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ontarioyachts

Newsletter - March 6, 2009

Drain Plug Assemblies and Spares

"Drill a hole through the bottom of your boat and let the water out" is a bad idea unless of course you are fitting up an Ontario Yachts Drain Plug! When installed low in the sump these brass plugs are machined to be flush with the outside of your sump and allow you to easily keep water from collecting in the bottom of your hull when you are on the trailer hauling to a regatta or stored for the winter. Our current drain plug assembly is pictured in the top of the photo. We have machined the outside of the collar to ensure a solid mechanical bond when epoxied in place. You can install a new 5/8" assembly yourself with a bit of care… phone us and we'll walk you through it.

Drain plug assembly – 5/8" collar and 5/8" center plug ..CDN $56.65

The story goes that Ben Altman once sailed a whole summer series with a wax candle jammed into the keel drain hole after he accidentally dropped his only plug into Belmont Harbour. That's a frugal solution but if you are always drysailing you might want to have some spare plugs. The current plugs are 5/8" diameter but the older plug centers are ½" diameter so measure the diameter of the plug your need when ordering spares.

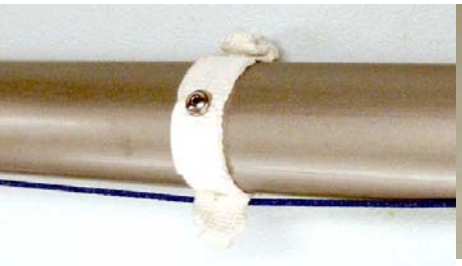
Spares plug centers..1/2" or 5/8" …..CDN$ 16.48

These small items can ship alone by standard post..or remember to add some to your other Etchells parts orders

Tapered Spinnaker Pole

After some years of development, our current spinnaker poles with tapered fiberglass ends are durable, class legal and lighter than an aluminum roll tapered pole. They combine a max o.d, light wall aluminum tube with efficient light weight Proctor piston ends. The aluminum is hard anodized and stiff enough that cumbersome bridles are eliminated.

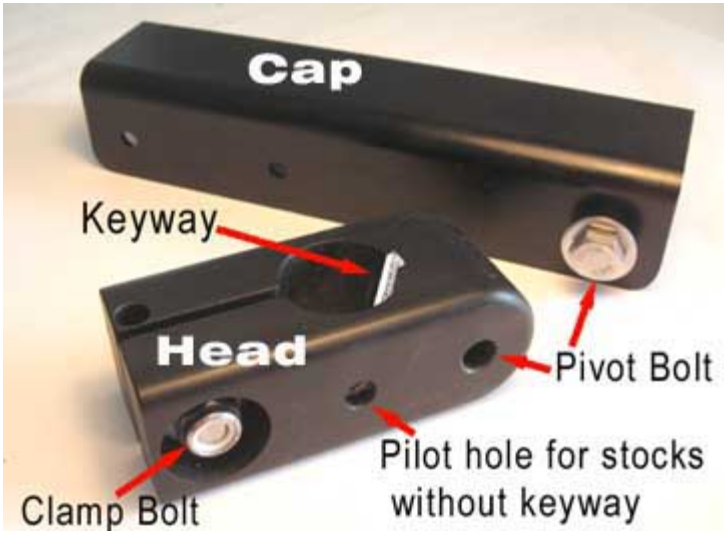
It can be shipped with the aluminum tube loose from the assembled glass and proctor ends ready for you to epoxy and rivet together. If the aluminum tube ever fails you can remove and reuse your tapered fiberglass and piston ends on a new aluminum tube.



Complete tapered spin pole with Kevlar strop and Proctor ends - assembled whole or part CDN$ 690.00
Proctor pole end only… CDN$ 70.00 each
Tapered Fiberglass end… CDN$ 95.00 each

Rudders and Tillers

Replacement Rudders
It's been more than a decade since we stopped sailing triangles. This has put a higher premium on running and, accordingly, on reduction in foil drag and so we reduced our rudder chords and edges to the minimum legal thicknesses. We also wrap a thin layer of glass around stainless steel rudder stock: this keeps it smoothly faired into the front edge of our rudder blade and eliminates the vertical separation and chipping, which used to occur between the stock and blade. Our replacement rudders are hand faired and polished prior to shipping and the top of the rudder stock is machined for a ¼" rudder head keyway**.**
Rudder - faired - with keyway …..CDN$1236.00



Rudder Heads
Prior to 1989 our Etchells rudder head was an off the shelf Scheafer assembly. Those heads functioned well on Solings but ultimately they had insufficient tiller cap to head bearing surface for an Etchells and eventually the head pivot bolt bushings would elongate making precise steering impossible. Our new custom machined aluminum rudder head substantially increased the tiller to rudder head interface surface. We also machined a ¼" keyway into the head: the key eliminated any shimmy between the rudder head and the stock. To install these heads in new boats we temporarily clamp the head to the stock and bolt on the tiller and then line up those and the rudder blade with the centerline. We then mark the pre-machined rudder stock keyway slot onto the rudder head and then remove the head to machine its matching keyway. If you are retrofitting this head to a rudder stock that has no keyway then do the alignment but, leaving the head clamped to the stock, use a 5/16" drill bit and cutting oil and drill right through the head pilot hole and stock. This should cleanly enlarge any preexisting ¼" pin hole in the stock. Finally - install a 5/16" s.s. pin and then lightly point punch the ends of the pin to secure it in the head. The black anodized tiller cap also shown here has a 1¾"interior width and accepts two ¼" cross bolts for standard wooden tillers.
Rudder Head with clamp bolt, nut and washers CDN$ 133.00
Tiller Cap for wooden tillers with two ¼" cross bolts and one 3/8"pivot bolt CDN$

DC Glass Tillers
Having eliminated rudder head slop and refined the rudder shape, it remained only to eliminate tiller deflection to create an Etchells steering loop that transmitted precise data from the rudder to the helmsman and then sent precise tiller movements from the helmsman back to the rudder. As far as we remember, Dennis Conner had the first one off glass Etchells tiller built by Murray Ross from

New Zealand. We then began working on a glass fiber tiller of our own and soon afterwards Chris Clark began sharing his professional laminate stress analysis for the tiller that he was working on, which proved to be both lighter and stiffer than a laminated wooden tiller. The tiller ran horizontally at the rudder head thereby increasing the tiller/rudder head bearing surface even further. The section then swept upward to a height that allowed the tiller to be pushed hard over and still clear the coaming without having to pivot the aft end of the tiller up from the rudder head as previously. This higher forward horizontal tiller section also brings the tiller extension into line with the helmsman's forearm, which reduces the mushy feeling of steering downward into the cockpit. By 2004 we had production glass tillers underway, which we nicknamed the DC glass tiller. Subsequently we beefed up the tiller structure surrounding the rudder head pivot bolts and further widened the tiller midsection by 25%. In our deflection testing we lined up our new wide body tiller with the stiffest laminated custom wooden tiller available. With a load cell and a laser it was obvious that our new tiller had lower deflection than either the custom wooden tiller or our previous glass tillers.

Our new wide body tillers come complete with two stainless steel non-compression barrel nuts for installation of your tiller extension base. The Tiller fits our own rudder heads but can be custom made to fit the slightly smaller Australian style rudder head.

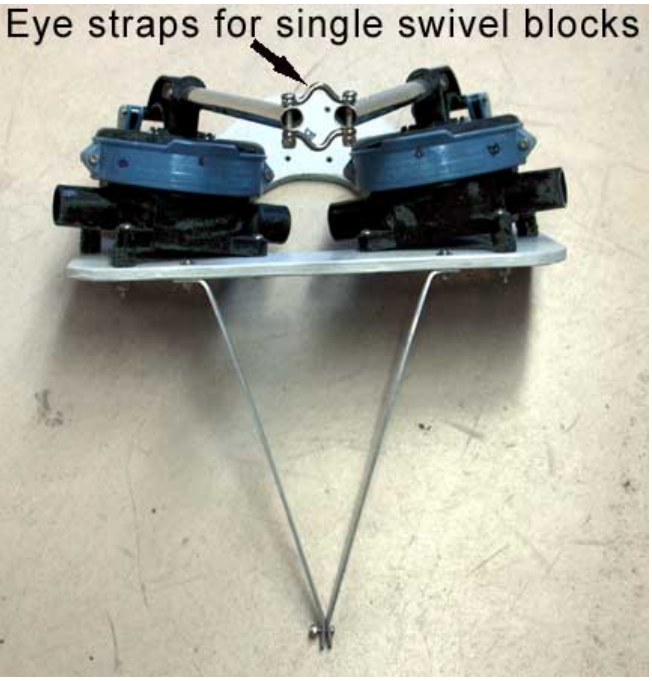
DC Glass Tiller with Pivot bolt and Barrel bolts for extension base CDN$ 618.00

Stainless Eye Nuts

These stainless steel eye nuts are a rust proof replacement for older cast iron eye nuts. They are 5/8" dia. x 11 threads per inch to fit Etchells keel bolts. The eye has an interior diameter of 1 3/8". Add 5/8" washers or spacers as necessary so that the top of the keel bolt barely protrudes above the nut - you want as much room as possible so that the bridle hooks stay properly in line with the load!!!

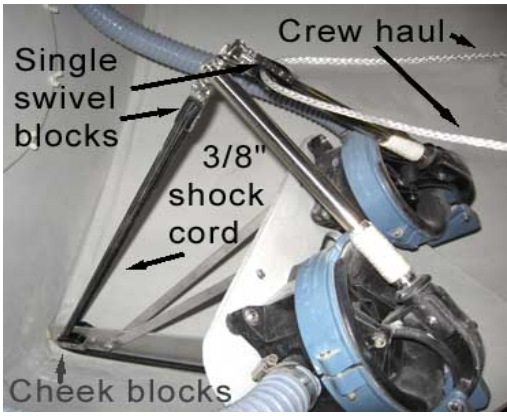
S.S Eye Nuts CDN$ 49.00 each

Bilge Pumps and Brackets



When it's windy and wet you need an efficient bilge pump. Our systems are designed to position the bilge pumps so that their exhaust hoses are as short as possible, which reduces surface resistance when pumping and also minimizes residual water trapped above the gate valve after the last pump stroke. Mounting the system on the mast step also keeps the entire weight of the system as close as possible to the boats center of gravity and much lower than a deck mounted pump. Our double pump bracket is designed around two single action Whale

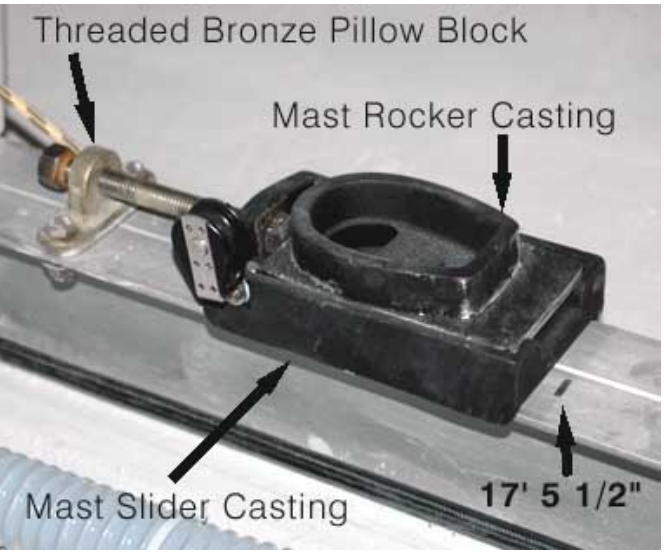
Titan Gusher pumps, each having a capacity of 105 litres (28 US gals) per minute. One Titan alone matches the capacity of the Henderson Mark V double action pump. Our bracket also comes with two ½" x 1/8" aluminum struts, which mount to the upper edge of the bracket and
extends down and forward to the vertical web of the mast I-beam where both struts are through bolted with a single 3/16" machine bolt. The aft flange of the bracket fastens through the cap of the I-beam with four 3/16" machine bolts and cup washers. A double-ended line runs to port and starboard on the cuddy console and allows the crew to power the intake stroke from multiple angles in the cockpit. Eleven feet of powerful 3/8" shock cord pulls the handle through the exhaust stroke. Our custom made through-deck exhaust fittings are epoxied in place and fit flush with the deck surface. Plastic screen filters prevent blockage of the intake hose ends in the keel sump.



Double Pump Bracket with struts.... CDN $125.00
Pump exhaust,.., CDN$ 18.00
Double Pump System Kit with pumps, bracket, fittings, hoses, blocks and shock chord.… CDN$ 685.00

Mast Butt Winder

When it is windy you need to stiffen up your forestay but pulling your backstay alone stretches your main sail into wrinkles and inversion. Blocking the mast aft at the partners loads tension to your forestay and allows you to use less backstay tension to fine tune your forestay. In light air your headstay needs easing in order to provide your jib with depth and a correct luff angle but easing your backstay alone leaves your mast so straight that it does not pull the luff of your main into its design curve and it "bags" up: the mainsails' leach closes up as well. Blocking the mast forward at the partners bows the middle of the mast forward enough to pull the bagginess out of mainsail luff and into its proper curve. However, your mast partner block fore and aft range on its own can only compensate for a narrow combination of the particular stiffness of your mast and prevailing wind conditions. Moving the mast butt provides a coarse tune setting that then gives you the entire travel of your mast blocks to fine tune within that coarse setting cover. Under class rules the mast butt may not be moved during a race, but with our winder you easily adjust the butt position before or between races to a coarse tune position for the wind conditions.



Our mast butt winders have been continually refined. The assembly consists of : a casting that fits into the mast section and has a rockered bottom face to help the mast lean forward down wind; a slider casting which has a low friction pad and caps over the mast I-beam; a threaded bronze pillow block. To find the location to install the two 5/16" holes that hold the pillow block we mark the mast I-beam at 17' 5 ½" from the transom deck intersection (pull the tape over the traveler and through the barney post cut out). Completely wind the pillow block to the forward wind of the threaded rod. Hold the back edge of slider on the 17' 5 ½' mark and use the

pillow block holes to drill through the I-beam. In use the winder adjusts by a ½" nut at the forward end of a threaded rod. We leave a cheap socket handle and a ¾" socket in place on the nut .. works like a charm.

There is one more benefit to installing the mast butt winder - it is taller than the ordinary butt casting that you will now be replacing and so your mast will sit higher in the boat. You will have to cut the bottom of your mast section to bring your lower black band back within the legal tolerance but with careful measurement you can cut the mast so that the height of your black band will be at max height to achieve more sail plan height. The procedure for this "Point B" measurement is on the class website http://etchells.org/images/stories/Mast Bury_Point B_ p_115.pdf . Most of the class sailmakers have tuning data to help you adjust the mast butt winder position to match their sails. Although the winder adjustment rod has a travel of two inches, we normally settle down into ¾" of that range for our own boats mast/sail combinations.

Mast Butt winder… CDN$437.75

Hope this is helpful. We'll be adding more items to the next newsletter.