

## Tool and Equipment First-Round Winner

Innovations Challenge

April 2017

Prepared by Transportation Planning  
Missouri Department of Transportation

## Pull Paver Modification



### Description

To modify the paver, a notch was cut in the front of the paver to allow a truck hitch to pull the paver at any time. The paver was converted from operating on a propane engine to working off of the truck's hydraulics.

### Benefit

The pull paver modification has increased work zone safety dramatically. The use of hydraulics has eliminated the loud engine noise, which allows for better communication within the crew and enables them to hear the noise of roadway traffic traveling within inches of them. Running the paver with hydraulics reduces the 260° heat that comes from using a propane engine making workers more comfortable in the area and saves money by eliminating the use of a bottle of propane each day.

### Materials and Labor

20 hours of staff time with \$1,100 in materials. See materials list and diagram on back page.

### For More Information Contact:

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Additional photos or videos can be seen by accessing the Innovations Challenge SharePoint page at: <http://sharepoint/systemdelivery/TP/Documents/InnovationsChallenge.aspx>.

## Materials List and Diagrams

QUANTITY	PART
2	3" CHANNEL 7 1/2" LONG
2	4" FLAT 7 1/2" LONG
1	4" FLAT 12" LONG
1	3" FLAT 16" LONG
2	8" FLAT CUT AT ANGLE ONE END 23" LONG 19" ON SHORT SIDE
2	4" FLAT 19"
1	SINGLE HYD VALVE OPEN CENTER !!!
2	SETS 1/2" PIONEER COUPLERS
6	1/2" 90° PART TIME SWIVLE
2	1/2" STRAIGHT PART TIME SWIVLE
1	1/2" PIPE TEE
3	PIECES OF 5/16 ALL THREAD 12"
3	PIECES OF 5/16 ALL THREAD 11"
3	1/2" HOSES 1/2" PIPE BOTH ENDS 8' LONG
1	1/2" HOSE 1/2" PIPE BOTH ENDS 2' LONG
1	3/8 HOSE 1/6 ONE END 1/2 PIPE OTHER 3' LONG
1	LARGE RETURN PIONEER FITTING
1	MEDIAM SIZE PIONEER FITTING
1	SMALL PIONEER FITTING

CUT FRONT OF PAVER

