

**PLUMAS COUNTY DEPARTMENT OF PUBLIC WORKS**  
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October 18, 2000

To: Tom Hunter / Director

From: Robert Pettit / Equipment Maintenance Supervisor

Re: Fuel Miser Testing

Tom,

On July 17, 2000, we agreed to begin testing the Fuel Miser XL unit and decided to test the following vehicles: A, B, E, 13, 31, 118. After talking with Mike Manit, we realized that 31 and 118 were not being used enough for our testing purposes. We felt that it would be a waste of time to test these units. I wanted a broad range of testing, with credible results. Mike and I couldn't think of any suitable replacements for these two units within our fleet. I elected to go outside the road department to find suitable replacements. I contacted Martin Byrne, knowing that he is the director for the Plumas County Transit System. Marty thought that it would be a good idea to test the transit busses. He put me in contact with Jason Snow who is the Manager of the Plumas County Transit System. Jason was very cooperative and agreed to test two of their newer busses, #331 and #332. Both units are diesel powered. I Installed the Fuel Miser XL on both units August 24, 2000.

As I mentioned before, I wanted a broad range with credible results. Joe Blackwell and I decided to test two other County units. These would be stationary units, where we could eliminate all the variables and deliver credible results. We used # 215 Ferguson Roller with a new 4-53 Detroit diesel and a 200 KW Generator set from our asphalt plant. This unit has a new D343 Cat 425 HP turbo charged and after cooled diesel engine.

Briefly talking to other people about our testing, they became very interested and wanted to be involved in our testing. I agreed to test three non-county vehicles. I felt that these test results would be helpful to our overall test results. The three vehicles that I agreed to test, were:

1. Joe Costa, who is the store Manager for Cashman Equipment in Susanville, Ca. Joe has a new 2000 GMC 2500 4X4 with the 6.0 L Vortec gasoline engine. Joe does a lot of driving. He covers Lassen, Plumas and Sierra Counties as well as Reno and Lake Tahoe. Joe installed the XL on 8/23/00.
2. Gerald Thompson, who is the outside sales representative for North Valley Diesel in Yuba City, Ca. They are our Detroit Diesel / Allison dealer. Jerry has a 1998 GMC Sonoma Extra Cab pick up with the 4 CYL engine and 5 speed manual transmission. Jerry primarily covers the Sacramento Valley and Plumas County. Jerry also does a lot of driving. He has kept track of his fuel mileage on his truck from day one. Jerry installed the XL unit on his truck on August 19, 2000.
3. Jason Glover, who is a good friend of mine, has a delivery contract with the US Mail. He transports mail between Quincy and Chester, Ca. Jason Has a new 2000 Chev 2500 4X4 pickup with the 6.0L Vortec gasoline engine. He also has a large cargo box mounted on the truck. I installed the XL unit on Jason's truck on 8/19/00. He too keeps good records on his fuel mileage.

I believe that the vehicles and the equipment we put together for this Fuel Miser testing is a very good representation of the vehicles used in our fleet. Let's get to the actual test results:

1. # A 1992 Ford Explorer 4x4 with a 4.0L EFI engine. Between 7/28/00 and 8/25/00 we established a baseline fuel mileage without the Fuel Miser. 884.1 miles driven, used 52.19 gal. fuel = 16.94 MPG. Fuel Miser XL installed 8/25/00 and ran the testing through 10/10/00. 1349.8 miles driven, used 74.38 gal. fuel = 18.147 MPG. That's an increase of 1.21 MPG or 7.14% increase.