figures in the journal article.