"VOL"VOPENTA.

AB Volvo Penta
SE-405 08 Goteborg, Sweden

Parts Bulletin

Group	Number	Version
P-44-7	6	01

Propeller Update, Calculation of Propeller Size of Folding Propellers

Models: Marine Transmissions

Distribution: Parts Date: 03-2007 Binder: Parts Replaces:

The following example shows calculation of a 3-bladed folding and the principle is the same for a 4-bladed.

Attached are performance charts for both 3- and 4-bladed folding propellers.

CALCULATION OF PROPELLER SIZE OF 3-BLADED FOLDING

To select the right propeller size for both S-drive and shaft installations, a propeller selection chart has been developed. The propeller size decides as follows:

1. Gather engine data. Here we select as an example a D 1-30 engine with a l30S sail drive:

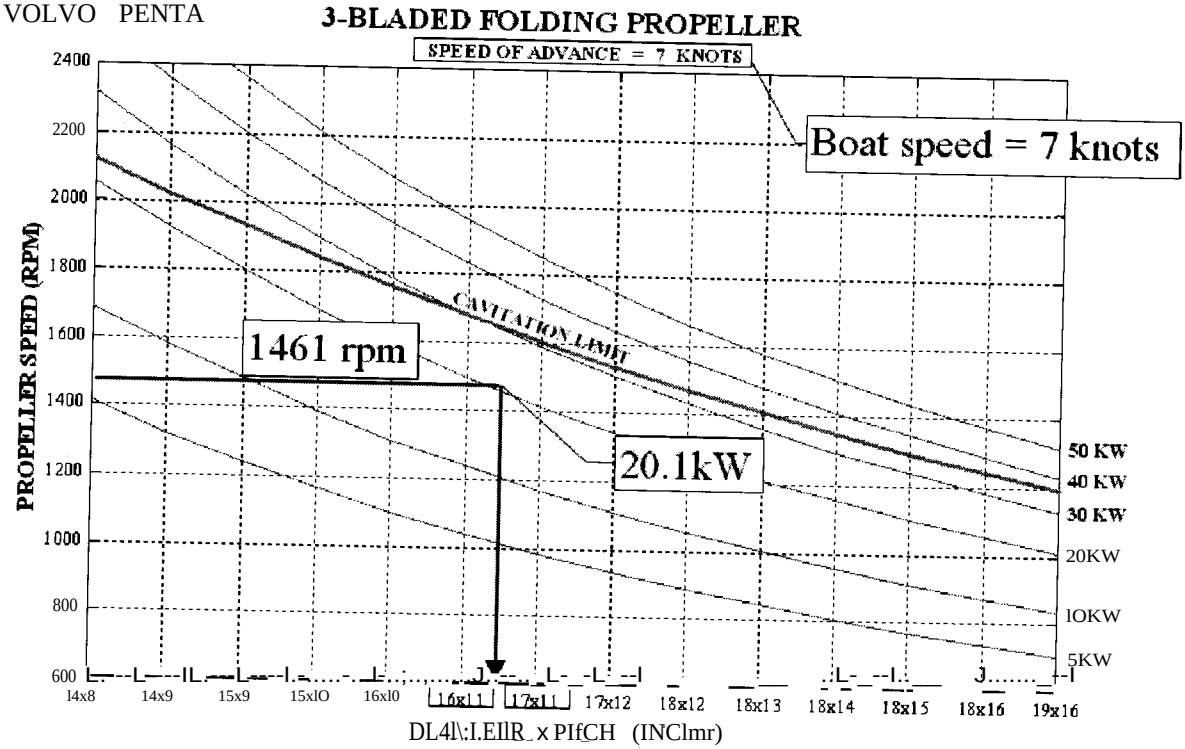
Propeller shaft power	20.1 kW
Engine speed	3200 rpm
Gear ratio	2.19:1

2. Calculate propeller speed.

$$Propeller\ speed = \frac{Engine\ speed}{Gear\ ratio} = \frac{3200}{2.19} = 1461\ \text{rpm}$$

3. Estimate boat speed in knots. A first approximation can be the length of the waterline of the boat, measured in meter. In our example the waterline length is about 7 m and we estimate:
   Boat speed = 7 knots
4. Select propeller from propeller select diagram. From the diagram of a speed of advance of 7 knots the most suitable propeller is selected as follows:

VOLVO PENTA



DL4l\:I.EIlR_x PIfCH (INClmr)