

Shepler's Mackinac Island Ferry

Mackinaw City & St. Ignace

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TO: Jeff Bowles
Dudley Dawson
Tim Graul
Steve King
Craig McLeod
Ron Taylor

FROM: Bill Shepler

SUBJECT: Wyandot Solution

DATE: 5-19-03

Gentlemen:

In spite of the many obstacles, one after another, the newly fabricated struts and rudders along with the two propellers re-conditioned to the correct pitch and balance were installed, and the MV Wyandot was finally launched with the US Coast Guard's blessing. I am sure you can appreciate the level of excitement and anticipation on just how the vessel would perform under a full throttle condition. Understand last fall in October, we accomplished a change in the exhaust system from an underwater arrangement to a conventional application through the transom. Craig McLeod of Marine Exhaust Systems gave us an excellent design with all components fitting perfectly allowing the two 16 V2000 Detroit Diesel to function correctly.

The following details the results of our first trial run on Saturday, May 17, 2003: with 7 persons aboard, 500 gallons of fuel (estimated) and an ESE breeze at 15 MPH in a 2-3 foot chop:

- Speed-33.6 MPH (a loss of .5 MPH)
- Maneuverability:
Appears to have excellent response.
- Vibration:
This is the area of immediate concern as the vessel vibrated so excessive that standing on the bottom plate over the prop area gave you the sensation the vessel could come apart. We are pleased to report the vibration has been reduced by an estimated 75%. The vessel ran smooth and virtually free of vibration.
- Noise Level:
Without our decibel meter, it appears we have reduced the noise level by 35%. The new addition or compartment is a

different matter. The noise level is truly very loud as one can not talk or even yell to one another. I realize the exhaust pipes are now part of that environment and perhaps is part of this problem.

- Percent of Power:
Another success achieved with a loss to 85% at full throttle condition. This is an approximate 8% gain undoubtedly achieved through all the changes made.
- Summary:
We were disappointed in the slight loss of speed, as we anticipated a slight increase based upon conversation with Jeff Bowles and Steve King. The water leaving the tunnel area at the transom is solid green and free of bubbles and foam. The bottom plate over the prop area is virtually vibration free. Although as you feel the bottom plate outboard toward the chine, the plate does vibrate a very small amount. The aft deck area has a very slight vibration standing on the new deck extension as compared to the original deck area. A huge positive change.

We extend our sincere thanks to Dudley Dawson for his input and for bringing the Don Bloust firm to re-evaluate the situation and the final design by Jeff Bowles of that office. To Tim Graul in the actual drawings and Coast Guard approval. To Steve King of Black Dog Prop for taking the two props and re-conditioning these wheels to the correct pitch for each blade and over all balance. To Greg McLeod of Marine Exhaust for giving us an excellent design and complete exhaust system.

Please understand we have some work left as we were unable to complete the fairing around the port rudder shaft. Further, noise dampening material for the aft compartment has yet to be installed. These items will be accomplished after Memorial Day weekend. Also, we plan to video under water with the vessel at full speed.

As detailed, this information was achieved over a half hour trial run. I am sure additional information will be made available after we have had the opportunity to operate the vessel under a full load in different sea state conditions. Stay tuned.

Best Regards,



William R. Shepler

WRS/lad

Cc: Charlie S.
Billy S.