

## UNION PACIFIC RAILROAD COMPANY

FILE NO. \_\_\_\_\_

Memo  
MCH

La Grande May 7 1948

Steaming qualities of 3500, 3800 and 3900 Class oil burning locomotives.

On May 5 locomotive 3836 was used on Westbound freight and checked from La Grande to Kamela. This locomotive is equipped with the wide firepan and side air openings  $7\frac{1}{2} \times 29$ ". Out of Pocatello shops M. J. Pocatello  $24\frac{1}{2} \times 25$ ". The locomotive steamed very free and burned an excellent fire, apparently filling the firebox completely while using  $\frac{1}{2}$  turn on a trimmer valve. It was possible to gain water and maintain full boiler pressure with a clear stack. Locomotive was worked at from 5 PSI to 15 PSI back pressure. Locomotive 3565 was cut in at Hillgard as third helper and steamed free as indicated by stack being clear most of the time. At times a light haze was apparent. This locomotive has large side air openings  $5 \times 30$ " at chute entrance.

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Fireman used atomizer valve  $\frac{1}{4}$  turn open.

On May 6 locomotive 3811 was used on Eastbound freight and checked from La Grande to Baker.

This locomotive is equipped with wide pan and  $7\frac{1}{4}'' \times 24\frac{1}{2}''$  side air openings. Out of Pocatello shops Feb 3 and M.L. Pocatello May 3. Locomotive steams free but not quite as free as other 3800 class locomotives checked. It is necessary to use more blower at back pressures below 5 PSI.

In order to make fire fill firebox it was necessary to close bottom damper and use about 1 turn on atomizer valve. No trouble was experienced in steaming the locomotive and full boiler pressure was easily maintained with clear stack to light haze. Locomotive was worked up to 17 PSI. back pressure.

Locomotive 3982 on train 12 was checked Baker to Huntington and found to be



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steaming satisfactorily under all conditions from drifting to heavy operation at 15 PSI back pressure. Full boiler pressure could be maintained with light haze at stack. Fire did not fill firebox, and side sheets and brick work were visible most of the time. It was necessary to use about ~~continuous~~ ~~blast~~ ~~atomizer~~ ~~pressure~~ for best results.

Locomotive 3980 was checked from Huntington to La Grande on train 17. This locomotive steamed free under all operating conditions from drifting to heavy operation at 15 PSI back pressure. The fire apparently filled firebox when using 150 PSI atomizer pressure. Full boiler pressure was maintained at all times with no more than a very light haze at the stack.

P. E. Flebbe

COPY

Omaha, April 15, 1948

Orig JWB OL Cy GFA PJJ Oma & OL

B-25 excessive fuel consumption oil burners NWD. Engr  
Road Tests is now at Portland on this assignment making study 3900  
class and will follow 3800 and 3500 respectively to develop  
correction ney.

N-140

DSN