

**DULUTH, MISSABE, & IRON RANGE RAILWAY
LOCOMOTIVE DEPARTMENT**

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DATE: October 24, 2001

TO: Curt Myers, BNSF

FROM: Tim Johnson, Mgr. Loco. Maint. DMIR

SUBJECT: Flange Lubrication Testing.

Hello again Curt, it was nice talking to you the other day.

As to the info you were looking for, we first tested the MPL flange lube system in Aug. 1998. Our railway consists of two divisions, and we ran test trains on both. The Missabe Division is about a 106 mile round trip, one way empty one way loaded. Two SD-40's and 164 cars were used. The Iron Range Division is 162 miles round trip, with 2 SD-40's and 116 car trains, the same empties up loads back scenario. The Iron Range Division has considerably more severe grades. The locomotives and car sets were captive in that service for the length of the test.

Test went as follows. First we ran twenty trains on each Division and recorded fuel usage. Then we equipped the same units with flange lube and ran twenty additional trains on each Division, again recording fuel usage.

On the somewhat "flatter" Missabe Division, the unlubed locomotives averaged 400 gals per trip, and the lubed locomotives averaged 351 gals per trip.

On the Iron Range side, with it's more severe grades and curves, the unlubed locos averaged 653 gals per trip, and the lubed locos averaged 612 gals per trip.

We are still in the process of evaluating the effect on wheel wear. As I mentioned, we only recently acquired a wheel truer, and the water is a little muddy right now.

We have had no maintenance problems with the applicators after installation. The simplicity of the design was a major consideration for me when initially looking at systems to try.

I hope this helps! Call anytime if I can be of assistance.