



Figure 1. Vertical Exhaust Stacks on the Rear deck of the Forever Resort's Houseboat rental fleet.

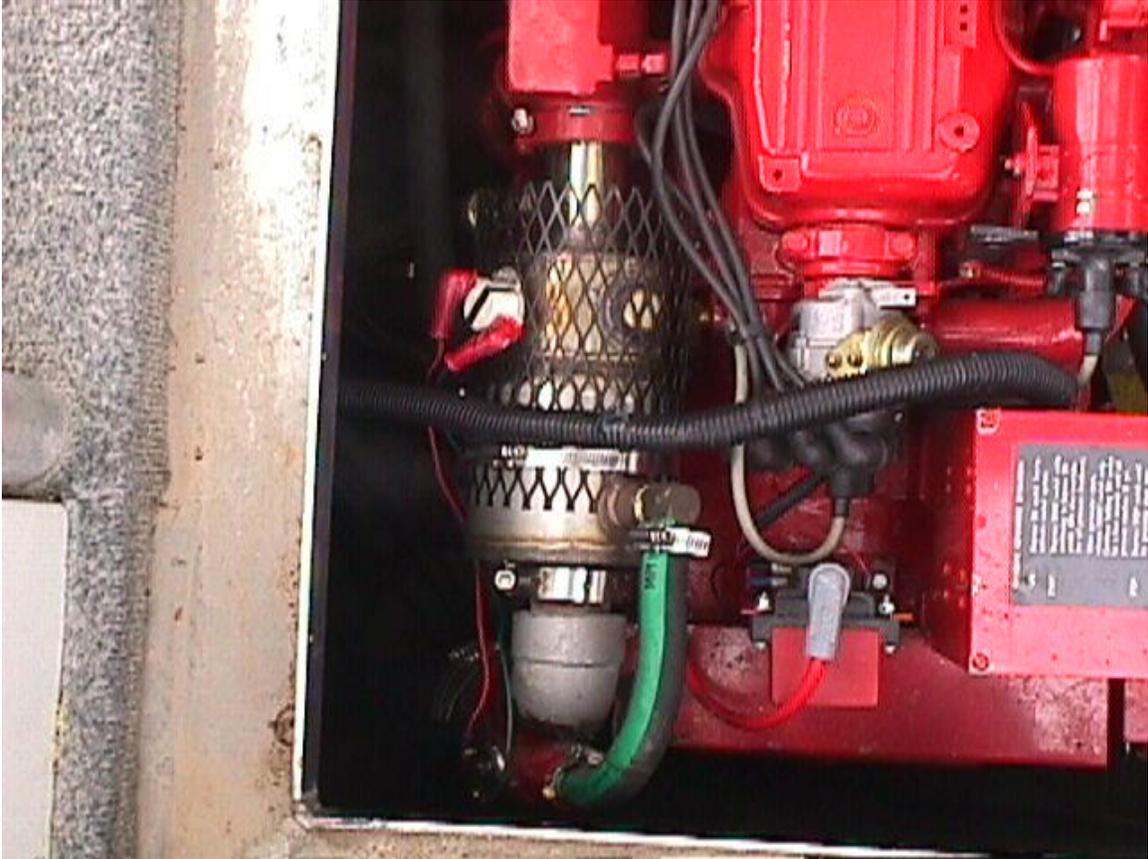


Figure 2. Production ECD with heat shield attached to Westerbeke generator. Note that this ECD has a thermocouple installed to shut off the generator if the temperatures gets too high.



Figure 3. Three houseboats tied together and beached during vertical exhaust stack testing.

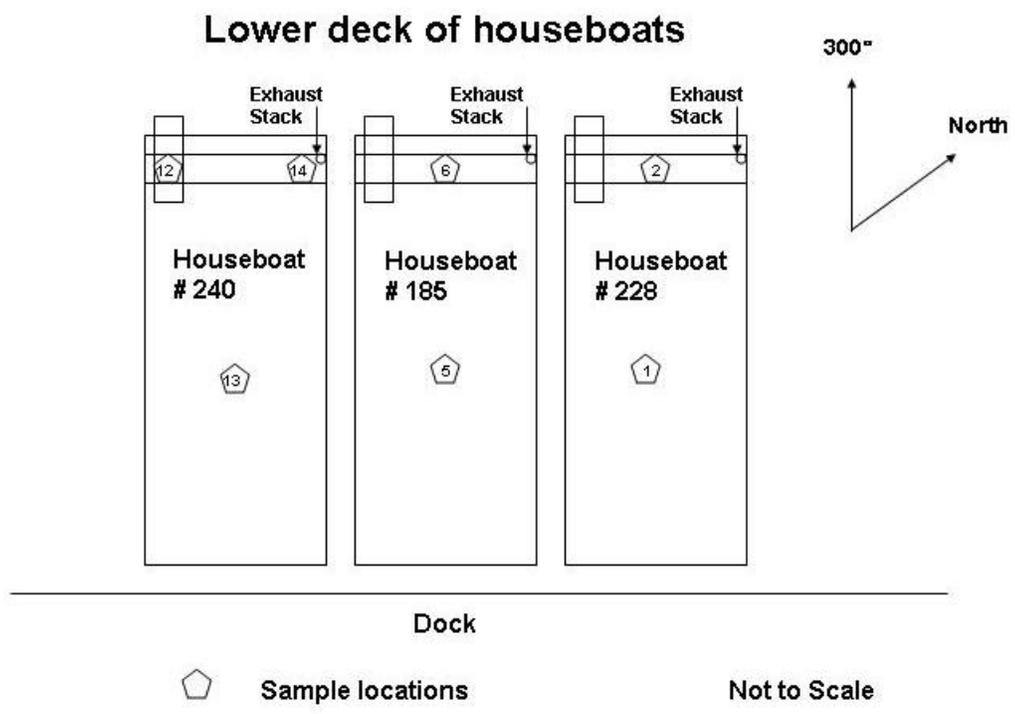


Figure 4. Sampling locations on boats evaluated Monday afternoon (Lower deck)

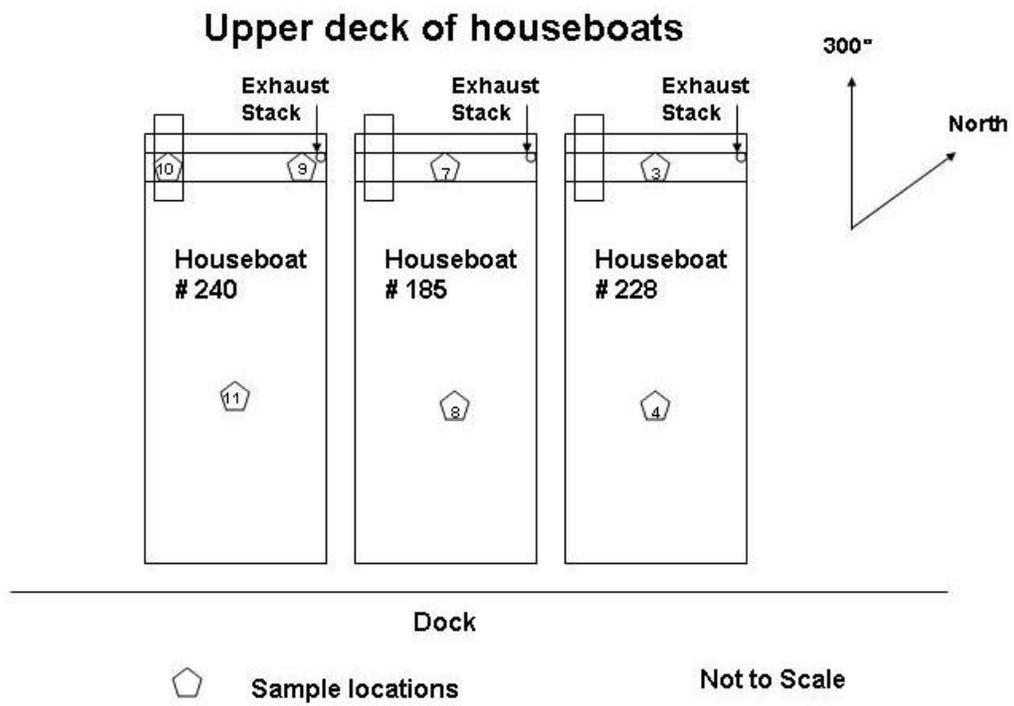


Figure 5. Sampling locations on boats evaluated Monday afternoon (Upper deck)

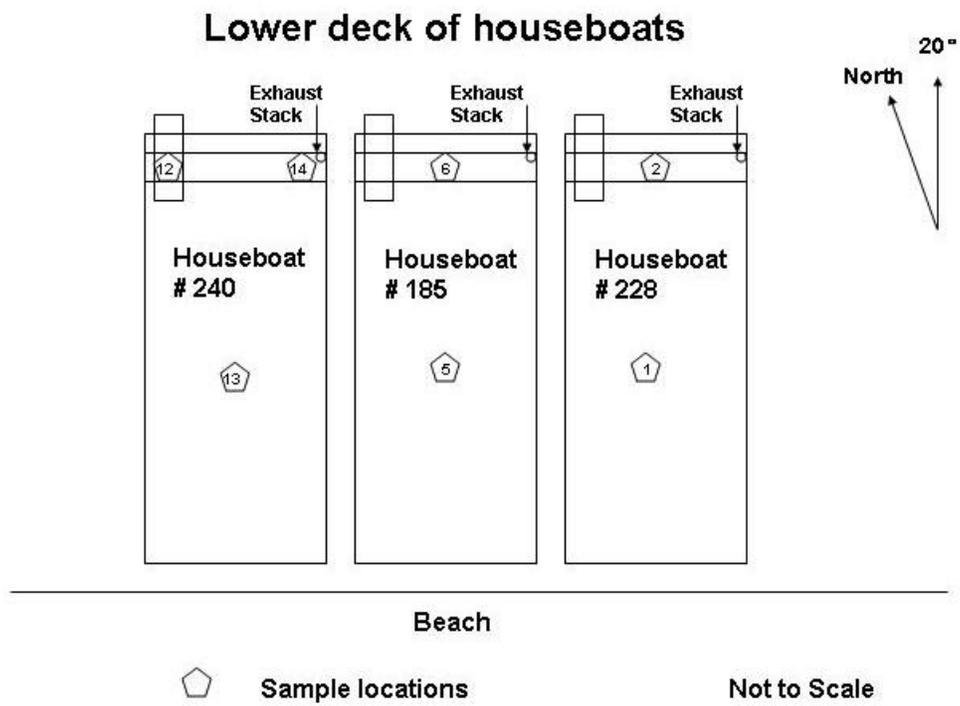


Figure 6. Sampling locations on boats evaluated Tuesday afternoon (Lower deck)

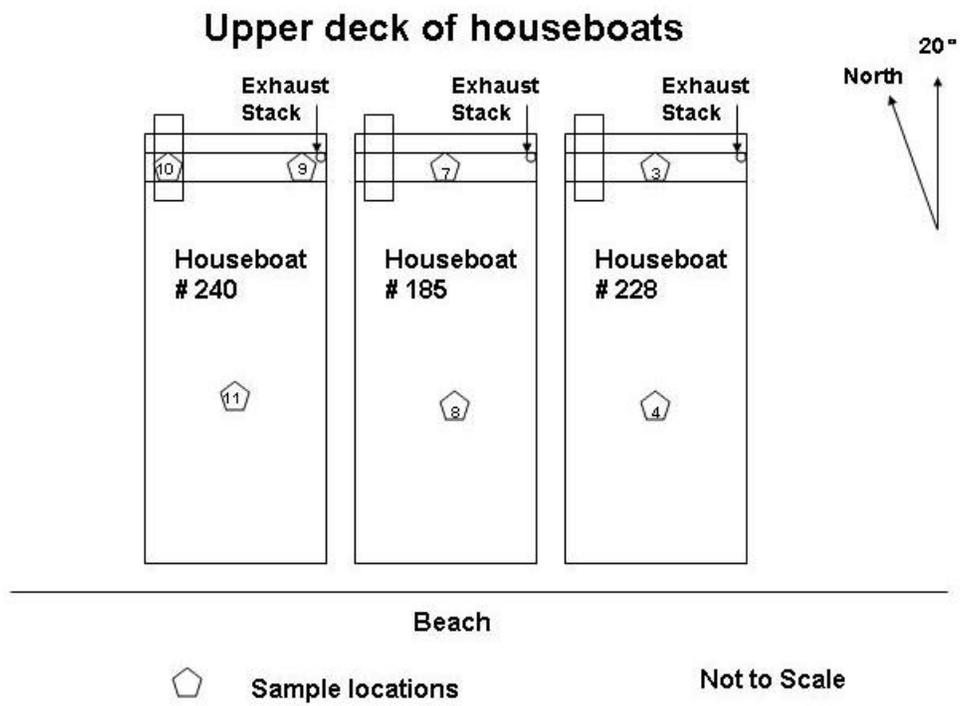


Figure 7. Sampling locations on boats evaluated Tuesday afternoon (Upper deck)

Sampling locations for ECD testing of houseboat #22 and #340

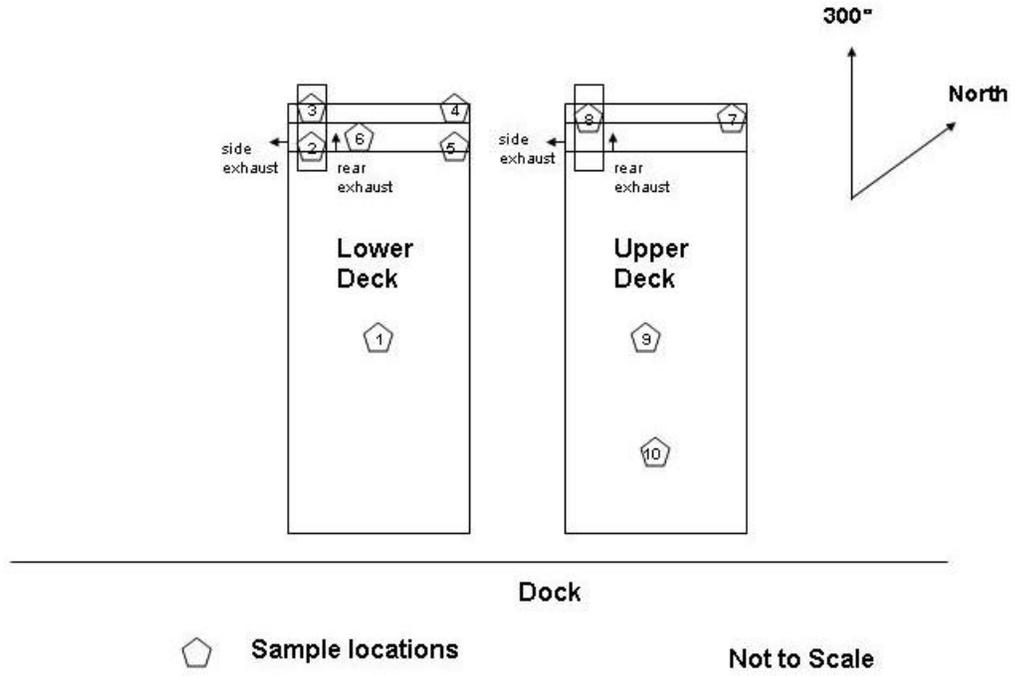


Figure 8. Sampling locations on boats #22 and #340 evaluated with ECD

Three Houseboats underway and Rafted together, stationary

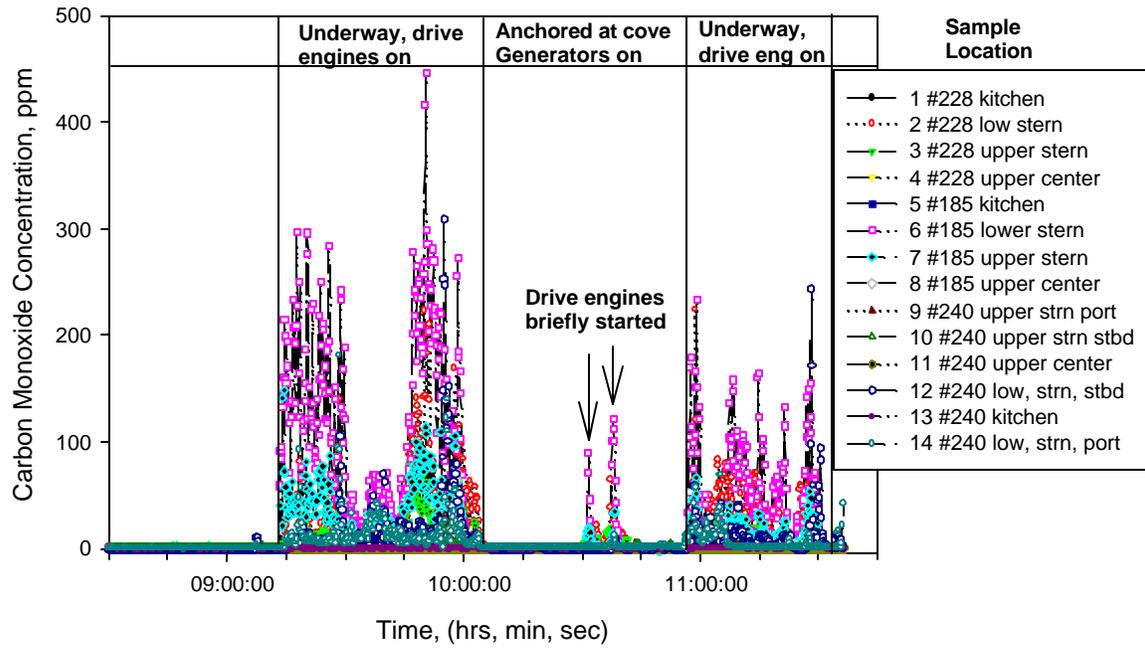


Figure 9. Comparison of CO concentrations with 3 houseboats with vertical exhaust stacks underway and 3 houseboats tied together and stationary. (Tues. aft. 10/1)

Wednesday, (10/2/02) Lake Mead Data

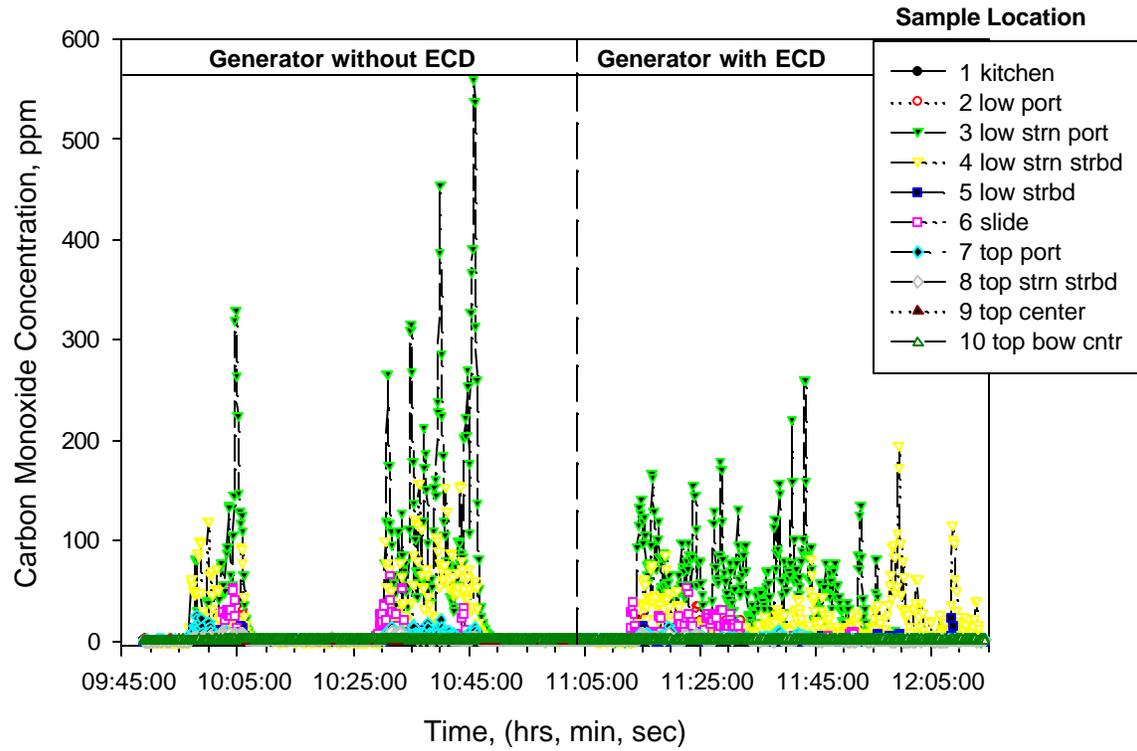


Figure 10. CO sampling on houseboat #22 showing degradation in the ECD's performance (Wed, 10/2).

**Thursday, (10/3/02) Lake Mead Data
Tests on Boat #22**

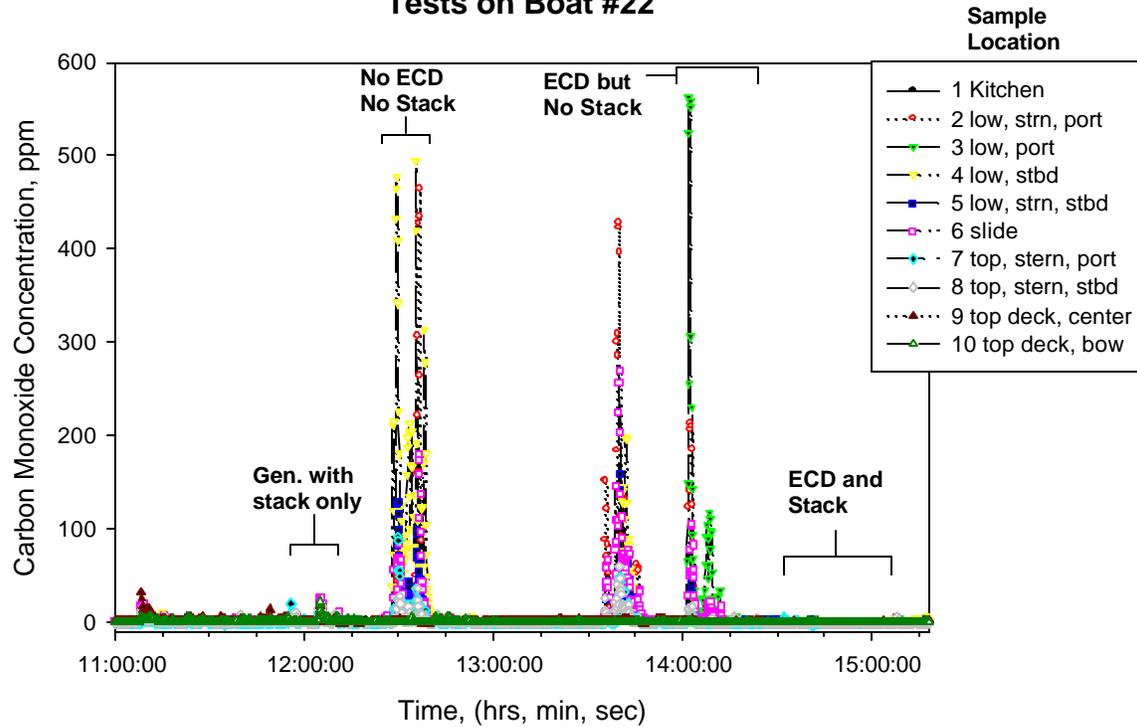


Figure 11. Comparison of CO concentrations on houseboat #340 with and without the ECD and vertical exhaust stack. (Note that the ECD reduced the CO concentration in the exhaust from approximately 1.5% to 1%). (Thurs. 10/3)

Houseboat #22
Generator cold started with ECD
Measurement in Exhaust Stack
10/3/03

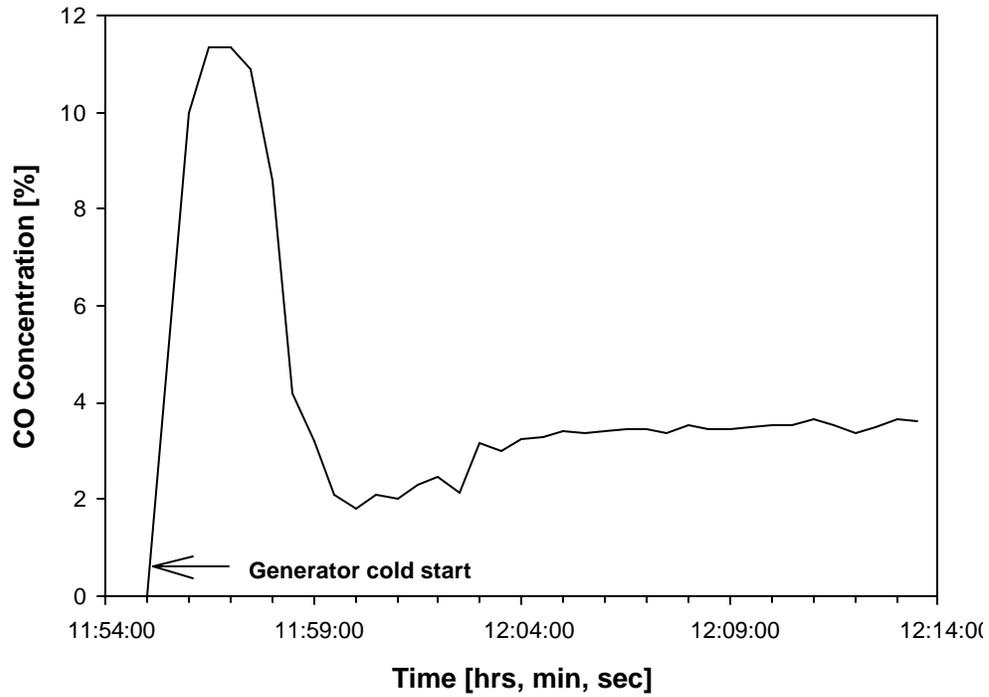


Figure 12. Cold-start data on Houseboat 22 with ECD.

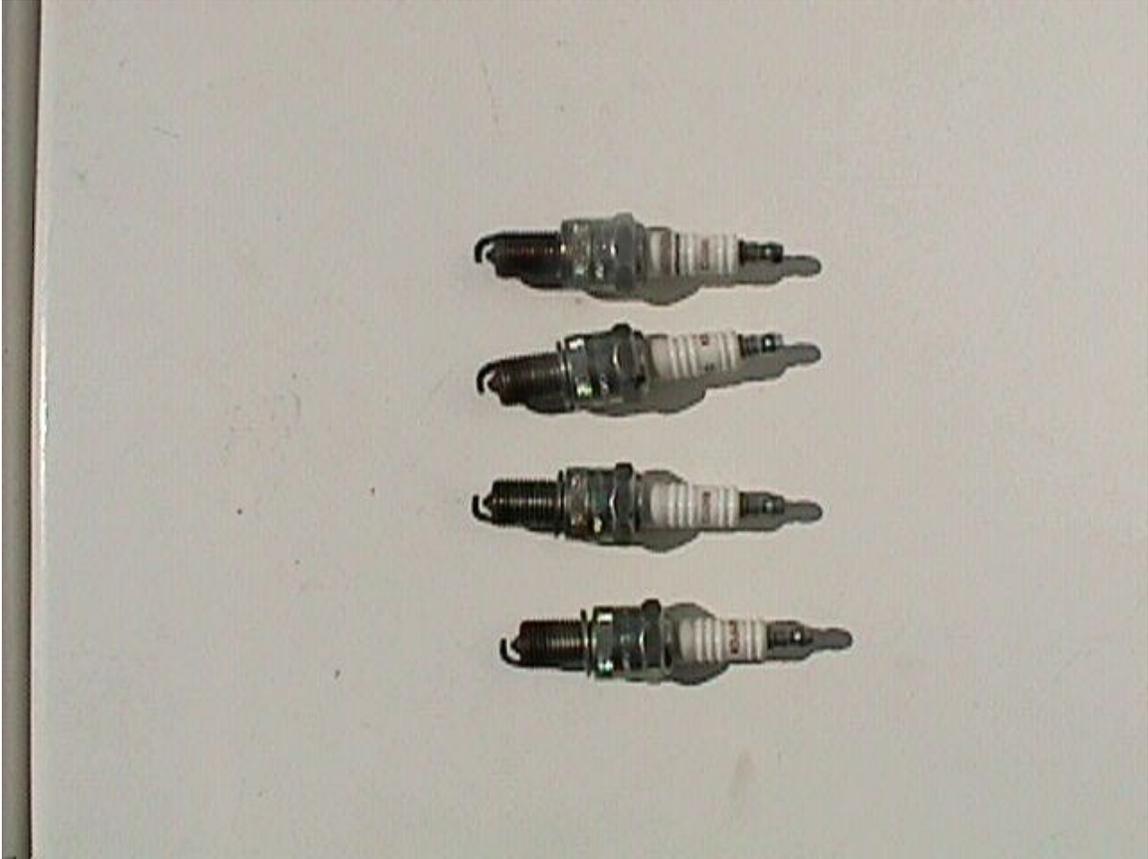


Figure 13. Badly Fouled spark plugs on houseboat generator using the ECD



Figure 14. Carbon deposits found in the mixing elbow of the generator and ECD exhaust.