Moor Fun

QUICK GUIDE
2010

CHECKLISTS AND PROCEDURES

Checklists and Procedures for Routine Operations of the 2008 Gemini 105Mc Sailing Catamaran *Moor Fun*

Hull #1039
Manufactured by
Performance Cruising, Inc.,
Annapolis, MD

USCG Documentation No. 1214454
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These checklists and procedures are intended to aid experienced owners/sailors in safe routine operations of the Gemini 105Mc sailing catamaran hull number 1039, *Moor Fun*, launched at Performance Cruising,' Inc, (PCI) Annapolis, MD, on or about 19 July, 2008. The information contained here is tailored somewhat to the peculiar features of *Moor Fun*, but may be useful for other 105Mc vessels of similar vintage.

Contents of this document are subject to change without notice.

Detailed procedures for operating systems described herein are explained in various documents provided either by PCI upon delivery of their boats to owners, or by manufacturers of the various systems onboard the 105Mc. The checklists and procedures presented herein are for the convenience of experienced operators, and should not be construed to be intended for use in lieu of those detailed procedures from manufacturers or PCI.

The checklists provide only a cursory outline of one plausible sequence in which systems might be routinely operated, and the operating states or modes that will facilitate routine operations. *Checklist* operations are preceded by a small box or circle, and

may be performed in any order. Numbered *Procedures* lists should be performed in the order specified.

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1 Checklists for Routine Operations

Prepare for Departure: Interior

- ☐ **DC Power –**
  - **Refrigerator – ON**
  - **Propane sensor – ON**
  - **VHF – ON**
  - **Sailing Instruments – ON**
  - **Cabin Lights – ON (power to GPS)**
  - **All Others – AS REQUIRED**
- ☐ **AC Power –**
  - **Circuit breakers – All OFF**
  - **MAIN – OFF**
- ☐ **Propane Sensor – All Green, Gas ON**
- ☐ **Inverter – AS REQUIRED**
- ☐ **Batteries –CHARGED**
- ☐ **CAPT's Log –**
  - **Float Plan –**
  - **LOGGED**
  - **Capt, Crew**
  - **FILED with friends/family**
- ☐ **Weather (VHF Ch 02) – LOGGED in CAPT's Log**
- ☐ **VHF – SET to Ch 16**
- ☐ **Dagger Boards – AS REQUIRED**
- ☐ **Speed Wheel – SPIN, LUBE as required, INSTALL**
  - **CHECK speed instrument when spinning**
- ☐ **Head –**
  - **SET discharge to HOLDING TANK, SECURED**

- ☐ **Seacocks –**
  - **Engine – OPEN**
  - **Air conditioner – CLOSED**
  - **Head outlet – OPEN**
  - **Head inlet – CLOSED AT ALL TIMES**
- ☐ **Charts – ABOARD**
- ☐ **Documentation – ABOARD**
  - **USCG documentation**
  - **Dinghy registration**
  - **Maryland registration**
  - **Fishing license(s)**
  - **Personal ID**
- ☐ **Emergency Equipment –**
  - **Horn(s) – LOCATE**
  - **Flare gun – LOCATE**
  - **Fire extinguishers – LOCATE (4)**
  - **First aid kit – LOCATE (1)**
- ☐ **Loose Items -- STOWED**
  - **Water bottles (Stbd berth)**
  - **Coffee maker**
  - **Dishes**
  - **Computers**
- ☐ **Galley – SECURED**
  - **Foot pump, check hose connections**
- ☐ **Doors – SECURED**
  - **All 3 berths**
  - **Head**
- ☐ **Fluids –**

- **Battery – Check water level**
- **Water – Sufficient for mission (Port & Stbd)**

□ **Curtains/Shades – OPEN**

□ **Chartplotter – POWER ON**

DONE

Prepare for Departure: Exterior

- ☐ **Hatches -- DOGGED DOWN as required**
- ☐ **Crew Berths (Port & Stbd)**
- ☐ **Life Jackets – ONE per Individual in sail locker**
- ☐ **Throwable PFDs – IN COCKPIT**
- ☐ **Fluids –**
    - **Oil – Check level**
    - **Coolant – Check level**
    - **Fuel – Sufficient for mission**
    - **Propane – Sufficient for mission**
    - **Water – Sufficient for mission**
- ☐ **Shore supply lines –**
    - **Shore power cord – SECURED**
    - **Water hose – SECURED**
- ☐ **Dinghy -- SECURED**
- ☐ **Rudder – DOWN; free motion**
- ☐ **Sensor – CALIBRATED for auto pilot**
- ☐ **Sail Cover – REMOVE as required**
- ☐ **Boat Hooks – SET in holders fore/aft, AS REQUIRED**
- ☐ **Bungie Cords/Preventer – AS REQUIRED**
- ☐ **Docklines –**
    - **Leeward – RELEASED**
    - **Windward – HOLD; RELEASE on command**

□ **Navigation Lights – CHECK ON AS REQUIRED (on ½ hour after sunset; off ½ before sunrise)**

- **Tricolor Lights – CHECK ON**
  - **Red/Green/White light at top of mast**
- **Running Lights – CHECK ON**
  - **Port/Starboard lights on forward rail**
  - **Stern light on port step rail**
  - **Steaming light midway up mast**

□ ***NOTE: DO NOT display Tricolor and Running lights at the same time. Tricolor light is authorized for boats 39' and less when sailing at night. Running lights are to be displayed when motoring.***

□ **DONE**

Engine Start

- ☐ **CHECK FOR IRISH PENANTS (Lines hanging over the side that might get caught in prop.)**
- ☐ **Start Time – LOG**
- ☐ **Engine Hours – LOG**
- ☐ **Fuel Cutoff – DOWN**
- ☐ **Throttle – OUT OF GEAR, Forward slightly**
- ☐ **Key – ON, note alarm**
- ☐ **Preheat – Press ON for 10 sec; hold for start**
- ☐ **Start – ON; release both Preheat and Start when engine starts**
- ☐ **Throttle – Return to detent after start**
- ☐ **Cooling Water – CHECK FLOWING from exhaust port adjacent to stern drive. Flow normally starts within about 10 seconds of engine start. Shut down engine if no water flow within 60 seconds, and examine strainer (located under starboard bunk) for blockage.**
- ☐ **Nav Lights / Steaming Cone -- AS REQUIRED**

- ☐ **DONE**

Drive Leg

- □ **CHECK FOR IRISH PENANTS**
- □ **Leg – DOWN, Listen for click**

Underway

- □ **Dagger boards – AS REQUIRED**
- □ **Fenders – SECURED**
- □ **Gates – CLOSED**
- □ **Dock lines – SECURED**
- □ **Anchor – SECURED**
- □ **Navigation Lights – AS REQUIRED**
- □ **Drinks – AS REQUIRED**
- □ **Head –**
    - **SET to flush to holding tank**
    - **Forward Bulkhead in place**

- □ **DONE**

Prepare to Dock

- ☐ **Drive Leg – CHECK Reverse Lock OK**
  - **Slow to < 2 kts**
  - **Announce to pax & crew "Checking Brakes"**
  - **Apply moderate reverse thrust**
- ☐ **Fenders – AS REQUIRED**
- ☐ **Dock lines – AS REQUIRED**
- ☐ **Gates – OPEN**
- ☐ **Boat hooks – SET in rod holders**
- ☐ **Dagger boards –AS REQUIRED**
  - **Normally down for maneuvering**

- ☐ **DONE**

Prepare to Drop or Raise Anchor[1]

- ☐ **Headsets (if available) –**
  - **Power ON**
  - **Communications CHECKED**
- ☐ **Head – NOT IN USE[2]**
- ☐ **Anchor light/ball – AS REQUIRED**
  - **Display light ½ hour after sunset until ½ hour before sunrise**
  - **Display ball otherwise**

IF Raising anchor: Foredeck Wash –

- ☐ **Pump – AS REQUIRED**
- ☐ **DONE**

Secure from Drop/Raise Anchor

- ☐ **Anchor SECURE (Down or Up, AS REQUIRED)**
- ☐ **Anchor Light/Ball – AS RQUIRED**

1**Lewmar Windlass, Raritan Elegance electric head, and seawater foredeck wash installed after delivery of boat. Power provided to all via same circuit, terminal located in head locker.**

2**Electric macerating head, if installed, is on the same power line as the anchor windlass and the foredeck wash.**

- □ **Headsets – OFF & STOWED**
- □ **Anchor Remote -- SECURED**
- □ **Foredeck Wash – SECURED**
- □ **Navigation/Running Lights – SECURED or AS REQUIRED**

- □ **DONE**

Air Conditioner

- ☐ **A/C Power – Air conditioner breaker ON**
- ☐ **Seacock – OPEN to seawater (Under PORT bunk). Handle should be *DOWN*, toward the bottom of the hull. Middle position is CLOSED. Up position is open to fresh water prime.**
- ☐ **Thermostat –**
    - **RUN switch to run position**
    - **SET to desired temperature by selecting Up or Down arrows**
- ☐ **A/C Cooling Water – CHECK flowing (listen for water discharge from inboard port hull)**
    - **Prime with fresh water, if required, is accomplished by moving seacock handle to up position while a/c is running; Fresh water pump will come on. After a few seconds (10?), return seacock handle to down position. Fresh water pump will stop pumping momentarily. The a/c pump should be primed and should continue pumping sea water. Check flow by listening for water from the undersides – best heard from PORT stern step.**

- ☐ **DONE**

Engine Stop

1. **Throttle – NEUTRAL**
2. **Fuel cutoff – UP**
3. **Alarm -- SOUNDING**
4. **Key – OFF (will silence alarm)**
5. **Fuel cutoff -- DOWN**
6. **Stop time/Engine hours – LOG**
7. **Drive leg – UP or AS REQUIRED**

DONE

Secure from Sailing for RON1

IF RON1 at Anchor –

- ☐ **DC Power –**
  - **Cabin Lights – ON**
  - **Propane Sensor – ON**
  - **Water Pressure – ON**
  - **Refrigerator -- ON**
  - **All Others – OFF or AS DESIRED**
- ☐ **Inverter – ON**
- ☐ **Seacocks (4) – AS REQUIRED**
- ☐ **Bimini hatches – AS REQUIRED**

IF RON1 Dockside –

- ☐ **At Anchor, above, plus**
- ☐ **AC Power –**
  - **Shore Power -- CONNECTED**
  - **Main – ON**
  - **Outlets 1 & 2 – ON**
  - **Refrigerator – ON**
  - **Water Heater – ON**
- ☐ **Inverter – OFF**
- ☐ **Bimini hatches – AS DESIRED**

☐ **DONE**

Secure from Sailing for Going Ashore

IF Going Ashore temporarily

- ☐ **Seacocks (4) – CLOSED or AS DESIRED**
- ☐ **DC Power –**
  - **Propane Sensor – ON**
  - **Refrigerator – ON**
  - **All Others – OFF or AS DESIRED**
- ☐ **AC Power –**
  - **Shore Power -- CONNECTED**
  - **Main – ON**
  - **Refrigerator – ON**
  - **All Others – OFF or AS DESIRED**
- ☐ **Inverter – OFF**
- ☐ **Bimini hatches – AS DESIRED**

IF Going Ashore for extended period

- ☐ **Speed Wheel – OUT**
- ☐ **Blank Plug – CHECK NO SEEPAGE**
- ☐ **Dagger Boards – UP**
- ☐ **Seacocks (4) -- CLOSED**
- ☐ **Shower – SECURED, Bilge DRY**
- ☐ **Galley -- SECURED**
- ☐ **DC Power –**
  - **Propane Sensor – ON**

- **Refrigerator – ON**
- **All Others – OFF**

□ **AC Power –**
- **Shore Power -- CONNECTED**
- **Main – ON**
- **Refrigerator – ON**
- **All Others – OFF**

□ **Inverter – OFF**

□ **Bimini hatches -- CLOSED**

□ **DONE**

Head

- ☐ **DCPower Panel – Water Pressure ON**
- ☐ **Your Business – Do it**
- ☐ **Commode Flush Button – Press "Water Saver" or "Normal Flush" as appropriate**
- ☐

Shower

Prepare for Shower

- ☐ **DC Power Panel –**
  - **Water Pressure – ON**
  - **Water Heater – ON**
  - **Shower Sump Pump -- ON**
- ☐ **Plexiglass Panel – SET to keep commode area dry**
- ☐ **Floor carpet mat – REMOVE and set outside shower area**

Secure from Shower

- ☐ **DCPanel**
  - **Shower Sump – ON**
- ☐ **Shower Deck Panel; remove, wipe off and place outside shower area**
- ☐ **Shower Sump Valve – SET as required to drain from shower sump. Valve is located in locker just**

outside shower door. Note valve settings on placard.

- ☐ **Shower Sump Pump – ON (Rocker switch at lower right when facing sink). Allow to run until water is evacuated from shower sump. Inspect by raising shower deck.**
- ☐ **Shower Bulkheads – SQUEEGEED**
- ☐ **Plexiglass Panel – SQUEEGEED, SECURED**
- ☐ **DC Power Panel –**
    - **Shower Sump Pump – OFF**
    - **Water Heater – AS REQUIRED**
    - **Water Pressure – AS REQUIRED**

- ☐ **DONE**

Generator – Power ON

- □ **ACPanel – CHECK MAIN OFF**
- □ **Oil – Check level**
- □ **Propane – Connect hose to 20# tank and to generator regulator quick disconnect; OPEN valve (lefty loosey)**
- □ **Primer -- Press for 2 secs (button on back of regulator; will hear hissing sound)**
- □ **Switch – ON**
- □ **Choke -- FULL**
- □ **Crank rope – PULL**
- □ **Choke – OFF when engine is running smoothly (normally after a few seconds of running the engine will warm up sufficiently)**
- □ **Power cord – CONNECT to a/c power port and plug into 30A socket on face of generator**
- □ **ACPanel –**
    - **MAIN ON**
    - **All others – AS REQUIRED**

  □ ***NOTE: Cannot use air conditioner or water heater when on generator***

Generator – Power OFF

- □ **Propane – Shut OFF at tank (righty tighty)**
- □ **Switch -- OFF**

NOTE DIAGNOSTICS: Generator will shut down and overload light will illuminate when generator is unable to supply the demand. Shut off all AC loads, AC Main circuit breaker to OFF. Generator OFF. Disconnect generator. Restart using normal procedures.

2 Routine Maintenance

Batteries

- □ **Water level -- Check monthly (required due to constant charging from solar panel). Connect bulb-plastic hose to battery bank by quick-disconnect fitting. Place bitter end into jug of DISTILLED water. Squeeze bulb until it is firm, indicating that batteries are full.**
- □ **Charge – Note charge level on battery management panel. Panel indicates RED when batteries have reached 40% of rated charge capacity.**
- □ **Inverter – Note that inverter drains battery capacity, even when there are no devices plugged in. Keep inverter OFF unless required to run 110VAC devices on house battery power.**

Stern Drive

- □ **Lift hinge – Lube as required**
- □ **Clamp – Lube**
- □ **_____ Quarts**

Zincs

- □ **Heat exchanger – Check monthly. Access is in transmission compartment. Normally have to cut about 1/8" off end of zinc using hacksaw.**
- □ **Stern drive – Check annually. Located behind prop.**
    - **Note Manual says 2 zincs present**

Engine Oil

- ☐ **4 Quarts SAE 30**
- ☐ **Check at beginning of each trip**
- ☐ **Use SAE 30, CC or better service**
- ☐ **Pennzoil used as of 10/2009**
- ☐ **Change every ___ hours**
    - **Run engine until ~140-degrees to speed up oil flow**
    - **Using vacuum oil extraction equipment, insert tube into dipstick. Pump to sustain a vacuum to draw oil into the container. Gurgling sound will be heard when oil is drained completely.**
    - **Filler port on top of valve cover. Pour about 3.5 quarts into filler port, then allow to sit for a few minutes, check level. Add oil as required. DO NOT OVERFILL.**

Change oil filter

- ☐ **Part No:_____**
- ☐ **Change with oil**

Fuel Filter Element

- ☐ **Part No: Racor R12P**

Pump-out Head

- □ **Commode -- FLUSH to holding tank**
- □ **Holding Tank – PUMP-OUT**
- □ ***NOTE: The holding tank has an air vent, so no other valves or vents need be set to pump out. Simply insert the pump-out station hose into the pump-out fitting on the foredeck, and start pumping. This fitting is attached to the bottom of the holding tank, and will draw most/all of the sludge from the tank.***

- □ **RINSE[3] and repeat**
- □ **When finished, fill the holding tank with fresh water**
- □ **PUMP-OUT the fresh water**
- □ **ADD 4 ounces Raritan KP or similar deodorant product**

3**To rinse, fill the holding tank mostly full with fresh water from a dockside hose. When finished initial pump-out, simply insert the fresh water hose into the foredeck pump-out fitting.**

3 Procedures for Winterizing

Refrigerator

- □ **Propane – OFF**
  - **Close valve at bottle (righty-tighty)**
  - **Turn off at Propane Control panel**
- □ **DC Panel**
  - **Refrigerator – OFF**
  - **This action turns off power to the small fan, and to the ignition for the heater**
  - **Propane Sensor – OFF**
- □ **AC Panel**
  - **Refrigerator -- OFF**
- □ **Refrigerator Door – PROP OPEN; can prop open by placing a drink can "cozy" underneath the door edge**
- □ **Refrigerator Interior –**
  - **Freezer section – Empty, defrost, wipe down**
  - **Fridge section – Empty, wipe down**
- □ **DampRid – EMPTY and/or REPLACE AS REQUIRED**
  - □ ***NOTE: DampRid is a commercial product available at West Marine and similar outlets. The product is a dissicant, meaning it removes moisture from the air. Place a container near the open door of the refrigerator to help minimize the growth of mold during the off season.***
- □ **Cockpit access panel – SECURE CLOSED**

Fresh Water Systems

- ☐ ***INTRODUCTION: The fresh water systems comprise two 18 gal. tanks, pump, service lines from tanks to a cross-over valve (in port cabin), and from the valve to the hot and cold running water spigots, a 6 gal. hot water tank, connections to allow priming the a/c pump, and the electric head. Conduct winterizing in the prescribed order to minimize cost and matériel.***
- ☐
- ☐ ***Pump out holding tank before beginning winterization of fresh water system. See Holding Tank pump-out instructions.***
- ☐
- ☐ ***NOTE: There is a winterizing "kit" in the nav station deep locker that comprises a couple of air pressure nozzles and hose clamps for use in attaching air pressure source to the fresh water system.***

- ☐ ***Estimated time: 15 minutes***

- ☐ **Isolate hot water heater**
    - **Disconnect cold water supply to hot water tank from its "T".**
    - **Disconnect hot water out line from hot water tank and connect it to the cold water "T"**

- □ **Drain fresh water tanks**
  - **Open a hot and a cold spigot (e.g., galley sink)**
  - **Power on water pump and drain both tanks to empty (obvious when stream starts to sputter)**
- □ **Add 3 gal potable antifreeze to STBD water tank**
- □ **Add 7 gal to PORT tank**
- □ **Set crossover valve to draw from STBD tank**
- □ **Port Bunk – Remove mattress and plywood to nav station area; will replace when done with fresh water winterization.**
- □ **Air conditioner –**
  - **Clean, rinse, reinstall a/c strainer**
  - **Flush antifreeze through a/c service lines.**
    - **set a/c thru-hull valve to draw from fresh water)**
    - **Turn on fresh water pump at DC panel and observe antifreeze flowing through a/c service lines**
    - **Close a/c thru-hull when antifreeze is observed exiting the a/c outlet thru-hull**
  - ***Note: Fresh water pump should stop pumping***
- □ **Flush antifreeze through remaining fresh water lines**
  - **Set cross-over valve to draw from PORT tank**

- **Beginning with furthest line out (probably cockpit fresh water shower), open spigot and allow to run until antifreeze is observed. Catch this antifreeze in one of the bottles and return it to the Starboard tank,**
- **Shut off the spigot when antifreeze is observed for a few seconds.**
- **Continue to all other spigots, catching antifreeze if possible and returning it to the Port tank.**
- **Set pumped-out head to empty overboard, and flush repeatedly until antifreeze is observed entering the bowl.**
- **Set head to empty into holding tank; Flush several "Normal Flush" cycles until about 1" of antifreeze is observed in the holding tank.**

□ **DONE**

Bilge Pump

- ☐ **Place STBD bilge hose into 1 gal. jug of antifreeze**
- ☐ **Brace settee center cushion up so you can observe the Gulper pump and hoses.**
- ☐ **From port side, set bilge pump valves to draw from STBD.**
- ☐ **Run pump until antifreeze is observed in the hoses**
- ☐ **Stop pump, switch valves to draw from PORT**
- ☐ **Move jug of antifreeze to PORT side**
- ☐ **Place hose in jug**
- ☐ **Run pump until antifreeze is observed flowing to the pump from PORT hose**

- ☐ **DONE**

Engine

- □ **Strainer – REMOVE, CLEAN, REINSTALL**
- □ **Engine Seacock –OPEN to sea (not fresh water position)**
- □ **Engine -- RUNNING[4], warming up**
- □ **CONNECT dirty water hose to engine seacock fitting, and place bitter end in antifreeze source (it will fit into the neck of a typical 1 gallon antifreeze bottle)**
- □ **Engine Seacock -- With Engine running, move the lever to FRESH WATER position**
- □ **Engine Seacock – *Immediately* OPEN the small valve on the side of the seacock to admit fluid into the fresh water port of the seacock**
- □ **Antifreeze – NOTE antifreeze being drawn from the 1 gallon bottle**
- □ **When bottle is empty, move the hose to the next 1 gallon bottle and note a/f being drawn from that bottle; pump is self priming**
- □ **Repeat for a third bottle (3 gal in all).**
- □ **Engine -- STOP**
- □ **Engine Seacock -- CLOSED**

- □ **DONE**

4**Preferably do this upon returning from voyage, prior to engine shutdown.**

General

- ☐ **Hammock – REMOVE, CLEAN, STORE**
- ☐ **Sails –**
  - **Main – SECURE cover**
  - **Screecher – REMOVE, STORE in bag**
    - **Lash head pivot to furler using ¼" line…This keeps the screecher halyard before the jib stay**
  - **Gib – REMOVE, STORE in bag**
- ☐ **Bunks –**
  - **Remove sheets/blankets/pillows**
  - **Inspect & dry mattress bottomsides as REQUIRED**
- ☐ **Dinghy – BAG it**
- ☐ **Bilges – Inspect & dry as REQUIRED**
- ☐ **Thru-Hulls – CLOSE all 4**