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INTRODUCTION: THE FRUSTRATION OF A SOLIDWORKS WELDMENT CUT LIST EMPTY

Every SolidWorks user who works with welded structures has faced it at some point. You have spent hours meticulously modeling your frame, placing structural members, and trimming corners. You open the drawing, insert the cut list, and then you see it: a blank table. The dreaded **Solidworks Weldment Cut List Empty** message stares back at you. For a designer or engineer, this is more than an inconvenience. It can halt production, delay fabrication, and create confusion on the shop floor. The weldment cut list is the lifeblood of any welded structure drawing. It tells the fabricator exactly what lengths of material are needed, how many, and what profile to use. When it is empty, you are left with a ghost of a drawing. This article will provide you with a comprehensive, step-by-step guide to understanding why your cut list is empty, how to fix it, and, most importantly, how to prevent it from happening again.

Before diving into troubleshooting, it helps to understand exactly what a cut list is and how SolidWorks generates it. A **weldment cut list** is a dynamic table that automatically extracts data from the structural members in your model. It

reads the length, angle, profile, and quantity of each member. When this list is empty, it usually means that SolidWorks cannot recognize the bodies in your model as distinct, valid structural members. The causes can range from simple user error to deeper issues with the model's feature tree. In the sections that follow, we will explore every angle of this problem, ensuring that you never have to face an empty table again.

WHAT IS A WELDMENT CUT LIST IN SOLIDWORKS?

A weldment cut list is a specialized BOM (Bill of Materials) that is specifically designed for weldment parts. Unlike a standard assembly BOM, the cut list operates at the part level. When you create a weldment part file in SolidWorks, you insert structural members via the Weldments toolbar. Each member is a separate body within the same part file. The cut list then groups these bodies by their profile type and length. It provides critical information such as:

- **Quantity** of each unique member.
- **Length** of each member (often the cut length, not the overall bounding box).
- **Profile** description (e.g., HSS 4x4x0.25, C8x11.5).
- **Angle** of cuts, if trimmed.
- **Custom properties** assigned to the weldment.

The cut list is essential for streamlining fabrication. It eliminates manual counting and measuring. When the cut list is empty, the fabricator has no guidance. Understanding how this list is populated is the first step to diagnosing the **Solidworks Weldment Cut List Empty** error.

How SolidWorks Populates the Cut List

The process is automatic but relies on a specific model structure. When you insert a structural member, SolidWorks creates a **Cut-List Item** folder in the FeatureManager design tree. Each unique body, or group of identical bodies, is placed into its own sub-folder. The software analyzes the bodies, extracts their lengths, and creates properties like *Description*, *Length*, *Angle1*, and *Angle2*. If these folders are missing or corrupt, the cut list will be blank.

COMMON REASONS FOR A SOLIDWORKS WELDMENT CUT LIST EMPTY ISSUE

An empty cut list rarely has a single cause. It is usually the result of one or more of the following issues. Identifying the root cause is more efficient than randomly clicking rebuild.

Missing or Incorrectly

Applied Structural Members

The most basic cause is that no weldment features exist in the model. You might have modeled the frame using standard extruded boss features instead of the Weldments structural member tool. SolidWorks only recognizes bodies created with the **Structural Member** command for cut list generation. If you used extrudes, sweeps, or imported bodies, the cut list will be empty. Another scenario is using the wrong profile. If you select a profile from the library that does not match the actual body geometry, the cut list might fail to recognize it.

Unrecognized Bodies Due to Modeling Order

SolidWorks relies on the feature tree hierarchy. If you move a body out of the Cut-List folder manually, or if you use the **Move/Copy Bodies** command in an unexpected way, the body can become orphaned. These orphaned bodies do not belong to any cut list item, so they are ignored. Similarly, if you trim a member before it is properly added to the cut list, the resulting body might not be recognized.

Corrupted or Unlinked Custom Properties

Cut lists depend heavily on custom properties. If you have manually deleted or edited the **Cut-List Item** properties, you might break the link. For instance, if you delete the *Description* property or change its name, the table will not know how to display the data. This is especially common when users try to customize their cut list templates and inadvertently corrupt the default fields.

Configuration and Display State Issues

Sometimes the cut list is not truly empty. It might be populated in one configuration but empty in another. If you are working in a configuration where the weldment bodies are suppressed, the cut list will naturally be empty. Check your active configuration in the Configuration Manager. Additionally, check your display states. If a display state hides all bodies, the cut list will reflect that.

Weldment Bead Interference

In some cases, adding weld beads (fillet or groove welds) can interfere with the cut list recognition. While this is rare, it can happen if the weld bead merges

separate bodies into one solid body. Once the bodies are merged, the cut list no longer sees them as individual members, and the list empties.

STEP-BY-STEP TROUBLESHOOTING GUIDE FOR AN EMPTY CUT LIST

Now that you understand the possible causes, here is a systematic approach to fix the **Solidworks Weldment Cut List Empty** issue. Follow these steps in order. Do not skip ahead, as each step builds on the previous one.

Step 1: Check the Feature Tree Structure

Open the FeatureManager design tree. Look for a folder named **Cut-List** (or **Cut-List(1)**, etc.). If you do not see this folder, it means the model was not created as a weldment part. To fix this, you have two options. If you want to keep the existing bodies, you can insert a weldment feature using the **Insert > Weldments > Weldment** command. This will create the cut list folder. Then, you can manually drag the bodies into the cut list items. A better approach for future models is to always start your frame with the **Weldments** toolbar. If the folder exists but is empty, proceed to the next step.

Step 2: Use the "Update Cut List"

Command

Right-click on the Cut-List folder at the top of the tree (not an individual body folder). Select **Update Cut List** from the context menu. This forces SolidWorks to rescan all bodies in the part and group them into cut list items. If you have made changes to the model since the last update, this often resolves the issue. If the update returns a message that no bodies were found, go to Step 3.

Step 3: Verify Body Visibility and Existence

Use the **View > Hide/Show Bodies** command to ensure that all your structural members are visible. Sometimes a body becomes hidden accidentally. If a body is hidden, it still exists in the model, but the cut list might ignore it. Unhide all bodies, then try the Update Cut List command again. Also, check the **Solid Bodies** folder at the bottom of the FeatureManager. If a body is listed there but not inside the Cut-List folder, you can drag it manually into the Cut-List folder. This is a manual fix, but it works.

Step 4: Check for Corrupted Cut List Items

Sometimes individual cut list items become corrupted. Expand the Cut-List folder. If you see sub-folders (e.g., Cut-

List Item1, Cut-List Item2), right-click on each one and select **Properties**. Look at the *Length* and *Description* fields. If they are blank or show strange values, the item is corrupt. The simplest fix is to delete all the cut list items (right-click and delete), then right-click the main Cut-List folder and select **Update Cut List** to regenerate them. This will recreate all items from scratch based on the current body geometry.

Step 5: Inspect Custom Properties

If the cut list is populated but the table in the drawing is empty, the issue might be with the custom properties mapping. Open the Cut-List Item properties for one member. Ensure that the properties *Description*, *Length*, *Quantity*, etc., are present and filled with data. If they are missing, you can add them manually, but it is better to use the **Cut-List Properties** dialog. In the cut list table in the drawing, right-click and select **Properties**. Check the column settings. Make sure the column headings (e.g., DESCRIPTION, LENGTH) match the property names exactly. A misspelling will result in a blank cell.

Step 6: Rebuild the Model

Sometimes a simple rebuild fixes everything. Press **Ctrl+Q** to do a full rebuild. This forces SolidWorks to recalculate all features, including the cut list. If there were any temporary

glitches, this often clears them. After the rebuild, check the cut list again.

Step 7: Test in a New Part File

If none of the above works, the problem might be specific to that file. Create a new part using the same weldment template. Insert a single structural member. Check if the cut list populates. If it does, the issue is with your original file, not the software. If it does not, your weldment template might be corrupt. Try resetting your template or using the default SolidWorks weldment template.

BEST PRACTICES TO AVOID A SOLIDWORKS WELDMENT CUT LIST EMPTY ERROR

Prevention is always better than troubleshooting. Once you have your cut

list working again, adopt these habits to keep it that way.

Always Use the Structural Member Command

Never use extrude, sweep, or revolve to create frame members if you intend to use a cut list. The Structural Member command automatically creates the necessary feature tree structure and custom properties. If you need a custom profile, save it as an **.SLDLFP** (SolidWorks Library Feature Part) file and add it to the weldment profile library. This ensures full compatibility.

Keep the Feature