Manual
for owners and skippers

Sailing yacht „BAVARIA 42 CRUISER”

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Introduction

This manual will help you to handle your yacht safely and with pleasure. Apart from information about the yacht itself and installed or additionally supplied fittings the manual also contains information on operation and maintenance. Please familiarise yourself with everything before you go on your first voyage.

If this is your first yacht or if you are not really familiar with the special characteristics of a motor yacht please make sure you get proper training before you put it into operation. Do not hesitate to contact the dealer or our shipyard for information about further training possibilities.

As the scope of supply depends on the order, the equipment of your yacht can deviate with some descriptions and illustrations. In order to be able to adapt our yachts to the constantly progressing technical standard, we must reserve ourselves changes in form, equipment and technology. For these reasons no requirements can be derived from all data, illustrations and descriptions in this manual.

PLEASE KEEP THIS MANUAL IN A SAFE PLACE
AND HAND IT OVER TO THE NEW OWNER IF YOU SELL THE YACHT.

BAVARIA would like to welcome you to the circle of **BAVARIA** owners and would like to thank you for placing your confidence in our products by acquiring this yacht.

Your contract partner and the management and staff of Bavaria Yachtbau GmbH hope you will enjoy your new yacht.

Bon voyage, fair winds and fine weather.

BAVARIA Yachtbau GmbH
Management

W. Herrmann

Category of design

Following the European Recreational Craft Directive each boat has to be classified according to a category of design.

All sailing yachts of BAVARIA belong to the category of design A,

Ocean: designed for extended voyages where conditions may exceed wind force 8 (Beaufort scale) and significant wave heights of 4m and above, and vessels largely self-sufficient.

Certification

For yachts with a length of more than 12m hull length the EC-Directive intends the certification

module **B** (EC type-examination).

IMCI (International Marine Certification Institute) from Bruxelles was put into charge as a notified body (see: Declaration of Conformity).

Identification

The hull identification was formed into the transom on starboard side. This is a unique sequence of digits and letters.

Builder's plate

The builder's plate on the front wall of the cockpit is a demand of the Directive because certain information are required which will be explained in the following.

Explanations

- Category of design A : Ocean

- Max. =10 : Maximum number of persons recommended by the manufacturer if the yacht is

situated in the sea area
corresponding to the category of design. The number of crew can be increased under consideration of the maximum additional loading capacity if the yacht is on a voyage in non ocean areas.

-Max + = 1400 kg : Maximum additional loading including 10 persons, stores, provisions and personal equipment (excluding tank capacities).

- CE 0609 : CE marking which indicates the conformity of the yacht with all provisions of the Directive. The sequence of digits is the code number of the certifying body, in this case the **IMCI (International Marine Certification Institute), Brussels** (see: Declaration of Conformity).

Warnings

Many chapters of this manual will support a troublefree operation, maintenance or draw your attention to signs of dangers. To find them more easily they are especially marked (in boxes or in bold). We advise you to study them carefully although the experienced skipper might be quite familiar with many of them.
The following chapters contain such warnings/notes or other important information for operating the yacht.

Always consider the maritime duty to exercise diligence!

Danger
Means that an extreme real hazard which will lead to the death or too irreparable injuries with great probability exists if no adequate precautions are found.

Warning
Means that a hazard which can lead to injuries or death exists if no adequate precautions are found.

Caution
Means that a memory of safety measures or the attention judges on handling, which can be unsure or lead to personal injuries or to harm of the vessel or from components.

Declaration of Conformity - Recreational Craft – Sound and Construction Directive 94/25/EC as amended by 2003/44/EC

Name of the manufacturer: Bavaria Yachtbau GmbH

Street: Bavariastr. 1 **Town:** Giebelstadt **Postost Code:** 97232 **Country:** D – Deutschland (Germany)

Name of Authorised Representative (if applicable)**:**

Street: Town:

Postost Code: Country:

Name of Notified Body for construction (if applicable)**:** IMCI

Street: Rue Abbé Cuypers 3 **Town:** Bruxelles **Postost Code:** 1040 **Country:** Belgique **ID Number**: 0609 **Examination report / Certificate number:** BBAV025 **Date:** (yr/month/day) 2005 / 07 / 25

Name of Notified Body for sound (if applicable)**:**

Street: Town:

Postost Code: Country: ID Number: **Examination report / Certificate number: Date:** (yr/month/day) / /

Module(s) used for construction: A Aa B+C B+D B+E B+F G H Module used for sound: A Aa G H

DESCRIPTION OF THE CRAFT

Craft Identification Number DE-BAVC42C8C808 Brand name of the craft: Bavaria **Type or number:** 42 Cruiser

Type of craft:
sailboat motorboat
inflatable
other (specify):
Type of hull:
monohull multihull
other (specify):
Construction material:
aluminium, aluminium alloys plastic, fiber reinforced plastic steel, steel alloys wood
other (specify):
Design Category: A B C D
Max. Recommended engine power: 45 kW

Length of hull: 12,83 m Beam of hull: 3,99 m Draught: 1,96/2,15 m
Propulsion:
sails petrol engine diesel engine electrical motor oars
other (specify):
Type of engine:
outboard inboard z or sterndrive without integral exhaust
z or sterndrive with integral exhaust
other (specify):
Deck
decked partly decked open
other (specify):

I declare at my own and sole responsability that the craft mentioned above complies with all applicable essential requirements in the way specified (and is in conformity with the type for which above mentioned EC type examination certificate has been issued) – include text between brackets only if such certificate has been issued.

Name:W. Hermann Signature and title:
(identification of the person empowered to sign on behalf of the
manufacturer or his authorised representative)

Date: **(yr/month/day) 14/03/2008**

(or an equivalent marking)

Essential requirements (reference to relevant articles in Annex 1 of the Directive)	Harmonised standards used	used
	ISO-standards used	See the technical file
	Other normative documents	

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1.Descripton of the yacht

1.1 Main particulars

1.1.1 Principal dimensions

Length overall L_{OA}=13.06 m Length of hull L_H=12.83 m
Length on waterline L_W=11.45 m Breadth max. B_{max}=3.99 m
Draught - normal keel D_{max} abt 1.96 m Draught - lead keel D_{max} abt 2.15 m
Headroom ** H_D abt 18.15 m
Headroom (for transport) H_T abt 3.95 m

1.1.2 Displacement and weights

Weight of the empty yacht -incl. safety equipment 9200 kg Weight of the fully equipped yacht normal keel 11250 kg Weight of the fully equipped yacht lead keel 11300 kg
Ballast normal keel 2950 kg
Ballast lead keel 3000 kg

1.1.3 Motorization

Diesel engine:
Manufacturer Volvo; Type D 2-55, Output 41 kW or D2-40, Output 29.1 kW
Cooling indirect (sea-/fresh-water)
Reverse-reduction gear Sail drive 130 S reduction ratio 2.19:1
Propeller 3-bladed fixed propeller made from an aluminium alloy (option: folded propeller)

1.1.4 Electrical installation

230 V/110 V (option) AC-installation
Shore connection (option) safety contact plug box (meeting the CEE-norm) 230 V/110 V
Battery charger 230 V AC / 12 V DC with 27 A or 48 A max. current (option)

12 V DC-system
1 x starter battery 12 V 55 Ah 2 x service battery (option 3 x) 12 V 140 Ah Motor generator (lighting generator) battery charger (option)
The distribution occurs about switchboard, electric circuits with thermal safety switches, LED display, tumbling switches and voltmeters with throw-over switch.

1.1.5 Tank capacities (option)

1 fresh water tank abt 210 l on port side below the aft cabin berth. 1 fuel tank abt 210 l on starboard side below the aft cabin berth. 1 fresh water tank abt 150 l into the bow.
1 holding tank (option) abt 80 l in the locker seat, in the mess room. 1 gas cylinder (option) abt 3 kg cylinder (Butane)

1.1.6. Fixing points for cranes, resting-points for slipping and transport

Attention!
The rear webbing will be placed in the area of the sail drive The rear belt should be placed between shaft and keel, the front belt in front of the keel.

1.2.1 Rigging plan

Reference
The valid measuring of the foresail reefing gear are on the enclosure note at the carton of the Furlex-foresail reefing gear.

1 Navigation light Zweifarbenleuchte
2 Bow fitting Bugbeschlag
3 Bow pulpit Bugkorb
4 Life lines Relingsdurchzüge
5 Water inlet Wassereinfüllstutzen
6 Anchor chain bail Ankerkasten
7 Mooring cleats Belegklampe
8 Stanchion Relingsstütze
9 Teak batten Teakleiste
11 Stanchion base Relingsfuß
12 Deck eye  (option) Decksauge (Option)
13 Fuel inlet Dieseleinfüllstutzen
14 Op. hatch Vorschiffsluke
15 Hatch Luken
17 Spinnaker winch (option) Spinnakerwinde (Option)
18 Main shrouds Wantenpütting
19 Electric windlass Elektrische Ankerwinde
20 Opening portlight Portlight
21 Deck organizer Umlenkblöcke
22 Genoa track Genuaschiene
23 Genoa track car Genuaschlitten
24 Main sheet track Großschotschlitten
25 Main sheet track car Großschotschiene
26 End piece of rail Schienenendstück
27 End of rail with turning blocks Schienenendstück mit Umlenkblöcken **28** End piece main sheet track Schienenendkappe
29 Genoa winch Genuawinde
30 Stopper Stopper
31 Halyard winch Fallwinde
32 Ventilator Decklüfter
33 Cable penetration Kabeldurchführung
34 Sliding hatch Schiebeluke
35 Washboard Steckschott
36 Aft port push pit Heckkorb links
37 Aft starboard push pit Heckkorb rechts
38 Backstay chain plate Achterstagpütting
39 Life line  with pelican hook Relingszug mit Pelikanhaken
40 Boarding ladder Badeleiter
41 Grab rails Handreling
42 Stern light Hecklaterne
43 Hand operated bilge pump Handlenzpumpe
44 Shore socket 230 V Steckdose 230 V
45 Engine ventilation inlet Belüftungsroste
47 Emergency tiller fitting Notpinnenbeschlag
48 Passage Relingsdurchgang
49 Steering wheel Steuerrad
50 Shower Dusche
51 Tank air vent Tankbelüftung
53 Footblock with lock off Liegender Block mit Stopper
54 Check block-port/starbord Liegender Block Back-/Steuerbord **55** Engine panel Motorinstrumententafel
56 Cockpit port light Cockpitfenster

1 Steering gear Ruderanlage
2 Double bed Doppelbett
3 Shelf Bord
4 Companion way / engine room Niedergang / Motorraum
5 Head WC
6 Shower Dusche
7 Ice box Kühlbox
8 Gas cooker with oven Gasbackofen
9 Sink Spüle
10 Hanging locker Schrank
11 Double bed Doppelbett
12 Chain locker Ankerkasten
13 Shelf Bord
14 Head WC
15 Book locker Bücherbord
16 Saloon table Salontisch
17 Seating Sitzgruppe
18 Chart table Kartentisch
19 El. switch panel Elektr. Schalttafel
20 Hanging locker Schrank
21 Shelf Bord

1.3 Drive systems

1.3.1 Sails

The SY Bavaria 42 is equipped with the following standard sails:

Main sail standard abt 43 sqm
Main sail (fully-battened) abt 43 sqm
Genoa 150% abt 53 sqm
Fock abt 36 sqm
Spin abt 125 sqm

1.3.2 Rigging

Mast

- LM- Profile, without taper; – 18 deg. double spreaders , angular; - 2 halyards, topping- and boom lifts,
- tipping line and fittings.

Boom

- LM-Profile; - clew outhaul; - 2 reefing lines; - eye for mainsheet; - eye for tipping line.

Standing rigging (made of 1x19–lace, material 4401), consisting of:

forestay with excessive footage (headsail reef system) 1x intermediate shroud 2x permanent backstay 1x lower shroud 2x permanent backstay tackle 1x upper shroud 2x

Running Rigging

Inside the mast: Option:

- Main halyard - Spinnaker halyard (attached)
- Genoa halyard - Spinnaker uphaul
- Boom lift - Spinnaker downhaul
- 3 additional weighing lines

Additionally we draw your attention to the enclosed trim instructions of the manufacturer.

Attention

- Before you start a sailing turn:
  - Check all wires, ropes and lines, rigging screws and splints.
  - The latter should be secured with tape or by bending them. Exchange damaged or deformed bolts.

1.3.3 Motorising, engine room, gear, and propeller

This yacht is equipped with a inboard diesel engine with a sail-drive gear and a fixed propeller (option: folded propeller).
The engine room is separated from living quarters by plywood-bulkheads covered with sound insulating material. An access is possible through:
- a shutter below the companion way,
- detachable bulkhead in the aft cabin beside the engine room

Cooling-water supply to the engine is realised via the sail drive-gear (extra drain with shaft).

1 Motor Volvo Motor Volvo
2 Engine exhaust system Motorabgassystem
3 Exhaust water lock Abgaswassersammler
4 Engine fuel intake Kraftstoffeinfüllstutzen
5 Feedback fuel Kraftstoffrückführleitung
6 Fuel tank filling hose Kraftstoffeinfüllschlauch
7 Fuel tank ventilator Tankentlüftung
8 Fuel filter Kraftstofffilter
9 Fuel shut off cock Kraftstoffabsperrhahn

10 Ventilation Lüftungen

11 Engine panel Motorinstrumententafel

12 Engine control cables Motorfernbedienungskabel

14 Fuel gauge Kraftstofftankfüllanzeige

2. Installations and circuits

2.1 Tanks and piping – water

2.1.1 Fresh water, drinking water –cold

The yacht has two water tanks with a capacity of altogether about 360 l. Fresh water is supplied via a water inlet (with a blue cover) at the transom, port side and on the forecastle near the chain locker. You can take water from the tank over a hose connection leading to the pressure water pump.

This pump, realising the complete cold water circulation, is fitted below the pantry. An interruption of the operation of the pressure pump is done by cutting off all ducts. All pipes/hoses should be checked for leaks if the pump continuous working though all ducts were cut off properly. The pump is protected by a filter which should be regularly checked and cleaned if necessary.

Components:

1 Deck plate (inlet) Einfüllstutzen

2 Tank ventilation Tankentlüftung

3 Water heater Boiler

4 Backflow of water heater Rückfluss Boiler

5 2 – way valve 2-Wegehahn

6 Fresh water pump Frischwasserpumpe

7 Accumulator tank and pressure switch Druckgefäß und Druckschalter
8 Deck plate (inlet) Einfüllstutzen
9 Tank venting Tankentlüftung
10 Engine circulation Motorkreislauf
11 Draining water heater Entleerung Boiler
12 Shower Cockpitdusche

Note
Exchange the water in tank from time to time.
Additionally you should use common purifiers.

2.1.2 Sea-water circulation
Sea-water is necessary for both WC flushing and engine cooling (see: 2.9).

2.1.3 WC –installation: see enclosed directions for use

Attention
If you are not aboard for a longer time you should close all sea-valves.

Components: WC-flushing

1 Outlets Borddurchlässe
2 Waste water tank ventilation Fäkalientankentlüftung
3 Waste water tank Fäkalientank
4 Wash basin drain valve Kugelhahn Ausgang Waschbecken
5 Toilet drain Ausgang WC
6 Waste water drain valve Kugelhahn Ausgang Fäkalientank

7 Toilet water inlet valve Kugelhahn Eingang WC

8 Electric shower drain pump valve Kugelhahn Ausgang elektrische Duschpumpe **9** Electric shower drain pump elektrische Duschpumpe

10 Sink drain pump valve Kugelhahn Ausgang Spüle

11 Toilet water outlet valve Kugelhahn Ausgang WC

12 Wash basin drain valve Kugelhahn Ausgang Waschbecken

13 Toilet water inlet valve Kugelhahn Eingang WC

14 Electric bilge pump Elektrische Lenzpumpe

15 Hand operated bilge pump Handlenzpumpe

2.2 Tanks and pipes – fuel

Storage tank

There is a 210 l plastic diesel tank with an inspection opening on starboard-side below the aft berths. It is filled via a fuel inlet with a chrome cover (marked with DIESEL) at the transom of the yacht. The tank pickup is situated on the tank. The supply is made of a fire-proof fuel hose according to ISO 7840. The vent line is led to above deck.

Supply of the engine

The engine is supplied via a suction pipe from the upper edge of the tank. Due to the short distance a fire proof fuel pipe is used throughout. This is led via a wide-meshed filter/ water separator, fuel pump and fine filter to the engine and then back to the tank.

Attention

A trouble free operation of the engine and heating is only possible, if the fuel is clean. That's why a regular inspection and cleaning of filter/water separator is unavoidable.

The fuel tank should be completely emptied and cleaned once a year.

Warning

When refilling the tank:

- Switch off the engine, heating and stove!
- Do not smoke or use open lights!

2.3 Steering gear

2.3.1 Description of the system

The rudder is a suspended, balanced hydrofoil mid ship rudder. It is operated by hand from the steering wheels at the steering posts in the cockpit. Transmission of power is realised by means of rope pulls and fairleads to the rudder quadrant. With the autopilot (option) there is an electric motor installed.

2.3.2 Rudder blade and rudder bearings

The rudder blade is a profiled one. It consists of a FRP-body. The rudder post with a diameter of 60mm is made of a sea-water resistant aluminium alloy and is laminated into the blade. The post runs in two easy-going and special rudder bearings. The rudder is fixed by a mounting clip at the upper end of the post that also serves for the keeping of the rudder tiller.

The mounting clip is additionally secured with a straight stud bolt on the rudder post.

Attention
Check regularly and repair if necessary:
Tight hold of the mounting clip on the rudder post.

The rudder bearings used by **BAVARIA YACHTBAU** are self-setting bearings. Since rudder bearings are subject to wear and tear they should be inspected and maintained regularly.

Emergency tiller
The emergency tiller is stored in the starboard locker seat.
In case of emergency remove the steering wheel, the rudder quadrant for rudder bar and/or the quadrant for the auto pilot (option). Moreover the rudder head cover has to be removed and the emergency tiller to be mounted and secured.

Attention
Please ensure a suitable bearing lubrication of the necessary parts of the rudder installation with water proof lubricants (or Teflon). Bearing clearance has to be avoided and can be adjusted at the top bearing.
The post must have no clearance but should not need heavy movements.

You can brake or even fix the steering wheels by turning a screw home. Make always sure that this brake is not drawn especially when sailing with the auto pilot. This would mean an overload for the electric motor. The socket of the steering gear is integrated into the deck's form. On the socket there is the casing of the wheel hub. A chain is laid over a tooth-wheel of the hub. Both chain pulls are running to the rudder gear which passes the adjusting force by the rudder bar to the rudder quadrant. Both chains are tightened each with a rope pull. It is highly recommendable to check these rope pulls from time to time and to retighten if necessary.

2.4. Bilge pumps, bilge lines
The chain locker is made watertight against the yacht. It is self-bailing through two holes in the skin.
All **BAVARIA** yachts have got a self-bailing cockpit, too. The drain wells are situated at the rear and lowest part of the cockpit and are led outboard through the transom with hoses.

2.4.1 Description of the pumping arrangement
The yacht is equipped with both a manual pump and an electric bilge pump. The main line bilge suction has a capacity of 75 l/min.

A draw bucket is an ideal means for bailing out water.
It should be ready in a cockpit seat locker at any time.

Attention
Close all sea valves if you leave your yacht for a longer period. Valves being not clearly visible, like e.g. in the toilet room, should only be opened before use and closed short after.

Warning
In a serious situation, e.g. in case of a heavy inrush of water as a consequence of a collision, the pumping capacity might not be sufficient. Take measures for damage control with collision mats or other suitable means.

Note
In case of spherical valves a transverse lever-direction indicates: CLOSED and a longitudinal ones means : OPEN

Maintenance note
The tightness of ducts should be inspected regularly.
Retighten all hose clips and the stuffing boxes of valves

Components of the bilge pumping installation: see drawing 2.1.3

2.5 The electric installation

2.5.1 The AC-installation

The yacht has got a shore connection (option) by which it can be supplied with electric power from ashore when being berthed in a port. The plug box (meeting the CEE-norm) is installed at the transom of the yacht. The power is supplied into a shore connection unit, placed under the chart table.
The plug box is operational as soon as the shore supply cable has been plugged in. It only serves the operation of electric machines.

2.5.2 The DC–board net

All electric devices aboard are supplied with the 12 V DC. A main-switch is installed in he electric panel at the chart table. Power distribution is effected by a switchboard above the chart table. The lettering next to each switch refers to the corresponding consumer.

You can find all the switches for the 12 V consumers at the switchboard. By this you can operate different consumer-groups, being marked with logos or lettering, separately. Some of the switches are designed for an installation of additional electric devices. There are only automatic fuses used. So you only have to press them in case of a breakdown. If a fuse blows repeatedly you should spot the cause or consult a specialist (electrician).

2.5.3 Operating the installation and specific features

The combination of an AC- with a DC installation offers a clearly higher comfort but requires some special knowledge.

Charging the batteries

All batteries are maintenance–poor and drain-protected. They are charged via a buffer diode by the motor-generator. Charging the starter battery always takes priority to ensure a safe start of the engine.

AC–consumers

The only fixed link is the one to the battery charger. The safety contact plug-box at the electric panel is designed for electric tools to be used for small repair work.

DC–consumers

The essential consumers are:
- navigation lights bilge pumps
- engine displays tank display
- VHF-radio wiring (option) electronic devices
- devices for comfort

Navigation lights have absolute priority. In case of a lack of capacity first all other consumers have to be switched off. By a stand-by operation of the engine, even when under sail, the batteries can be

brought up rather quickly. After a while you can switch on the other consumers again.

2.5.4 Important warnings on the DC-installation

Warning

- To avoid freezing also maintenance-free batteries have to be recharged in winter if their capacity becomes less than 50%.
- Once a year all contacts should be checked and protected with a special spray.
- Familiarise yourself with the electric installation in due time to be able to react properly in case of disturbances.
- If a device should fail, check first if it is defective.

Attention

You should never

- work at the electric installation if it is in operation,
- alter fuses or overload switches,
- change the electric wiring and/or wiring plans; this has to be done by specialists only,
- install electric devices or add parts that exceed the allowed load limit,
- leave the yacht unattended with the electric installation in operation. This does not go for automatic bilge pumps, fire protection and –alarm devices.
- As long as the diesel engine is in operation, you must not disconnect the 12 V charging circuit.

Before starting a voyage you should always check

- the battery voltage,
- the correct function of navigation lights .

Have spare lamps for all navigation lights aboard.

 2.5.5 Important warnings on the AC-installation

Attention

- the electric wiring of the yacht and/or corresponding wiring plans must not be changed.
- Service and maintenance must be carried out by a qualified specialist.

Warning

To avoid the danger of a rush of current or fire:

- The shore connection cable must never hang into water.
- Plug the shore connection cable first aboard and then ashore.
- Do not alter plugs of shore connection cables

Disconnecting the shore connection cable:

- First disconnect the shore connection cable ashore and then aboard.

 2.5.6 Distribution of electric devices:

1 Zweifarbenleuchte Navigation light
2 Elektrische Ankerwinde Electric windlass
3 Bedienteil Ankerwinde Windlass switch
4 Frischwassertankgeber Fresh water gauge
5 Echolot Geber Echo sounder
6 Sumlog Geber Log
7 Halogenleuchten Light
8 Neonleuchten Neon lamp
9 Wasserpumpe Water pump
10 Duschpumpe Shower drain pump
11 Duschschalter Shower drain switch
12 Elektrische Lenzpumpe Bilge pump
13 Batterien Batteries
14 Batterie Ladegerät Battery charger
15 Elektro Panel Electric panel
16 Hauptschalter (Motor/Verbraucher) Main switch (engine/consumer)
17 Kurscomputer Auto – Optional Auto pilot – option
18 Kompass Auto – Optional Compass – option
19 Rückholgeber Auto – Optional Repeater – option
20 Motor Auto – Optional Auto engine – option
21 Anlasser Motor Engine start
22 Gleichrichter Detector
23 Dieseltankgeber Fuel tank gauge
24 Boiler Water heater
25 Heckleuchte Stern light
26 Kühlschrank Refrigerator
27 Kühlaggregat Cooling unit
28 Landanschluss 230 V Shore socket 230 V
29 Steckdose Küche 230 V Socket 230 V
30 Steckdose Duschraum 230 V Socket 230 V
31 Steckdose Boiler Socket 230 V
32 Kabeldurchführung Cable penetration
33 Lautsprecher – Optional Speaker - option
34 Radio- Optional Radio – option
35 Antennenkabel Radio – Optional Radio antenna – option
36 Motor Panel Engine panel
37 Tankuhr Tank gauge
38 Tridata Bedienteil Tridata unit
39 Wind Bedienteil Wind gauge
40 Auto 6001 Bedienteil – Optional 6001 unit - option
41 Kompass Compass
42 Bugstrahlrudermotor - Optional Bow thrusters engine – option
43 Steuerung Bugstrahlruder - Optional Bow thrusters unit – option
44 Genuawinsch Bedienteil - Optional Genua winsh unit – option
45 Genuawinschen Motor - Optional Genua winsh motor – option
46 Heizung - Optional Heater – option
47 Dieselpumpe Heizung - Optional Heater fuel pump – option
48 Thermostat Heizung - Optional Heater thermostat – option
49 Fühler Heizung - Optional Heater gauge – option
50 Generator - Optional Generator - option
51 Fäkalientankgeber Waste water tank gauge
52 Sicherung Fuse
53 Kartenplotter – Optional Map plotter - option
54 GPS Antenne GPS antenna
55 Relais Autopilot Relay
56 Sicherung Batterielader Fuse battery charger
57 Relai Ankerwinde Relay anchor winch
58 Lampe Light

2.5.7 Wiring plans

Deutsch English

Toplicht Topplight

Dampferlicht Steaming light

Beleuchtung Bug Bow light

Beleuchtung Heck Stern light

Salingleuchte Crosstrees light

Innenbeleuchtung Interior lighting

Instrumentenbel. Instrument lights

Navigation

Navigationsinstr. instruments

Funk Radio

Ankerwinde Anchor windlass

Bilgenpumpe Bilge pump FW-Pumpe

Fresh water pump Self priming

Duschabsaugpum shower pump

pe

Heizung Heating

Kühlschrank Refrigerator

12V-Steckdose Plug socket 12V

2.6 L.P.G. installation

The gas installation for the stove meets the European norm EN 10239. Attached please find the test-certificate.

The gas pipe leading to the stove from the standard 3 kg–gas cylinder is an 8mm copper pipe. It is placed into a self-bailing casing moulded into the deck in the rear cockpit area. All gas pipes have been installed according to the German safety regulations. The best-by date for the soft connection hoses between the gas cylinder and the copper pipe and between copper pipe and stove is printed onto the hoses. They have to be replaced after the expiry date.

The reducing valve in the gas cylinder casing has a service pressure of 30 mbar. The flow rate is 1 kg/h.

2.6.1 The components

1 Gas tank with valve Gasflasche mit Reduzierventil
2 Copper tube Kupfer Rohr
3 Gas stop cock Gaskugelhahn
4 Rubber hose Gummischlauch
5 Gas stove with oven Kocher mit Backofen

Gas installations require care. That's why you should follow this sequence:

Attention
- Open the stop valve in the gas cylinder casing
- Open the valve before the stove
- Open a stove valve and lighten the gas
- Keep the valve open until the glow timer allows further burning.

Attention
For finishing follow the same (above mentioned) sequence from the valve in the gas cylinder casing to the stove valve to allow all gas in the piping to escape and burn.

Attention:
- Do not use liquids containing ammonia for checking the pipe.
- **Never handle with open light and do not smoke if you look for leakage or if you connect a new gas cylinder.**

And here is some more advice on how to prevent difficulties with the gas installation:

- Close all gas valves if the stove is not in use. In a case of emergency you should close the valves immediately.
- The stove valves have to be closed before the gas cylinder valve is opened.
- Check the L.P.G. installation for possible leakages regularly. Check all connections with soap suds or the like (for doing so the stove valves have to be closed – all other valves of the installation have to be open).
- If you find any leakages close all valves and have the installation repaired by a specialist before further use.
- Since the flames consume oxygen a proper airing and de-aeration is necessary. Do not use the stove for heating the cabin.
- Valves of empty gas cylinders have to be closed and disconnected from the installation. Have the covers ready.
- Do not use the gas cylinder casing for storing other equipment.
- Never leave your yacht unattended if the stove is in use.
- Check the hose pipes at least once a year. Have them replaced if necessary.
- If you install a new stove make sure that is has got the same working pressure.
- Check the exhaust gas pipes at least once a year. Replace them if they a defective.

2.7 Fire protection

When building the yacht special attention was paid to avoid the risks of fire. This includes the choice of materials, the distance of stove flames to the surrounding built-in furniture and an island position of the engine. The engine room has got a lining with fire resistant insulating material.

As the owner of the yacht you should keep this state and pay attention to the following advice:

Attention:

Keep the bilge clean and check regularly if there is a smell of fuels or gas.

Do not have any freely suspended curtains above or close to the stove or other devices with open fire.

Inflammable material must not be stored in the engine room. If you store non inflammable materials in the engine room make sure that they are protected against falling into the engine installation or are in the way.

Furthermore you and your crew can support fire protection if you follow the following advice:

Never

- Obstruct any exits or hatches.
- Alter safety installations like fuel- and gas valves and electric switches and the like.
- Leave the yacht unattended if the stove or the heating is in use.

Never

- Use gas lights in the yacht.
- Fuel the tank or replace gas cylinders if the engine is running or if the stove or heating is used.
- Smoke or use open lights while handling with fuel or gas.

The well-known sources of danger on board are
- the stove in the pantry and
- the engine room.

If, despite all precautionary measures, a fire should break out aboard, there are four fire

extinguishers a board which are fixed at the following places:

Nr. 1: **Powder extinguisher** in the starboard locker seat, at least fire extinguishing 10A/68B
Nr. 2: **Powder extinguisher** in the port locker seat, at least fire extinguishing 10A/68B
Nr. 3 and 4: **Powder extinguisher** at the navigational seat, at least fire extinguishing 10A/68B

Additionally you should place in the pantry a light **fire retarding cloth,** which is made of glass cloth and is very useful in the case of fire caused by overheat fat.

It is the yacht owner's duty
- to have all fire extinguishers regularly checked and maintained ;
- to have fire extinguishers replaced after the expiry date. The same goes if the extinguishers should have been used. The new extinguishers should at least have the same capacity as the discussed ones.

It is the yacht owner's or skipper's duty
To make sure that
- all extinguishers are freely accessible
- to inform all persons on board about:
  - the position and use of all fire extinguishers and the fire retarding cloth,
  - the position and function of the opening for the extinguisher's nozzle in the engine room bulkhead,
  - the exit through the escape hatch above the fore-berths.

Caution
Test the fire extinguishers regularly!
Train yourself as regards fire fighting.
Always obey seaman's duty!

2.8 Anchor
The bower anchor (plough anchor), about 21 kg, hot-galvanised, (is known for its high holding power). It lays ready-to-fall in an anchor stowage device and is secured with a bolt. The chain has a length of 50 m and a nominal thickness of 8 mm. It is weighed and run out by an electric anchor windlass (option) operated with a remote control. The remote control is placed in the chain locker before use and its function is activated at the switch board.

Furthermore it is recommendable to have a stern anchor as well as sufficient mooring- and towing lines with the necessary strength on board.

E.g.1 stern folding anchor (4-fluke grapnel anchor), 12 kg, hot-galvanised, fixed at the aft guard rail. 6 m chain forerunner, thickness 7 mm, 34 m polyamide anchor rope, 18 mm, 3-strand hawser laid. It is stored in the port transom seat. The rope is cleated aft.

2.9 Engine cooling system
Engine cooling
The engine has got a two-circuit cooling system. Water enters through the sail drive, is led to the heat exchanger and then injected into the exhaust gas pipe. Together with the exhaust gas the cooling sea water is exhausted via the silencer and the exhaust pipe at the stern. This guarantees a

trouble-free engine operation. Moreover the engine noise is reduced.
All hose connections of the system a secured with double stainless steal clips.

Attention

- Check and clean the sea water filter in regular intervals, depending on the water quality.
- Before starting the engine make sure that the cooling water inlet is open.
- Have a short look into the engine room for possible leakage.
- When the engine is running it is highly recommendable to check regularly if cooling water is escaping with the exhaust gas.

2.10 Exhaust gas system

The yacht is fitted with a "wet" exhaust gas system, i.e. cooling sea water is injected into the exhaust gas elbow causing a cooling of exhaust gases. This mixture is led down into a silencer/water lock, runs through a pipe in the locker seat on the starboard side of the aft cabin, is led upwards at the stern and escapes to the side above the water-line.
The exhaust gas hose consists of a synthetic rubber material with an integrated steal spiral. The hose is heat-resistant (for some time) and should be checked and replaced if necessary. A constant flow of sea water has to be guaranteed. The hose is secured at its joints with two clips. If there is an interruption of the sea water flow, the temperature sensor in the exhaust gas hose will release an visual and acoustic warning. In this event you should stop and switch off the engine immediately until the problem has been settled (see manual of the engine manufacturer).

Attention

A regular inspection if saltwater comes out of the exhaust is urgently advisable.

2.11 Ventilation/Airing

We have taken the following measures for a proper ventilation of all rooms:

Chain locker

Certain ventilation is realised through the hawser port in the cover of the chain locker and through its bilge holes.

Living cabins/ Salon and forward quarter

Two ventilators

Aft cabin

2 side lights /bull's eye showings to the cockpit

Components:

1 deck ventilators, 6 side lights, 2 folding hatches

Fresh air:
Fresh air is sucked up through openings in the locker seat, heated and led through a flexible piping system to the outlets. The amount can be controlled by individual throttles.

2.12 Board ducts, sea water valves
Openings below the water line are possible weak spots. That is why we pay special attention to them.
All board ducts in the underwater part, with the exception of the duct for the transmitter of the echo sounder, consist of brass-made screwed joints with spherical sea valves and hose nipples. All hose connections are secured with two clips each. For the cockpit drain special plastic joints are used.

Attention
Close all sea valves if you leave the yacht for a longer time. Valves being not clearly visible, like e.g. in the toilet room, should only be opened for use.

Maintenance note
The tightness of board ducts should be inspected regularly.
Check and retighten all hose clips and stuffing boxes of valves if necessary.
Note
In case of spherical valves a transverse lever-direction indicates : CLOSED
And a longitudinal direction means: OPEN.

Board ducts:

1 Exhaust drain Ausgang Auspuff
2 Cooling water strainer Kühlwasserfilter
3 Toilet water inlet valve Kugelhahn Eingang WC
4 Wash basin drain valve Kugelhahn Ausgang Waschbecken
5 El. Shower drain pump Ausgang Duschpumpe
6 Waste water drain valve Kugelhahn Ausgang Fäkalientank
7 Sink drain valve Kugelhahn Ausgang Spüle
8 Echo sounder Echolot
9 Log Geschwindigkeitsmesser
10 WC drain valve Ausgang WC
11 Sink drain valve Kugelhahn Ausgang Spüle
12 Toilet water inlet valve Kugelhahn Eingang WC

3. Environmental protection

BAVARIA YACHTBAU has already met the legal requirements referring to exhaust gas regulations with its choice for the inboard diesel installed. An exhaust gas type-examination certificate can be handed in or sent on later.

3.1 Fuel and oil

You should be especially careful when filling the tank. A (wet) cloth around the fuel inlet can prevent fuel from dripping into water. In your engine manual you can also find a diagram with a curve about the specific fuel consumption thus offering you some good hint on the most favourable engine speed.

For a necessary exchange of oil you should use a suction pump, because you cannot drain it off like with a car. The oil has to be exchanged at least once a year, even in case of a little operation time of the engine.
A well-maintained engine should never leak. But in order to prevent even smallest amounts of oil being discharged overboard with the pumped out bilge water, the engine bed has been designed in form of a closed oil sump. All water from this sump, being possibly mixed with oil, has to be pumped into a separate canister and has to be deposited ashore.
In any case there should be oil-binders aboard.

3.2 Waste
For all water sportsmen it goes without saying: waste is not thrown overboard. This is also true for biodegradable waste. There should be a regular waste bag or –bin in a locker seat.

3.3 Sound
The wet exhaust pipe of the diesel engine reduces the engine sound considerably. Additionally rubber bearings, elastic couplings and the engine room insulation minimise sound emissions. Nevertheless you should not turn up the engine too quickly and, please, reduce the engine speed in waters with dense traffic.

3.4 Swell
Natural bank areas are sensitive against swell. Please keep sufficient berth. Formation of waves, caused by your yacht, is an indicator of where and when you should reduce your speed to avoid unnecessary swell. Pay attention to relevant signs.

3.5 Exhaust gas
Check the escaping exhaust gas regularly. The exhaust gas should show neither black smoke nor blue clouds. In such a case you should either clean the air filter or have a repair shop readjusted the engine.

3.6 Antifouling coatings
The underwater part of the hull of each yacht has to be protected with an antifouling coating because marine growth means more energy for propulsion. Today there is a wide range of protective paint with various effects for different bodies of water. Trust the recommendations of specialists for your decision. Coatings that are effective for years without any grinding in between are especially recommendable.
But if the coating has to be sanded to some extend you should arrange these activities with the port officials. Generally the ground under the yacht has to be covered with some plastic cloth to collect the rubbed down dust and dispose it.

3.7 Varnish removers
Most varnish removers contain aggressive substances and should not be used or as little as possible. A mechanical removal of paint is the much better way.

4. Maintenance
4.1 Maintenance, cleaning
1. Mast and rigging
See: Notes of the manufacturer

2. Sails
The sails are made of Dacron. This material is very robust and resistant. Thus the sails keep their form for a very long time.
Inspect all your running and standing rigging carefully for sharp edges, splints, protruding ends of wire and the like because laminated cloth is especially sensitive against touching them. Those parts of the cloth that can chafe at spreaders or shrouds should be protected on both sides by sticking self-adhesive cloth to them. The same goes for the foot of the sail if there is the possibility of chafing at the rails.

Note:
Please remember: Damage to the cloth is mainly caused if it is incorrectly treated or handled. Especially if you let it shake, expose it to UV rays constantly

or store it improperly.

If there are any questions on the cloths do not hesitate to contact the manufacturer or your sail maker.

Never remove track cars with ball bearings from the tracks carelessly. Always use sheet tracks with end stops.

Cleaning

Please clean your yacht immediately after you have taken it out of the water. High pressure cleaning devices will remove any growth. This is followed by an up keeping of the surface of the yacht. All paint manufacturers provide detailed instructions for their coating systems.

For ships sailing in salt water: rests of salt absorbs water and can cause a faster corrosion. Where and whenever it is possible you should rinse the yacht and parts of it with fresh water.

Care and maintenance of teak decks

Untreated teak weathers to an natural silver-grey colour, with no detriment to the timber's strength or other mechanical/physical properties. Because of teak's inherent durability and weather-resistant properties, the use of protective paints or coatings is neither necessary nor advisable.

Practical tips on care and maintenance:

Protective wood care oils – penetrate deep into the timber, and under the influence of heat and moisture can adversely affect the adhesion of the caulking material to the sides of the joint. As a result, the seal between the caulking material and the sides of the joint may break down, allowing water to enter.

Paints and lacquers are decorative coatings which, when applied to a teak deck, dry to form a continuous film over the caulking material as well. Some paints will not dry properly where they come into contact with the caulking material, leaving the surface tacky. In time most paints will flake away along the line of the joint. This spoils the appearance of the teak deck and causes cracks to open up along the joints.

Teak cleaners should be used only if they contain no other active ingredients apart from normal soap. Additives such as phosphoric or oxalic acid, which are often incorporated as brighteners, are corrosive substances which attack both the caulking material and the timber, causing them to age rapidly.

We therefore recommend that teak decks be swabbed down with a mop and clean fresh water, to which a small quantity of normal soap may be added if desired. Heavy soiling may be removed by scrubbing with a hard sponge. The use of a power washer is not recommended. The *high-pressure water jet* will remove areas of sapwood and break the seal between the caulking material and the sides of the joint.

In extended periods of hot, dry weather teak decks should be watered at regular intervals to prevent the timber from during out completely. Excessive loss of moisture will cause the timber to shrink, placing the joints under stress. Under unfavourable conditions this can lead to premature ageing or failure of the joint seal.

Stainless steel

The corrosion resistance of all fittings is based on their ability to constitute a thin skin together with the air occident, which makes a positive electrical potential. Specialists call it a CR-passive (CR is standing for chrome).But chrome is in the galvanic contact series negative and a bit less valuable than iron. If the thin protection skin is damaged the stainless CR will be active and less good than pure chrome. The corrosion can start.

Who is not disappointed about little brown spots on the fittings? They are caused by flying rust or particles of iron, which are in the air and in all harbours placed near big towns. As soon as the flying rust settles onto the protective coat of the stainless steel, it destroys the CR-passivity aggressively and fast.

Stainless steel only stays good looking for a long time, if there's taken good care of it.

Take it to your habit, if you are washing your boat with clear water, clean also the rail stanchions,

pulpits and push pits and all stainless fittings thoroughly too. Clear water will wash away the salt, rust and flying rust, the protective coat will be "ventilated" and its function is guaranteed again. If you have already brown spots, you can use most of all available metal cleanings to take care of the stainless steel fittings or you take normal polish like you use it for the hull.
Of course – all the best care can not help, if in the first place the fittings are not made out of the right material or the stainless steel has not been treated correct. Before you will buy the fitting, ask for example if the fitting has been polished electrical.

4.2 Coatings
You may contact your marina or the yard if you have any questions concerning the coatings. Preferably you should rely on one system of one manufacturer that goes on well together.

4.3 Wearing- and spare parts
As an experienced skipper you will not have difficulties in getting original spare parts. If you need any help, please contact the yard.
If you need any spare parts but cannot get the original ones you have to pay attention to the stability values to keep the yacht at the high technical standard it used to have at the time of delivery.

4.4 Repair work
Repairs at the hull (polyester full laminate and polyester sandwich laminate) can be implemented by a reliable workshop considering the general rules for the processing of polyester resin. The interior construction was designed in such a way that a non-destructive elimination of defects can be realised. In regard to the technical equipment you may contact a reliable workshop or your dealer, too.

4.5 Winter storage
We have already given some well-directed advice on winter storage in different paragraphs of this manual. Generally speaking all firms offering winter storage should meet the latest technological standard as far as environmental conditions, storage blocks, fire protection and accessibility of your yacht is concerned. Moreover there should be fixed rules for work, done by the owner himself, to prevent any interference with other sportsmen.

If possible the following objects should be taken from board and stored in a dry and frost-free place:
- Ship’s papers and other relevant documents
- Charts, books and instruments
- Mattresses, upholstery, blankets and sleeping bags
- Sails and lines/ropes
- Foodstuffs
- Gas cylinders
- Safety equipment
- Life raft and rubber dinghy
- Batteries

Advice:

Before wintering you should pay special attention to the following parts and protect them correspondingly:

- Rinse and clean the transmitters of the speedometer and echo sounder.
- Maintain the electrical systems and clean them with suitable materials.
- Water pipes can be successfully cleaned with soft acids, e.g. white vinegar.

- Water valves should be taken to pieces and greased.
- The toilet and corresponding pipes are cleaned with fresh water.
- The rudder should be fixed that no movements are possible (e.g. by fixing the tiller or wheel).

Engine:
- Fill the fuel tank completely
- Exchange the propeller's sacrificial anode (if necessary).
- Empty all cooling-water of the engine and follow the instructions of the manufacturer. -
Slacken all belts (lighting engine and other engine driven devices).

Winter storage
- Observe all notes in the engine manual.
- Store the fully charged batteries at a ventilated frost-free place.
- Grease the steering wire and –components
- Remove all water out of the ship and protect it against rainwater entering it.
- Replace all components which seem not to be reliable any longer.

Mast and rigging
It may not always be possible, but it is recommendable:
- Unship the mast,
- Refit all standing and running rigging,
- Inspect the cables and other wires,
- Inspect bolts, spanners and other tie points for possible fatigue of material or cracks,
- Rinse all aluminium parts with fresh water
- Rinse all lines/ropes with fresh water and store them in a dry place,
- Rinse and grease all guide rollers of the mast and the boom.

5. Final remarks and notes

This manual is in conformity with the directives of the harmonised European Norm EN 10240. Much of it might go without saying for you. Nevertheless we hope, that dealing with the different chapters of this manual will help you to understand the technical systems and the ideas behind them. As already mentioned in the introduction, the purpose of this manual is to contribute to an unspoilt use of the yacht.

Among the things that are not dealt with is e.g. the personal safety equipment. This solely belongs to the responsibilities of the skipper. It goes without saying that there have to be means of rescue for all persons on board. But this also includes the procurement and maintenance of a life raft, of signalling means, a first-aid- as well as a tool-kit.
Since the European Recreational Craft Directive pays special attention to fire protection it shall also be mentioned, that fire extinguishers have to be maintained in regular intervals and that it belongs to the duties of a skipper to introduce his crew into their operation.
Those being prepared for an emergency are normally never involved. But just in case: the yacht is properly equipped for those situations with suitable means.

We are constantly working on further developments of our sailing yachts. We hope you will understand that we have to reserve the right to carry out changes as far as form, equipment and technology is concerned. For these reasons you cannot lay claim to a complete correspondence of your yacht with the information, figures and descriptions in this manual.

If your yacht should be equipped with any details not being referred to in this manual or in the owner's file, your party to the contract will inform you about the correct operation and maintenance.

Since all yachts, manufactured by **BAVARIA Yachtbau GmbH**, are exclusively sold by official dealers there is no contractual relationship between the yard and the customer/owner.

Thus **BAVARIA Yachtbau GmbH** is not familiar with details of the contract between the dealer and the customer. That's why it is not urgently necessary that your party to the contract takes over the full extent of our warranty conditions.
So, if you have to make a claim it is unavoidable to contact your party to the contract.

6. List of manuals supplied

- manual with declaration of conformity

- engine assurance board with corresponding instruction

- gas test document with corresponding working instruction

- release checklist

- leaflets and description of production work

- working instructions: Hand operated bilge pump
  Compass
  Bilge pump
  WC-instruction
  Elapsed-time indicator

Sailing Yacht Bavaria 42 Cruiser Bavaria Yachtbau GmbH ***Proof of identity***

(to be completed by the dealer or party to the contract)

1. First launch : ..... **2.** Date of delivery to the owner: ..... **3.** Type of boat: ..... **4.** Hull identification number: ..... **5.** Commission number: .....

6. Name of the yacht: ..... **7.** Manufacture and type of engine: ..... **8.** Engine number: ..... **9.** Gear (manufacture, type, gear ratio): ..... **10.** Propeller (manufacture, type, dim.): ..... **11.** Dealer, representative (name/address): .....

.....

.....

12. Signature/stamp dealer: .....

(Address of the dealer)

Acknowledgement of receipt

Name:

Address:

Owner of the yacht *BAVARIA 42 Cruiser*
HIN *DE-BAVC42C8C808*

Signature: _____