



# 22 1/2 Degree Control Head Installation

- This bulletin will guide through the process of installing a 22-1/2 degree Control Head for a new installation or to replace an existing (standard) 15 degree Control Head.
- The basic difference between the standard 15 degree Control Head and the 22-1/2 degree Control Head is that the mechanical cable hookup for the gear is reversed from that of the 15 degree Control Head.
- Installing a 22-1/2 degree Control Head on the Glendinning EEC will allow for greater leverage and better feel on some installations.

## STEP 1: GETTING STARTED

If the 22-1/2 degree Control Head is replacing an existing 15 degree control, remove the old control and proceed to Step 2. If the Control Head is part of a new installation, proceed to Step 4 (see template) for cut out dimensions.

*NOTE: Remember to mark the cables as to their function. Step 3 provides a form for the purpose of recording the direction of travel of each of the engine levers.*

Determine whether the throttle is push-to-open, or pull-to-open. If control is push-to-open use template WITHOUT modifications.

## STEP 2: RECORD LEVER OPERATION

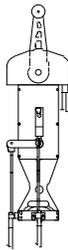
Record in the boxes below, the direction in which the engine throttle and gear levers operate:

TRANSMISSION GEAR LEVER:	PORT ENGINE	STARBOARD ENGINE
To Engage Ahead Gear:	Pull ? <input type="checkbox"/> Push ? <input type="checkbox"/>	Pull ? <input type="checkbox"/> Push ? <input type="checkbox"/>
GOVERNOR LEVER:		
To Increase Engine Speed:	Pull ? <input type="checkbox"/> Push ? <input type="checkbox"/>	Pull ? <input type="checkbox"/> Push ? <input type="checkbox"/>

## STEP 3: DRAWING ASSEMBLY

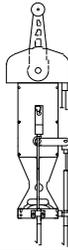
Depending on information contained above, assemble the mechanical backup interface as shown in the following drawings.

Pull to Open Throttle  
Pull to Ahead Gear



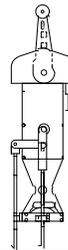
*This cable will always face the bow of the boat.*

Pull to Open Throttle  
Push to Ahead Gear



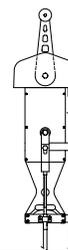
*This cable will always face the bow of the boat.*

Push to Open Throttle  
Pull to Ahead Gear



*This cable will always face the bow of the boat.*

Push to Open Throttle  
Push to Ahead Gear



*This cable will always face the bow of the boat.*

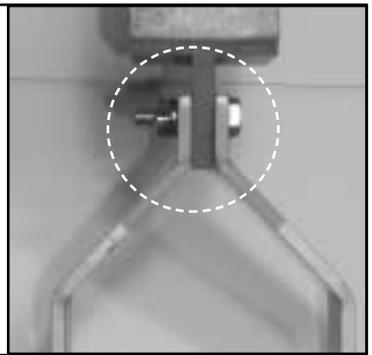
## STEP 4: USE TEMPLATE TO CUT HOLE IN CONSOLE (see attached template)

If the direction in which the engine throttle and gears operate is PUSH-to-open use the existing cut out template enclosed in manual (3.25 inch wide cutout).

If the direction in which the engine throttle and gears operate is PULL-to-open then use template attached to this bulletin (4.0 inch wide cutout).

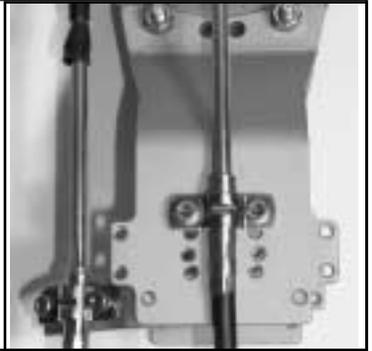
## STEP 5: MOUNT CONTROL HEAD TO CONSOLE

Install the 22-1/2 degree control into the hole cut into the console. Install the cable bracket to the base of the control head.



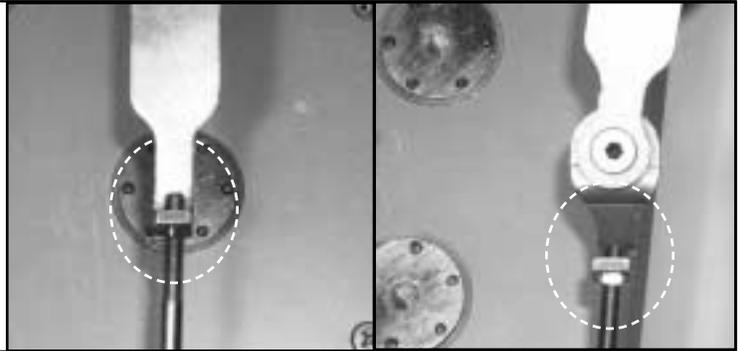
## STEP 6: ATTACH CONTROL CABLES TO CLAMPS

Attach the control cables to their clamps (As noted earlier, the gear cables will hook up opposite to how they were installed on the 15 degree control head. SEE Step 3 for proper installation).



## STEP 7: THREAD LEVER ASSEMBLIES ONTO CABLES

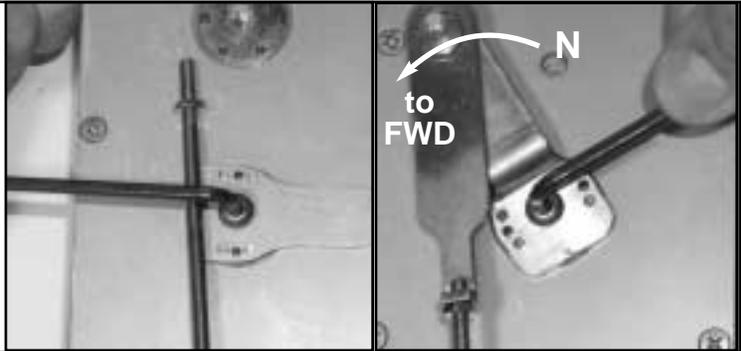
Thread the lever assemblies onto the ends of the cables with approximately 1/4-inch thread engagement (see photograph).



## STEP 8: ATTACH LEVER ASSEMBLY TO CONTROL

Attach the lever assemblies to the control head, making sure that they are in their proper alignment pins (use the center hole on each where there is a series of 3 holes). Tighten 1/4-28 retaining screw.

NOTE: Gear plate can be attached at Neutral. Throttle will need to be rotated to FWD or REV to attach Throttle plate.



## STEP 9: COMPLETE INSTALLATION

Tighten the jam nuts on the cable ends. These adjustments will probably not have to be changed. Any fine tuning will be done at the actuator, as per instructions in the Installation Manual (ver. 1.1 and 1.3).

Double check all connections to ensure that they are connected properly. Be sure to use the corresponding station processor (PN 11102-S) with this control head to ensure proper performance.