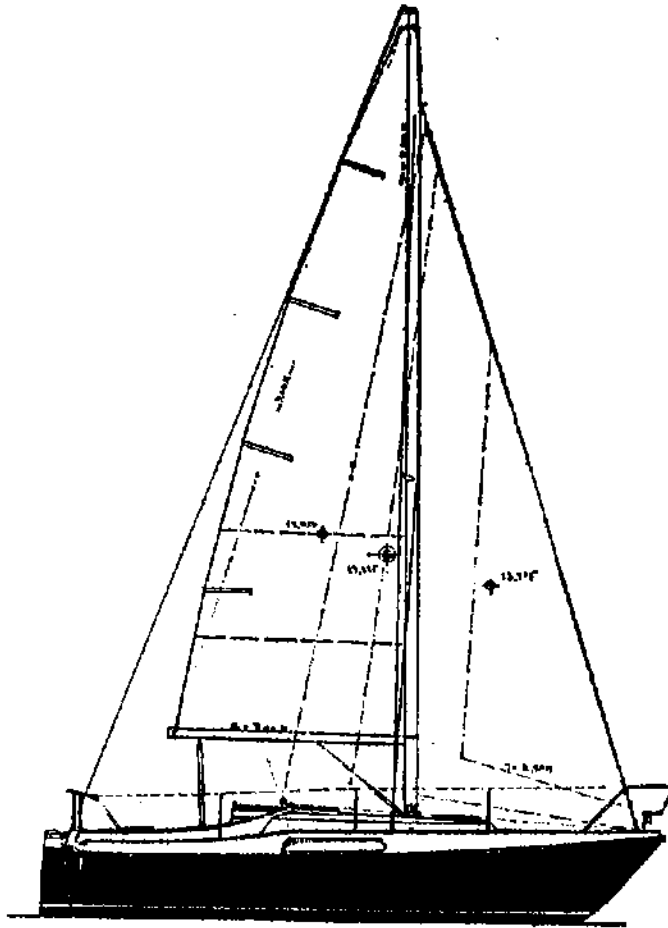


HALLBERG-RASSY 26



R **Hallberg Rassy**

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INFORMATION SHEET

Type of boat: HALLBERG RASSY 26

Construction no:.....

Year of Manufacture:.....

Colour of the Hull: Gelcoat No: Jotun 200

Superstructure Gelcoat No: Norpol 332

Motor No:.....

Starting Key No:.....

Acc. Hatch Key No:.....

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!

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 $1/32$ - $1/64$ of an inch and thus considerably thicker than a normal color coat. 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.

2) 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 (No 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 scuffings

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 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

The interior surfaces of mahogany are thoroughly treated with a synthetic laquer and even after many years of use 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 revarnish 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 teak and is not dependent of either laquer or oil for its protection.

Natural teak is scrubbed thoroughly at the same time as the cleaning of the fiberglass surfaces and will after some time take on a silvergry 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.

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 correct 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 fore stay and topshrouds are tight but still not completely rigid (abt 650 lbs tension). The lower shrouds are set up so the mast will maintain a slight bend. After the upper and lower shrouds and the forestay have been adjusted but with the aft stay loose, the mast should be straight sideways and the bend measured at half height should be abt 2". By putting tension on the aft stay the mast bend can be increased in order to reduce the fullness of the main sail. The 7/8 rigg gives the boat owner possibility to adjust his mast to the main sail and for different wind conditions.

At first opportunity the shape of the mast should be checked when sailing in hard wind with double reefed main sail. Under this conditions the mast is not allowed to bend aft at spreader height. If the mast shows such tendency, the top shrouds should be tightened and/or the lower shrouds slacked.

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 luff of the sail would move easier if the slot is treated with paraffine.

Vibrations in mast and rigging

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 tight. 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.

A small change in the tension of the rigging often eliminates the vibrations.

General hints about sailing, etc.

The HALLBERG RASSY 26 assures complete safety and has been designed for sailing on unprotected waters. The engine is powerful enough to take the boat against a 35 knots headwind. The angle of heel should not be allowed to exceed about 25° when motorsailing.

The light wind genua jib (20,8 m², 230 sqft) is carried on the wind up to about 16 knots and off wind slightly more.

The working jib (15,5 m², 170 sqft) is used in combination with full mainsail up to about 20 knots on the wind and with a reefed mainsail to about 25 knots.

The storm jib (7 m², 77 sqft) is carried in combination with a double reefed main sail up to about 35 knots wind and can also be used alone as a steadying sail when motoring.

Special jib (10,8 m², 120 sqft) is a self tacking sail and requires that the special X-track and traveller has been fitted on the foundation in the deck forward of the mast.

In the kit for the selftacking jib is included 3 blocks, schackles and a sheet. One of the blocks is provided with a becket to take the end of the sheet. This block is schackled to the roller track car. One block is fitted to the clew and the third block is schackled to the tack pennant enclosing the headstay. The sheet is rove as shown on figure 1 and is led to one of the sheet winches. The vertical position of the sail can be adjusted by fitting additional schackles between the tack of the sail and the pennant. This adjustment has the same effect on the trim of the sail as the moving forward or aft of the sheet lead on a normal genua track.

Main sail (16,4 m², 180 sqft) is fitted with two slab reefs of jiffy reef type, internal boomouthaul and Cunningham hole.

When setting the sail, the boom is lifted and the sail is hoisted fully. The tension is adjusted with the downhaul. Higher tension on the luff flattens the sail and moves the fullness forward in the sail. With the boomouthaul tightened, the sail becomes flatter in the lower parts. A rough rule is that small wrinkles in the sailcloth from the bolt ropes indicate low tension and folds along the mast or boom indicate overtension.

The mainsail is prepared for reefing by pulling in the reef-lines. The shorter line is intended for the first reef and is attached to the outer fixed loop in the boom. The line is then taken through the reefing eye in the leach for the lower reef down to the fixed sheeve on the opposit side of the boom and forward to a cleat on the boom. The longer line is arranged in the same way for the second reef.

Reefing

Reefing is made by lowering the mainsail enough to enable the eye of the first reef in the sail to be hooked at the tack, the halyard is retightened and the reef line for the first reef is tightened until the sail is well stretched out on the boom. The reefing is best made with the topping lift slightly tightened during the operation. There is no need to secure the loose part of the sail. The second reef is taken in the same way.

To let out a reef, the same operations are made in reverse.

The sails are made in Dacron, Terylene or equivalent cloth and do not need any special care during the first hours of sailing to obtain optimum shape. They are pretty well water resistant and in an emergency you may stow away them even when moist. They should however be aired at first opportunity as a small risk of discolouring by mildew exists.

The shape of the mainsail is depending not only on the tension along the spars but also on the bending of the mast and tension on the kicking strap. Change one component at a time and watch the influence on the shape of the sail.

Mainsails as well as foresails are usually provided with an adjustable leach line. This should only be tightened enough to prevent flutter.

The shape of foresails is largely depending on the tension in the halyard. This has to be adjusted to the strength of the wind. A tight halyard will prevent the fullness of the sail from moving aft as the wind increases. The fore and aft position of the sheet lead should generally be such that the sail starts to luff uniformly in the higher or lower part.

You will always find some creases in the sails extending from the corners. These are unavoidable in a modern full sail and make no harm.

The sails must be inspected periodically for worn seams and other small defects that can start a rip in heavy weather.

Instructions regarding the engine, engine installation, through hull fittings, head and electric system, etc.

Regarding the engine itself and the drive unit, we recommend you to refer to Volvo's "Instruction Book", which should be thoroughly studied before using the boat.

Engine cut out. The engine is a diesel and cannot be stopped by turning off the key. The engine cut out is a pull out handle on the engine panel in the stb cockpit locker.

Extra fuel filter. A water separation filter is fitted in the fuel line, accessible in the engine compartment. Periodically and particularly after refuelling, the glass bowl should be checked for water collecting. The water cannot be drained without stopping the engine. After refitting, the fuel line has to be vented as described in the engine manual.

The fuel oil tank is fitted under the cockpit floor. The volume is 40 litres (8,8 imp. gall.). The tank is made in stainless steel and has all connections concentrated in a special lid, which is also serving as a man hole cover.

Cabin heater. As optional extra equipment a cabin heater is available. For the maintenance and running of this, we refer to the makers manual. It is important that the current is not disconnected with the main switch before the heater has burned out and stopped.

The FW tank has 65 litres (14,3 imp.gall) capacity and is built in under the forward end of the v. berth in the fore cabin. It is made in polyethylene and is translucent. It can be cleaned through a man hole.

The FW pumps need no upkeep. They should be drained if the boat is winterstored in cold climates.

The bilge pump is fitted in the port side cockpit locker with a suction from the bilge well in the aft part of the main cabin. The pump can be dismantled to clear the valves if clogged.

The paraffin stove is an Optimus type 155 with direct pre-heating. Do not operate without reading the makers instructions.

Gas stove is available as an alternative to the paraffin stove. A copper pipe is laid forward to the stowage in the forepeak.

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 OPEN position the handle points away from the incoming pipe and the valve is closed 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 berth in the forepeak. It is important that the flushing valve if the toilet is set completely in the position CLOSED. 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 = FLUSH. 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 can 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.

Note: In some areas the boats are fitted with optional sewage treatment devices or holding tanks to meet the anti pollution laws. For maintenance of optional equipment see manufacturer's hand book.

Holding Tank for the toilet (European type)

A holding tank can be obtained as an accessory to the standard marine toilet. This tank is installed in the locker space, behind 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 emptied in open sea by first opening the bottom valve and then the tank valve; the tank is then drained through gravity. The tank is 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.

Seacocks

The water intake for the toilet is situated under the forward berth and can normally be left open.

The overboard valve from the toilet should be dismantled once every season and the surfaces greased by a thick water resistant grease.

The discharge from the selfbailing cockpit is arranged with two 1 1/4" outlets, port stb'd in the engine compartment. The discharge from the sink is also situated in the engine compartment.

The discharge from the wash basin is found in the locker below the basin.

NOTE! IMPORTANT!

Checking up on hose clamps.

Hose clamps, specially those positioned below waterline, where a leak means water entering the boat, must be checked up some time after delivery and then annually. The clamps are where possible of stainless steel and will not corrode. The hose must be so firmly attached to the fitting that it cannot be turned by hand and it must not leak. Extreme tightening should elsway be avoided as it may make the treads of the screws to override and the clamp to lose its grip.

The cooling water intake is on the sailboat drive's lower gear housing. It can be closed by a cock on the port side of the upper gear housing.

The electrical system is 12 V and wired with two separate circuits, one for engine start and one for light and general purpose. This means that the starting of the engine is not affected by the running down of the general purpose battery. Each circuit has as standard one 60 AH lead battery. The batteries may be cut out by the two main switches located below the accomodation ladder. The alternator has a permanent connection to the lighting battery to protect it against damage, if the switches are turned off by mistake, when the engine is running.

The fuse box is situated on the stb'd side over the navigator desk, where there are also switches for the running lights etc. A 12 V outlet and a fuel tank gauge is also located here. Before plugging in electronic equipment, sensitive to polarity (TV-sets), check the plugg and outlets.

The fuses are all 8 amp.

The interior light bulbs are in the buckhead lights two 5W coil type Hella 12844 or equal. Ceiling lights 10 W coil type Hella 12866 and in the spotlights 5 W bayonet base BA 15 S, Hella 12821 or equal.

The light bulbs for the navigation lights are special for the purpose type BAY 15 d, 25 W, except the stern light, which is 10 W Hella type 8 GA 002600-12 respectively S99-12 or equal.

A wiring diagram and fuse plan is found in the back of this manual.

Lifting, slipping and winter storage

If any uncertainty exists as regards the shape of the keel, the profile is found in the specification sheet on page 3 in this booklet.

The centre of gravity for unmasted boat is as follows, measured forward of the bulkhead between the cockpit and accommodation.

HR 41	0,9 m	(3'-0")
HR 38	1,2 m	(4'-0")
Rasmus 35	1,0 m	(3'-4")
Monzun 31	1,5 m	(5'-0")
HR 26	1,1 m	(3'-8")

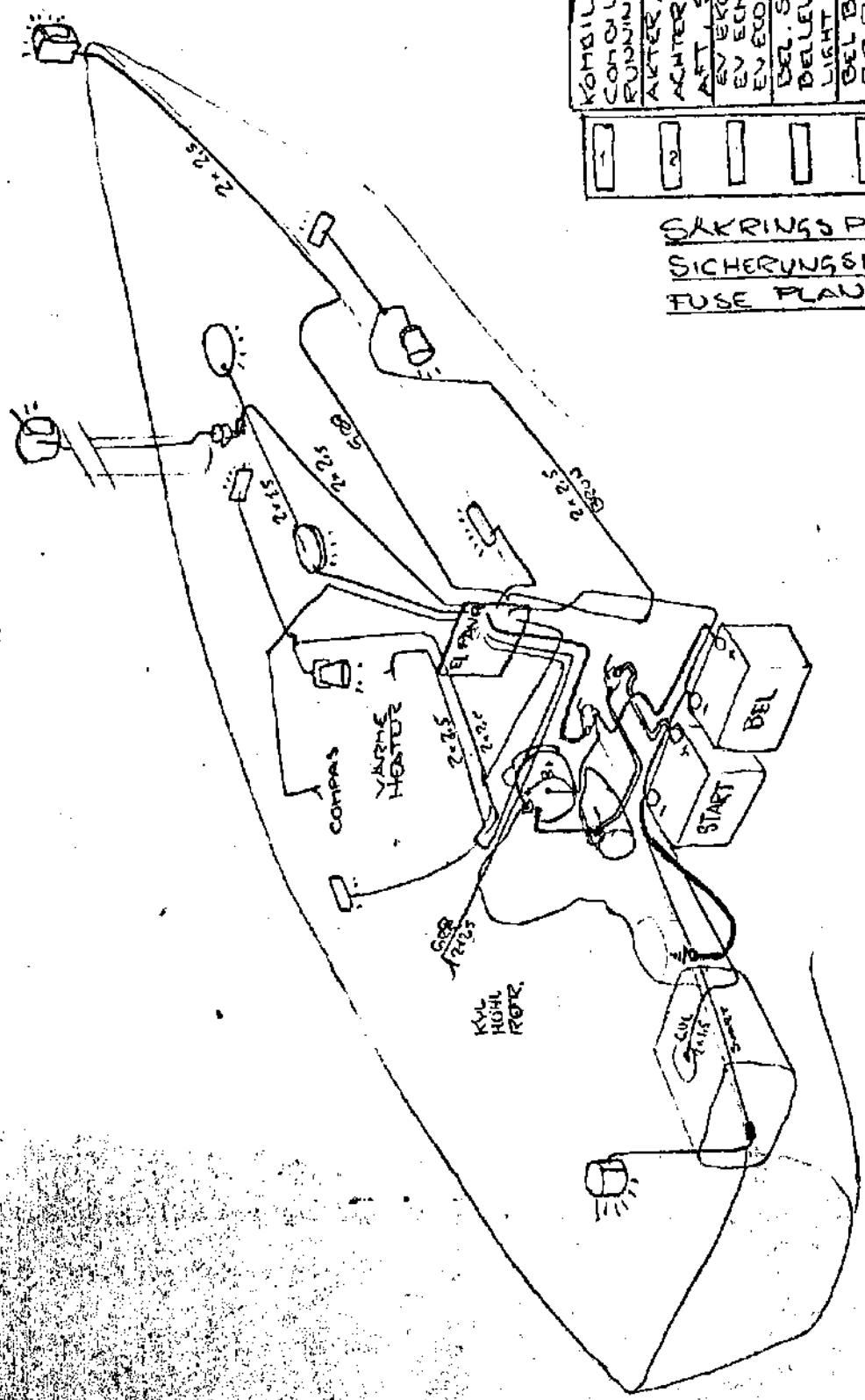
The above particulars are approximate and depending on the condition of the tanks and the distribution of eventual stores, etc.

When lifted on a slipway or placed in winterstore, the weight of the boat should be supported by woodfaced blocks, one of which should be as far forward as possible under the flat keel. One or two further supports are needed. For lifting by crane, the slings must be very long or provided with spreaders. Wood blocks may be used to prevent crushing the rail.

Generally speaking, when the boat is stored out of the water it should be blocked up level on firm ground. The bilge and the watertanks should be drained. Cushions are best removed and stowed dry or turned up to improve air circulation and left in the boat. The fuel tank is if permitted, best left full or nearly filled, to avoid condensation.

The boat should be covered by a self supported roof or by a tarpaulin over a rigid frame, arranged to keep the cover as far as possible free from deck and superstructure. Engine and toilet should be serviced according to manufacturers recommendations. All stainless steel, cromed bronze or anodized light metal fittings should be waxed.

If transporting by road, all tanks are best left empty.



1	KOMBILANTERNA COMBILATERNA RUNNING LIGHTS
2	ACHTER, DAMPF, LIGHT AFT STEAMING LIGHT
3	EV ERKÖLD, KOMPASS EV ECHOLOT, KOMPASS EV ECHSSONDER, COMPAS
4	BEL. SB BELEUCHTUNG SB LIGHT ACC. SB
5	BEL. BB BELEUCHTUNG BB LIGHT ACC. P
6	EV WÄRME, KÜHL EV HEIZUNG, KÜHL EV HEATER, RETRIG.

SKRINGS PLAN
SICHERUNGSPLAN
FUSE PLAN

FÜR MOTOREL SE SCHEMA I INSTR. BOOK FÜR MOTOR
FÜR SCHALTPLAN MOTOR SEHE DIE BETRIEBS ANLEITUNG
FOR WIRING OF ENGINE SEE ENGINE MANUAL