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| Dvorak iron worker model 314 | 4 |
| Metals  |

Resources

* Scotchmans Industries Operators Manual

The Scotchman Ironworker is a versatile, multi-purpose, shearing, punching and forming machine engineered for trouble free operation.

The hydraulic system operates at 1,200 PSI and is protected from overload by a pilot operated relief valve.

**Maintenance**

**Lubrication**

Before operating the 314 apply oil to the shear bar blades, angle shear and the punch and die as well as to every 10-15 cuts.

Apply oil to the 4 pins two on the punch and two on the angle shear.

**Twice per Week**

* Grease the two bar shear beam zerks, one on each end for pins.
* Grease the two punch zerks, one in the pivot pin and one for the punch barrel.
* Grease the two angle shear zerks, one in the pivot pin an done for the top blade holder.
* Apply grease to the surface of the beam guide wear plates on the outer end of the main beam

**Once per Month**

* Oil the four clevis pins on the punch and angle shear
* Check the hydraulic oil level on the dipstick in the reservoir

**Once per Year**

* Change the hydraulic oil



**Machine Operation**

**Punch capacities**

Thickness of Steel Diameter of punch

¼” 1-1/4”

5/16” 1-1/8”

3/8” 1”

½” 7/8”

**Punch Operation**

* Do not punch material thicker than the diameter of the punch
* Punch full, complete holes. Do not punch partial holes or past the edge of the material.
* Maintain sufficient material between the punched hole and the edge of the workpiece.
* Do not work with dull or damaged tooling
* Remove the clevis pin when using other stations
* The angle shear may be removed to provide a larger work area.

**Angle Shear Operation**

* Lubricate the blades
* Stay within the rated capacities
* The stroke may be shortened for small angles
* The angle shear can be used for mitering
* Unequal leg angle iron requires special blades
* Do not work with dull or damaged blades or allow excessive gap between the blades
* Remove the clevis pin when using other stations

**Bar Shear Operation**

* Lubricate the blades
* Less distortion at outer ends of the blades
* Rounds and squares may be cut on the bar shear
* Maintain proper blade clearance
* Hard material may damage blade
* Keep Cut-off area clear

**Bar Shear capacities**

Thickness of steel Length of cut

½” 4”

3/8” 6”

¼” 8”