

Newsletter No. 5
31 July 1980

Dear Friends,

I sure hope all of you are in good health and enjoying smooth sailing. Annie and I just spent a week cruising around Santa Cruz Island which is 20 miles off the coast north of Los Angeles. There are many anchorages around the island. Mostly you anchor with two hooks and use a dinghy to go ashore. There are small streams and pools around which grow lovely ferns and flowers. The anchorages tend to be rolly, but flopper stoppers help much.

As I mentioned in the last newsletter, I wrote a letter to Ta-Yang advising them of problems that require attention. I am delighted to say that Mr. N. S. Chiu, Sales Manager, answered the letter promptly and in a very responsive way. He was very glad to learn that a Tayana group exists, and encouraged me to continue to send suggestions. He acknowledged that since they do not have extensive experience sailing yachts, they have relied on suggestions from dealers, customers, visiting engineers plus visits to foreign boat yards. Our group offers an avenue of feedback heretofore not available. As Mr. Chiu put it, the newsletter will allow "both of us to step closer". He would like to receive copies of our newsletter. He sends his compliments to all of you. Now with regards to the 9* problems I wrote to him about, Mr. Chiu had this to say

1. With regard to worm steering failures, Ta-Yang buys the gear from a subcontractor who has been advised of the problem. Meanwhile Ta-Yang is in the process of switching to pedestal steering as their standard. Back at the ranch, Stephen Gold, who, among others had his worm steering fall apart, found his problem, fixed it and hasn't had any problems since. There is a fixed metal plate at the end of the worm shaft. This plate is held on by a bolt and two washers in such a way that you can tighten the bolt so it prevents the shaft from leaving the plate but doesn't tighten against it so that it can't move. This bolt is the culprit that fell out. Stephen reassembled it so that it will not fall out.
2. The problem of the corroding drain plug in the bottom of the water tank (when located in the bilge) has been solved by eliminating the plug. In addition, all water tanks now have a SS inspection plate on top
3. The problem of freezing seacocks has apparently been solved by the use of "rubber valve plug thru hull fittings". I'm not quite sure what Mr. Chiu means by this but what I hear from you makes me believe the problem has been solved. (Jim Hayes says they all work well except for the engine raw water intake one). Tom Beard (more on him later), who has one of the early models, is thinking of fitting the seacocks with grease fittings.

*The newsletter noted 7 problems, but I added 2 more when writing to Ta-Yang

4. Regarding prop shafts coming loose, Mr. Chiu says that is no longer a problem. It is my understanding from C. E. Smith Co./Bob Beverage, that the problem arose because the shaft and coupling were manufactured to different standards (metric vs. British). Ta-Yang then machined down the shaft so it would fit easier. This resulted in an imperfect fit which came loose despite keyways and set screws. Safety wiring of the set screws is still recommended. Bob says the way to check this is to loosen the set screws and try moving the shaft. It is supposed to be a close fit with a clearance of no more than 2 to 3 thousandths of an inch. If you can feel it wiggle, you have a potential problem.
5. Mr. Chiu said they have improved the mainsheet traveler and car, although he did not say in what way. He noted that Southern Offshore Yacht uses Ronstan track and car as standard, and charges extra. To me it makes sense to order your boat with the Nicro Fico, Ronstan, or Kenyon gear installed by Ta-Yang. To add these later is a miserable job described to me in excruciated detail by Chick Clark. If you plan to change over, be sure to contact Chick first.
6. The emergency tiller now furnished is 40 inches long which, Mr. Chiu claims is suitable for the pedestal steering. (I have not measured this yet) Ta-Yang made them 60 inches long (Jake Huber's was 7') for a while because one of their dealers (mistakenly) requested it.
7. Regarding the electrolysis problem caused by stepping aluminum masts on SS deck plates, Mr. Chiu advised that the problem arose because Ta-Yang did not know what kind of spars wound up on boats ordered without spars. At the request of a dealer, they furnished SS plates. Today, when aluminum spars are ordered with the boat from Ta-Yang, the mast is stepped on the keel. If the customer wants it stepped on the cabin top, Ta-Yang now has the proper plate says Mr. Chiu.
8. Regarding stuffing box failures, Mr. Chiu could only say that the problem has been referred to their metal working shop. Personally I do believe this is a minor problem solved by using the appropriate lock nuts on the two studs involved. As far as the packing itself goes, I found the 1/4" square type fits well. New packing can be added over the old between haul outs if the prospect of water pouring into the boat disturbs you. Jake Huber sent me an excellent detailed description of how to change the packing which I will try and include in the next newsletter. If you need advice before that, contact Jake.
9. I suggested that the ice chest insulation was insufficient and that the ice chest and galley sink locations should be switched. Mr. Chiu agreed to consider the swap but indicated some customers would not want it that way. He did say they are improving the ice chest insulation. (I did notice on a more recent model than mine that the insulation was quite a bit thicker). I will discuss how to add insulation to your refer in a future newsletter.

I was certainly pleased with Ta-Yang's positive response. Some of the problems have been taken care of and the others are being pursued. For the prospective owner reading these newsletters, Ta-Yang seems very interested in producing quality boats and solving problems that arise. In Mr. Chiu's words, "We (Ta-Yang) want the boats we build to march forward to high quality and establish good will in the yacht building field" (Amen!) I hope we can help Ta-Yang achieve these objectives.

Over the 4th of July I crewed on a friend's boat in a race from Marina del Rey (Los Angeles to San Diego). After 32 hours of light winds we arrived at the finish line. There was a 1 1/2 kn. ebb current and the wind dropped to almost nothing. We wound up sailing backwards and never did get across the line! The highlight of the weekend was meeting Tayana owner John Henzler. A more gracious, hospitable and generous person would be hard to find. I know he would welcome visits from any Tayana owners. His slip (B-25) is at the Southwestern Yacht Club. Call him on (714) 222-4818 or 223-9481. Incidentally a firm in San Diego (Ariel Inc.) makes a shaft brake just for the Borg Warner gear. I've asked John to evaluate the unit which lists for \$300 (it weighs 6 pounds and operates automatically from transmission oil pressure). Perhaps we can get a 15% discount if several owners are interested. While Borg Warner says it is OK to windmill with their Velvet Drive Transmission, it does cut down boat speed and the vibration is not good for the packing gland, etc.

Now for some discussion on a controversial subject what size prop is best for our boat? This may sound like an academic question since we already have props on our boats. It turns out however, that if we decided to do so, prop shops can change the diameter and pitch of a prop for as little as \$50. In response to my question about proper prop size in newsletter #4, several members provided input. Tom Beard, a new member is a yacht designer who knows and speaks with Bob Perry and Ted Brewer. Tom has gone to a lot of trouble for us to put together information that can be understood relative to prop sizing. Before I tell you about it, take a look at Table I, which shows what a number of owners have experienced with their boats. As you see, quite a variety of prop sizes exist. Among owners with the same prop, performance data is inconsistent. To add to the confusion, Bob Perry had in mind a 2 bladed 18x10 prop for the boat. Bob said to Paul Sheldon that if owners insist on 3-bladed props, they should be 15 3/4 x 9. C. E. Smith Co. of Los Angeles, who furnishes the Perkins engines and props to Ta-Yang, decided, after some tests, that a 3-bladed 18 x 10 was best. Evidently prop sizing is no simple matter. A more disciplined approach is needed to arrive at an answer.

Table I. Tayana Owners Prop Experience

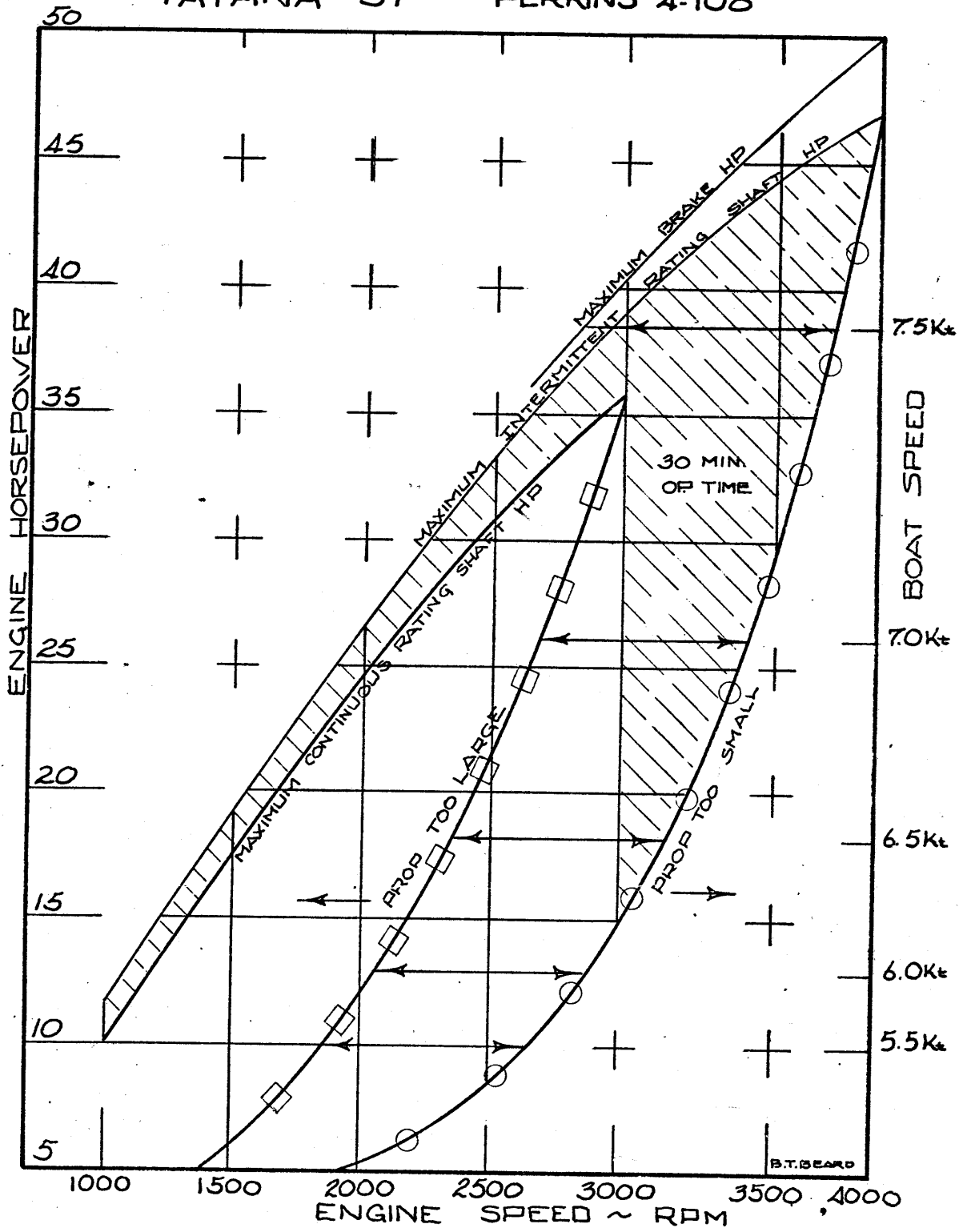
<u>Owner</u>	<u>RPM</u>	<u>Speed</u>	<u>Prop</u>	<u>Engine</u>
Sweeney	2300	5 1/2	18 x 10	Perkins
	3300 (Max)	6 1/2		
Huber	2350	5 3/4	18 x 12	Perkins
Demain	2600	6 1/4	18 x 10	Perkins
	3000 (Max)	?		
Radican	2750 (Max)	?	18 x 10	Perkins
Sacher	2000	6	2 Blade	Volvo
Sheldon	2450 (Max)	?	18 x 10	Perkins
	2750 (Max)	?	16 1/2 x 10	
	3300 (Max)	?	16 x 9	
C. E. Smith	2500	7	18 x 10	Perkins
	2750	7 1/2		
Leedy	1700	6 3/4	2 Bl-18x14	Volvo MD-3B

Tom Beard did some calculations for Tayanas with Perkins 4-108s and Volvo MD-3s, The calculations are quite involved because the proper prop is one that gives the lowest fuel consumption while producing the highest torque. Based on the Tayana's advertised specs i.e., 22,000 lbs. displacement, LWL of 31', Tom figures our boat should cruise at 7.2 knots with a clean bottom, no wind in smooth water. Under these ideal theoretical conditions, the Perkins engine will be turning at 2,000-2,900 RPM producing 28-29 horsepower. This engine speed gives the lowest fuel consumption and highest torque. Tom believes at this time that a 3-blade 17 x 10 prop would be the correct one. Tom has constructed a chart (see Figure) from which each of us can become prop experts. The chart appears complex but the two most important curves are the two labeled, "PROP TOO LARGE" and "PROP TOO SMALL". Here's how to use the chart for your boat. First run timed speed runs over a measured course in smooth water and no wind. Plot the boats speed* versus the engine

(Reminder Speed = Distance/Time

If distance is expressed nautical miles and time in hours, speed will be in knots)

TAYANA - 37 PERKINS 4-108



Beard 6/24/80 pp 3.

A more accurate chart can be constructed and I would be pleased to get one out for TAYANA owners. All I need is the following information:

Hull Number:

Rig (ketch, cutter, etc.):

Approx. displacement (heavy, light):

Time since last haulout:

Type of bottom paint:

Operated in fresh or salt water:

Make and size engine:

Total engine hours:

Gear reduction:

Propeller size, number of blades, new or used:

Underwater equipment (steering vane):

Any other information you feel might effect your boat's speed:

Oh, yes; maximum RPM and speed obtained at full throttle:

Include a copy of the speed chart with this report with a curve of your boat's speed plotted on it. (Remember to make timed runs in both directions over a measured course. Average the speed, not the times. For best results, do only on a calm surface, deep water away from banks and in no wind.)

Well, Norm, there it is for what its worth. I look forward to hearing from you soon.

Most sincerely,
Tom

RPM on Tom's chart. I suggest 200 RPM increments between 1800 and 3000 RPM. Connect the points. The developed curve should fall somewhere between the "PROP TOO LARGE" and "PROP TOO SMALL" curves. If it doesn't it could mean lots of things: boat is fouled with growth; the three tons of beer in the bilge is taking a toll; 500' of 3/8 chain in the forepeak is a bit much; an engine injector is fouled. Seriously, in order to do this thing right, a chart needs to be developed for your boat.. Now hear this: Tom has volunteered to construct charts for us if we provide him with certain information. (See page from Tom's letter attached.) I do hope many of you can cooperate with this group effort. Out of it can come the answer so hard to find elsewhere. WHAT SIZE PROP SHOULD I HAVE FOR MY TAYANA? Oh yes, make sure your engine will turn near or at a max of 4000 RPM (Perkins) when out of gear. If much below this, you may have an engine problem. Send your data to Tom Beard, P. O. Box 2073, Port Angeles, WA 98362.

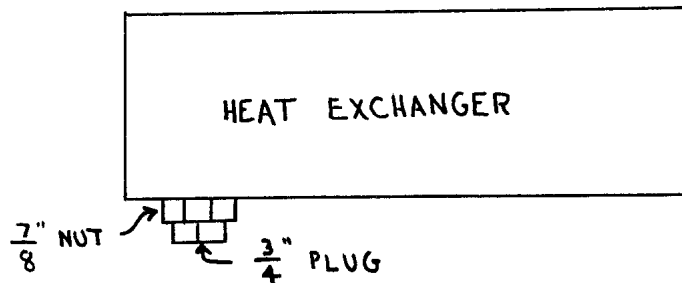
Do you remember Stephen Gold's comments about creating a sexual playpen out of his cockpit area? Ed Sacher, who keeps his boat in the BVI says, "I just can't understand Stephen's problems and commotion about placing boards over the cockpit, unrolling foam covering, etc., etc. for his little sexual athletics. I am now old, but I cannot recall that all this preparation has been necessary in my day. This leads me to believe that our friend has never tried it on a pedestal" Elizabeth Stennis adds, "there are so many biting bugs up here (Alaska? we couldn't sleep outside - so don't mind having pedestal steering. If we did sleep outside, we would need so much bug repellent it would be a real sexual repressant!"

I have some more comments about potential problem areas to discuss but first let me pass on some questions from our members,

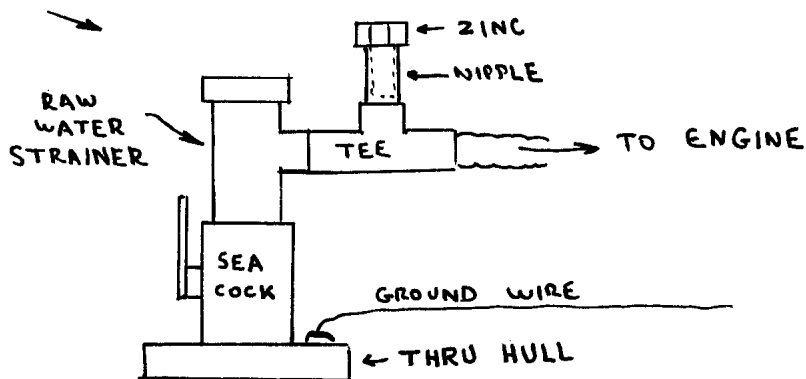
- o Skip Jones finds his boat sails about 1 knot faster on a starboard tack than on a port tack and wonders why.
- o Elizabeth Stennis wants to know where to obtain state flags.
- o What is the proper rate of water drip for the stuffing box? (prop turning and not turning)
- o Bob Butkus wants to sell 2 Barient winches, size 28, 2 years old. If interested, write him directly: 3224 Deluna, Rancho Palos Verdes, CA 90274
- o I would like to know how to provide a comfortable sitting arrangement behind my pedestal steering. The wheel is too far forward to sit comfortably
- o I've been asked by a few members to develop a list showing how boats are rigged, what equipment they have, etc. via a questionnaire. Any volunteers to help develop the questionnaire?

In the safety department:

1. The Perkins 4-108 has a zinc fitting located in the heat exchanger. This information is not shown in any of the Perkin's manuals or parts book. The Perkins "Hot Line" did not know about it either. After 2 1/2 years I just found it out. This zinc is located like so:



You hold onto the 7/8" hex with one wrench and unscrew the 3/4" plug. Mine was too corroded to move and it's too easy to tear the thin exchanger shell. Besides it was just about impossible to reach, The solution, suggested by the C, E. Smith Co., is to abandon the heat exchanger zinc and put one in a convenient easy to reach location like such



This arrangement provides zinc protection for the engine and makes it easy to inspect and replace the zinc. Also, instead of the small pencil zinc now provided, you can use a much larger zinc. A 3/4" bronze tee fit my strainer. On the subject of zincs, the Stennis' when at the dock connect a large zinc to their boat ground and hang it overboard -- good idea.

2. For those of us with pedestal steering there's a couple of points worth mentioning. You should occasionally check the cable tension. One owner had the cable fall off and hence - no steering. Jim Hayes had trouble with the quadrant slipping down on the rudder post. He --put in one inch shims under the quadrant where the post becomes round and this solved the problem. At the ends of the cable there are eye bolts and nuts. Ken Richter used lock nuts to insure against the nuts vibrating loose. While you are at it, check the lead angle of the cable over the pulleys. If it's off, the pulleys are adjustable.

3. Fred Brodersen has two safety items

- o He uses a product called "Vibra-Tite whenever he finds loose nuts.
- o Fred discovered that his bow sprit had dry rot. He noticed it because the paint was bubbling in spots. He confirmed his rot problem by pressing a screw driver hard into the sprit it went in 3/4" (by comparison, the same screwdriver, using the same force, went into a pine board 1/4" and into mahogany 1/16"). Fred called Dave Wresch who in turn called Ta-Yang immediately. Within a week the yard air-freighted a new sprit. Fred commends both Dave and Ta-Yang for their prompt handling of the problem. (P.S. . . . The air freight bill, paid by Fred, was \$360. Dave expects Ta-Yang to pay for the new sprit. He suggests we all check our sprits for this potential problem).

4 On top of the Perkins 4-108 there is an electrical connector which allows the engine to be easily disconnected. John Henzler had this connector partially melt creating shorts. Anyone else with this problem?

In the miscellaneous items department

1. I have it on good authority that it's OK to use the off brands of engine oil provided the label says it meets the military standards referred to in the engine manual. I buy K-Mart oil at 47¢ a quart.
2. Many boats have a water heater made by American Appliance Mfg. Corp., 2341/2425 Michigan Avenue, Santa Monica, CA 90404. Write and ask them for an "Installation and Service Manual" and a Marine Electric Water Heater specification sheet. My model no. is ARMS-10. Starting with cold water, how long does it take, on your boat, to get hot water from the engine?

Wow, I have rambled on haven't I? You have been sending me such great information I just have to pass it on. Please keep it up! Tell me about your experiences, comments on equipment, whatever.

Well I'm going to close now by quoting from Stephen Gold's letter written just after his return from Bermuda. " . . . I realized that one of the reasons - probably most - that I love my Tayana is that as a designer, I consider the aesthetics of a boat most important, and my boat is just beautiful. It's strong, yet graceful, and all that teak is just so pleasing. My favorite place on the boat is out on the bowsprit watching the bow slice through the water . . .

Warm regards,

Norm