

2015 YOU SHOW US CONTEST
SERVICE TRUCK TIRE CARRIER

COUNTY: Dickey County in North Dakota

DESIGNERS: Daryl Lematta and Daniel Bowden

ADDRESS: Dickey County Highway Department
213 15TH Street North
Ellendale, North Dakota 58436

CONTACT: Jeff Hagen

E-MAIL: dchighway@nd.gov

TELEPHONE: 1-701-349-3326 or cell 1-701-710-0778

PROBLEM STATEMENT:

Upon purchasing a new service truck it was decided that we could no longer use the utility crane off the old service truck to haul tires for the road graders and larger truck tires. So a new way was needed to be found to load and haul tires to job sites and for emergency tire replacement. If something wasn't designed the handling of tires by hand greatly increased the possibility of injury to employees.

SOLUTION:

For a safe and easy way to load tires we built a drop hitch to lower the height the tire would need to be lifted. Then we built a swiveling ramp with a curved basket at the end to hold the tire in place once loaded. Then a back plate was added to keep the tire off the service truck's end gate. A safety snap pin and safety bar to hold the tire in an upright position prevents the tire from moving. This design eliminates the need to do any manual lifting of a tire which reduces the chances of injury to employees.

LABOR AND MATERIAL:

The following material was purchased:

9' of tubing, 30" of solid rod, 13' of angle iron, 16"x6' expanded metal, and 10' of flat steel for a total cost of \$108.

The total labor hours were 22 hours. A lot of the time was in design and discussion.

SAVINGS AND BENEFITS:

The design of this ramp “tire carrier” has made the hauling of tires both easier and safer. Being a self-contained unit has left other uses for the service truck. Not having a utility crane on the service truck has left us with the option of hooking on a 5th wheel trailer. That in itself has saved us from having to purchase another vehicle for that purpose.



