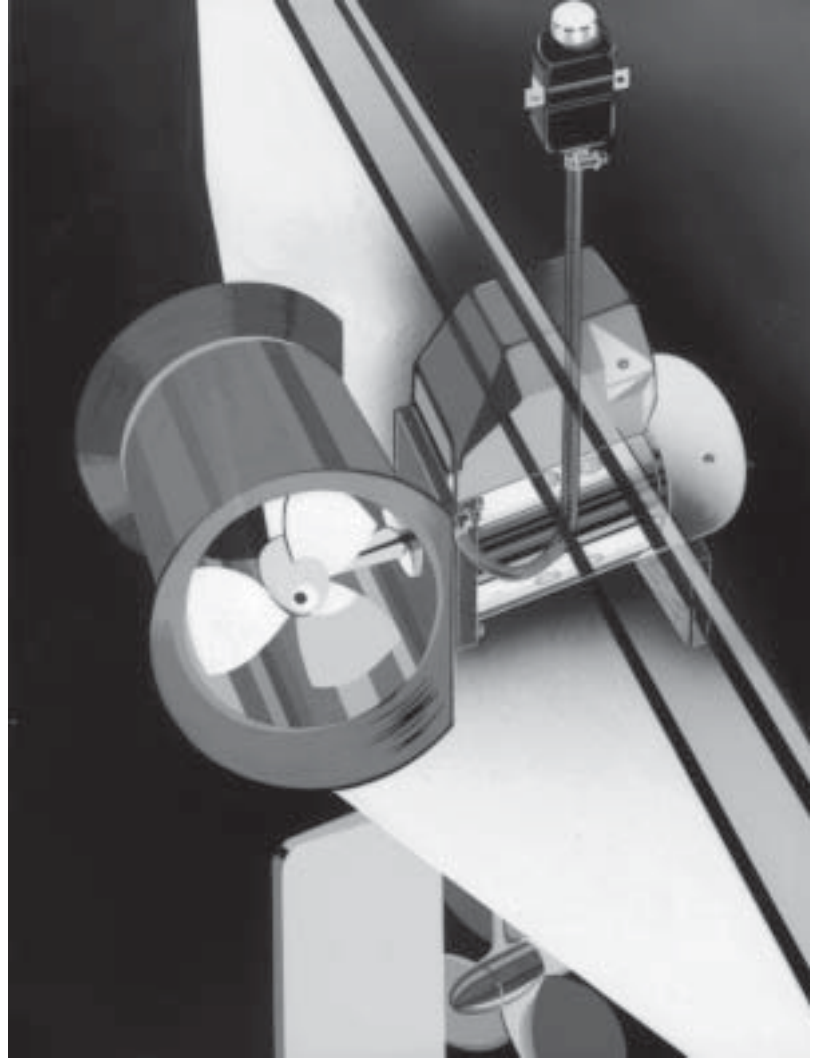


# QL Stern thrusters



**QL Heckstrahlruder**  
**Propulseur de poupe QL**  
**Elica di poppa QL**  
**Propulsor de popa QL**  
**QL Akterpropellrar**  
**QL Peräohjauspotkuri**



Marine Accessories  
by Volvo Penta

# Packing list

Please check that the contents of the package agree with the enclosed packing slip.

The Stern thruster must not be installed in areas where inflammable or explosive gases may occur !

*The manufacturer does not assume any liability for the installation of the unit.  
Authorized installers should be employed. For special installation please contact the supplier.  
The installation responsibility rests entirely on the performing party.*

**ENGLISH**

Advice for installation.

**NB. Read the entire instruction carefully before starting to install the Stern thruster.**

1. Decide the position for the stern thruster, see installation drawing (fig.1) and dimensional drawing (fig. 2).

**NB.** Recommended minimum distance for SP600 and SP900 from centre of tunnel to water line is 240 mm. Minimum distance for SP1300 is 300 mm.

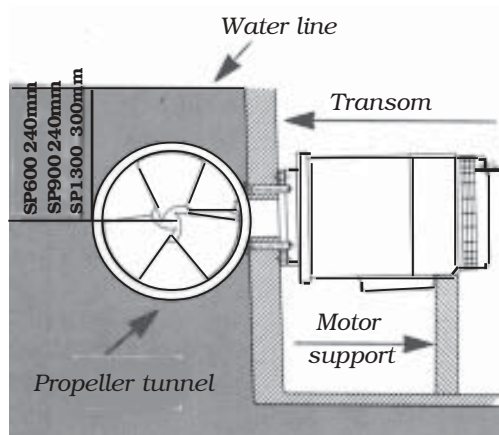


Fig. 1

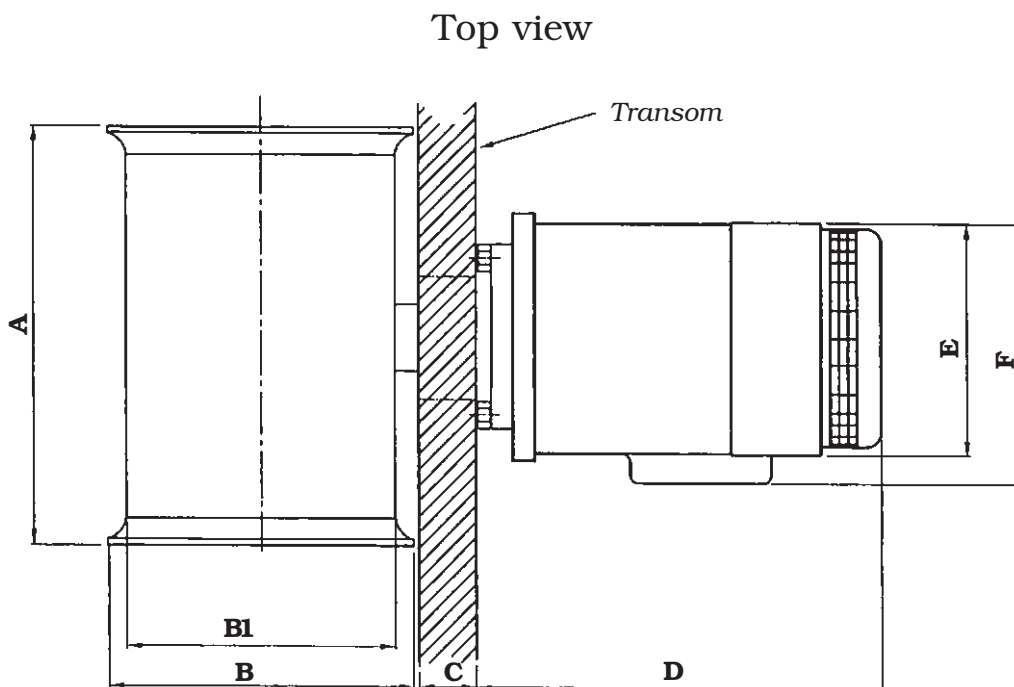


Fig. 2

	<b>SP600</b> mm	<b>SP900</b> mm	<b>SP1300</b> mm
A	300	300	400
B	235	235	297
B1	185	185	250
C	max. 45	max. 45	max. 82
D	270	330	305
E	125	172	172
F	215	277	277


**Advice for installation (cont.)**

Before you make any cut-outs in the transom, please consider the following:

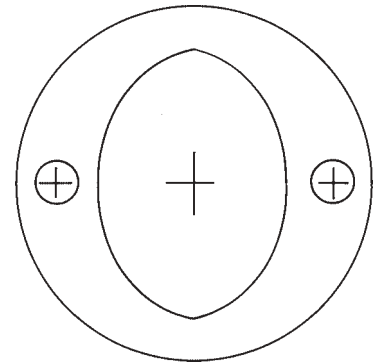
- make sure that the water flow from the thruster is not obstructed by sterndrive, trim tabs or other moving parts as this will reduce the thrust significantly.
- the propeller tunnel may be positioned off-centre on the transom if required by space restrictions.
- make sure the propeller tunnel does not interfere with the engine's exhaust outlet pipe. The efficiency is reduced considerably if exhausts come into the tunnel.
- make sure that it is possible to fit a motor support. Such a device is necessary to reduce stress on the suspension design and tunnel/transom.

**Installing the Stern thruster**

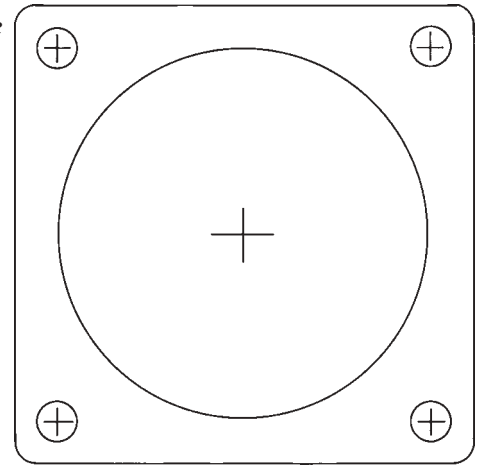
1. When the position is decided; hold the propeller tunnel horizontally to the out-side of the transom and mark the cut-out for the bracket and the holes for the attachment bolts. Use the support plate as template. Fig. 3
2. Cut the hole (in the transom) for the bracket and drill the holes for the bolts (10 mm).
3. Paint the cut-out section and the bolt holes with two-component primer to prevent water from entering into the transom.
4. Buff the propeller tunnel's interior and exterior and clean well with acetone. Paint the tunnel twice with two-component primer or top coat.
5. Carefully apply Sikaflex or similar sealing compound on the bracket. Guide the bracket, from within, through the transom. Fig.4.

 Make sure the oil nipple is positioned upwards.

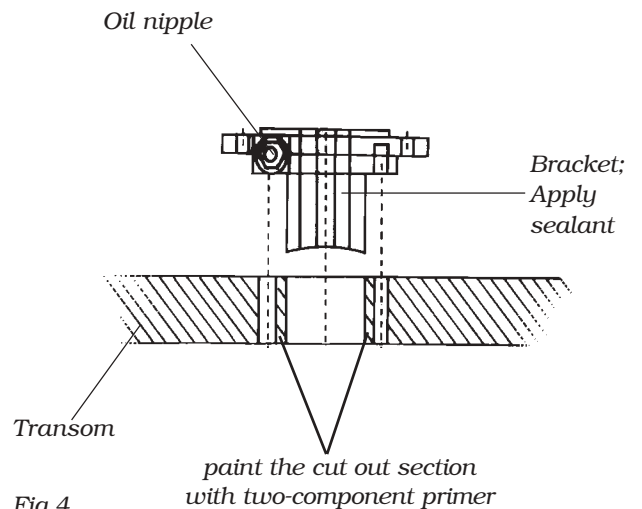
*Support plate  
SP600/SP800*



*Support plate  
SP1300*



*Fig.3*



*Fig.4*

Installation of Stern thruster (cont.)

6. Apply Sikaflex or a similar sealing compound to support plate and bolts. Place the plate (fig. 3) on the transom and fit the attachment bolts, through the transom, to the bracket. Fasten the bolts thoroughly.

7. Carefully apply Sikaflex or similar sealant to the gear house as per fig. 5 before fitting the gear house to the bracket.

**NB.** make sure the sealant does not obstruct the oil hole.

8. Guide the gear house from within the tunnel through the hole.

**NB.** No propellers should be fitted during this process.

9. Guide the two attachment bolts, from within the transom, through the bracket and fasten gear house and propeller tunnel to the transom.

10. In some cases the tunnel flanges must be adjusted to fit close to the transom. See fig. 6.

11. The motor has to be properly supported to off-load weight and tension on suspension design and tunnel/transom. See fig. 1 and 7.

12. Attach the oil hose to its base on the bracket and mount the oil container (fig. 8) close to the bow thruster but above the water line. The hose should be mounted in such a way that no air traps are formed which could hamper the oil flow to the gear house. Fill the oil container and open the oil plug in the gear house. Wait until oil leaks out. Put the oil plug back in place. This is done to speed up the oil flow to the gear house and also to squeeze out any air that is left in the hose.



Fig.5

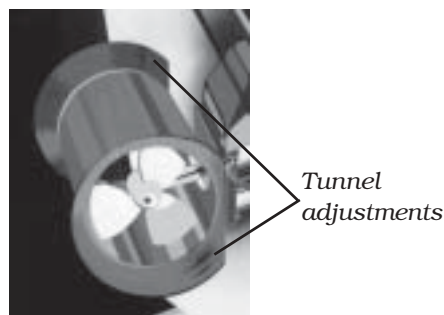


Fig.6

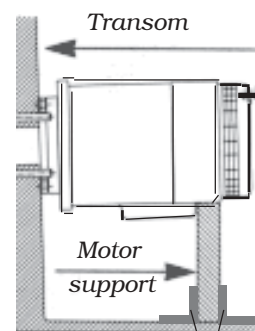


Fig.7

Stabilize the motor support with fibre glass stripes or Sikaflex

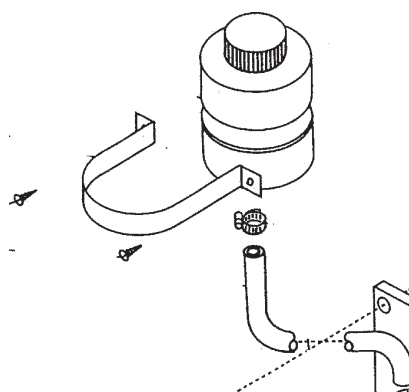



Fig.8

## Electrical connection SP600

1. Fit the el. motor to the bracket and screw the units together.

Connect the Pos.(+) and Neg.(-) cables, from the battery, on resp. terminals marked with + and - symbols on the el.motor. See Wiring diagram, fig. 9.

 Below recommendations reg. battery capacity, cable length and - area must be adhered to, to avoid functional problems or stop in service. Deviations from the recommendations will make the warranty invalid.

Recommended battery capacity for **SP600, 12V**: Minimum 100 Amp.

Recommended battery capacity for **SP600, 24V**: Minimum 2 x 70 Amp.

Recommended area for battery cables for **SP600, 12/ 24V**: Pos. (+) 1x70 mm<sup>2</sup>, connected through main switch and fuse. Neg.(-) 1x70 mm<sup>2</sup>. Maximum length 10 m one way.

We recommend Volvo Penta main switch. Part no. 1140319.

Recommended fuse: **SP600, 12/24V**: 300 Amp. Part.nr. 41100052.

*Wiring diagram SP600*

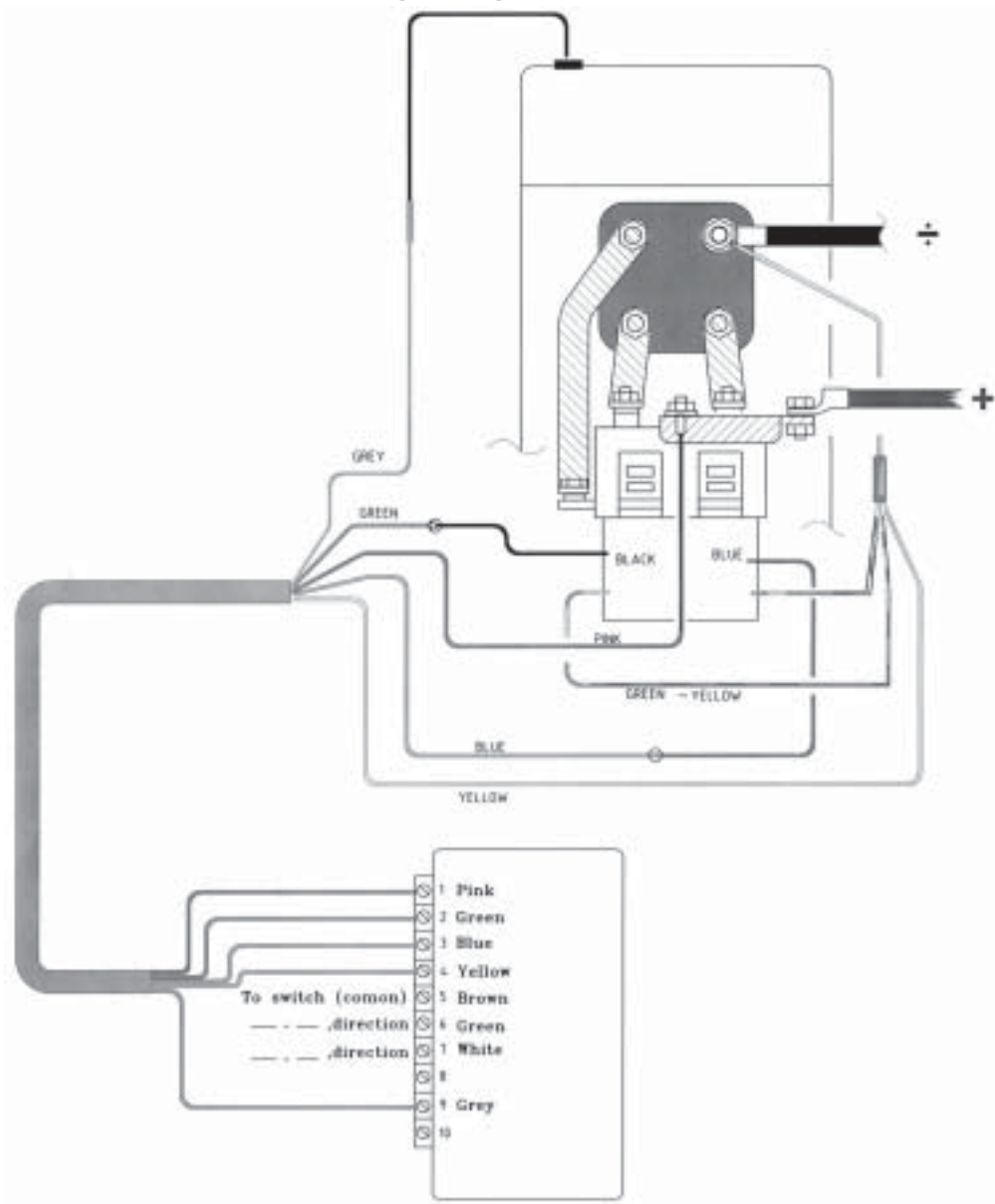


Fig.9

**Electrical connection SP900/SP1300**

1. Fit the el. motor to the bracket and screw the units together.  
Connect the Pos.(+) and Neg.(-) cables, from the battery, on resp. terminals marked with + and - symbols on the el.motor. See Wiring diagram, fig. 10.



Below recommendations reg. battery capacity, cable length and - area must be adhered to, to avoid functional problems or stop in service. Deviations from the recommendations will make the warranty invalid.

Recommended battery capacity **SP900, 12V**:  
Minimum 300 Ah

Recommended battery capacity **SP900, 24V**:  
Minimum 2x150 Ah

Recommended battery capacity **SP1300, 24V**:  
Minimum 2x150 Ah.

Recommended area for battery cables for **SP900,12V**: Pos. (+) 2x70 mm<sup>2</sup>

connected through main switch and fuse.Neg.(-) 2x70 mm<sup>2</sup>. Maximum length 10 m one way.

Recommended area for battery cables for **SP900, 24V**: Pos. (+) 1x95 mm<sup>2</sup> connected through main switch and fuse. Neg.(-) 1x95 mm<sup>2</sup>. Maximum length 10 m one way.

Recommended area for battery cables for **SP1300, 24V**: Pos. (+) 1x95 mm<sup>2</sup> connected through main switch and fuse. Neg.(-) 1x95 mm<sup>2</sup>. Maximum length 10 m one way.

We recommend Volvo Penta main switch. Part no. 1140319

Recommended fuse; **SP900, 12V**:= 425 Amp. Part no. 41100403.

Recommended fuse; **SP900, 24V**:= 355 Amp. Part no. 41100604

Recommended fuse; **SP1300, 24V**:= 425 Amp.Part no. 41100403 .

**Wiring diagram  
SP900/SP1300**

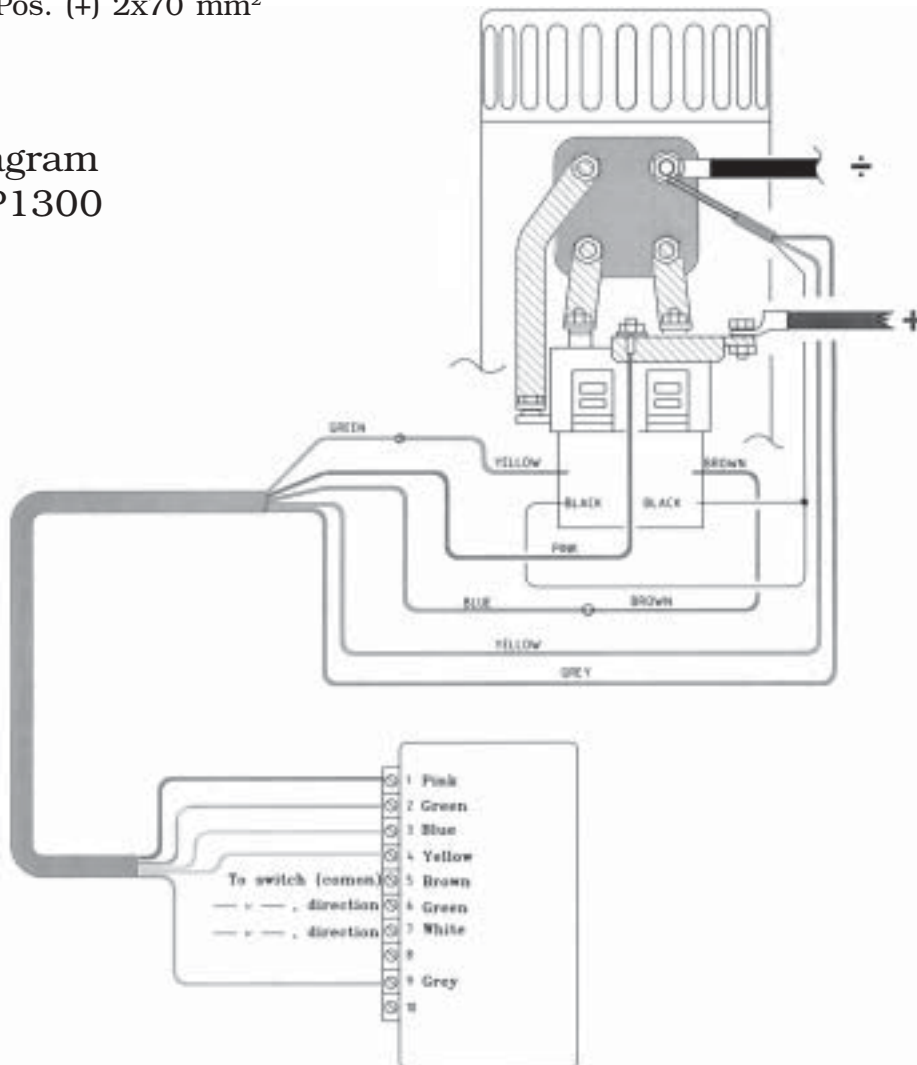


Fig.10

## Installation check up

1. Prime the gear house the same way as the tunnel interior. **NB!** Do not prime the zinc ano-de or its contact area. Refer fig. 11.

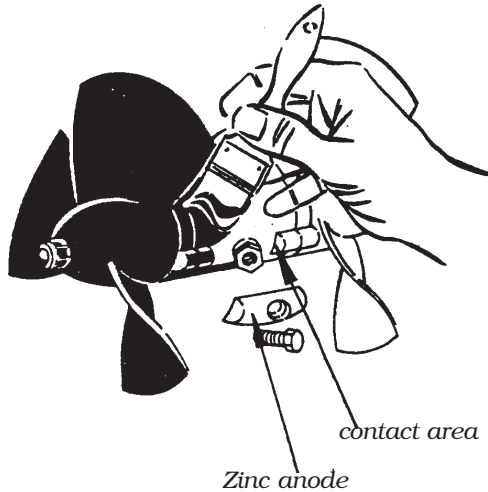


Fig. 11

2. Paint the gear house with bottom coat. (**NB!** Anti fouling paint.)

3. Before the propeller is fitted it should be ground and cleaned with acetone and then painted as in fig. 11.

4. **NB!** Manually check the propeller's clearance in the tunnel.

5. When tightening the propeller locking nuts (SP900 and SP1300) use a wooden wedge or something similar to place between the blades.

6. The propeller marked LH should be put on Port side and the one marked RH on Star-board side.

## Test running

1. Make sure no-one is within reach of the rotating propellers.



The propellers must have stopped before running the opposite way, otherwise the contactors might burn.

2. When the boat is launched check that it moves in the correct direction when operating the control panel. If not, shift the cables connected to no. 6 and no.7 on the stern thruster's circuit card.

3. If more than one control panel is installed these should be joined in parallel.


4. **NB!** All power consuming equipment should always be run with care. The engines must always be running when the stern thruster is engaged to keep the generators charging.



**Please note!** What has been written on electrical connections so far is valid only for 12V or 24V stern thrusters being installed in boats with the corresponding operating voltage.

## Maintenance

- Keep the propellers clean from being overgrown. (Paint with antifouling paint.)
- Paint gear house and propellers once every year. ( Antifouling paint).
- Change the zinc anode once every boating season or, if needed more frequently, but always when app. 40 % of the anode is used.
- Check the oil level. The container should always be half filled. Check at least once every boating season that there is oil in the gear house. Change oil every other season or more frequently if required. Use only QL Bow thruster oil. Part no. 41100129.
- Check that the propellers are tightened.
- Check that all el. cables are well tightened and uncorroded.
- Check that the bolts which hold the gear house are well tightened.
- Check that the fastening bolts on the el. motor are well tightened.

 When working on the stern thruster always switch off the main switch.