

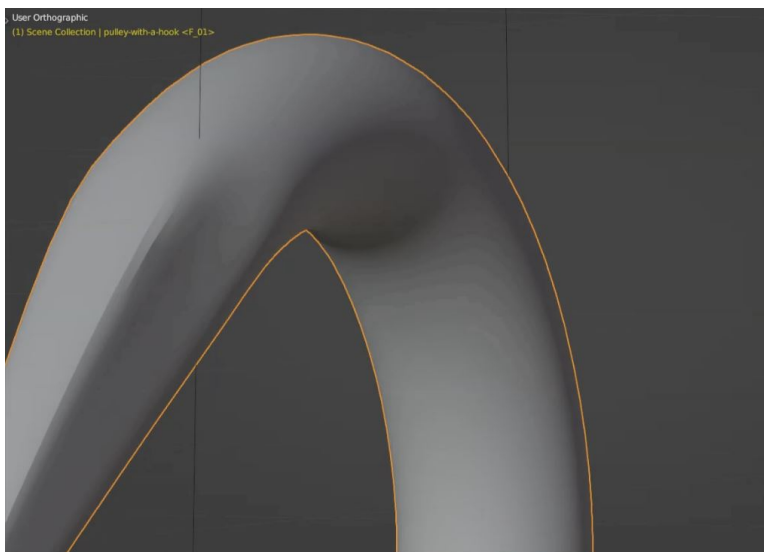
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Hello everyone!

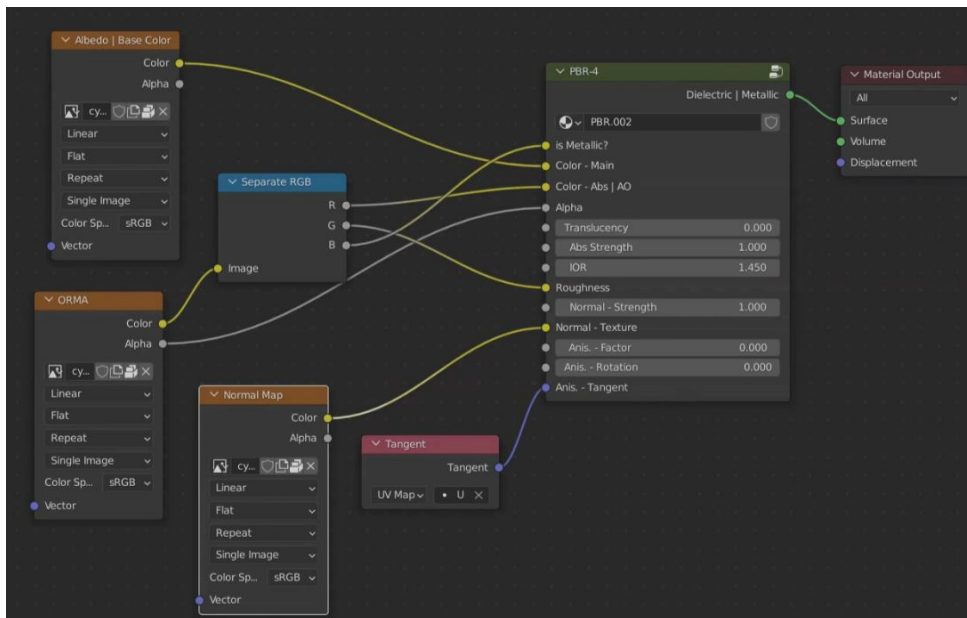
In this tutorial I want to show you some strange artifacts that I encountered while applying some Textures from Substance Painter in Blender and how to fix them. The rendering engine used here is **Cycles**.

Let's take a look at the object: as you can see, it is a simple pulley with a hook; the geometry looks fine: **no flipped Normals**, no double vertices or geometries, the topology is OK, **the shading is set to Smooth** and **Auto Smooth** is on.



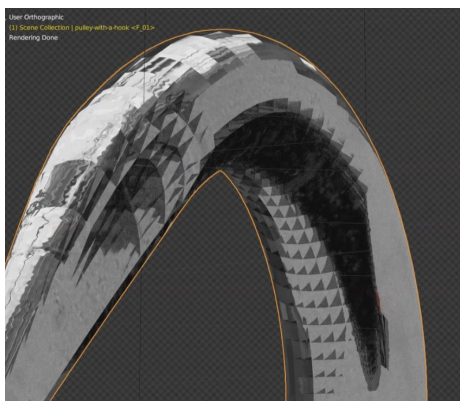
Regarding the **UVs**, the Material and the Textures: the UVs are **non-overlapping** and I'm using a single **PBR Material** with three Textures: Albedo, Normal and a particular color texture called "ORMA" in which I store, as the name suggests, the Occlusion, the Roughness, the Metallic and the Alpha maps in the RGBA channels of the image.

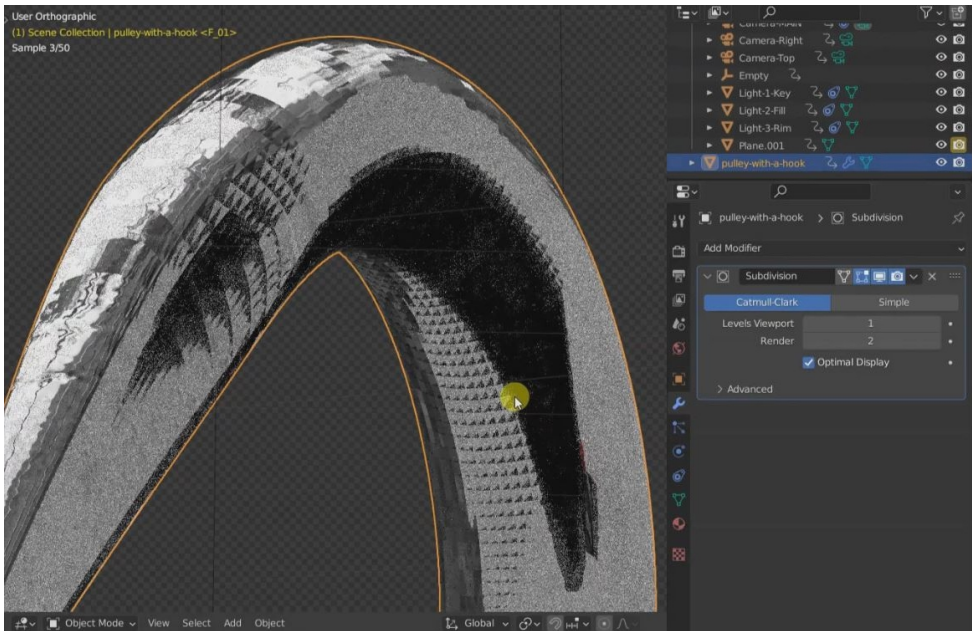
I export this texture from Substance Painter in order to save disk space, because those channels are stored in grayscale images, so I can put them in a single PNG image texture, then I separate the channels in Cycles.



When I switch to **rendered mode**, however, I can see some strange **artifacts** on the surface: the faces look triangulated, or "jagged".

Most of the times, this may due to the **Normals** or to the **Smoothing** options, but here the Auto Smooth option is OK, the **Edge Split** modifier is **useless** and the **Subdivision Surface** modifier will make things even **worse**.

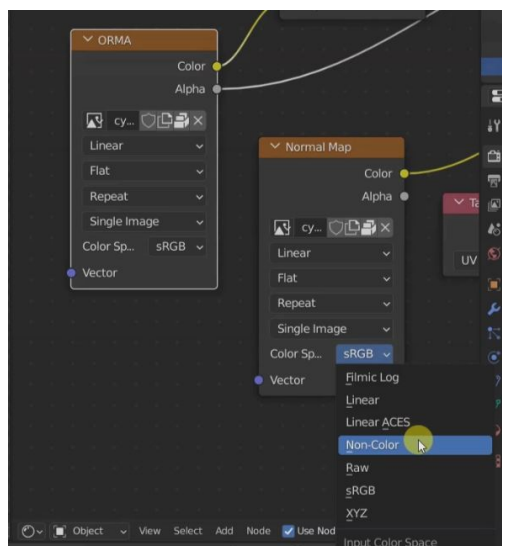




So, we know that this is not due to the Geometry, but it is not due to the rendering settings either: changing the **Shadow Terminator** parameters (in the **Object - Shading** tab) or other parameters in the **Render Properties** tab will not fix this problem.

I'm pretty sure that it has to deal with the Normals, but they are OK...

... well, actually *it deals with the way the Normal map is applied to the material*: in the Input Image node in which I load the Normal Map, in fact, there is a parameter, called "**Color Space**"; it is set to **sRGB**, which is OK for a base color image texture, but here I'm dealing with a Normal Map, so I switch to "**Non-Color data**" and...

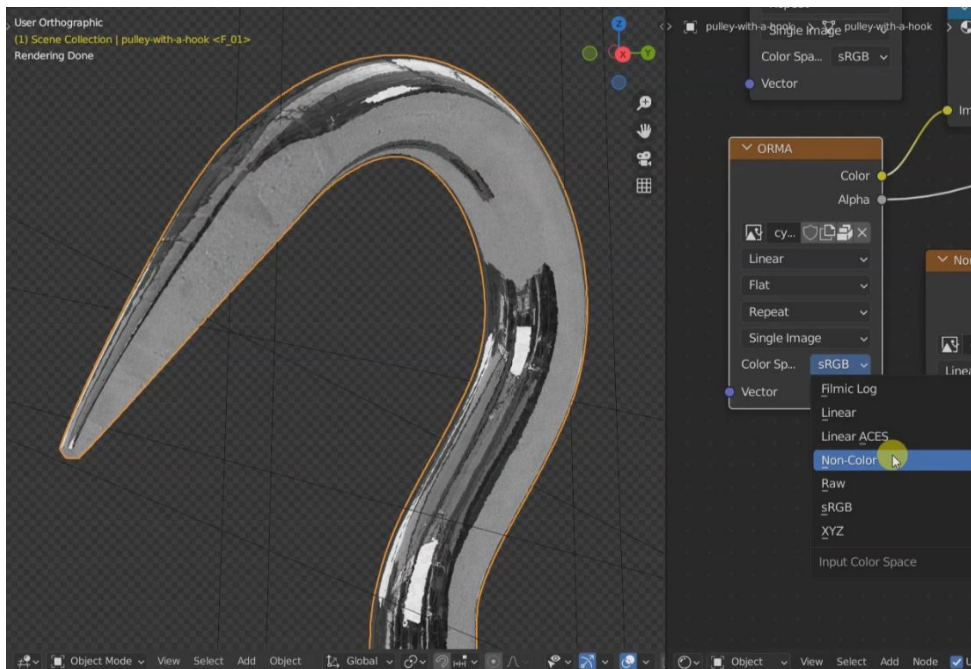
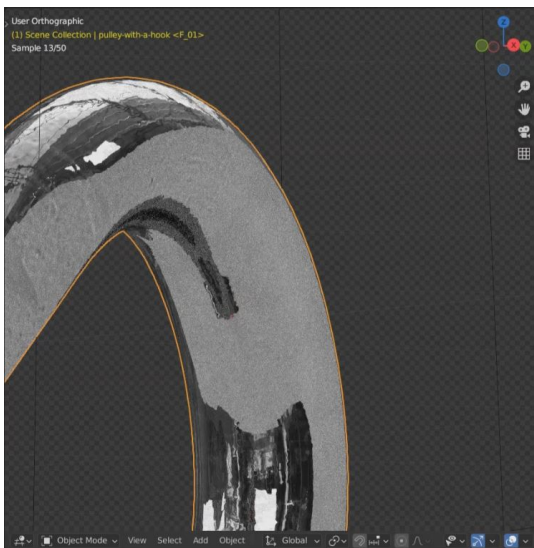


... those strange artifacts are gone!

So, if you see this strange artifacts on your objects, take a look at this parameter, too!

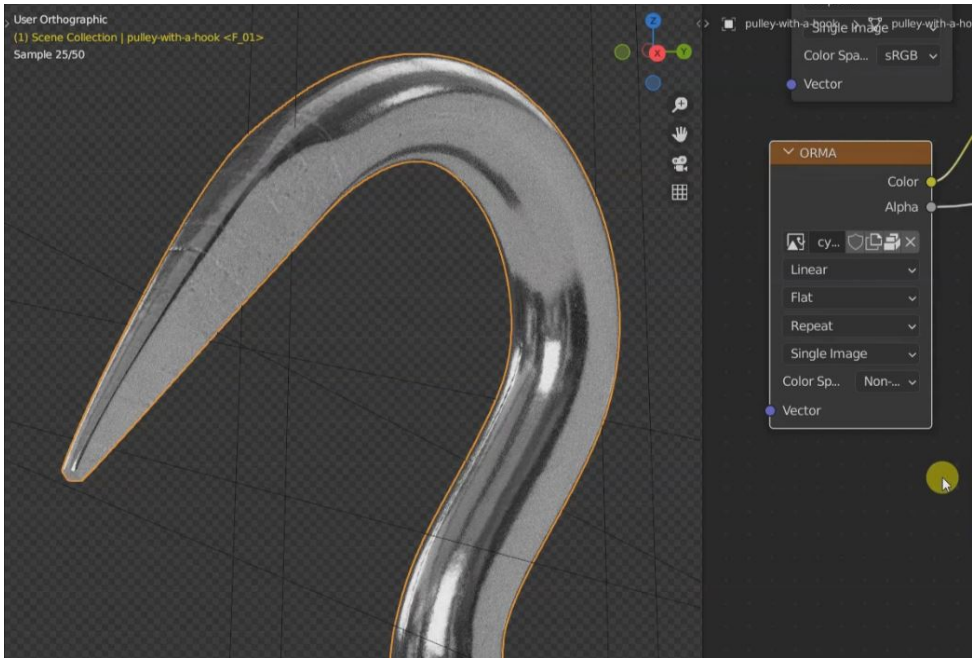
But wait: there's more!

If we take a look at the object preview in Substance Painter, we can see that the **Roughness** is different from the one we get in Cycles; now, we know that this may be due to the **Color Space** of the **ORMA Texture** (the one in which I store the **Roughness** data, among others), so we can switch to *Non-Color Data*, and...



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... here we go!



Ok, that's all! See you soon!
