



# Rasmus 35

HALLBERG-RASSY VARV AB - SWEDEN

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## HALLBERG-RASSY BOAT YARD

### INSTRUCTIONS FOR BOAT OWNERS

This booklet is intended to give some hints and information regarding the best handling and maintenance of your boat. It does not, however, in any way claim to be complete, but deals with some of the questions, which have been previously answered upon delivery.

This Instruction is not intended as an "Operation Manual", but deals primarily with details, which are specifically related to our boats.

As a rule, the new owner always has to dedicate sufficient time in order to get himself acquainted with his new boat and its construction.

The responsibility for the proper maintenance is up to the buyer.

We wish you GOOD LUCK and  
many HAPPY NAUTICAL MILES!

I N F O R M A T I O N   S H E E T

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Type of boat .....

Construction No. ....

Year of Manufacture .....

Color of the Hull: Gelcoat No.....

Superstructure.....

Motor No.....

1.

### Maintenance of the Gelcoat - Repair of Damages

The outer, colored coating of a fiberglass boat is called the Gelcoat. This is a plain coating, which protects the fiberglass hull and at the same time gives the boat an elegant and easy-to-care exterior. The thickness of the Gelcoat is approximately less than 1/4 of an inch and thus considerably thicker than a normal color coating. It is completely homogenous and has the same hardness right through. This is why it is often possible to remove bad scratches through grinding or polishing without having to apply any new plastic. It is not difficult either to repair deeper scratches or damages. Any air bubbles, scratches or ruptures that may occur in this outer coating does not mean that water can penetrate the laminate.

#### 1) Maintenance of plastic surfaces in good condition

The plastic surfaces of the boat should be kept clean and spotless for a nice appearance. Use regular detergents and water but avoid detergents which may cause scratches. Do not use detergents containing ammonia as they may damage fittings, plexiglass, etc. Detergents and solutions should be thoroughly rinsed off. Should the shiny surfaces get dull they can be polished either by hand, using a polishing agent, or by using a low revolution machine. There are several special polishing agents for fiberglass boats on the market.

Waxing is nor normally required, but can do no harm. When waxing notice that the wax has to be worked well. Do not wax any surfaces with pattern, which will make them slippery.



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### Repair of superficial scratches, etc.

Scratches in the gelcoating may often look deeper than they really are and as the scratched surface is different in color than the shiny one, you may think that the colored coating has been penetrated. For reasonably deep scratches use water sanding. Start with a coarse paper and little by little change down to a fine paper (# 800). Rub the surface after sanding, i.e. use polish and an abrasive on the surface as well as on the surrounding undamaged surfaces.

### 3) Repair of deep scratches and scaffings

If the gelcoating has been damaged and completely removed, the repair is done as follows. Get Gelcoat in the proper color (See Information Sheet) and a hardener from a fiberglass manufacturer or the yard. The damage is then cleaned with the edge of a knife and covered with masking tape very closely on both sides of the hole. Mix the Gelcoat and the hardener (approximately 2% of the hardener). The temperature in the working area should be between 60-80 F. Use a generous amount of the Gelcoat to fill in the damaged spot and immediately place a piece of tape over the same to avoid the Gelcoat from running. After the plastic has hardened, grind off the surplus and polish the surface.

Scaffings under the waterline are filled with putty epoxy (Interpad) and then painted with a 2-component primer, e.g. International Poly Ground.

Larger scaffings, in case the boat hits bottom hard, have to be cleaned from crushed fiberglass through grinding and are then repaired with fiberglass mat and plastic before final putting (repair

(sets are available on the market).

### Maintenance of Wood - Interior and Exterior

The interior surfaces of mahogany are thoroughly treated with a synthetic laquer and even after many years of use they do not normally need any other maintenance than a cleaning. Should a surface, however, be damaged to the extent that it would be necessary to re-varnish same, the whole damaged surface has to be sanded and then varnished with a mat laquer (International Lagolac or similar). Most of the minor damages are taken care of with a little bit of oil. Interior teak, mouldings, etc. can be oiled once in a while with teak oil.

### Exterior Wood

The exterior wood is made of genuine Bangkok teak and is not dependent on either laquer or oil for its protection. It is thus a matter of taste whether the teak should be varnished or be left untreated. It is our opinion that the varnished teak has a better appearance and that it sets off a better contrast against the other plastic surfaces. But of course a certain maintenance is required to keep it up from wear and tear. On varnished seats we strongly recommend the use of non-skidding and non-scratching footwear. When the teak is treated at the yard they use a synthetic varnish with a phenolic resin glue base. Varnish with an oil base is not suitable and a 2-component varnish should not be used on top of the old varnish. Untreated teak is scrubbed thoroughly at the same time as the cleaning of the fiberglass surfaces and will after some time take on

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a silvergrey shade.

In our experience, the use of teak oil on the exterior may cause bad looking surfaces, which are difficult to maintain. Therefore we do not advise any oiling.

When you re-varnish, the surrounding fiberglass surfaces must be well protected from streaks or drips of varnish, which otherwise leaves bad spots which are difficult to remove. Should you happen to spill some varnish be careful to remove same immediately as, even if it is practically translucent from the start, it will from the sun turn yellow very quickly on the fiberglass surfaces.

If teak oil is used, it is our experience that only pure oil should be used as otherwise patchy looking surfaces will appear, specially after some time of wear.



### Mast and Rigging

If the boat is not commissioned at delivery and therefore the owner has to take care of the stepping of the mast and the rigging, the following procedure should be followed.

The halyards are checked and the shrouds and stays are attached to the mast. If the top navigation light is not yet mounted, it should be done before stepping the mast. The spreaders are mounted and locked on to the mast and top shrouds. In order to make it simple to obtain the right angle of the spreaders, stretch the top shrouds along the mast and make a mark at the position of the spreader bracket on the mast. This marking indicates the correct position for the outer end of the spreader. Any covers for the turnbuckles should be attached at this stage. When the mast has been stepped and the shrouds and stays have been fastened to their respective chain plates, the rigging is tightened by hand and the mast adjusted into a vertical position.

The Principal Adjustment of the Rigging is made so that the top shroud and the aft stay is tightened to correspond to approximately 10% of the weight of the boat and the headstay somewhat more, which will give this stay quite a rigid feeling. Next in line come the forward undershrouds, which should position the mast to rake slightly forward. Finally the aft undershrouds are not lightened more than is possible by hand.



As the various items, such as wires and mast, settle, the rigging should be restressed, but not before some hours of sailing in fresh breeze.

First reset the rigging as done when you first step the mast. A correct stepped mast will assure you to get the best performance of your boat. An incorrectly adjusted mast may give excess weather helm or opposite effect.

To be sure that the mast, when under stress, does not form a S-curve. After final trimming make sure that the turnbuckles are locked with splitpins for protection. It is advisable to use tape over the same.

Inspect the rigging when the mast is taken down, either for winter storage or for other reasons. Special care should be given to halyards. Grease the top and bottom shives. Wash the mast and afterwards hose it thoroughly.

Before stepping, also control all wire connections for running lights and antennas.

The anodized surface can be protected by using a silicone-free wax. The traveller on the sail would move easier if the slot is treated with paraffine.

The wind can cause vibrations in the mast and rigging. This happens most often when the boat is moored at the dock and is quite normal and natural. But sometimes you may find it somewhat disturbing. Vibrations seldom occur during sailing. The most common cause is that the topping lift is too stretched. Specially if the boat is moored and the wind is coming in from the side, the mast itself may vibrate alongship. This can be remedied by stretching the spinnaker topping lift to some suitable place aft.

General Hints about Sailing, etc.

Rasmus' construction assures complete safety and she has been tested during severe conditions during ocean passages and numerous crossings of known rough water as the Northsea and the Baltic. It can generally endure more than its crew. Reefing should however be done in time to obtain the best performance and good seamanship is essential.

The Largest Genua Jib (350 square feet) is used for wind conditions up to about 10-15 knots; and is generally sheeted home on a reach so that at the height of the spreader it is about 4-5" outside of the stay. The sheet is always outside of the double lifelines and stays.

The Working Jib

(240 square feet) is a large jib giving balance to the boat in much the same way as the large Genua Jib. It is normally sheeted home outside of the double life lines and stays. Together with the main reefed down 3-4 rolls on the boom it provides for good sailing in a stiff breeze.

The Storm Jib (240 square feet) is the best size jib in winds above 25-30 knots.

Through deep reefing and using a small jib (Storm Jib 100 square feet is available) with the motor running about 1.200 r/m, sailing in heavy weather can be very comfortable. It is now that you will discover the boat's advantage as a motor sailer.

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The simplest way is to reef the sail while in port. To take out a reef is more simple than to start reefing but of course it can well be done at sea. It is very important that the halyards are completely stretched and still more so that the sail is stretched out on the boom.

The Sails are made of Dacron or Terylene and do not need any special care during the first hours of sailing to obtain optimum shape. They are pretty well water repellent and in an emergency you may stow them away even when moist.

The Main Sail is to a very large extent dependent on the right stretching alongside the foot and luff and the manner of trimming can change its appearance completely. Wrinkles at the bottom of the pocket for the battens is most often caused by improper stretching of the foot on the boom.

The clew must be securely fastened to the boom and the foot stretched firmly. Make sure that the rope goes around and through the eye in the clew.

The jib should be firmly stretched on to the headstay. Use the halyard winch on the mast.

There are always some wrinkles at the corners of the sails, but this does not influence the efficiency of the sail. The sails should be inspected thoroughly every year in regard to minor damages and worn out seams, which may have to be repaired.

The sailmaker issues a guarantee for the sails and also includes advice regarding the maintenance of the sails and spot removal.



Instructions regarding the Engine Installation, Steering, Drainage, etc.

Regarding the Engine itself we refer to Volvo's Instruction Book, which should be thoroughly studied before using the boat. The instruction book does not comprise those parts of the motor referring to the very installation.

Note that the Shaft's Stuffing Box is accessible for greasing under the floor in the aft cabin. For the first time under power the pressure cap (top cap of grease gun) should be turned half a turn every second hour for the first six hours. If the stuffing box after a while has a tendency to leakage, more than a slight dripping which is as should be, it should be adjusted by loosening the stop nut and pulling the box approximately half a turn, but not more, the box should still be dripping a little bit.

The Cooling Water Intake - is located on port side in the engine room.

The Fuel Oil Filter is of a combined water-separating type and a fine filter and is mounted on starboard side in the engine room. The filter should be inspected regularly, specially after filling the fuel tanks, with regard to the water collecting in the lower part of the glass container. The water cannot be drained off while running, but it may not rise too high in the filter as this would ruin the paper filter in the upper part.

Drainage Pump for the Fuel Oil Tank

If you would suspect that the fuel tank contains water, this can be removed by using a special pump built in under the seat

on starboard side in the cockpit.

The Fuel Oil Tank is located under the engine and has a nominal volume of 75 gallons. The suction pipe to the engine is, however, located about 4 inches above the lowest point. In order to avoid that the fuel pump sucks in air, specially while running, a further margin should be left.

To calculate the cruising range (under power) the accessible fuel should be calculated to about 55-60 gallons, which gives 360 dist. minutes of engine output using approximately 1 gallon/hour at 7 knots. You can take a bearing on the tank through a plug on the pipe for filling located aft of the engine.

The Fresh Water Tank holds approximately 75 gallons and is built in under the floor in the main cabin. There are several inspection openings for cleaning of the tank. Do not open unnecessarily because of the risk of leakage if the seal is improperly replaced.

The Steering is hydraulic. No maintenance is normally necessary. If it for some reason should need some airing, e.g. after changing tubing, this is done through the ventilation nipples on the steering piston. You find this one under the bunks in the aft cabin connected to the rudder shaft. Oil of type Shell Tellus 23 is used for refilling .

The Bilgepump is of a very efficient membrane type and is mounted starboard under the seat in the cockpit. It operates from the large bilge immediately forward of the engine.



Access also from main cabin by lifting the last floorboard. The pump is designed in such a way that large particles can pass through without causing any blockage. Should this happen anyhow, the pump is cleaned by loosening the membrane. As the pump being designed for a heavy suction tube the bilge cannot be completely dry through suction.

Bottled Gas (L.P.) Installation The yard delivers Rasmus 35 as a standard equipped with a 2-burner stove with range. This stove is of a low-pressure type equipped with safety pin that will automatically turn off the gas if the flame has been accidentally extinguished. A L.P. tube, made of solid copper, is installed between the forward stowing place and the stove where it is connected by a drained shut off valve. The owner has to install the proper L.P. tube suitable for his particular needs and a suitable reduction valve for low pressure. The L.P. tube must be securely installed to prevent it from overturning or coming loose. After the installation, all connections are tested by opening the valves to the stove. Have all connections brushed with soap water for checking for leakage. This check should be done regularly at least twice a year or when a leakage is suspected. Maximum safety is obtained by closing the valve at the L.P. gasbottle when the stove is not in use.

The Head - The boat is equipped with a reliable marine-head of over board discharge type. The bowl is flushed by pumping



seawater and pressing out the waste directly into the sea. The discharge is connected with a special bottom valve, which normally should be kept closed and in any case always while sailing. In an O P E N position the handle points away from the incoming pipe and the valve is open when the handle points along the pipe on either side. Normally the valve for incoming seawater has to be closed only when the boat is not in use for a long time. The valve is placed under the floor in the forepeak. It is important that the flushing valve of the toilet is set completely in the position C L O S E D.

When in use, the bottom valve shall first be opened. The bowl is then flushed a couple of times. After use the bowl is emptied through forceful pumping. at the same time as the small valve at the side of the bowl is open = F L U S H. When the water level has risen somewhat in the bowl the small valve at the side shall be closed and the pumping is continued until the bowl is emptied. Put flush valve back to OPEN position.

Never put any foreign matter in the toilet! A match might easily clog the toilet. Close the bottom valve after use.

As regards the winter maintenance, flush the toilet with detergent and water and drain through the bottom plug.

Bottom Valves - Besides the bottom valves for the cooling water intake and the head, as previously mentioned, there are also the following through hull valves:

two 1 1/4" placed in the self-bailing cockpit

Sink drain 1 1/4" under the sink

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Wash basin drain 1"

All these through hulls are equipped with sea cocks. Furthermore, there is a 1 1/4" through vent above the water line on starboard as an outlet for the bilge pump.

Electric Pump for Fresh Water and Shower- Please note the following when electric pumps have been installed for the fresh water system.

The pumps start automatically when opening a faucet. The pump housing is made of rubber and cannot run empty for more than at the most a minute. The pumps should therefore be turned off immediately if the water runs out. Note that the pumps in use are heavy users of electricity. They are also sensitive to too low voltage. If the voltage is low, due to poor charging of the battery in use, the pump will not start, but the automatic control device is on and the batteries are quickly drained. At the same time the pump engine can be overheated even without blowing the fuse.

The Electric System is 12 Volt and has 2 different circuits.

One for starting the engine and one for use onboard, etc.

Even if the lighting battery is completely discharged, this does not affect the second battery for starting the engine.

Each circuit has as a standard one 114 amp. hour battery, which is located under the aft seat portside in the main cabin. The batteries can be turned off by the main battery switches, which are located under a cover on the front panel of the seat. The

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batteries should not under any circumstances be turned off while THE MOTOR IS RUNNING as this would immediately destroy the alternator.

The Fuse Boxes are located at the Navigator's table, where one electric outlet is also located. All fuses are of 8 Amp. except the icebox and pressure water pump, which use 15 Amp.

The interior Light Bulbs are generally of a 10 W coil type. (Type Philips 12866 or similar).

The Light Bulbs in the Lanterns are 25 W, except for the stern navigation light, which is 10 W Hella, type 8GA 002 600-12 resp. 699-12 or similar. Spare lamps can be purchased from the dealer or directly from the XAX Corporation, 1861 S.E. 17th Street, Suite 207, Fort Lauderdale, Florida 33316.

There are three 12 volt outlets: one at the Navigators table, one in the head compartment and one in the aft cabin. Minus and plus should be checked when plugging in appliances sensitive to polarity, e.g. portable TV sets, etc.



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### Holding Tank for the Toilet

A holding tank can be obtained as an accessory to the standard toilet. This is installed in the stowage space, portside of the toilet. This tank makes it possible to use the toilet while in port without pumping out the waste, which later can be emptied into the sea. It is used in about the same manner as without the tank, but instead of opening the bottom valve for drainage, the valve of the holding tank is opened. After use, the tank valve is closed. With careful use of the flushing water, the tank should normally be enough for one family during a weekend. The tank is opened in open sea by first opening the bottom valve and then the tank valve, the tank is then emptied through self-pressure. The tank is then flushed with the toilet pump and emptied and is then ready for use again. The tank is equipped with ventilation opening outside and above waterline. If the tank is full, the flushing water will come through the hose to the ventilation and the pumping must be stopped immediately. It is advisable to flush the tank with some chemical disinfectant and detergent before the winter season.

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