Catalina 350

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C350 Owners:

I must apologize but in trying to keep all my e mails filed correctly I lost the name of the owner who submitted this so I can not give credit where credit is due. –Bonnie

C350 Refrigerator Runs Continuous - Fix!

The freezer/refrigerator on our model 350 ran continuous no matter what setting the freezer section thermostat was set on (1-warmest, 7-coldest). The refrigerator section has a "spillover" fan that works well and can be set to cycle within a temperature range. The constant 4.5-5 amp draw on the battery seemed excessive without being able to achieve a 50% on/off duty cycle. I began to think maybe the freezer thermostat was defective and might have to be replaced. With nothing to lose I did the following and was able to get to the coarse adjustment inside the thermostat:

1. Loosen/remove the two screws with nuts holding the capillary tube to the freezer box and carefully slide it out from the hold down.

2. Remove the thermostat from the back wall of the freezer box via two philips head screws.

3. Disconnect the two wires from the spade connectors ...noting where they were to put back later.

4. At this point you should have the thermostat in your hand outside the freezer box

5. Pull the knob off the shaft. Remove nut on shaft and remove the thermostat from its plastic housing.

6. The coarse adjustment is a set screw that you can see looking in the end of the metal housing about in the center of the unit.

7. I adjusted mine by temporarily putting the capillary tube back on the freezer box and re-attaching the spade terminal wires and knob. I turned the knob to number 2 and turned the power on and let the unit run about 30 minutes or until a heavy frost develops on the freezer cold plate.

8. I then put an allen wrench into the set screw and turned it clockwise until I heard a click and the compressor unit shut off. You will see the amperage draw on your electrical panel drop.

9. Before putting everything back together run the unit to make sure the knob adjustment cycles within the temperature range desired.

Our unit now cycles on about a 50% on/off cycle and still makes ice. One added benefit we found is that we for some reason are now not getting condensation around the counter top access lid openings. *–Author Unknown*

C350 Drive Shaft Bolts

A couple tales have appeared on the Sailnet C 350 list recently that I thought I would follow up on with Catalina:

Drive Shaft Bolts - Cautionary tale

Last week I set out on a one week trip on Portland #231. My engine has 40 hours on it. Second day on the trip I went to empty the strainer on the salt water intake for the engine and noticed a nut and washer sitting directly below the prop shaft flange behind the transmission.

The short story is there are four bolts connecting the prop shaft to the transmission flange. One was off, two were loose and one was tight. Fortunately I was able to snug up the bolts before anything flew off and caused damage. I know the dealer is supposed to check these bolts during commissioning. Also on page 11 of our manual under monthly maintenance we are directed to "Tighten all bolts and nuts to proper torque" (item 3) and "Check bolts" (item 6). I (we) may not do everything on that check list, but at least on a new boat I should have checked those bolts since the price of failure could be so high. All ended well.

The trip was excellent. We spent the first night in Cuttyhunk Island. The next day we booked to Nantucket and spent four nights. Then we sailed to Edgartown and spent three nights. All in all a great way to get to know my 350! *–Andy Sumberg, Portland #231*

Thanks for the heads up; After 60 hours, the 4 bolts on my drive shaft were also loose on my new 387; one in fact was finger loose; does anyone know the torque these are to be set to and also the torque for the bolts fastening the engine to the boat? Thanks. *–Chris MacIsaac, Traumerei hull #22*

According to Warren Pandy at Catalina the bolts should be tightened so that the lock washers compress. –Bonnie

C350 Energy Independence for Cavalier and Freedom

We love to cruise and anchor out so we decided to upgrade the electrical system to handle multiple days at anchor. The original battery capacity was a good start, but the alternator and monitoring systems were not up to our needs and we wanted to enhance the system with alternative sources. So with our good cruising friends, Barbara and Gary on "Freedom", we started to map out a strategy to insure our ability to keep the refrigerator running and other luxuries that we have become accustom too. Our plan was to add a starting battery, Link 20, high output alternator, and integrate solar panels and possibly a wind generator into our system.

We started by installing a West Marine combiner for the 4 D's and putting the Link 20 in place, the plan was to be able to use the two 4D's together but still be able to isolate them. Following that process we added a group 27 starting battery that would be automated in charging but have a separate switch to integrate it into the starting system.

Initially we bought 100 amp alternators from the Battery Shack in Marathon, Florida that were touted to be bolt on, with internal regulator and simplified wiring, not to mention the fact they were very reasonably priced. We bought two alternators one for "Cavalier" and one for "Freedom." After a number of hours of trying to get the alternator installed we realized they wouldn't fit, the product looked real good but it just wasn't meant to be. We contacted Battery Shack and they graciously allowed us to return them. After a thorough search for a better solution, we went for the more expensive option. We called E-Marine and ordered their bolt-on solution for the M35-BC which included a Pro-Line 125 amp unit and Balmar regulator. Their bolt-on actually bolted on and the installation was simpler than we thought. We set up the new wiring so the stock 50 amp alternators could be reinstalled quickly with snap connectors for all wiring if the new unit failed. We replaced the existing 10 gauge, non-tinned, wire from the existing system with 6 gauge wire from the alternator to the starter and ran a new wire from the new regulator back for the tachometer connection. We have experienced between 80 and 90 amps of power, according to the Link 20 from the new system so it is working better than expected. We have got over 100 hours on the new alternator and are very pleased with the output and it appears to place little burden on the motor or belt.



The solar panel installed on the bimini, notice the wire running down the stay.



The solar panel power connection by the back stay.



The installed ProLine 125 amp alternator, you can see where the bolt from the original alternator was fitted.



The Balmar regulator in the aft cabin above the engine access hatch.

The next phase was to wire our two UniSolar 32 watt flexible solar panel into the electrical system and put attachments on the Bimini. The two panels in Florida can generate about 3.5 to 4 amps per hour during peak sunlight hours and really help off set the drain from the refrigerator. This project started by running dedicated 12 gauge, tinned wires from the electrical panel to connectors so they can be hooked up easily. We set the connectors up so one panel is on each side of the backstays, running from stern to bow, with the wire running down the backstay. A dedicated breaker for solar energy was established on the electrical panel. We have had the UniSolar units for several years and they are very durable and fit on the Bimini with ease.

Right now I am pretty pleased with the system and am making plans to add a wind generator. After a discussion with Garhauer they indicated that their lifting davit system can be extended to accommodate an Air Marine X wind generator (or other model) with no problems and solve my problem with handling our 8 hp dingy motor. The initial plan here is to install dedicated 8 gauge wire from the pole to the panel and have a dedicated circuit breaker that will bring the power into the system. This project will probably happen this fall as the current system is working very well or sooner if funds become available.

Attached are the photos of the starting battery project on our boat and how the total electrical package looks like. The total package is a starting battery that is independent and allows us to use both of the 4D batteries as a house bank. The 4D's have been linked together and are monitored with a LINK 20 monitor and interconnected with a combiner from West Marine.

Shore Power in the Anchor Locker

Here is an improvement that has saved me a lot of hassle trying to run 50 feet or more of shore power cord down the dock or worse, down the deck all the way to the power socket at the aft end of the boat each time we visit a new port. All it takes is an additional shore power connector, 35 feet of 10/3 marine AC cable, an oversize switch box (available at any home improvement store for less than a dollar) and some miscellaneous tie-wraps, electrical connectors and mounting bolts, nuts and washers to mount the shore power connector. Total parts approx $125.00

The installation was straight foreword and simple. I ran the 10/3 wiring along the existing wiring along the Port side of the cabin and all the way back to the shore power circuit breaker under





the Port cockpit locker. When you take the circuit breaker assembly apart you see the original breaker box is nothing more than a common plastic switch box you can find in any home improvement store. Just buy a deeper one to accept the additional wiring and you are set. IF I have to tell you to unplug the shore power before beginning this project then don't try this yourself but if you have any knowledge of electricity and common circuits, it should be a breeze and you won't have to look at or trip over that yellow power cord any more. *–Bob Standish, Brigadoon #56*

Bob

This is a great idea. I carry 2 shore power cords so that I can be sure to reach all the dock power boxes when we cruise. Sometimes it is not convient to back in. *–Bonnie*

Note from Catalina Yachts:

1) A.B.Y.C. requires A (2) pole circuit breaker within 72in. of the shore power connection to the boat. The system as described does not comply with this standard.

2) Remember that the unused shore power connector will be "hot" when plugged in. The connector has male prongs will be "hot" and present a hazard. Installation of a dedicated breaker for each connection would eliminate this potential hazard. *–Gerry Douglas*
