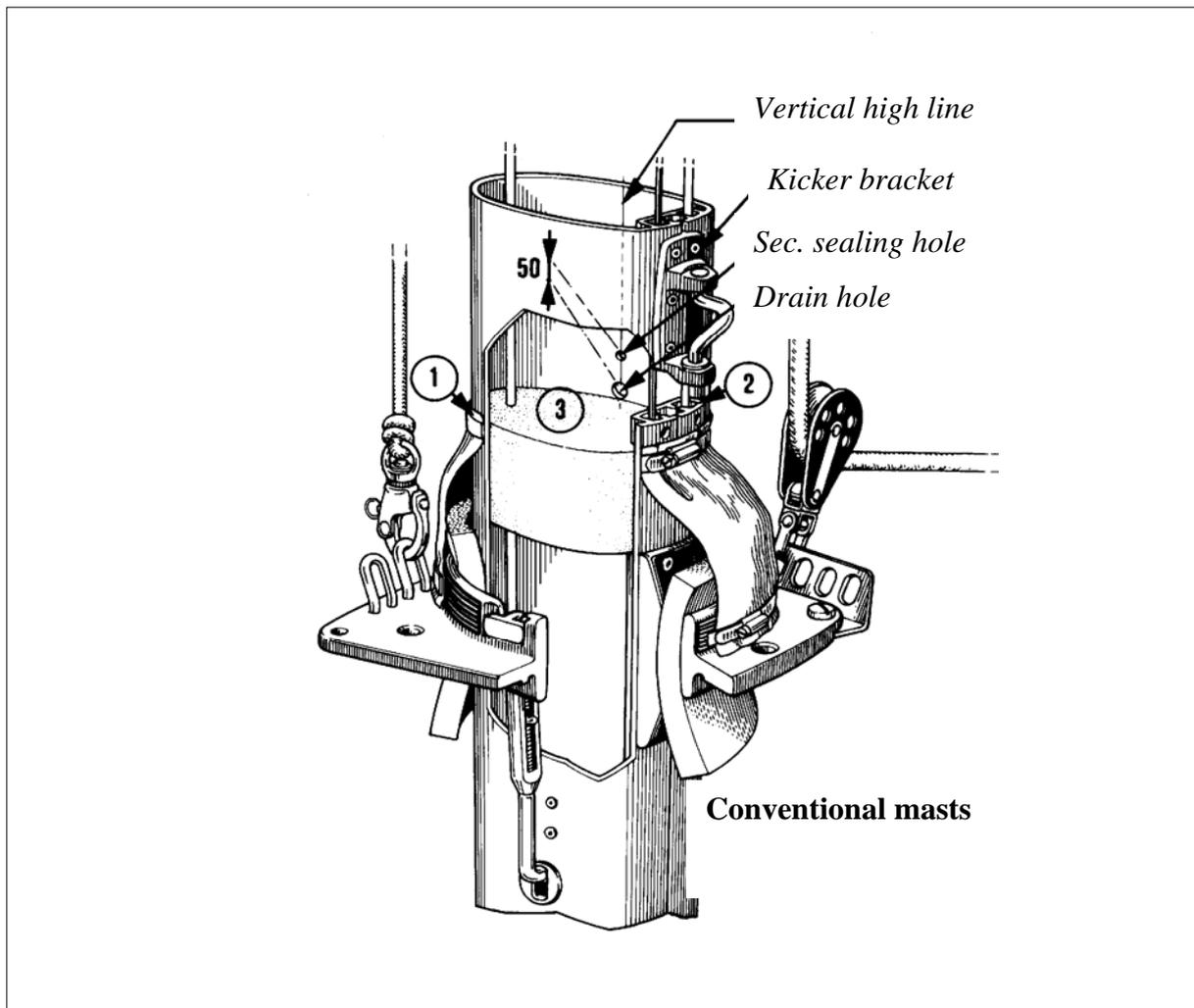


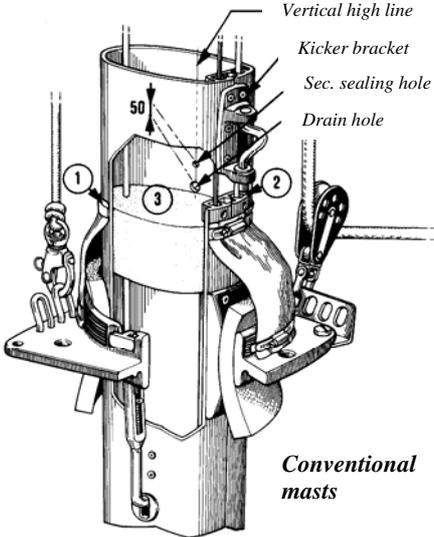
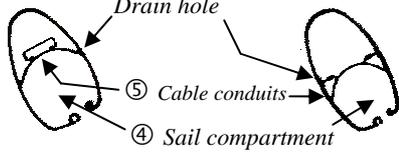
Internal Sealing of Masts

(Replaces the sealing instructions 595-551-SE)



This instruction is enclosed in the secondary sealing kit. The kit includes, besides the instruction, sealing compound that is specified in section 2 "Preparations".

Check the location of the leak. There are various possible places. These are:

Leakage	Action	
1. Between the coat and external mast wall in the aft part of the section. Carefully check the small marking grooves on the mast	See section 6	 <p style="text-align: right;"><i>Conventional masts</i></p>
2. In the sail groove on conventional masts. On some older mast section, the sail groove also works as a cable conduit. Warning! If the sail groove is sealed according to this instruction, it will not be possible to retrofit any cables. The easiest way to check if the mast as integrated cable conduit is to use a piece of bent wire, and locate the cable slot. (See Fig. 3c)	See section 4	
3. Conventional masts – inner part of the section. In-mast furling – in halyard compartment	See section 3	<p>Type RA & RD 190/94 – 235/116</p> <p>Type RB & RC 232-126 – 290/150</p> 
4. In-mast furling – In sail compartment	See section 3	
5. In-mast furling – In the cable conduits	See section 3 & 5	

In order to give adequate help, the leak has to be located before contacting Seldén.

General

The sealing kit is intended for masts with internal leakage in halyard and sail compartments (in-mast furling masts). Careful attention to these instructions will increase the overall results.

Internal cleaning is important in that the sealing compound's adhesion against the mast wall determines the quality of the results. When correctly applied, the sealing compound (approx. 30 mm thick) provides a sealed mast around the mast wall. Full sealing can be difficult to achieve, as the sealing compound cannot be applied behind the cable grooves. This mainly applies to in-mast furling masts of types RA and RC, which have U-shaped cable grooves (so-called open cable grooves). In-mast furling masts of type RB are set up for sealing, as all cables are installed in the mast. See section 5.1.

It is therefore very important to follow the instructions for the sealing procedure around the cable grooves. Any future leakage will be minimal.

2 Preparations

Sealing should be performed during a period of dry weather, because it is crucial that the mast is dry on the inside. Mask the deck, mast and mast collar with protective plastic sheeting or similar material since the sealing compound has a tendency to flow out. Lead the halyards and lines from the mast and deck ring to the side before sealing. Carefully read the attached *information about the sealing compound*.

Warning! Check that the internal sealing block has not been moved from its original position or distorted. See fig 3a. If the gap between block and mast is too wide, the low viscosity sealing compound will run completely through and fail to make a seal.

If the leakage is wide, or if the extent of the leak is not known. Divide the sealing compound in two sets. Start with mixing smaller an amount (~200ml) and pour it into the mast. Check that the sealing compound does not run thru the mast and into the mast. (If so remove the sealing compound immediately). After the sealing compound has set continue the sealing according to the instruction.

The sealing kit (Art. No. 312-322-10) includes:

- 312-411 1x NM hardener 1348
- 312-412 1x NM ME 52 T Tix
- 590-190 1x Plastic bottle, 1000 ml
- 595-814 1x Instructions, internal sealing
- 595-853 1x I:NM data sheet
- 595-500 1x Profile list
- 319-511 18x Plastic plugs to kicker bracket
- 592-050 4x Disposable gloves
- 312-307 1x Sikaflex tube, 70 ml

The following items are **not** included in the sealing kit and should be obtained before work begins:

- Methylated spirits
- A scales
- 10 mm and 5 mm drill bits
- 25 mm drill bit
- Utility knife
- Rags
- Heavy steel wire (for internal cleaning of the mast)
- Small torch
- Hot air gun (and optional compressed air)
- Masking materials for deck and mast
- Measuring tape
- Adhesive tape
- Container for mixing

3 Internal sealing of mast

Points 3.1–3.3 describe conventional masts.
Points 3.4–3.6 describe in-mast furling masts.

3.1 Conventional Masts:

There are normally a drainage hole (approx. 12–16 mm in diameter) and a sealing hole (approx. 9 mm in diameter) in the mast (see Figure 3.a).

- 3.2 Drill a 25 mm hole on each side of the mast. The lower edge of the 25 mm hole shall be about 25 mm above the existing internal sealing. Normally, the 25 mm hole is about 12 mm centre-to-centre under the post-sealing hole. Pre-drill with a 5 mm bit. The centring bit on the 19 mm bit must not come too close to the edge of the post-sealing hole (minimum of approx. 5 mm).
Finish by deburring the 25 mm holes using a file or knife.

- 3.3 To be able to properly seal conventional masts with internal cable grooves in plastic, two 10 mm holes must be drilled at the aft edge of the mast. (NOTE: Not all masts have plastic cable grooves. To identify your mast, see the attached profile list 595-500-E.) The holes are drilled so that their lower edges are even with the lower edges of the 25 mm holes; the location of the holes fore and aft is indicated in the following table. Pre-drill with a small bit of about 5 mm. Be careful to avoid damaging the cable grooves, as they are directly inside of the holes. Optionally, some form of collar can be placed on the bit so that the hole-depth is limited to the thickness of the mast wall. On some masts, the 10 mm holes may be in conflict with the kicker bracket. On these masts, drill the 10 mm holes about 10 mm in front of the kicker bracket.

Now go to point 3.7

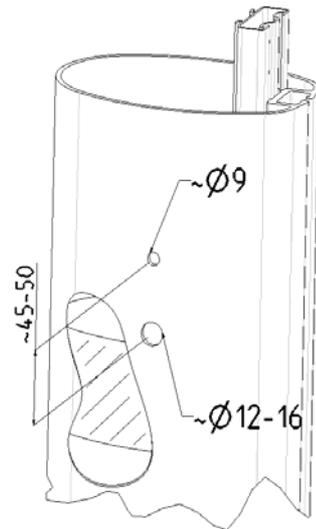


Fig. 3.a

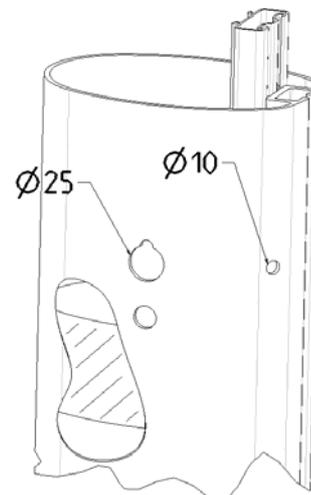


Fig. 3.b

Drilling Dimensions for Conventional Masts		
a = Distance from luff groove		
Mast profile	Cable groove in plastic 535-608-01 (17x56) Fig. 3.c	Cable groove in plastic (535-673 18x53) Fig. 3.d
122/85	-	-
130/93	-	-
138/93	-	-
155/104	50	-
170/115	50	-
177/124	50	35
189/132	55	35
206/139	60	35
224/150	55	35
237/162	60	35
274/185	-	40

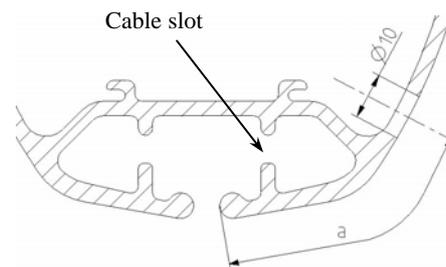


Fig. 3.c

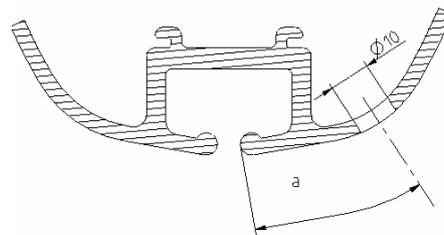


Fig. 3.d

3.4 In-mast furling masts:

There are normally a drainage hole (approx. 12–16 mm in diameter) and a sealing hole (approx. 9 mm in diameter) in the mast – see Figure 3.e – and a 16 mm drainage hole at the aft edge of the sail compartment. There can also be two holes for secondary sealing of cable conduits.

- 3.5 Drill a 25 mm hole on each side of the mast. The lower edge of the 25 mm hole shall be about 25 mm above the existing internal sealing. Normally, the 25 mm hole is about 12 mm centre-to-centre under the post-sealing hole. Pre-drill with 5 mm bit. The centring bit on the 19 mm bit may not come too close to the edge of the post-sealing hole (minimum of approx. 5 mm). Finish by deburring the 25 mm holes using a file or knife

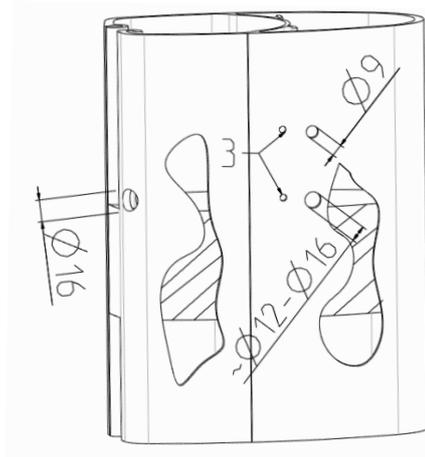


Fig. 3.e

- 3.6 Also drill a new drainage hole in the sail compartment, approximately 25 mm centre-to-centre above the old drainage hole (see Figure 3.f). Finish by deburring the hole.
- 3.7 Remove any surplus polyurethane foam from the original seal on the inside of the mast. If the mast is damp on the inside, it shall be dried using a hair dryer or hot air gun.

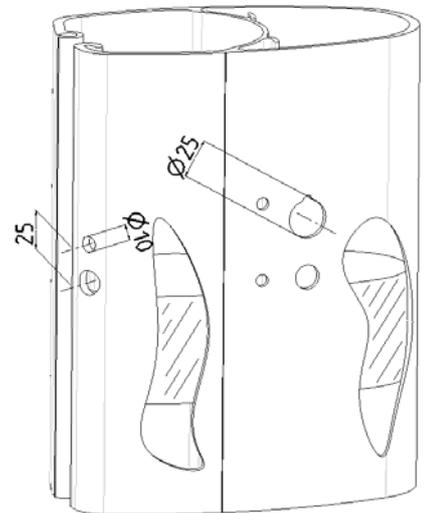


Fig. 3.f

WARNING: The mast profile must not be heated to more than 100°C. Overheating can reduce the masts structural integrity!

- 3.8 Bend one end of a length of steel wire around a small piece of rag. Dip the rag in methylated spirits and use it to clean the inside of the mast.
- 3.9 Seal the old drainage holes with tape.
- 3.10 Seal the pop-rivets on the kicker bracket with the plastic plugs provided. (The plugs can remain in place after sealing is completed.)
- 3.11 Protect the mast, kicker bracket, mast collar and deck using plastic sheeting and tape. Be especially careful with masking under the kicker bracket, as the sealing compound can run out under the kicker bracket.
- 3.12 Place tape over the 25 mm holes and then cut the holes with a sharp knife. On in-mast furling masts, also mask the kicker bracket and sail opening, as filling is performed through this for the aft compartment.
- 3.13 Recheck that the mast is dry after cleaning. Re-dry if necessary in accordance with point 3.5. Mix the sealing compound in accordance with the instructions on the cans (see instructions 595-818-E) and pour the mixed compound into the provided plastic bottle. At 25°C, the sealing compound has a working time of about 40 minutes and a hardening time of about 50 minutes. If the leakage in the mast is big, mix approx. 20% of the compound and seal, before the final sealing is done.

- 3.14 Pour the sealing compound through the 25 mm holes, filling a little at a time, until the sealing compound is level with the lower edge of the 25 mm hole. On in-mast furling masts, sealing compound is also poured through the sail opening until it is level with the lower edge of the aft, newly drilled, drainage hole.
- 3.15 It is important to seal between the internal cable grooves (of plastic) and the mast. On an in-mast furling mast, this is best done by inserting a finger in the 25 mm holes and drawing the sealing compound along the joint between the mast and cable grooves (use protective gloves). On a conventional mast, this is best done using a stick or screwdriver, which is inserted into the mast through the drilled 10 mm holes.
- 3.16 Tape the aft drainage holes completely. Also tape the lower portions (5–10 mm) of the 25 mm holes.
- 3.17 Fill with additional sealing compound up to the edges of the 25 mm holes.
- 3.18 Remove any excess sealant from the outside of the mast.
- 3.19 After the sealing compound has hardened, remove the protective tape and plastic sheeting.
- 3.20 Cut away the sealing compound from the holes so that water can easily run out.

4 Post-Sealing of Luff Groove - Conventional Mast

The kicker bracket's location relative to the mast collar varies. The kicker bracket's lower edge is normally 20 mm above the mast collar. On some masts, however, the kicker bracket is edge-to-edge with the mast collar; this requires additional preparations before the actual sealing can be performed (see point 4.5).

Points 4.2–4.4 describe masts with kicker brackets that are above the mast collar (approx. 20 mm).
4.5–4.8 describe masts with kicker brackets that are level with the mast collar.

- 4.1 If the kicker bracket is pop-riveted, check that the rivets are properly sealed in accordance with 3.11.
- 4.2 **Masts with kicker brackets above the mast collar**
Remove the old sealing in the luff groove between the collar and the kicker bracket. If possible, remove the sealing behind the bracket.
- 4.3 Tape over the luff groove between the kicker bracket and mast collar.
- 4.4 Mask the mast (luff groove) above the kicker bracket, and carefully tape off the kicker bracket.
Go to point 4.9

4.5 **Masts with kicker brackets that are level with the mast collar**

Pour in sealing compound above the kicker bracket through the luff groove until the sealing compound is level with the lower edge of the kicker bracket. The level must be no higher than the lower edge of the kicker bracket, or water could collect inside the mast.

- 4.6 Seal between the kicker bracket and mast with Sikaflex sealing adhesive.
- 4.7 Tape off the luff groove under the kicker bracket.
- 4.8 Mask the mast (luff groove) above the kicker bracket, and carefully tape off the kicker bracket.
- 4.9 Pour in sealing compound above the kicker bracket through the luff groove until the sealing compound is level with the upper edge of the kicker bracket.
- 4.10 After the sealing compound has hardened, remove the tape and protective material.

5 Sealing of Cable Grooves, Type RB

The cable grooves are delivered unsealed to enable subsequent installation of cables.

NOTE: We advise *against* sealing them in that they are very difficult to reopen when adding additional cables or replacing existing ones. For identification of your mast, see the attached profile list (595-500-E).

- 5.1 With the mast in the horizontal position, inject sealing adhesive (such as Sikaflex) through the lower holes (see Figure 5.a). If the mast is standing, inject the sealing adhesive a little at a time, letting it harden between injections).
- 5.2 Secondary sealing, if necessary, is carried out with the mast stepped, by pouring liquid sealing compound into the upper holes.

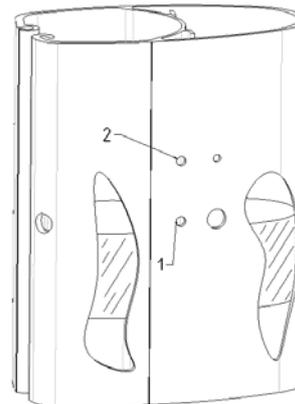


Fig. 5.a

6 Sealing of leakage at mast collar

The clip mentioned below is replaced by an adhesive tape on masts produced 1990 and later.

- 6.1 Remove the clip or tape around the mast.
- 6.2 Pull the coat upwards slightly.
- 6.3 Apply sealing compound around the mast at the correct location of the collar.
- 6.4 Reposition the coat and tighten the collar with clip or tape.

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