



## Tool and Equipment

April 2024

Prepared by Transportation Planning  
Missouri Department of Transportation

### Plow Pin Driver 1000



#### Description and Benefit

Our team often works on broken belly plows that are in need of repairs. These plows often have “frozen”, and the blade will not move up or down. The pin inside has seized and must be removed along with its casing. The pin is solid steel and roughly 8 feet long by 2 and 1/4 inches in diameter, inside of seamless steel tubing that is welded to the plow chassis. The replacement of the tubes requires a mock-up of the pin and seamless tubing in preparation for the welding process. We then “tack weld” the tube onto the proper location and then remove the pin in order to fully weld the tubing in place. It should be noted that before the welding is 100% finished, the pin can be inserted and extracted from the tubing very easily. However, the excessive heat from the welding process changes the shape of the tubing ever so slightly, making the pin harder to install. The install process first involved driving the pin in with a sledgehammer, which is not without danger or risk. Next, we tried spinning the pin around clockwise and counterclockwise while applying forward pressure. This seemed effective but also very physically demanding. It was a great way to increase the safety aspect of the job. Next, our team designed a way to take some of the physicality out of the final install of the pin and what we came up with is the Plow Pin Driver 1000.

#### For More Information Contact

Central District - Maintenance

Eric Bybee at [Eric.Bybee@modot.mo.gov](mailto:Eric.Bybee@modot.mo.gov) or 573-690-2615.

Central District - Maintenance

Bryan Hentges at [Bryan.Hentges@modot.mo.gov](mailto:Bryan.Hentges@modot.mo.gov) or 573-751-7734.

