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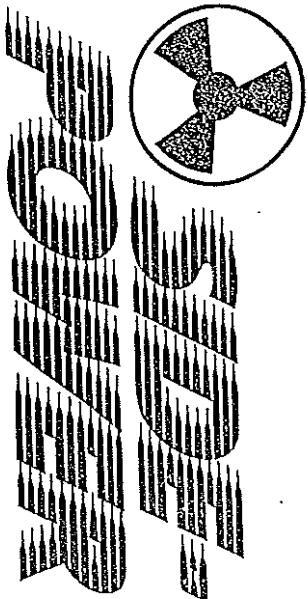
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INSTALLATION AND USERS GUIDE



6 HP WITH TOUCH PANEL

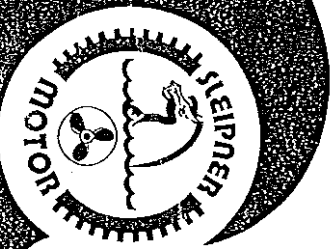
MADE IN NORWAY
BY

SLEIPNER MOTOR A.S

IMPORTANT TO READ THIS GUIDE !

Edition Nov.1990.

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APPARTSLIST WITH TOUCH-PANEL

s.no.	Pcs.	Description	Part no.
1	1	Electric motor 12 V	6 1011 12
1	1	Electric motor 24 V	6 1011 24
2	1	Switch box cover	6 1020
3	1	Clamp	6 1031
4	1	Oil tank	6 1030
5	1	Oil tube with clips	6 1040
6	1	Shear pin Ø3x20 with locking	6 1050
7	1	Oil tube conn.in motor braket	6 1060
8	1	Motor braket	6 1071
9	1	Tunnel Ø262/250 x length	6 1091 X
10	2	Bolts M.8 x 55	6 1080
11	1	Gear housing	6 1101
12	1	Drive shaft	6 1111
13	1	Sliding bearing, lower	6 1120
14	1	Gear for drive shaft	6 1130
15	1	Seeger lock for gear	6 1140
16	1	Zinc anode.	6 1180
17	1	Bolt M.6 x 16	6 1170
18	1	Ball bearing, small	6 1160
19	1	Distance ring Ø18/25 x 0,2	6 1150 02
19	1	Distance ring Ø18/25 x 0,1	6 1150 01
20	1	Copper gasket Ø5/10'	6 1210
21	1	Distance ring Ø22/32 x 0,2	6 1430 02
21	1	Distance ring Ø22/32 x 0,1	6 1430 01
22	1	Propeller-shaft with gear	6 1199
24	1	Oil drain screw M.6 x 10	6 1220
25	1	Ball bearing, big	6 1230
28	1	Selenoid with internal conn.	6 1370 12
28	1	Selenoid with internal conn.	6 1370 24
29	4	Bolts M.8 x 25	6 1360
30	1	Sealing ring	6 1350
31	2	O-ring	6 1340
32	2	Distance ring Ø12/18 x 0,5	6 1330 05
32	2	Distance ring Ø12/18 x 0,1	6 1330 01

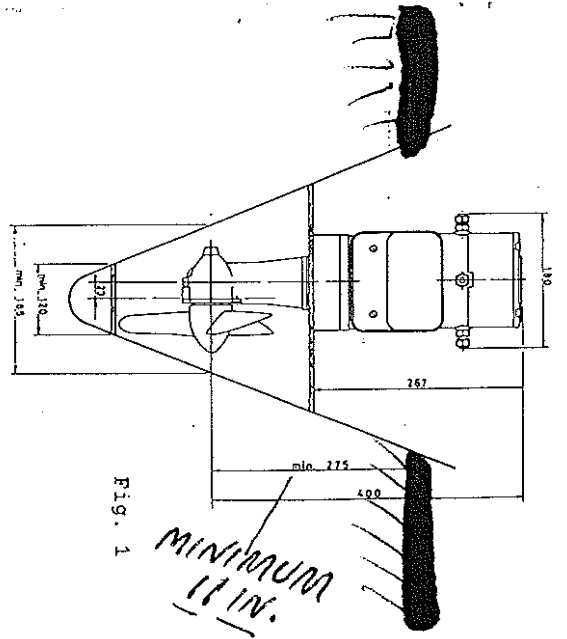


Fig. 1

INSTALLATION.

Prior to installation we recommend that you read this guide. This to ensure necessary acquaintance with this product.

Start by deciding the best place for the Sidepower tunnel. Ref. fig 1 and 2 for required minimum clearances.

The tunnel should be placed as far forward and deep in the hull as possible.

If the room for the Sidepower is small, it should be ventilated because of heat from the motor.

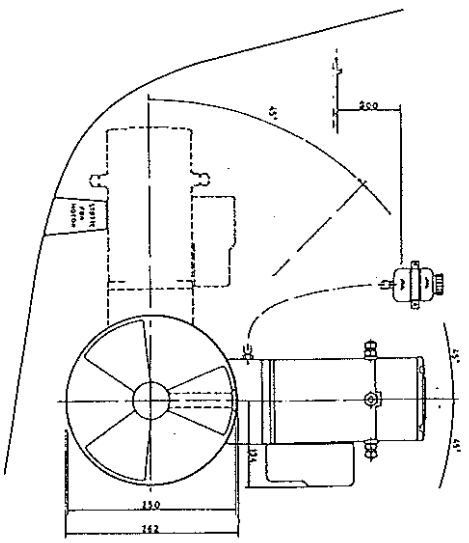


Fig. 2

PS ! All measures in this guide are given in millimetres, unless otherwise is indicated.

25.4 MM = ONE INCH.

Power for the Sidepower can be taken from the main engine(s) start battery, or there can be installed a separate battery.

If the height in the room you are installing the Sidepower in is limited, the Sidepower can be installed horizontal. In this case you will need support for the engine as shown on fig.2.

It is also important that the electric motor is mounted so that it will keep dry at all times.

No part of the propeller or propellerhouse must be outside the tunnel. Make tunnel as fig.10 if necessary, to keep propeller inside tunnel.

When position is decided, and all measures are checked, mark the centre of the tunnel on both sides. Drill a 6mm hole in these marks (see fig. 3).

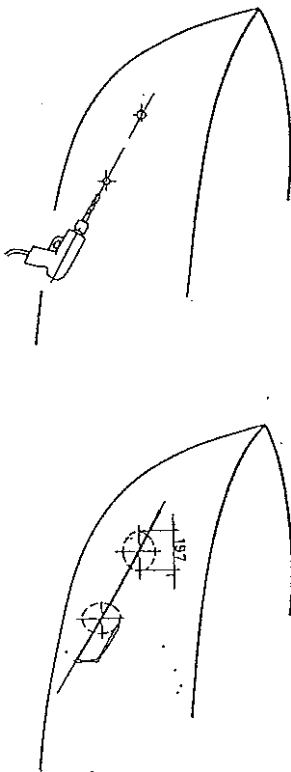


Fig. 3

Fig. 4

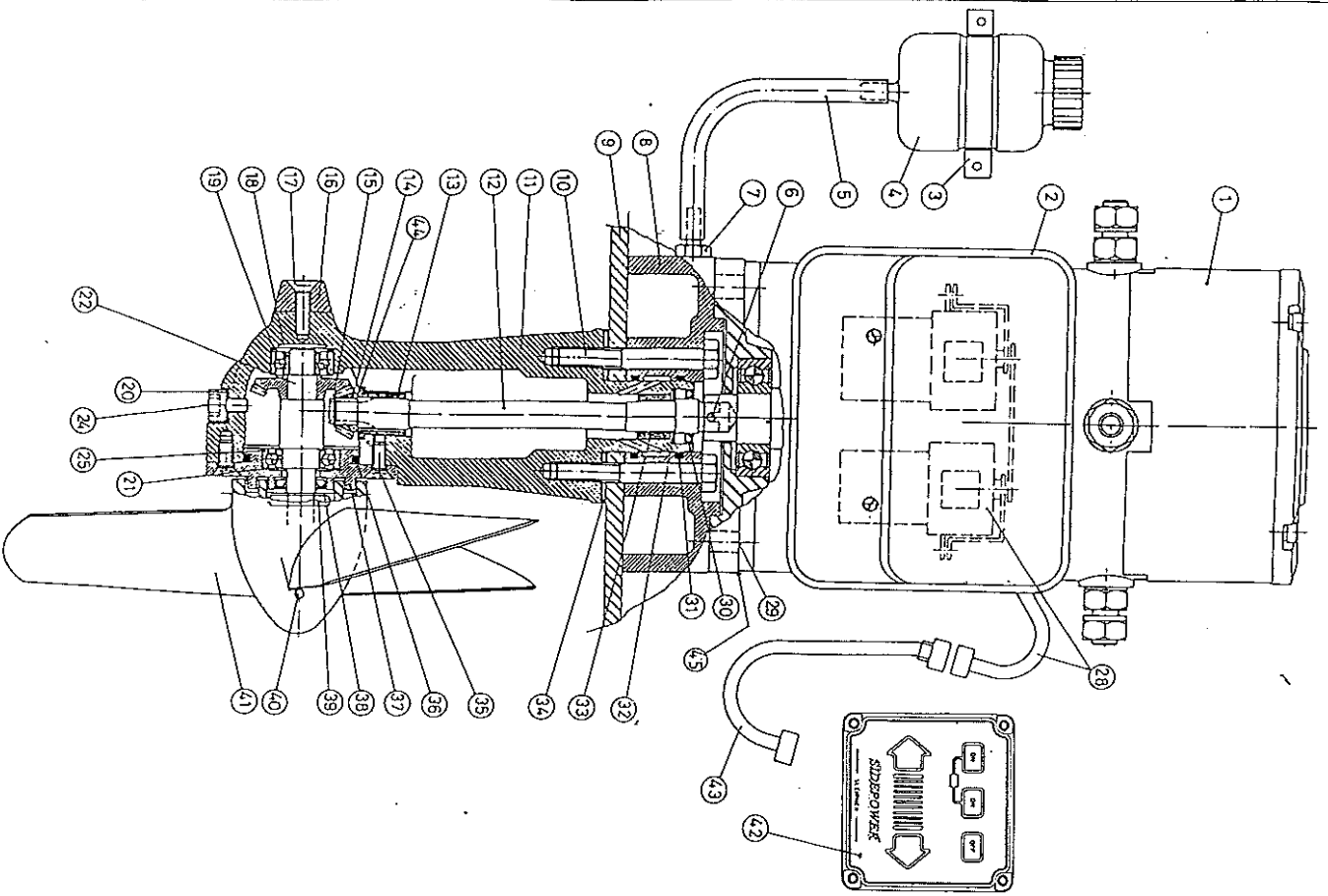
Bend a 5mm steel bar and mark the circle for the tunnel opening (see fig.4). Don't cut any "steps" in the hull if it can be avoided.

Cut the hole, and grind off the top-coat and polyester so that you are down in the "real fibreglass" in an area of 12cm around the hole to cast the tunnel to the hull.

Then cast the tunnel to the inside of the hull, use at least 8 layers of 300 g. Glass fibre (see fig. 8).

PS ! Avoid any casting where the motor-bracket are to be placed, this can misfit of the lower unit.

Pos.no.	Pcs.	Description	Part no.
32	1	Distance ring Ø12/21 x 1,0	6 1420 10
33	1	Sliding earing, upper	6 1320
34	2	Gasket for gear housing in tunnel	6 1310 10
34	2	Gasket for gear housing in tunnel	6 1310 20
35	2	Bolt M.6 x 16	6 1170
36	1	O-ring in lid	6 1290
37	1	Lid for gear housing	6 1280
38	1	Sealing for prop.-shaft	6 1350
39	1	Shear pin prop. Ø5 x 24	6 1241
40	1	Lock screw M.5 x10 for propeller	6 1250
41	1	Propeller Ø9,5" x 8", Ø5 mm pin	6 1259
42	1	Controlpanel	6 1252 12
42	1	Controlpanel	6 1252 24
43	1	Cable 7 m	6 1253
44	1	Trust Washer	6 1331-02
45	1	Distance ring	6 1061
EXTRA EQUIPMENT			
	1	Flybridge-panel incl. cable	8030-12
	1	Flybridge-panel incl. cable	8030-24
	1	Extra cable 4 m	6 1261
	1	Extra cable 7 m	6 1263



SLEIPNER MOTOR AS
FREDRIKSTAD - NORWAY

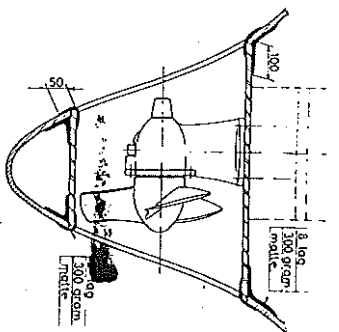
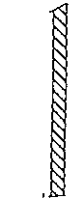


Fig. 8

When the polyester is hard, the part of the tunnel that is outside the hull can be cut off. Grind off the gel-coat in area of 6 to 8 cm around the tunnel and soften the edges.

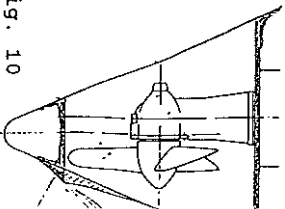
Cast then the tunnel to the outside of the hull and let it set hard. Grind then the edges around the hole and apply gel-coat.

If the tunnel are mounted very shallow, it can be necessary to make a special edge, under and in front of the tunnel (see fig. 10).

This to prevent that the propeller starts turning because of any beating from waves, etc. This might cause damage on the unit.

This can also be done to make the resistance from the tunnel smaller on sailboats, fast boats etc.

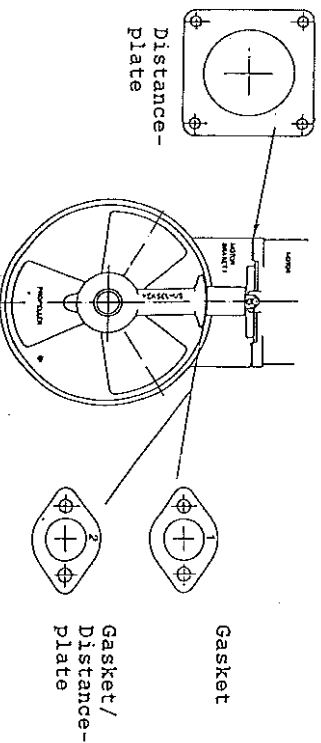
Fig. 10

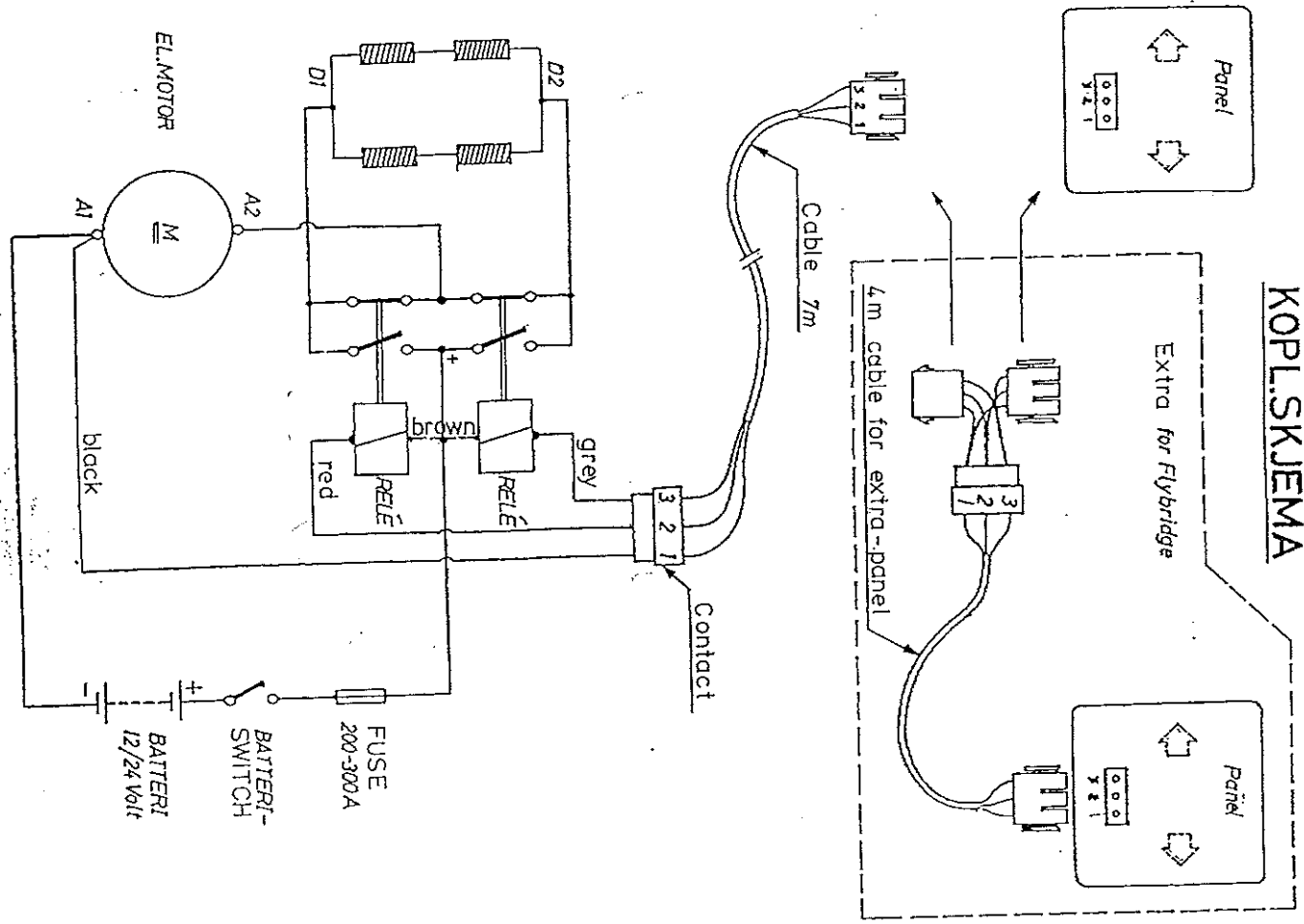


Mounting of lower-unit inside tunnel.

In the box you will find two gaskets that fits between the lower-unit and the tunnel. You must always use one gasket. But the second gasket is only to adjust the mounting. This is if the max. measure on fig. 6b is more than 7,5mm. This is also the reason for the big distance-plate that can be used under the motor, only if the measure (fig. 6b) is more than 7,5mm.

Fig. 6a





KOPLSKJEMA

9. Put the motor on the bracket and insert the screws without tightening them. Make sure that the break-pin gets into the slot in the drive-shaft. Try to turn the propeller, you should be able to turn it using one finger if it is mounted correctly. If it is very hard to turn, check points 5 and 7, and correct it, if it is wrong.
- When everything is correct, tighten the screws with a power of 27 Nm.
10. Install the oil tank min. 200mm above the waterline, connect it with the motor-bracket, and fill it with oil type EP 9 PS. Check that the oil flow into the lower-unit by opening the plug in the bottom of the lower-unit.
11. Install the electrical wiring as shown on page 8 and 9. Always check the sign on the engine to make sure that it is the right voltage for your boat. You will find the dimensions for the cables on page 6. Battery capacity should be min. 100 AH for 12 V, and min 50 AH for 24 V.
12. The control-panel should be placed out of the way of any throttles. Because these are often used together with the Sidepower. Use the rubber gasket (Fig. 11) to mark the holes. Drill and cut the holes, and fasten the panel. Connect the contacts as on the diagram on page 8.

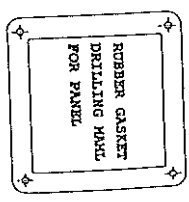


Fig. 11

Now everything is mounted, and we can try the Sidepower. If it should run the opposite way of what it should, switch the red and the grey wires in the solenoid box on the motor.

We recommend that you paint the lower unit against growth. PS! Not the zincanode.

Extra checklist 1

1. The propeller lock screw is fastened to the shaft!
2. The battery connection is correct (+/-)
3. There is oil in the lower-unit.

Technical information.

SIDEPOWER 6 HP.

Motor:

Type: Reversible DC motor
 Voltage: 12 V (24 V)
 Current: 347 A (161 A)
 Output: 4,3 KW / 6 HP
 RPM: 3430 rpm
 Continuous use: Max. 5 min per. 10 min rest.
 Isolation class: F

Transmission:

Gears: Spiral cut bevel gears
 Reduction: 2,15:1
 Lubrication: Oil bath
 Bearings: Propellershaft: ballbearings
 Driveshaft: slidingbearings
 Gear case: NS 16530 bronze
 Gear case lid: NS 16530 bronze
 Sealings: Simmer rings
 Zinc anode: Mounted on lower-unit

Propeller:

Diameter * pitch: 9,5" * 8"
 Number of blades: 3

Control-panel:

Membrane panel with delay for changing direction.

Cables:

Battery cables: Minimum 50 mm² for 12 V
 (Minimum 25 mm² for 24 V)
 Control cables: 7 m. of 3 * 1,5 mm² can be extended with extra cables.

Tunnel:

a) GRP tunnel: Ø 250 mm inner diameter
 6 mm thickness length
 1,0 - 2,5 m.
 Material: GRP - 60 % glass
 b) Steel / aluminium: As ordered

USER GUIDE.

Turn the battery main switch on.

Push both green buttons marked "ON". The control light will come on and the Sidepower is ready for use. Push red ore green arrow for desired direction. The panel has a built in delay for 2 seconds, to protect the unit against sudden change of direction.

PS 1 Maximum continuous use are 5 minutes per 10 minutes of rest. This means that if you use the Sidepower continuously for 5 minutes, it must get 10 minutes to cool off before used again.

Maintenance.

The Sidepower usually requires only a minimal maintenance. But there are a few things that should be done.

1. The oil tank must be checked, and refilled if necessary.
2. Change the oil after one years use.
3. Check the oil in the lower unit when you have your boat on land, and change it if needed.
4. Change the zinc anode when necessary.
 PS 1 Remember to use a sealant on the screw holding the zinc anode. (Fig. 7)
5. Clean the lower-unit and the propeller from growth if needed.

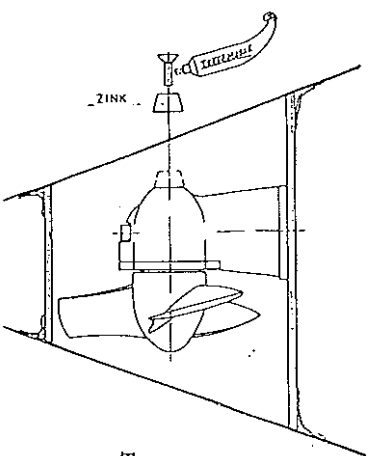


Fig. 7