

## Clearing Cylinder

**Part Name:** Clearing Cylinder

**Interchangeability with OEM Part:** The Optimum Crush® Clearing Cylinder, is an improved and patented design. As a whole it replaces the OEM Clearing Cylinder.

**Equipment:** XL1100, MP1000

**Optimum Crush® Optimized Design Part Number:** 500233

**Purpose:** Increase Life of the Cylinder, Reduce Maintenance Time to Remove Cylinder and Replace Seals.



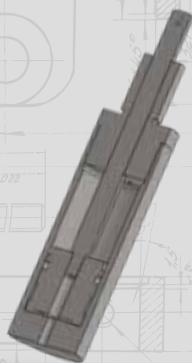
## Background

The OEM Clearing Cylinder frequently seizes when water and dirt enter the rod area. There is no wiper on the rod or breather in the cylinder body so when the piston retracts, it pulls in water and dust which naturally accumulate in the large M100 threaded hole in the Main Frame. To repair the cylinder, the entire cylinder must be removed from the Main Frame or the cylinder body unthreaded and disassembled in place which is very difficult and time consuming.

## Optimized Design

Optimum Crush® has discussed this inefficient design with clients as well as the difficulty to remove these bushing and collaborated with Millwrights to design a bushing that can be removed easier and will last longer. The Optimized design has larger, and more, jacking holes to help remove the bushing from the Main Frame flange bore. It also has a flange that is designed with proper clearance to allow the bushing to be removed and rotated in 90 degree increments so that it can be reinstalled up to 3 more times to create 300% longer part life. The OEM Design is shown on the left and the Optimum Crush® design is shown on the right.

**OEM Design**



**New Bolted Body Design**

**Breather**

**Hex Nut**

**Added wiper locations**

**Optimum Crush Design**  
"Patent US 10,940,482"

