

## Hydraulic Cylinder Honing

### What Is Honing?

Honing is a unique abrasive machining process which **removes material** and **improves bore geometry** and **surface finish**. The **rigid tool** design corrects most common bore errors.

Any respectable hydraulic shop should be providing a honing service as a critical part of a cylinder rebuild. It is a simple process and a relatively small portion of the total cost of a cylinder repair.

### Why Hone?

A properly honed tube is the basis for a superb seal, smooth operation and extended seal life for any hydraulic cylinder. Leaks are the most widely cited repair indicators that will prompt a cylinder repair. When leaks are present, contaminants could enter the system. Contaminants can create scratches, low spots and other irregularities in the cylinder tube wall. These irregularities accelerate seal wear and eventually cause internal leaks. Internal leakage is a silent killer that decreases performance. Deglazing is another reason to hone a cylinder before installing new seals. Deglazing will in effect restore the original crosshatch finish that will improve lubrication, minimize wear and offer smoother operation. Honing can also be considered an inspection tool. After a light hone, surface imperfections may be revealed that could indicate a more severe condition. Flexible hones do not provide the same result as the Sunnen rigid honing tool.

### Advantages of honing:

- Deglazes the Surface and Creates a Cross-Hatched Surface Finish
- Improved Lubrication - Uniform Wear – Longer Seal Life
- Corrects Minor Surface Irregularities
- Scratches – Dents - Worn Areas – Minor Galling
- Helps Correct Geometrical Issues
- Taper – Bell Mouth – Out of Round - Ballooning
- May Reveal more Serious Surface or Geometrical Issues

Can remove up to .010" (.25mm) and use standard cylinder seals

### When Hone?

Every time a cylinder is resealed, light honing should be performed as part of a thorough repair. It is widely accepted that honing when resealing will save you time and money when you consider the costs of more frequent rebuilds, shortened seal life, and lost time. A suitable hone job will renew the bore finish and provide a true bore that is necessary to achieve maximum life, peak performance and reduced downtime.

### Honing and More!

In some instances, cylinder damage is too severe and a light hone will not be sufficient. In such cases, the hydraulic repair experts can offer several options for a sound repair.