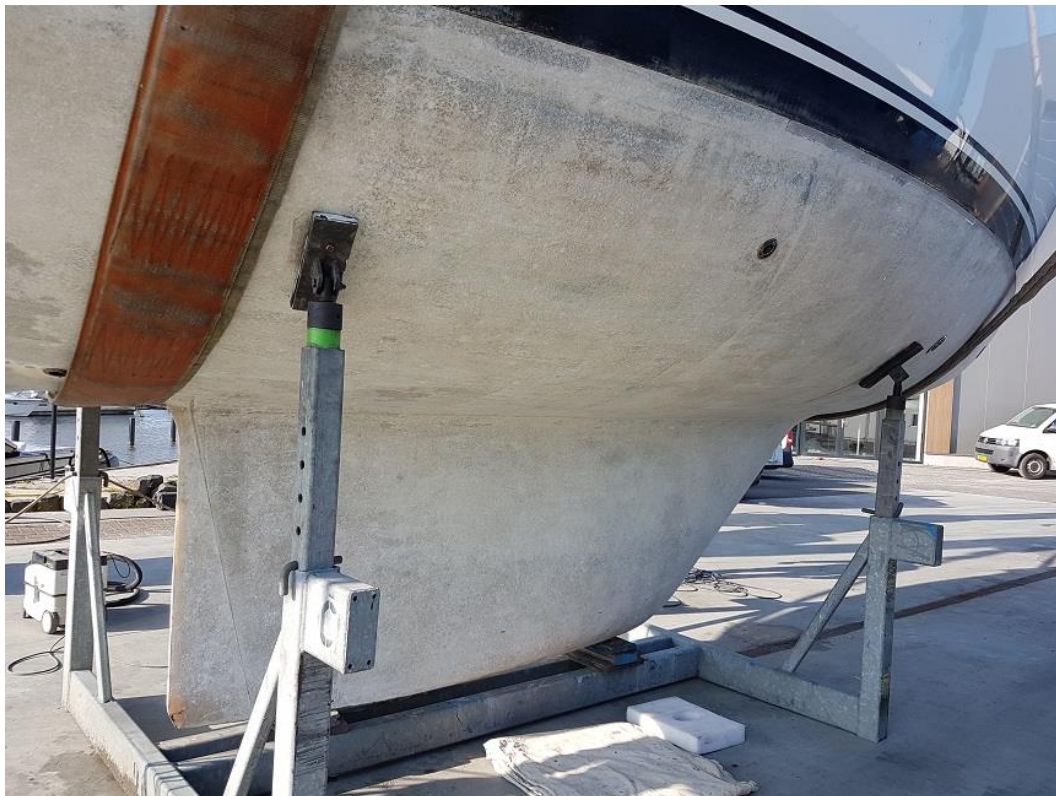


	Refit projects Doc. 06
Subject	Refit of Trintella 38 - BN982-Van Holland
Category	General
Content	The report of a special project, shortening and modifying the keel + refit of underwater ship and hull + installing new oil bath propeller shaft bearings.

Our Trintella 38 frequently gets stuck in the lock that gives us access to the water where we live. If the water level on either side is slightly low, we hit the lock sill or worse, we end up stuck on the lock floor. Since both the sill and the floor are made of concrete, it's not a pleasant feeling when we try to force our way out under power.

We decided to reduce the boat's draft by 5 cm, sacrificing around 120 kg of keel weight. After discussing the plan on-site with Van de Stadt and Dick Koopmans, we concluded it wouldn't negatively affect the sailing characteristics or stability of the boat.



The hull stripped and ready for keel modification

We found out that lead is best cut with a chainsaw, as this prevents the material from sticking to the blade. All other methods either jam or break the saw. We used an electric chainsaw fitted with an extra-long bar to handle the 48 cm thick lead. The saw was mounted on two guide rails, each equipped with a drive spindle allowing speed adjustments. We improvised a lubrication and cooling system using small barrels and hoses directed at the chainsaw and blade. This entire setup was placed in a large steel container with wooden side panels to catch debris, after all we were guests at Lengers Shipyard in Lelystad. The yard didn't have the capacity or willingness to handle the cutting, so we had to thoroughly plan and execute the job ourselves.

It turned out the lead keel was cast inside the hull and pre-filled with lead ingots to avoid excessive heat on the polyester during casting. The structure of the ingots was clearly visible in the sawn-off section.



Removing the polyester 12 cm above the future cut line in the lead

We first carefully cut into the polyester hull to locate the lead beneath. The aft section of the keel turned out to be about 25 cm of solid polyester, which we first trimmed down to the desired height. After measuring, we made a full cut around the hull down to the lead, 12 cm above the future cut line. Once the cuts were made, the shaped polyester piece came off with just a few hits with a hammer. The polyester turned out to be up to 35 mm thick — very strong. We secured the sidewalls with screws and threaded rods to prevent the lead keel from shifting downward when hoisted.

With these preparations complete, we levelled the saw and positioned the boat in the cutting box. Since the polyester had been removed, the saw only had to cut lead. After adjusting the blade pressure and speed via the drive spindles, we started cutting. The setup worked

extremely well, the entire operation was completed in just 6 working hours, which was faster than expected. The actual lead cutting took just 75 minutes. After weighing the sawn-off lead section (48 cm wide, 2.5 m long, 5 cm thick) and the sawdust, we determined that 300 kg had been removed.



Chainsaw at work.



Chainsaw cutting through the keel and the removed lead section.

Next, the cut lead was melted and cast into two moulds measuring 2.5 meters by 12 cm and 5 cm thick. This resulted in two strips weighing around 90 kg each. After shaping, the strips were glued to the sides of the exposed lead with an adhesive sealant (Adheseal), using clamps. Now only the fairing remained. The yard will handle the laminating and repainting of the underwater hull.



Shaping and gluing the lead strips to both sides of the keel.

After bonding the lead strips, we faired the joint with approximately 2 litres of epoxy filler to create a smooth transition. At the right curing moment, we used a sharp scraper to achieve the final shape - no sanding needed - ready for fiberglass matting. A total of 30 layers of mat were applied to the bottom and flanks in a stepped fashion.



Fairing and glass mat applied. The widened bottom section of the keel is clearly visible.

The entire underwater hull was stripped and the hull was checked for old seams and joints, which were all reinforced with at least two layers of mat and vinylester to prevent any cracking. The hull was moisture-checked, sparking debate about the moisture levels in the polyester. The boat had been hauled out in autumn, stripped and rinsed, and then left to dry both outdoors and indoors for about 5 months. Moisture levels had dropped significantly during that time. Although some areas still measured above the advised 30%, no signs of osmosis were found. The hull has been "too moist" for 45 years without issue. So in my view, the hull is now in much better condition, and we applied an epoxy osmosis protection system: better than ever. Time to paint.

To laminate under the keel, we supported the boat by the hull, lifting the keel off the ground. The underside of the keel was finished up to the antifouling layer. Once complete, we lowered the boat onto the keel in consultation with the yard. Support beams were placed through the portholes and secured with braces. This allowed us to remove the usual stands, giving us unobstructed access to the entire hull for epoxy and antifouling coating. The painters at the yard appreciated the unique setup, which made their work much easier. The rudder was also removed and fully serviced.



Supported by beams through the windows, allowing full access for painting.

The boat also received a new oil-bath propeller shaft bearing, installed by a specialist from the past who agreed to train and guide the current technician during the replacement. This is not a task to be taken lightly without proper expertise. The results have been outstanding — the engine is completely silent while sailing, everything turns without a sound or vibration, and we sailed over 7 knots

In summary, this was a well-thought-out and thoroughly prepared operation, which went very smoothly thanks to the facilities and support of Lengers Shipyard in Lelystad. Since the keel was shortened by a net 5 cm, we haven't had any further issues with the lock thresholds — clearly, it was exactly what was needed.

Report and pictures: Adriaan Pouw

Edited in TVK format: Gerard Hoogewerff - September 2025

Translated by Marike van Meer – Oct 2025

Note: Technical Information is published by the Trintella Vriendenkring in order to advise members and other Trintella owners on their boat's maintenance. Most of this information is based on experiences from these Trintella owners, gained from maintaining their own boats. Even though the publications have been compiled with great care, no rights can be derived from it. The TVK is open to suggestions that can improve the content of these publications.