

## Cyclone Spiggot Change Out Tool

### Evolution Mining – Pajingo Site

#### The Problem or Initiative

The reason behind the design of the cyclone change out tool was to eliminate the need of three men to do the job of a simple one man task. The other reason is that at Pajingo Mine we use ceramic lines spiggot's that if not aligned properly can be easily cracked, which is costly and causes excessive wear. When Spiggot's were changed out in the past they were often hard to fit correctly lined up. The tool eliminates the issue of incorrect alignment and manual handling.

#### The Solution

After a discussion between co-workers a resolution to the problem was reached. After a proto type was designed it was found to work but lacked in the safety aspect, which was later resolved by making a second tool that was able to clamp to the cyclone. The hierarchy of control was applied with elimination being our goal, and was achieved through a change of design.

#### Benefits / Effects / Outcomes

By using the spiggot tool it has eliminated the use of hammers and screwdrivers when fitting the clamp that hold the spiggot housing to the lower cone of the cyclone, it also cuts out a lot of the manual handling and hours used for the job. Through asking other crews onsite doing the same job, it shows that the tool does work in the sense of making the job safer and easier to do. Because the tool is user friendly simple training for other crews has made it versatile to be used by all workers on site.

#### Transferability

Cyclones are widely used throughout the mining industry where milling and grinding is used therefore the cyclone spiggot change out tool could be easily modified to fit different sized cyclones.

