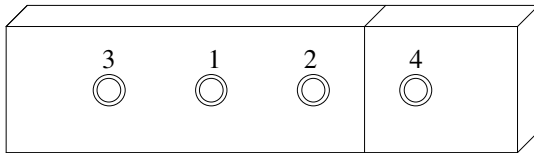


MUBEA IRONWORKER BLADE CHANGE SAFETY AND OPERATING PROCEDURES

Blades are sharp and brittle, they should be handled with due caution.

A. Lower Blade Removal Sequence

1. Using Plant Lockout Procedures, lock out the Ironworker.
2. Bolt removal:

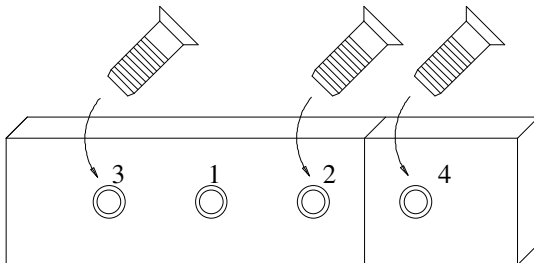


Note: Some blades have a 3 hole mounting pattern, some have a 4 hole pattern.

- a) **Loosen** bolts 4, 3, 2 and 1 in this sequence, outside to in.
 - b) **Remove** bolts carefully. Be careful not to drop the blade.
 - c) Clean the blade and put it where it cannot be dropped or damaged.
3. Clean the ironworker blade seat and immediate area.
 4. Unlock the iron workers power supply.

B. Upper Blade Removal Sequence

1. Lower slide to bottom position "bottom of stroke".
2. Lock out the ironworker.
3. a) Loosen and remove **outside** mount bolts, from the upper blade.



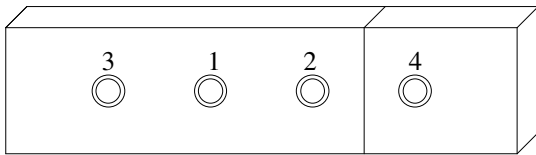
STANDARD OPERATING PROCEDURES

- b) **Loosen** the center bolt.
 - c) Have a helper hold the upper blade before removing the final bolt.
 - d) **Remove** final bolt and upper blade
 - e) Clean and inspect upper shear blade mounting surface.
4. Clean and inspect the condition of the shear blade cutting edge.
 - a) If there is a “fresh” sharp edge remaining, proceed with installation.
 - b) If all edges are worn, send the dull shear blade to Tool Services.

C. INSTALLATION

1. Install the upper shear blade.
 - a) Have a helper hold the blade in place while you finger tighten the mounting bolts.

To prevent warping of the shear blades, the following tightening sequence must be exercised whenever shear blades are installed.



Step I - Torque Bolt 1, 2, 3, 4 to 50 ft lbs.

Step II - Torque Bolt 1, 2, 3, and 4, to 150 ft lbs.

Ensure anti seize compound is used on the contact surfaces of the bolt and shear blade.

2. Unlock ironworker power source.
3. Raise slide to upper limit.
4. Lockout ironworkers power source.
5. Install lower shear blade, using the same method for installing upper blade.
6. Unlock the iron workers power source.

These steps must be followed in proper order as to prevent injury or damage.