This document captures ideas, experiences, and informal recommendations from the Yaskawa Partner Support team. It is meant to augment – not supersede manuals or documentation from motoman.com. Please contact the Partner Support team at partnersupport@motoman.com for updates or clarification.
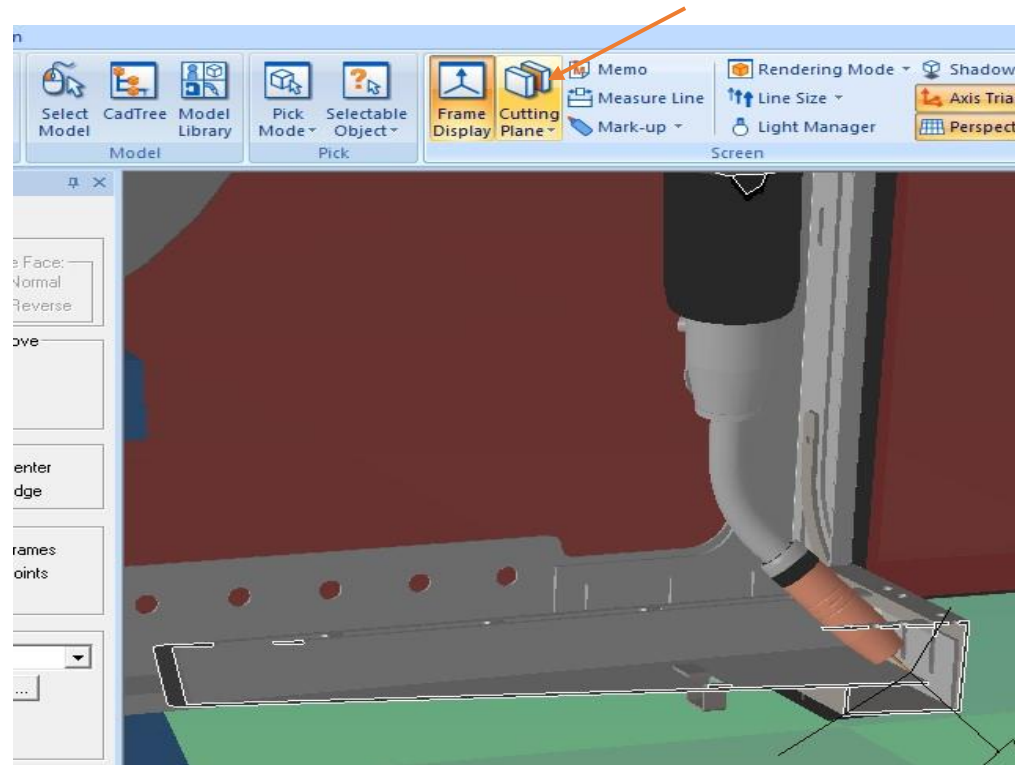
Dealing with View Obstructions in MotoSim

Introduction

There will be a time when using MotoSim you will run into an issue where it is difficult to see where the program point needs to be. For example, welding inside a box or having to maneuver through tight tooling with a weld torch to a hidden joint.   This is when you will use cutting planes. Click the icon below in the MotoSim Home tab to add a Cutting Plan to the model.
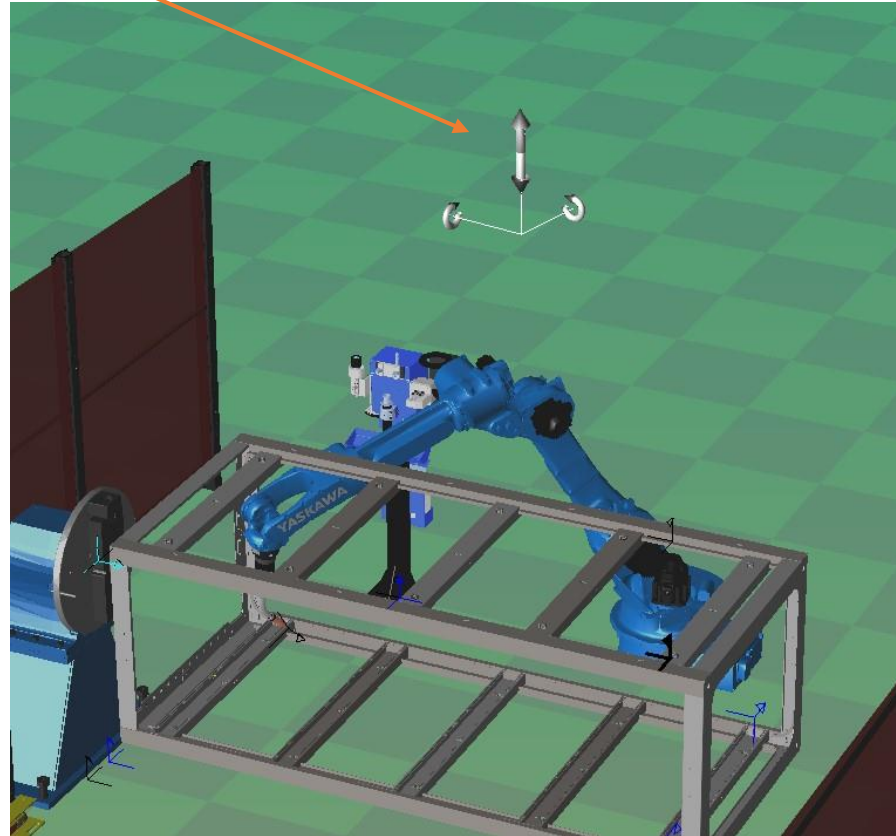
Cutting Planes

Cutting Planes are a way to display cross sections that are perpendicular to the X, Y, and Z axes directions in the cell window. Specifically, planes can be defined as follows:

1. X cutting plane
   a. Roll about Y axis
   b. Roll about Z axis
2. Y cutting plane
   a. Roll about X axis
   b. Roll about Z axis
3. Z cutting plane
   a. Roll about X axis
   b. Roll about Y axis

When you are using the X cutting plane, for example.   You can adjust that plane's attitude with the roll about of the Y axis or Z axis. This will give you the ability of changing the angle of the cut for better viewing about those axes.
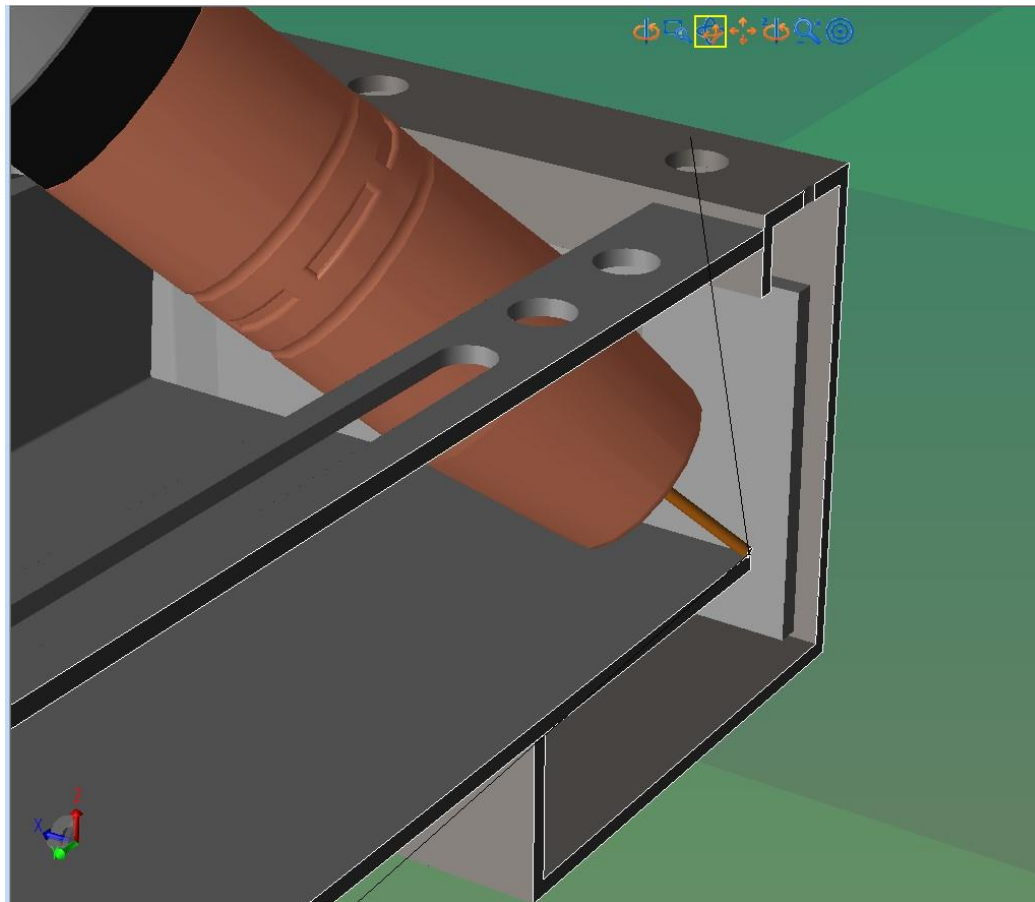
Below is an example of the Z axis plane User Coordinate System (UCS) being shown. It shows the direction, plus each additional axis of rotation available. Here, it will be Rx and Ry.

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Here, the X plane is active and was moved in the positive X direction until a hidden joint could be seen. The torch and wire are in the same location as seen above, just with a better view of where the wire is.

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When you are done with whatever cutting plane you are using, simply click it again to shut it off.