

## TECHNICAL MANUAL

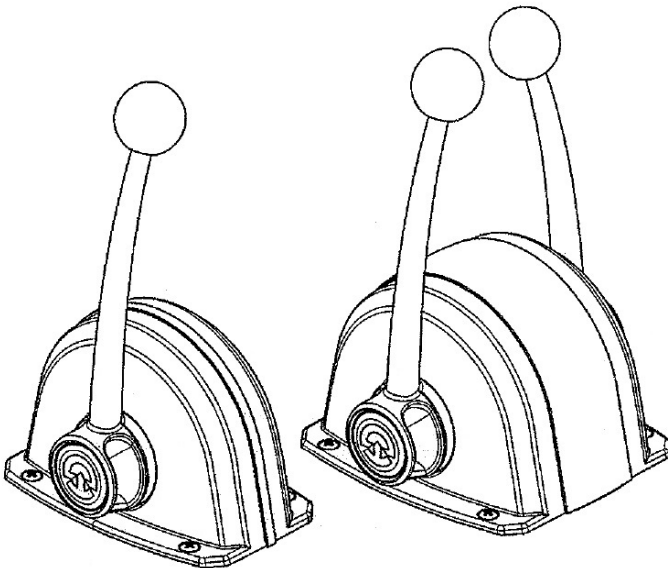
Maintenance and Operation  
Instructions

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### LEVER CONTROLS

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#### CM04 - CM05



#### CAUTION

Before to install and start-up, please read  
the “Technical Manual”.

## Certificate of Warranty

Riviera Srl declares that its products are manufactured in a workmanlike manner and comply with current regulations.

The warranty is valid 24 months from the purchase date.

If the Riviera products are installed and used for commercial purposes, the guarantee is limited to one year from the purchase date, without further warranty extensions.

The warranty does not cover any costs deriving from assembly or disassembly of products, transport of the same and expenses for technical personnel, even if attributable to manufacturing defects.

Upon receipt a defective product, it will be examined to determine the cause of defect. If the product is determined to have a defect in workmanship or material, it will be repaired or replaced at the Riviera discretion.

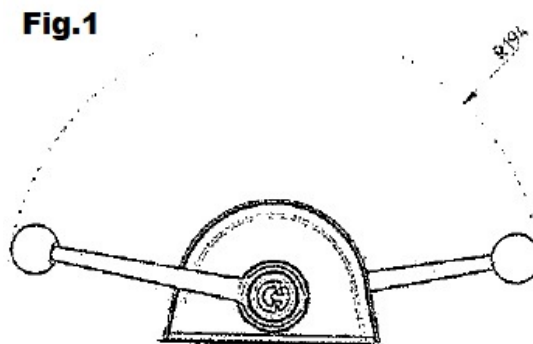
This guarantee does not cover products that have been misinstalled or misapplied, it does not cover claims for direct or indirect damage.

Riviera Srl Genova decline liability and guarantee if products are improperly installed, misapplied or misused.

## BEFORE STARTING

### LOCATING THE CONTROL BOX

1. Choose the control box installation position so as to allow a complete and free turning of the hand lever/s and make sure the cable minimum radius bends (203 mm), are given. (see Fig. 1),



2. For fixing, use the measurements indicated in the drilling diagram (see Fig. 2 and Fig. 3) and mark the position of both holes and the part to cut off.



**ATTENTION: The drilling diagram is not to be used as a drilling template as, once printed, the actual measurements of the drawing do not correspond to those indicated.**

FIG.2

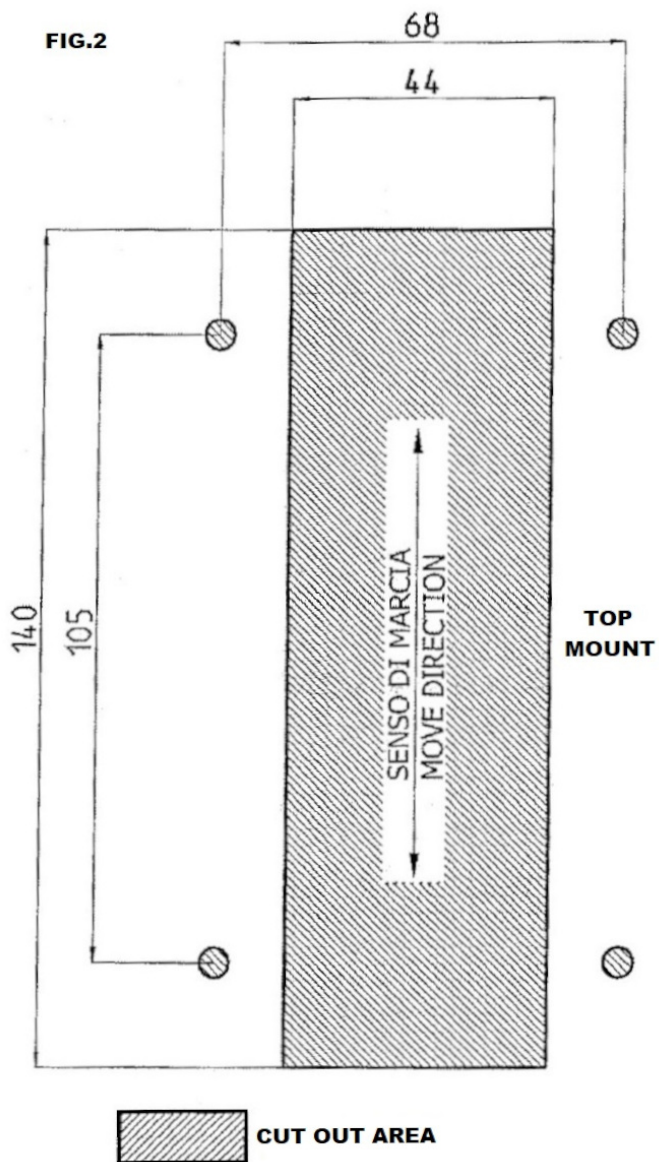
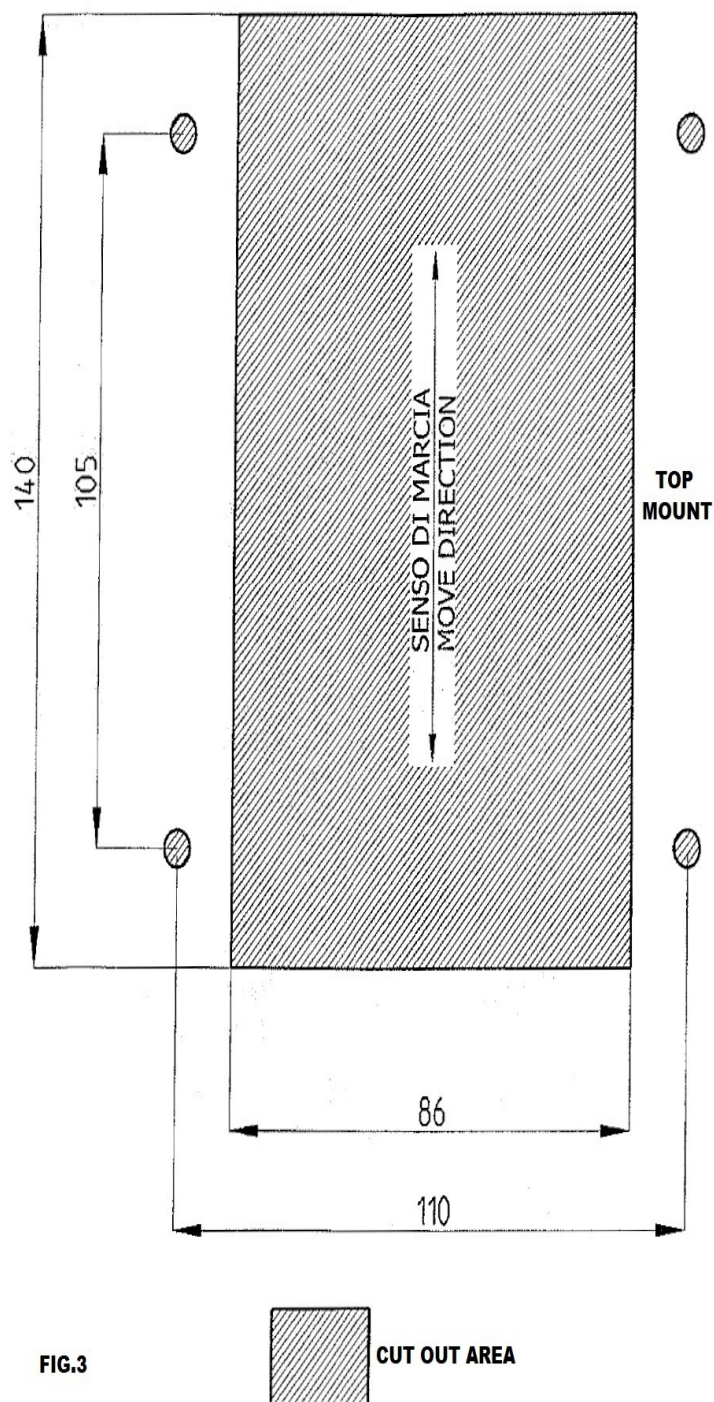


FIG.3



## CONNECTING THE CABLES

Before connecting the cables, you have to verify the movement require by the specific engine: push or pull action of the cable for forward gear.

Riviera F02 or F08 cables are available for the connection.

Following table shows the movement require by some of the main engine models:

ENGINE	SHIFT CABLE ACTION (to go forward)	THROTTLE CABLE ACTION (to open throttle)
Johnson/evinrude OMC in/outboard Mercury 18,25 HP	PULL	PUSH
Mercury outboard Mariner outboard Mercuiser in/outboard	PULL	PULL
Volvo in/outboard	PUSH	PULL
Yamaha 90 HP and up U.S. marine(force)	PULL	PUSH
Yamaha in/outboard	PULL	PULL
Honda, Suzuky, Tohatzu Yamaha 70 HP and below	PULL	PULL
Inboard (diesel, gas)	PULL	PULL

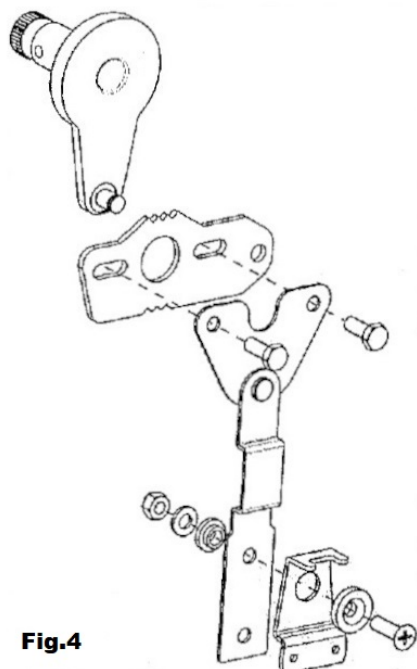
### ***FITTING THE CABLES***

1. Place the single or dual lever control in the area you previously cut off, place the cables towards the engine and make sure to mark a possibly straight part; in case it should be necessary to cover a bend, be sure to keep anyway a minimum radius of 203 mm (8 inches).
2. Fix the cables onboard at equal gaps; the first fitting must be placed at least 50 cm from the remote control. Do not tighten the cable sheath too much, in order to avoid friction increase on the control lever/s.

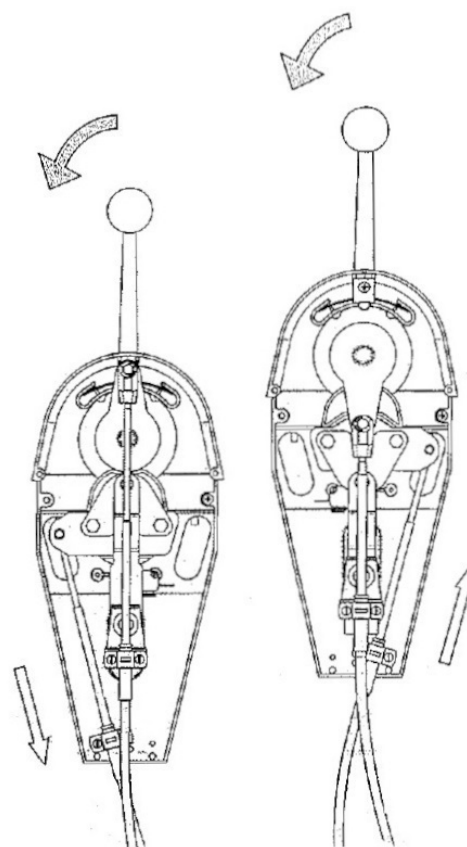
### ***CONNECTING THE SHIFT CABLE AND ADJUSTING THE STROKE***

1. Check the correct shift arm setting for cable action (pull or push) according to the engine type and in case invert it. To invert the action, **see Fig.4 and Fig.5.**

"Pull to open" setting



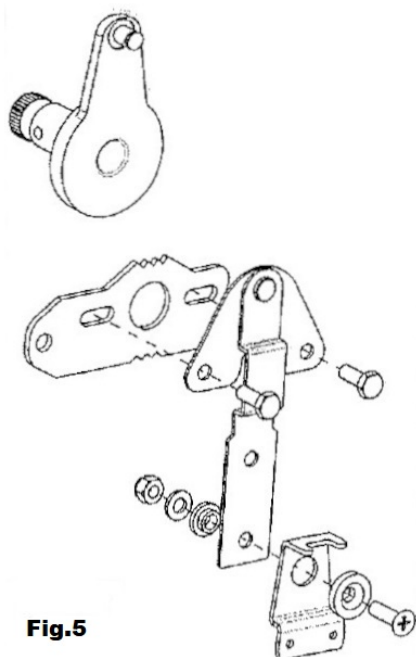
**Fig.4**



"push to open" setting

"pull to open" setting

"Push to open" setting



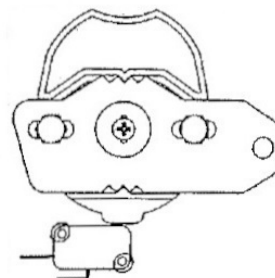
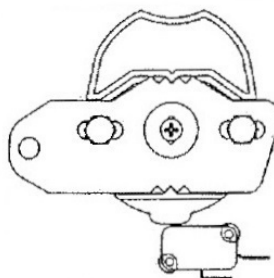
**Fig.5**

**N.B.** in questo tipo di installazione è necessario invertire anche il senso di montaggio dell'interruttore.

**N.B.** for installation this way you have to invert the switch mounting sense too.

"push to open" setting

"pull to open" setting





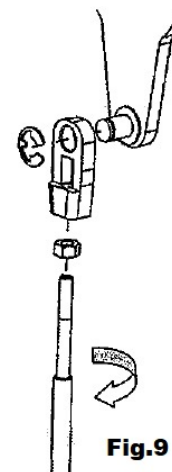
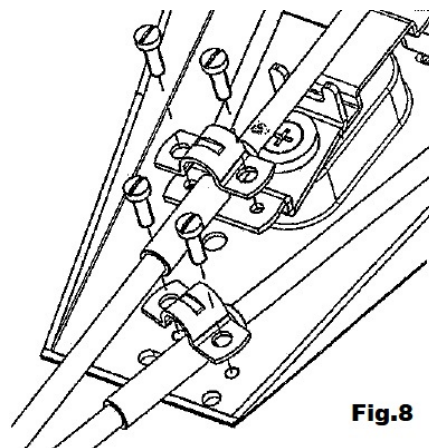
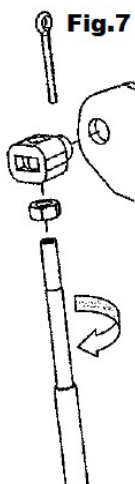
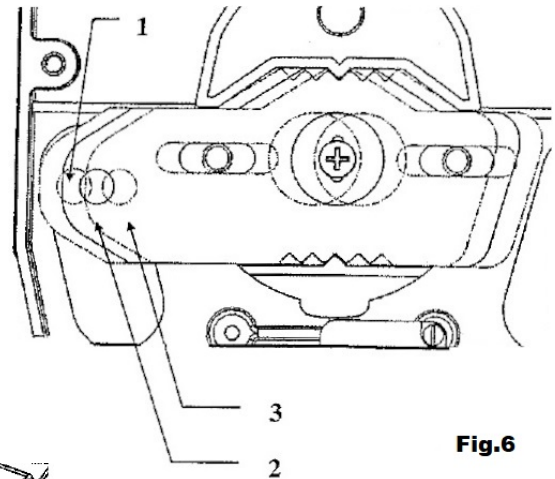
2. Fix the shift arm as shown in **Fig.6**, according the required run:

Cable travel:

- 1) 81,72 mm (left movement)
- 2) 72,12 mm (in central position)
- 3) 68,05 mm (right movement)

3. Prepare cable end as per **Fig.7** and fix it to the shift arm with the proper split-pin.

4. Fix the cable to the control base by the racket provided, making sure to fit the wrench correctly in the groove on the metal part of the cable (**see Fig.8**).



## CONNECTING THE THROTTLE CABLE

### • CONNECTING TO MAIN STATION

1. Check the correct throttle lever setting for cable action (pull or push), according to the engine type and in case invert it.
2. To invert action, **see Fig.4**.
3. Prepare cable end as shown in **Fig.9** and fix it to the throttle lever with the proper split ring.
4. Fix the cable to the control base by the racket provided, making sure to fit the wrench correctly in the groove on the metal part of the cable (**see Fig.8**).

### • CONNECTING ENGINE



**ATTENTION: the slow running adjustment has to be carried out while the throttle cable is DISCONNECTED from the engine.**

1. Verify that the throttle lever both on the control and on the engine are in slow running position.
2. Connect the throttle cable to the engine throttle lever.

3. Verify correct cable running: pull out the lever and turn it forward gear-wise; this way you can speed up the engine without engaging the gear.
4. Return the hand lever to neutral; the right positioning is proven by snap of the lever itself.

