

## **ROUTT COUNTY ROAD ROLLER**

Routt County, Colorado

Contact:

Steve Kernen,

Routt County, District 2 Heavy Equipment Mechanic

P O Box 773598

Steamboat Springs, Colorado 80477

(970) 276-4603 or (970) 879-0831

### **Problem Statement:**

When doing maintenance on a gravel road, compaction and moisture are lost creating an unstable surface. In the past, our operators usually wheel rolled the bladed section or a drum roller and operator were brought to compact the newly bladed road section.

The problem with using a roller is that there are never enough operators to man the roller so ultimately no rolling occurred so the blading of the road did not last as long and repeat blading occurred more often. This added additional costs to the operation of gravel road maintenance.

### **Discussion of Solution:**

Why not do the blading and rolling all in a single pass with one piece of equipment?

After doing some research I discovered there are commercial motor grader mounted roller attachments available. Pricing on commercial roller attachments start at approximately \$11,000; I knew that the \$11,000 price tag would be out of reach for Routt County Road & Bridge. So I started checking at our local salvage yards and metal distributors. I found that a great deal of the materials needed for such a roller attachment could be purchased at salvage cost or at a reduced price. So I decided to make a motor grader mounted roller.

### **Labor, Equipment, & Materials Used:**

It took approximately 2 weeks to design and fabricate this attachment. Using 1" plate doubled up, I made the lift frame portion of the roller. This lift frame attaches into two ripper pockets on the ripper lift frame. Then using a piece of 4 x 6 x 1/2 "wall box tubing and some 1" plate the roller frame was built. The roller itself was made from 24" gas line 3/8 wall. 2" shafting was used to rotate the drum with bulk heads welded into both end and one in the center. A local concrete company donated the concrete to fill the drum for added ballast. Two pillow block bearings were used for the drum to roll on

### **Cost:**

Materials: \$2,061

Labor: \$1,300

Total Cost: \$3,361

### **Savings and Benefits:**

By using the motor grader mounted roller attachment the road surface can immediately be compacted saving moisture and insuring a more stable road surface. The stable road

surface requires less maintenance. The other added benefit is the elimination of the need for an additional operator to man a roller.

