

# Tillermate

Thank you for buying a TILLERMATE. We are sure it will help you enjoy your sailing even more.

## 1. Tools needed.

There are many ways that the rope onto which your TILLERMATE clamps can be set up, so the only essential tool is a screwdriver for cross-headed screws. As almost every boat is different, these notes are only intended as a guide – **you may have to try different ways of fitting the rope to get the best system for your boat.**

For your TILLERMATE to work well you will need to have some way of fixing the rope. We suggest the **Installation Kit** (Part no 528IK) which you can buy on the website:

- 2.5 metres of rope of 6mm diameter - the length will depend on the size of your boat. We suggest 6mm, 3 strand, pre-stretched polyester;
- Two small guides<sup>1</sup> to suit that size of rope;
- Two anchor points for the rope<sup>2</sup>;
- A set of screws.

## 2. Planning.

Where you fix your TILLERMATE on the tiller will be set for you by items already in place, such as the clamp for your tiller extension or the pivot for your electronic pilot. Try to fix the TILLERMATE, on the top or **bottom** of the tiller, according to the following notes:

### For boats with 'outboard' rudders (see Figure 2)

- a) It is important to get points 'A', 'B' and 'C' in Figure 1 so that the rope makes about a 90° angle at 'C'.
- b) The TILLERMATE is fixed at point 'C'
- c) The anchor points could be at points 'A' and 'B' as in Figure 2, but it will be different from boat to boat

### For boats with 'inboard' rudders (see Figure 3)

- a) It is important to get points 'A', 'B' and 'C' in Figure 3 so that the rope makes about a 90° angle at 'C'
- b) The TILLERMATE is fixed at point 'C'
- c) The anchor points could be at points 'A' and 'B' as in Figure 4, but it will be different from boat to boat
- d) Move the fixings to points 'AA', 'BB' and 'CC' if necessary to achieve the minimum of 45cm shown in Figures 1 and 3

Try to arrange the ropes so that they are out of the way. Be careful not to create a hazard or an obstruction.

## 3. Fitting.

Your TILLERMATE comes to you ready for use.

1. Take it out of its box and unscrew the blue knob so that the two parts separate. The unit is assembled with a drop of thread sealant such as 'Loctite' on the thread of the blue knob, so that the first time that you unscrew it, IT WILL BE VERY STIFF.
2. You will see that the TILLERMATE comprises two parts:
  - The 'Pulley' which is attached to the blue knob
  - The 'Clamp' which has four screw holes in the bottom
3. Having selected your site, place the Clamp on the tiller with:
  - The centre-line screw holes in-line down the length of the tiller
  - The raised part of the Clamp and the red dot, nearest the hand-grip (The red dot is not intended to be permanent)
4. Using the stainless steel screws provided, screw the Clamp to the tiller (You may need small guide holes<sup>3</sup> to make tightening the screws easier). If you have a flat surface on your tiller, you will only need screws in the two centre-line holes, but if the surface is curved, or if you have a very heavy boat, you will need to use three screws, two in the outer holes and one in the single centre-line hole.
5. If you have a tiller made of tube, use the stainless steel right angle **Adaptor Bracket** (Part no 528AB) which you can buy on the website. Drill 4 guide

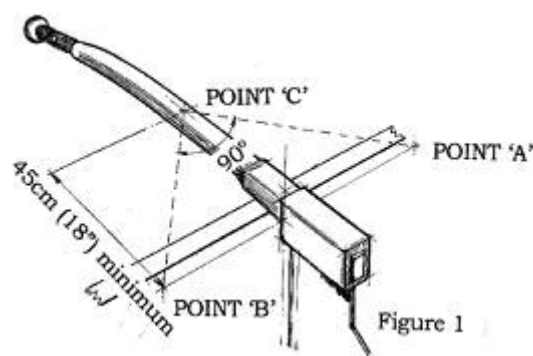


Figure 1

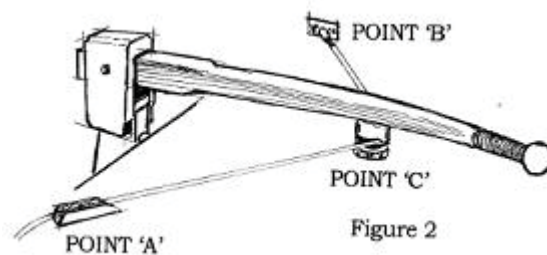


Figure 2

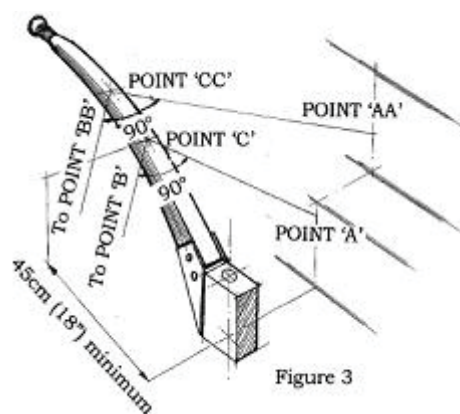


Figure 3

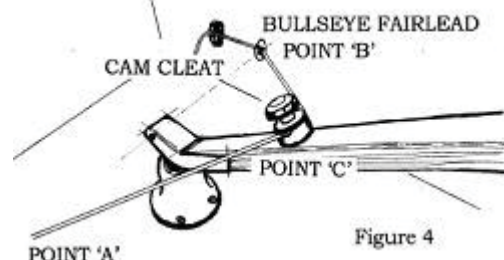


Figure 4

holes in the tiller - two in the top and two in the side face. Screw the bracket in place (see photograph on the next page) using the short screws that come with the bracket. Two of the screws pass through the centre-line holes in the TILLERMATE base and through the bracket. When satisfied with the positioning, tighten all of the screws.

6. If you are fixing on the bottom of the tiller, we **STRONGLY ADVISE** that you use a **Leading Block** (Part no 528LB) which you can buy on the website. Mount this under the TILLERMATE and the screws pass through the holes in the TILLERMATE base and through the bracket of the Leading Block. See the photograph on the right.
7. Screw the Pulley back into the Clamp by a few turns and then feed the rope round the Pulley and screw down some more.



#### 4. How it works.

Your TILLERMATE can stay with the rope in it all the time (but you may want to take the rope out for extended voyages on electronic pilot or self-steering wind vanes). Feed the rope through one guide and lock one end to its anchor point. Then tighten the rope so that it is taut round the Pulley before feeding through the other guide and locking in the second anchor point.

TILLERMATE can work in 3 ways:

1. Free.  
Unscrew the blue knob so that the Pulley runs freely and use the tiller in the normal way. If the tiller is restricted in its movement by the rope becoming too tight, then re-examine the geometry of the fixings and adjust. Do not use the TILLERMATE when using an electronic pilot. **Always unscrew the TILLERMATE blue knob before switching on the electronic pilot**, but don't unscrew the blue knob too much, it only takes about 1.5 to 2 turns to let the pulley run freely.
2. Part Tight  
Screw the blue knob down so that the TILLERMATE lightly clamps the rope and holds the tiller in position, but allows you to make small tiller movements when required. Part tightening is quite sensitive and takes practice and with heavy rudder loads the tiller can still move.
3. Clamped  
Screw the blue knob down further so that TILLERMATE clamps firmly onto the rope and the tiller cannot be moved without unscrewing the blue knob.



When 'free', the blue knob should not turn as the *Pulley* turns. If it does, two things could be wrong:

1. The Pulley could be rubbing on the underside of the blue knob, in which case, add a replacement drop of 'Loctite 243' on the thread, leave for 24 hours and then 'break' the set.
2. It may be that the rope is feeding into the Pulley at an angle (see 'X' in **Figure 5**) and not at right angles to the axis of the TILLERMATE ('Y') and is rubbing on the Pulley. In which case readjust your angles to stop this.

Another problem will be if you have a boat with the rudder shaft at an angle as in **Figure 6**. This means that the tiller will make a downward curve when turned from the straight ahead position and you may need to experiment with having the rope at position 'Z' in Figure 5 when in the straight ahead position or use a **Leading Block** (Part no 528LB) which cures this problem.

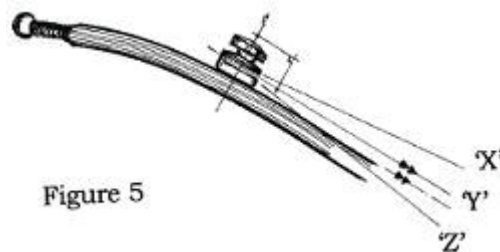


Figure 5

#### 5. Maintenance

TILLERMATE is made from 316 stainless steel, CZ121 brass or Acetal thermoplastic and needs no maintenance other than a clean and a light coat of grease on the outer face of the inner boss in the centre of the *Clamp*. (The version made of Acetal may be affected by continuous exposure to the UV in sunlight) Renew the Loctite on the screw at intervals.

#### 6. Safety

1. TILLERMATE is meant to hold the tiller **for short periods only**. It is not a navigation aid nor will it hold your boat on a compass course, it simply holds the tiller where you clamp it.
2. The recommended anchor points are ones which can be freed very quickly in an emergency - 'cam' cleats are an example.
3. TILLERMATE is intended for use in open waters and it must be realised that the only way that the tiller can be freed from the clamped position is by unscrewing the blue knob and this takes a finite time. Always allow time for that when calculating manoeuvring distances and times.

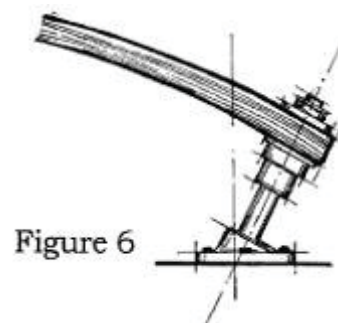


Figure 6

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