

Construction Lessons from WRC SEA ARK Sinking Incident



NOAA Small Boat Program

18' SEA ARK W/Fully Enclosed Cabin



Recessed FWD Deck Area Isolated from the Rear Deck



Single 115 HP 4-Stroke Outboard. This is the smallest vessel the manufacturer has built w/enclosed cabin and this size motor.
(Note Height of Tow Bitt.)



Deck drains for FWD recessed area. Water drains to bilge filled with foam



Bilge pump installation w/ spring loaded check valve on pump discharge line



OVBD bilge pump discharge



Aft bilge well. All bilge water is intended to drain here.



View of hole drilled into FWD side of aft bilge well to drain water from internal bilge spaces. Hole is approx. 1/2" in dia. Space contains flotation foam.



5 Gal. water poured into the FWD drains did not pass to aft drain hole and bilge pump well. Flotation foam interfered with the transit of water.



CONCLUSIONS:

1. NEVER allow vessels to be constructed with foam filled bilges that communicate with bilge water.
2. Do NOT rely on the manufacturer to have your best interests at heart. (They will build whatever you ask for).
3. Do NOT deviate from established CFR requirements for stability and level flotation requirements without fully evaluating the risks.
4. Do NOT take a platform and add items never constructed before or fully evaluated for effects on stability and buoyancy.
5. Do NOT allow bilge pumps to be installed with check valves in the pump discharge.
6. DO ask questions and ask for help when procuring vessels. It's why we're here.

