

26th Annual Local Roads Conference

*YOU SHOW US
CONTEST*

10/27/11

Steve Chase
North Dakota LTAP
Bismarck, North Dakota

JUDGES

Mike Kisse, NDDOT Mtce. Program Manager

Mark Sandifer, FHWA Technology Deployment

Mark Verke, ND Insurance Reserve Fund

Vernon Monger, former NDLTAP Circuit Rider

Reed Schwartzkopf, Jamestown ND City Engineer



Montana: Tractor Rear Window Guard
TOM FAIRBANK - BLAINE COUNTY

PROBLEM

Tractor rear window being broke by flying debris.

Grass sticking to rear window reducing visibility.

Didn't want to attach anything permanently because tractors are leased.

SOLUTION

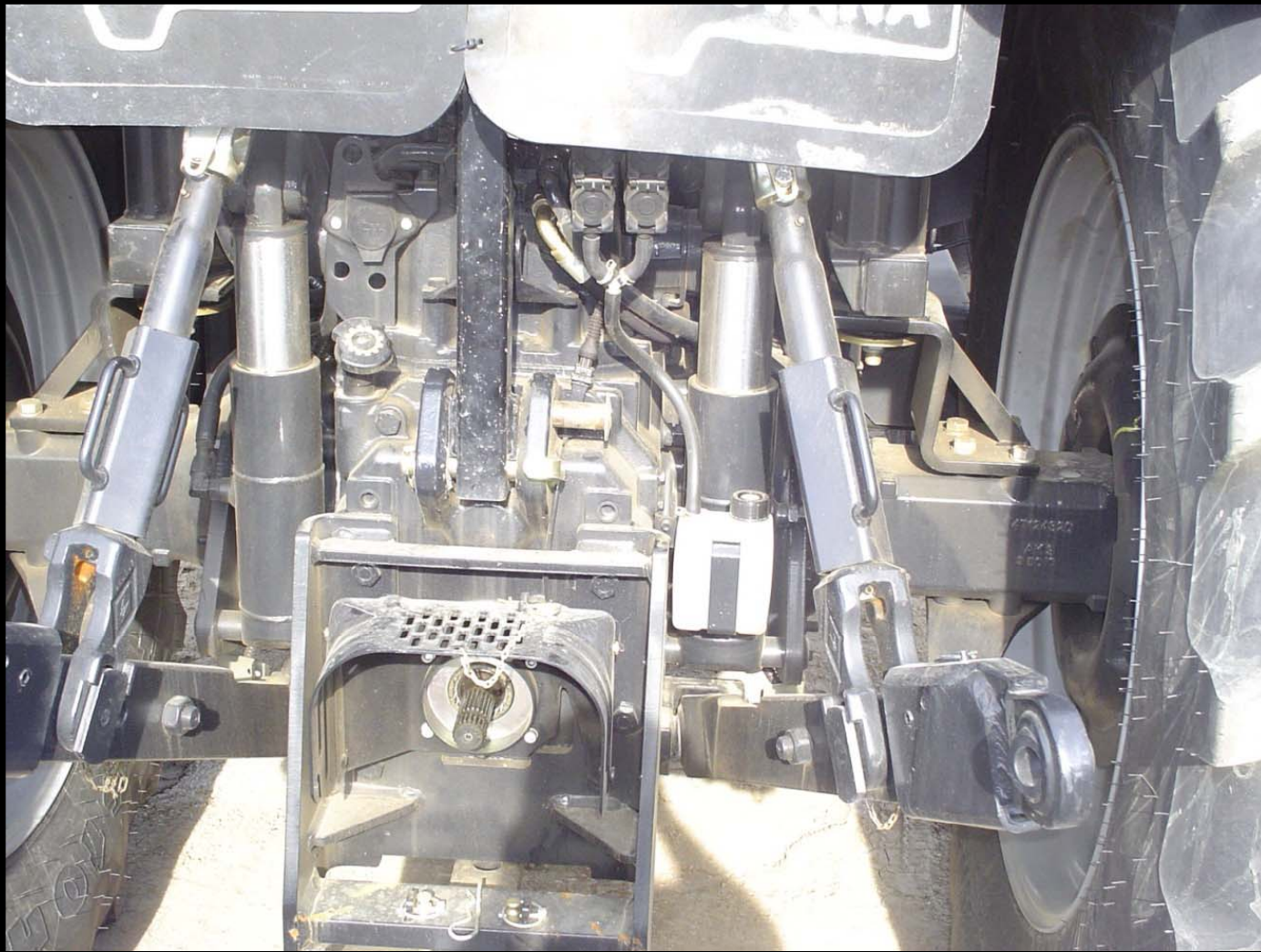
- ✓ Design a guard that is removable.
- ✓ Three point pins attach guard for easy removal.
- ✓ Clean rear window, pull pins and pivot guard down.
- ✓ Guard can be removed and used on another leased tractor.



LABOR AND MATERIAL

- Labor was 5 hours @ \$17/hour = \$85
- Cost of material = \$150
 - Including 2" square tubing, expanded metal, three point pins, and mud flaps.

Total = \$235



SAVINGS AND BENEFITS

- ✓ Protecting operator from flying glass and cost of replacing rear window.
- ✓ Easily clean rear window saving time and improve visibility.
- ✓ Use guard on another leased tractor.



NEBRASKA- MOTOR GRADER WEED SPRAYER

DAVE LUDVIC - SAUNDERS COUNTY

UGPTI

PROBLEM

Weeds and vegetation along roadways can cause various safety issues.

Uncontrolled vegetation can cause visibility problems, drainage issues and snow removal problems.

SOLUTION

- ✓ Mount weed sprayer on front of motor grader with adjustable side bar.
- ✓ Sprayer controlled inside cab with toggle switch.



LABOR AND MATERIALS

- Material = \$185
 - including tank, pump assembly, wiring and scrap sign posts.

Total Cost = \$185



SAVINGS AND BENEFITS

- ✓ Sprayer attached to motor grader eliminates the need for another vehicle used to spray weeds.
- ✓ Farming community appreciates weed control efforts.



NORTH DAKOTA- SNOW PUSHER
JOE RETTERATH - MERCER COUNTY

PROBLEM

Large amounts of snow get piled up in sheltered areas and intersections.

Piled snow creates poor visibility at intersections.

Equipment gets stuck driving into ditches.

SOLUTION

- ✓ Design piece of equipment to push snow further back from intersections while remaining on roadway.
- ✓ Snow pusher adds 12 feet of length to plow.
- ✓ Quick hitch attachment makes it easy to change to different piece of equipment.



LABOR AND MATERIALS

- Labor was 40 hours X 2 people = 80 hours at \$12.50/ hour = \$1000
- Cost of material = \$300
 - including 3 – 8 inch I beams 10 feet long, 80 feet of drill stem pipe, junked snow plow modified, and built quick hitch from strap iron.

Total = \$1300



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UGPTI

SAVINGS AND BENEFITS

- ✓ Impossible to measure is the safety to the traveling public by improved visibility at intersections.
- ✓ Snow pusher moves more snow in one hour than snow blower could move in three hours.
- ✓ Saving in man power and equipment by not having to pull out stuck equipment in ditches.



Colorado - Sign Repair Stand

Josh English - Cherry Hills Village

PROBLEM

Safe means to repair signs or trim trees around signage and structures.

City doesn't have funds for bucket truck to perform these duties.

Standing in back of pickup or using ladder in unsafe conditions.

SOLUTION

- ✓ Design sign repair stand to mount in box of pickup.
- ✓ Easily installed or removed by two people.
- ✓ Ladder to climb into box of pickup.



LABOR AND MATERIALS

- Labor was 20 hours to build.
- Cost of material = \$300
 - including square tubing, angle iron, chains, grip strut and paint.
- Tailgate ladder purchased = \$60
- Miscellaneous supplies = \$20

Total = \$380

Before

After



BEFORE



AFTER

SAVINGS AND BENEFITS

- ✓ Saved several thousand dollars cost from purchasing commercially built unit.
- ✓ Reduced the risk to employees of possible injury from falls.
- ✓ Increased work area because of additional height employees can reach safely.

AND THE WINNER IS