

# TroubleShooting & Tips

## Lighting

- Please insure when loading old scenes that the shop\_lightpath points to a PxrCollect VOP.
- Pxr Std Lights (which are RSL lights) were deprecated in RenderMan 21. Create a new Pxr C++ light. See [Adding Lights](#).

## Shading

- The new material workflows requires that the most downstream VOP node is a PxrMaterialBuilder.
- RSL (RenderMan Shading Language) support was removed in RenderMan 21. Materials (BxDFs) are C++ constructions and patterns should be OSL when possible.
- We accept the Houdini attribute names for use in shading by connecting a [PxrPrimvar](#) or [PxrAttribute](#) node to a parameter using the appropriate name.

## Geometry

- Poorly tessellated (non-subdivision) surfaces may show artifacts when rendering like dark edges and outlines. It's recommended to render smooth subdivisions to avoid this artifact. You may also use polygons with no normals defined and then subdivide, RenderMan will compute the normals for you.

## Rendering

- The RenderMan 21 ROP renders using the 21 Soho workflow. It is recommended to use a *new* RenderMan ROP to take advantage of the interactive workflow in RenderMan 22.