



## BINNACLE MOUNT REMOTE CONTROL INSTALLATION AND USER'S GUIDE

### APPLICATION

Use for "Evinrude<sup>®</sup> E-TEC<sup>®</sup>" binnacle mount remote control assemblies designed for Evinrude<sup>®</sup> and Johnson<sup>®</sup> outboards.

### SAFETY INFORMATION

For safety reasons, this kit should be installed by an authorized Evinrude<sup>®</sup> / Johnson<sup>®</sup> dealer. This instruction sheet is not a substitute for work experience. Additional helpful information may be found in other service literature for your engine.

This instruction sheet uses the following signal words identifying important safety messages.

	<b>DANGER</b>	
<b>Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.</b>		

	<b>WARNING</b>	
<b>Indicates a potentially hazardous situation which, if not avoided, CAN result in severe injury or death.</b>		

	<b>CAUTION</b>	
<b>Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate personal injury or property damage. It also may be used to alert against unsafe practices.</b>		

**IMPORTANT:** Identifies information that will help prevent damage to machinery and appears next to information that controls correct assembly and operation of the product.

These safety alert signal words mean:

**ATTENTION!**  
**BECOME ALERT!**  
**YOUR SAFETY IS INVOLVED!**

Always follow common shop safety practices. If you have not had training related to common shop safety practices, you should do so to protect yourself, as well as the people around you.

It is understood that this instruction sheet may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

DO NOT do any repairs until you have read the instructions and checked the pictures relating to the repairs.

Be careful, and never rush or guess a service procedure. Human error is caused by many factors: carelessness, fatigue, overload, preoccupation, unfamiliarity with the product, and drugs and alcohol use, to name a few. Damage to a boat and outboard can be fixed in a short period of time, but injury or death has a lasting effect.

When replacement parts are required, use Evinrude/Johnson Genuine Parts or parts with equivalent characteristics, including type, strength and material. Using substandard parts could result in injury or product malfunction.

Torque wrench tightening specifications must be strictly followed. Replace any locking fastener (locknut or patch screw) if its locking feature becomes weak. Definite resistance to turning must be felt when reusing a locking fastener. If replacement is specified or required because the locking fastener has become weak, use only authorized Evinrude/Johnson Genuine Parts.

If you use procedures or service tools that are not recommended in this instruction sheet, YOU ALONE must decide if your actions might injure people or damage the outboard.

**TO THE INSTALLER:** Give this booklet to the owner. Advise the owner of any special operation or maintenance information contained in the instructions.

**TO THE OWNER:** Save these instructions in your owner's kit. This sheet contains information important to the future use and maintenance of your outboard.



# CONTENTS OF KITS – BINNACLE MOUNT REMOTE CONTROL



Single Lever Binnacle (with keyswitch) PN 5006186 005476

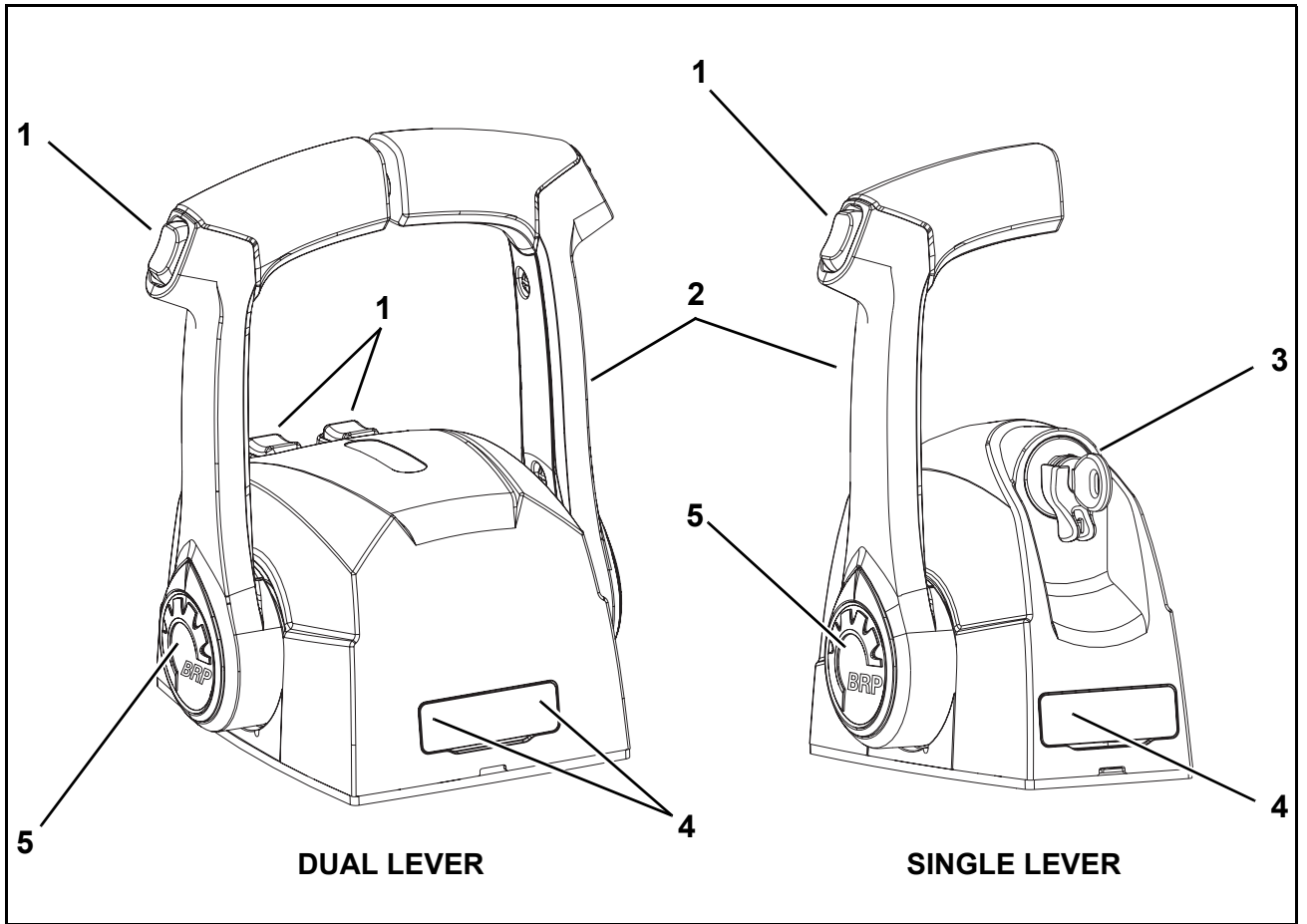


Single Lever Binnacle, PN 5006182 005478



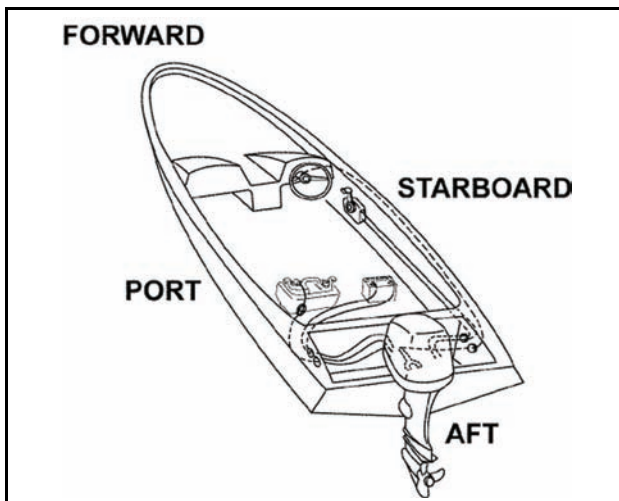
Dual Lever Binnacle, PN 5006184 005483

## BINNACLE MOUNT REMOTE CONTROL FEATURES



1. Trim and tilt switch
2. Handle, shift and throttle
3. Key switch (includes clip and lanyard assembly)
4. Adjustment screw, remote control lever friction
5. Fast idle button

005497



Nautical Orientation

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### List of Additional Features

- Neutral Detent
- "Start in gear prevention" switch
- Adjustable throttle friction
- Uses standard *Evinrude / Johnson* control cables (1979 and newer type)

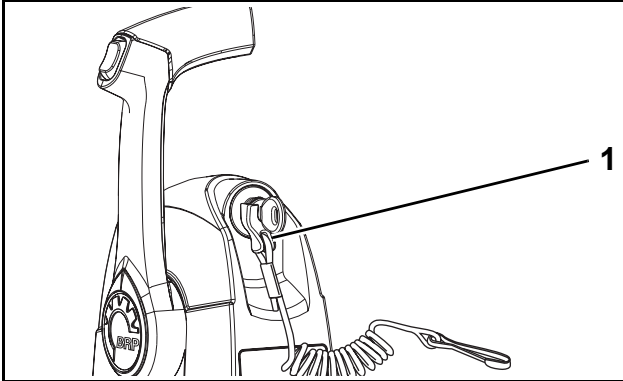
## REMOTE CONTROL OPERATION

Read and familiarize yourself with the complete operation of the remote control before attempting to start the outboard.

**IMPORTANT:** The operation of this remote control may vary from one outboard model to another. Refer to outboard's operator's guide for specific instructions related to outboard.

### Emergency Stop Feature of Key Switch

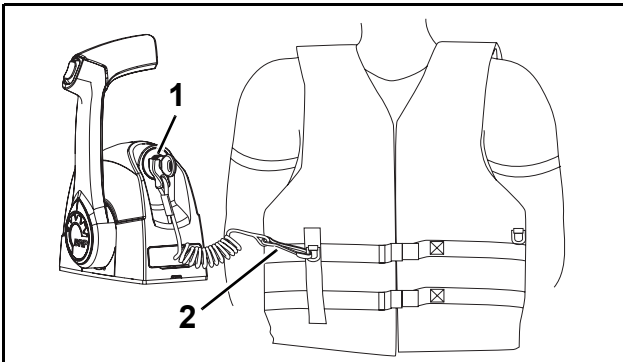
Push clip of emergency stop lanyard onto key switch as shown.



1. Emergency stop clip

005498

Lanyard **MUST** be securely attached to operator.



1. Key switch  
2. Lanyard

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### WARNING



Lanyard **MUST** be securely attached to operator, and clip **MUST** be installed on key switch. **DO NOT** operate outboard with clip removed from switch, except in an emergency.

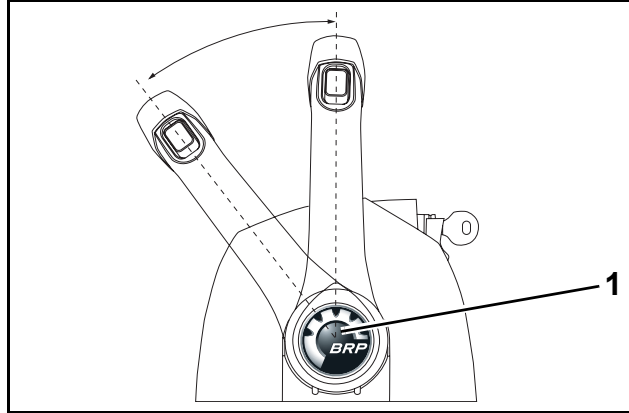
If operator is thrown from helm, lanyard will pull clip from key switch to stop outboard.

**IMPORTANT:** In an emergency, a passenger can put control handle in NEUTRAL and restart outboard without lanyard.

## Fast Idle

Use of fast idle feature is not required on *Evinrude E-TEC* outboards. Refer to operator's guide for specific outboard.

The fast idle button can be used to advance throttle without shifting into gear. With control lever in NEUTRAL, push on fast idle button (cover) to open throttle for starting and warm-up.



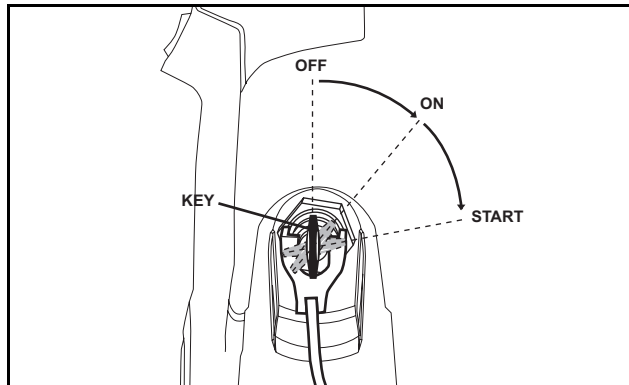
1. Fast idle button (push on cover)

005500

## Key Switch

Refer to operator's guide for specific starting instructions related to outboard.

Turn key switch from OFF to ON position. The warning horn should sound momentarily to indicate it is working. Turn key to START position. Release key as soon as motor starts. **DO NOT** turn key to START while outboard is running.



005501

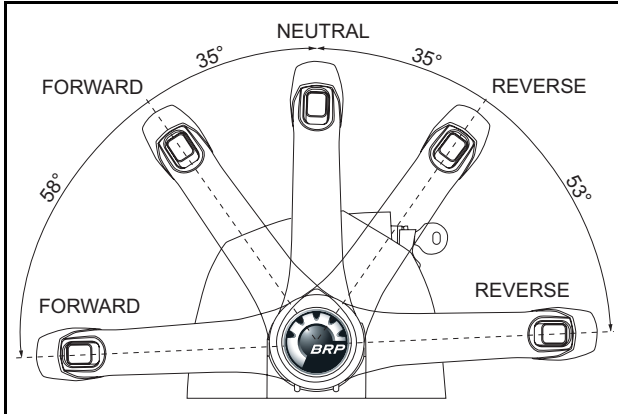
PRIME feature is **NOT** used on *Evinrude E-TEC* outboards. To use PRIME feature, momentarily push key IN with key in ON position.

**DO NOT** run a cold engine any faster than necessary to keep it from stalling. **DO NOT** exceed 2500 RPM in NEUTRAL. If throttle is advanced for starting, reduce idle speed setting as soon as outboard starts. For outboards with *Quikstart*<sup>™</sup>, wait until engine slows to IDLE RPM before shifting into gear.

## Control Handle

**IMPORTANT:** Outboard must be OFF. If remote control cables are connected to outboard, turn propeller shaft while shifting remote control.

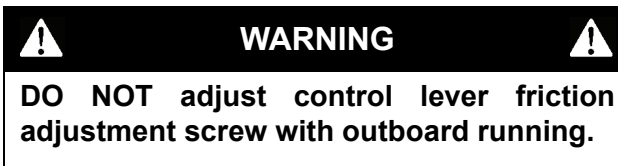
With control handle in NEUTRAL and fast idle feature not activated, move control handle to FORWARD gear or REVERSE gear position. Continue movement of control handle in same direction to open (advance) throttle.



Remote Control Handle Positions

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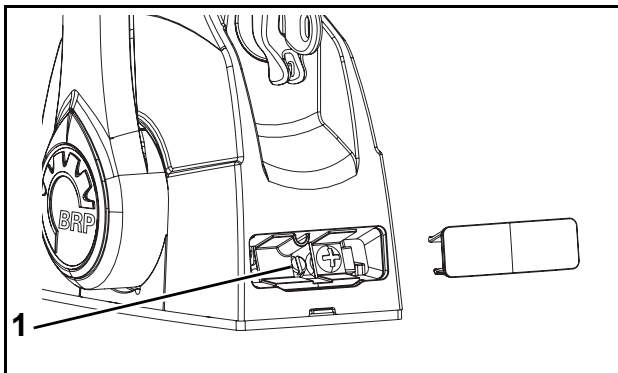
## Control Handle Friction Adjustment



Move the control handle to FORWARD throttle range. Control handle should move freely. Adjust control handle friction adjustment to prevent vibration from changing throttle setting.

Use a flat head screwdriver to adjust control handle friction adjustment screw. This adjustment is used to increase or reduce the force required to move the control handle.

Turn adjustment screw clockwise to increase the friction or counterclockwise to reduce the friction.



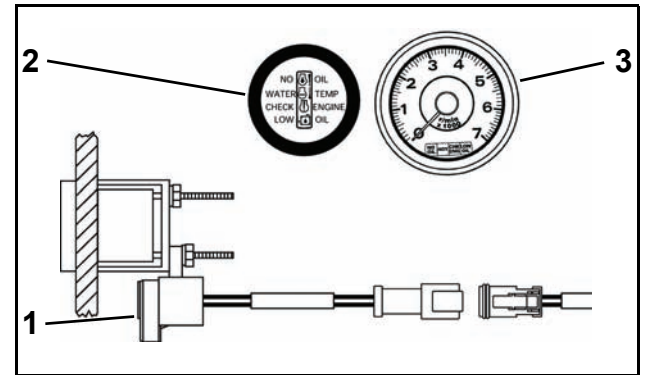
1. Adjustment screw, throttle friction

005475

## Warning Horn – SystemCheck™ Installations

The warning horn sounds to alert operator when certain engine problems occur. A 1/2-second self-test beep should sound when the key switch is turned ON.

**IMPORTANT:** The warning horn must connect to wiring harness with a SystemCheck gauge or an audible horn driver module to be functional. Refer to Operator's Guide and instrumentation instructions for additional information related to the outboard's warning system.



1. Warning horn

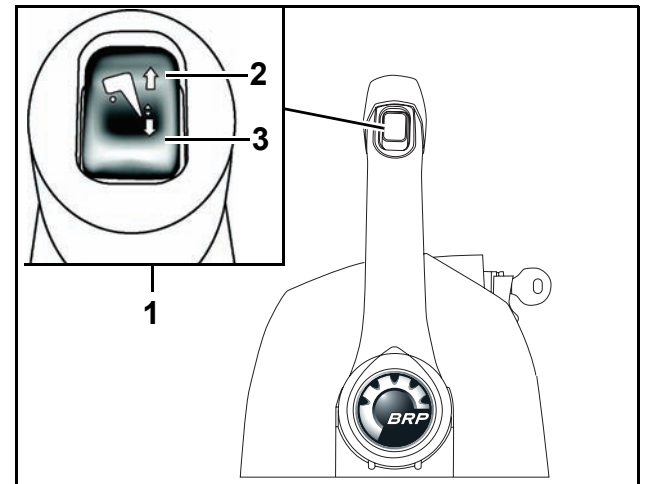
2. 2 in. SystemCheck gauge

3. 3 in. Tachometer / SystemCheck gauge

004857

## Trim/Tilt Switch

Push top of switch to trim out and tilt up, or push bottom of switch to trim in and tilt down.



1. Trim/Tilt switch

2. Top – Trim out / tilt up

3. Bottom – Trim in / tilt down

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## INSTALLATION INSTRUCTIONS

Read and familiarize yourself with the complete installation instructions of the remote control before attempting to install the remote control. Always test operation of remote control once installed.

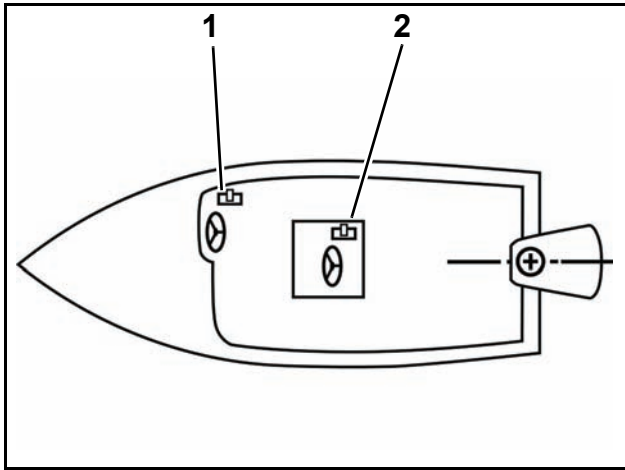
**WARNING**

Failure to properly install and test remote control may result in remote control malfunction and loss of control of boat.

**IMPORTANT:** Refer to specific outboard installation instructions for information related to connecting remote controls to outboard.

### Mounting Location

Select the appropriate location based on boat configuration.



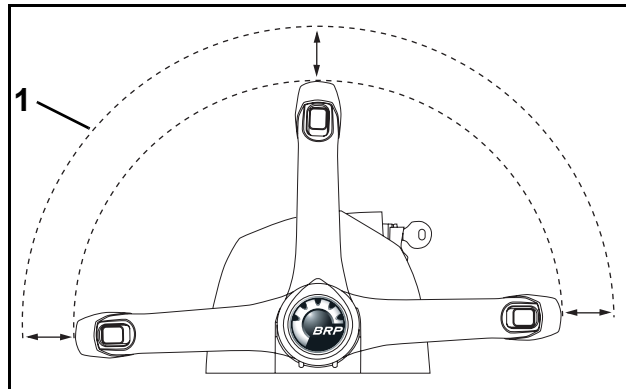
1. Side console (Port side)
2. Center console (Port Side)

005471

**IMPORTANT:** The mounting location must be a flat surface and must be strong enough to provide a rigid support. Strengthen mounting surface as necessary.

Refer to "SINGLE LEVER BINNACLE MOUNT REMOTE CONTROL PROFILE DIMENSIONS" on page 15 and "DUAL LEVER BINNACLE MOUNT REMOTE CONTROL PROFILE DIMENSIONS" on page 16.

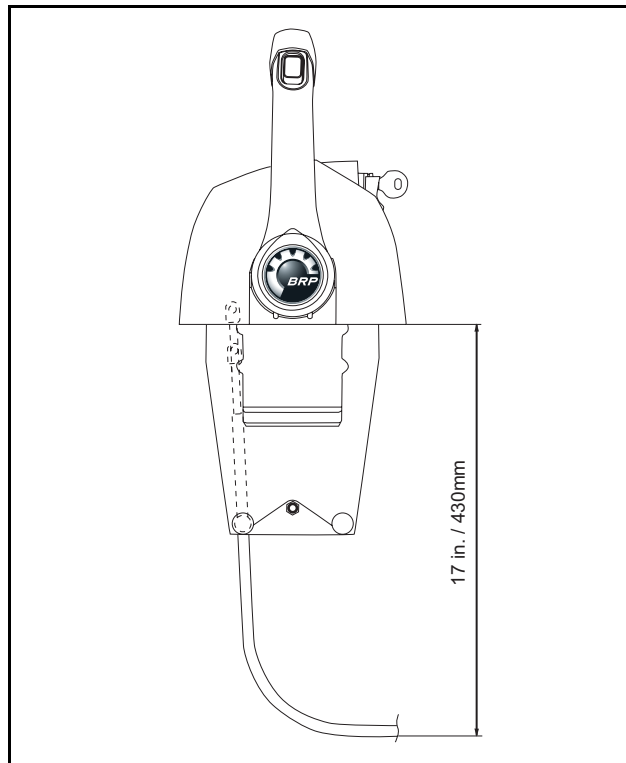
Place remote control at proposed location and check clearance around remote control handle at full throttle in FORWARD and then at full throttle in REVERSE. There must be at least 2.5 in. (64 mm) of clearance between the handle and any part of the boat throughout the control handle travel.



1. 2.5 in (64 mm) clearance line

005473

There must be at least 17 in. (430 mm) of clear space below the remote control for cable routing. Control cables must be straight as they exit the remote control. Allow at least 6 in. (152 mm) to the beginning of the first bend of control cables.



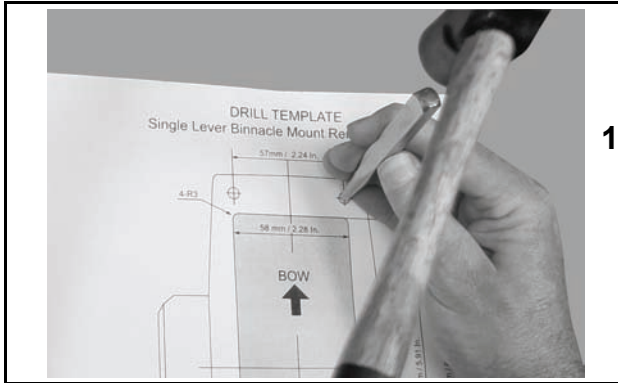
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## Cut Mounting Holes

Refer to profile drawings and use appropriate drill template to cut mounting holes.

**IMPORTANT:** Make sure the mounting location has **all** the required clearances before drilling or cutting. Disconnect battery to prevent accidental shock from electrical wiring.

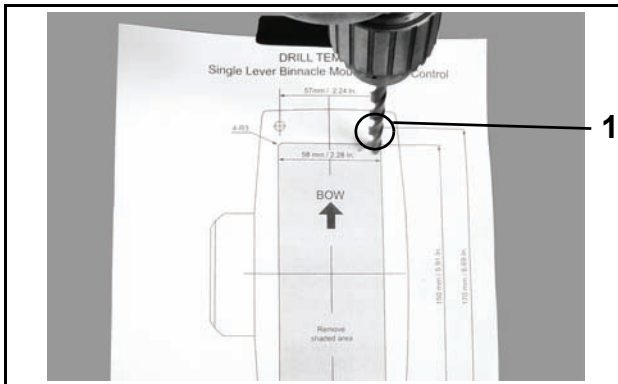
Position template. Use center punch and mark the centers of drill locations.



Template, single lever remote control

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Drill four (4) 3/8 in. (9.5 mm) holes at the four corners of the area to be cut out. Cut along the lines of shaded area. Use reciprocating saw or appropriate cutting tools.

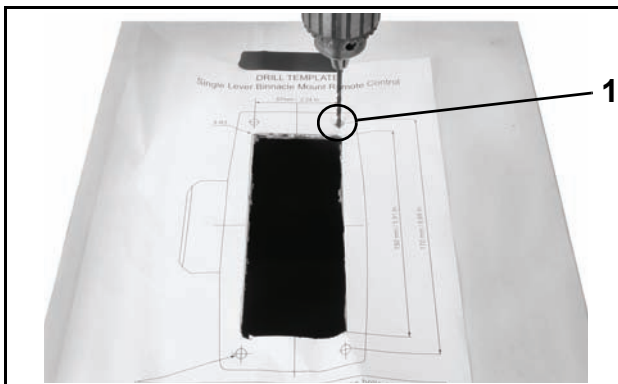


Template, single lever remote control

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1. Corner of shaded area

Drill four 9/64 in. (3.5 mm) holes at mounting hole locations.



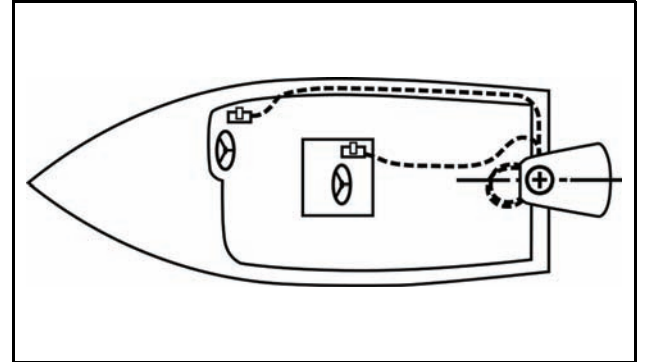
1. Mounting hole locations (4)

005504

## Determine Remote Control Cable Length

Measure from center of control handle with remote control in mounting position, along intended cable route to engine centerline at transom height as illustrated by dotted lines in diagram. Add 40 in. (1.0 m) to the measurement. This dimension is the required cable length.

*Evinrude/Johnson Genuine Parts* outboard control cables are available in one-foot increments from 5 ft. to 20 ft. lengths and two-foot increments from 20 ft. to 50 ft. lengths. Use cables that are equal to your calculated length, or are the next longer available length.

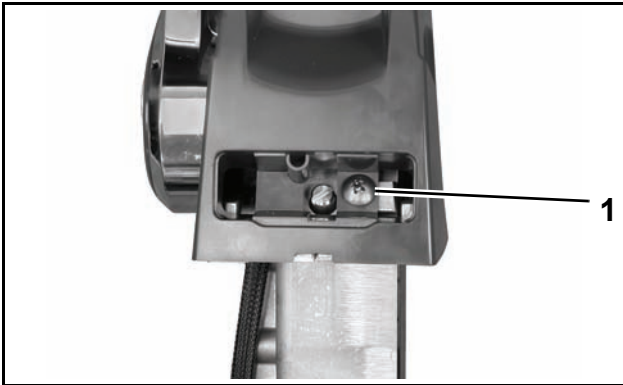


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**IMPORTANT:** Route cables with fewest number of bends. Bends must never be less than 6 in. (150 mm) radius.

## Install Remote Control Cables

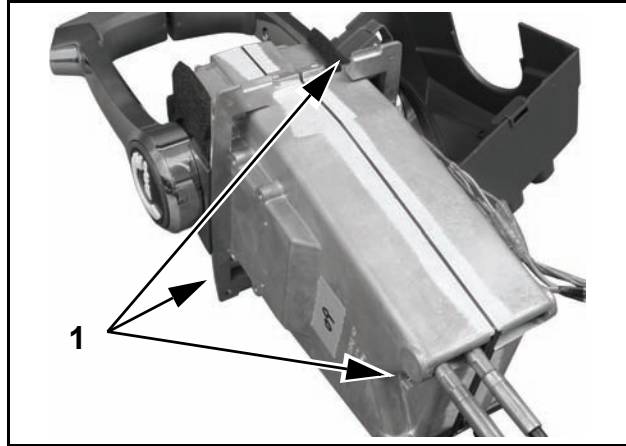
Remove friction cover. Remove cover retaining screw(s) and remote control cover.



**Single Lever Remote Control**  
1. Screw

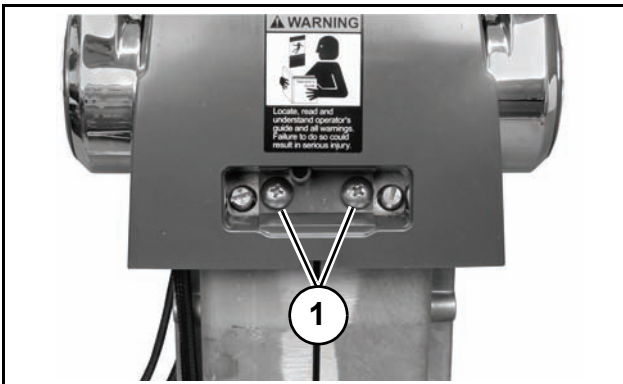
005479

Dual Lever Remote Control – Remove three (3) screws and separate port and starboard remote control housings.



**Dual Lever Remote Control**  
1. Screws

005492



**Dual Lever Remote Control**  
1. Screws (2)

005489

Single Lever Remote Control – Remove flange retainer screws and flange.



**Single Lever Remote Control**  
1. Remote control cover  
2. Flange

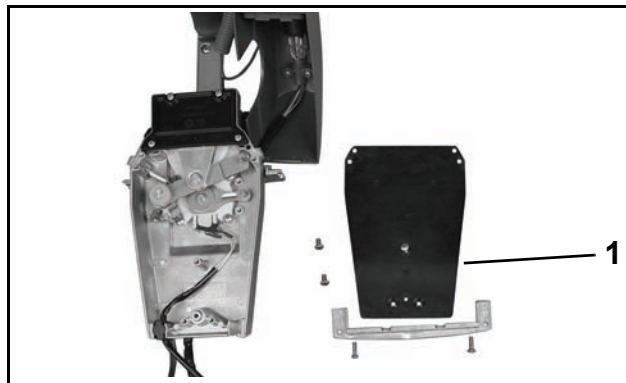
005482



**Dual Lever Remote Control**

005491

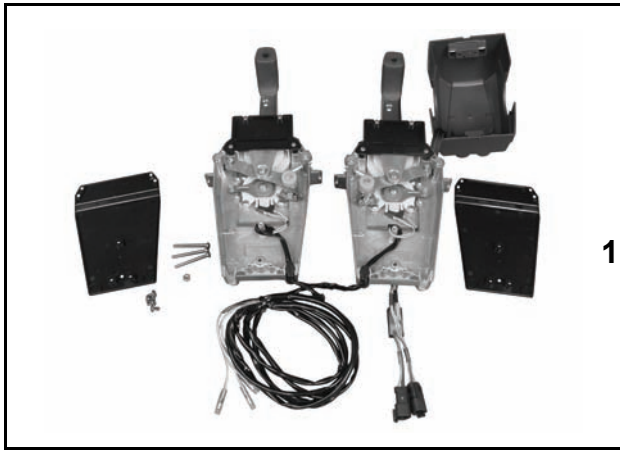
Remove screws and side cover from remote control housing.



**Single Lever Remote Control (with key switch)**  
1. Side cover

005477





**Dual Lever Remote Control**  
1. Side covers (2) 005490

Use *Triple-Guard*® grease to lubricate all moving mechanisms, trunnion pockets, and remote control cables.

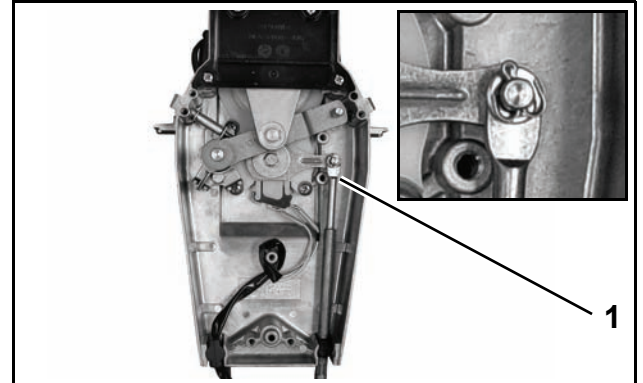


004910

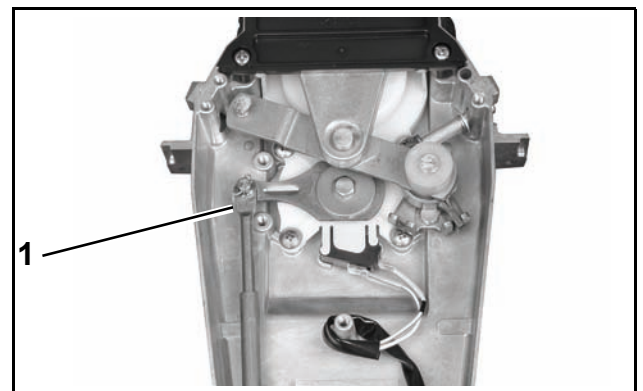
**! WARNING !**

Always use new cotter pins and bend both sides of cotter pin as shown to prevent interference with remote control housing or possible dislodging of cotter pin from mounting pin.

Install shift cable and flat washer on to shift pin and secure with **new** cotter pin. Bend cotter pin as shown.



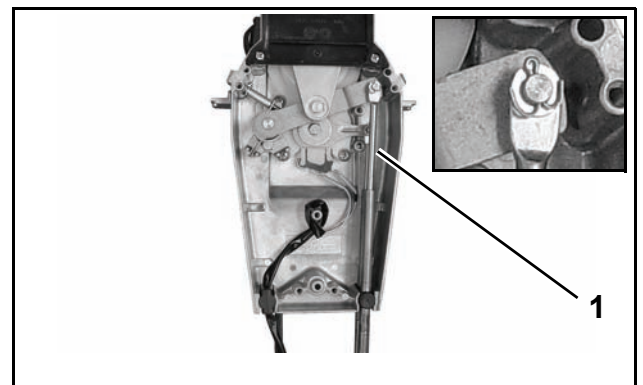
**Single Lever Remote Control (Dual Lever Remote Control - starboard side)**  
1. Shift cable 005485



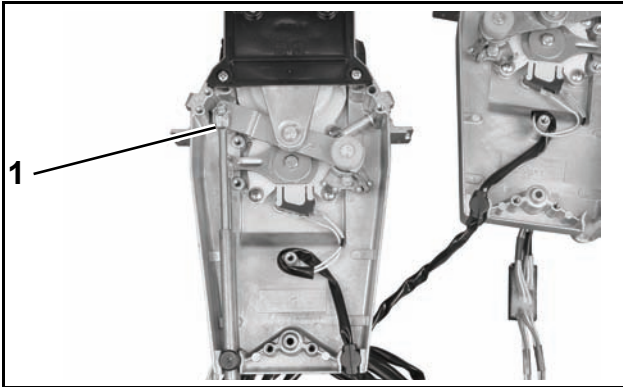
**Dual Lever Remote Control - port side**  
1. Shift cable 005493

**IMPORTANT:** Use *Evinrude/Johnson Genuine Parts* or parts with equivalent characteristics, including type, strength, and material.

Install throttle cable and flat washer on to throttle pin and secure with **new** cotter pin. Bend cotter pin as shown.



**Single Lever Remote Control (Dual Lever Remote Control - starboard side)**  
1. Throttle cable 005486



**Dual Lever Remote Control - port side**  
1. Throttle cable

005494

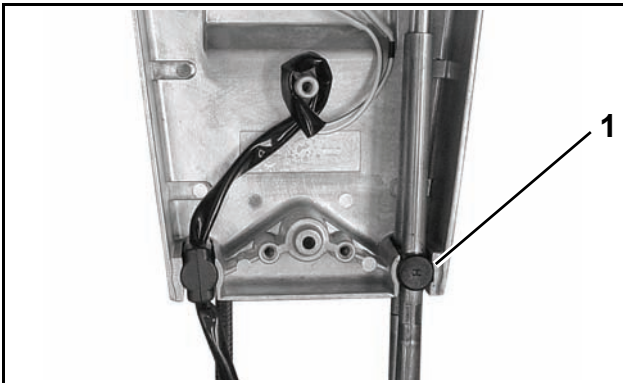
Dual Lever Remote Control – Install covers and screws. Apply *Triple-Guard* grease to screws. Tighten screws securely



**Dual Lever Remote Control**  
1. Screws

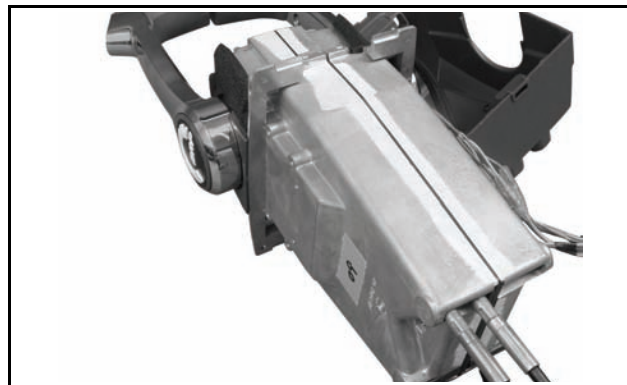
005491

Make sure shift and throttle cables are in trunnion pocket(s), and safety switch wiring does not rub or interfere with movements of remote control components.



1. Trunnion pockets

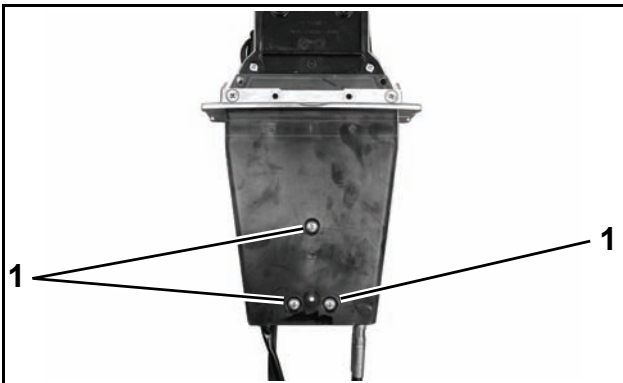
005488



**Dual Lever Remote Control**

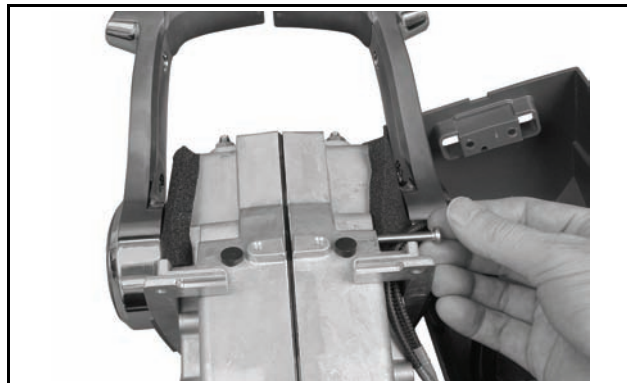
005492

Single Lever Remote Control – Install cover and screws. Apply *Triple-Guard* grease to assembly screws. Tighten screws securely



**Single Lever Remote Control**  
1. Screws

005487



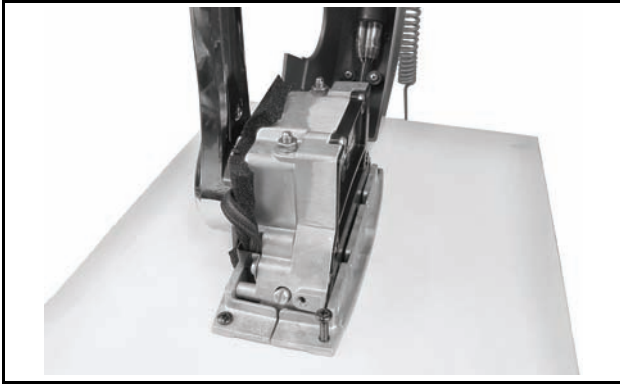
**Dual Lever Remote Control**

005496

Check operation and movement of control levers. Make sure remote control shift and throttle functions operate smoothly. Refer to **REMOTE CONTROL OPERATION TEST**.

## Fasten Remote Control to Boat

Fasten control box in position with mounting screws provided. Install gasket and four screws. Tighten mounting screws.



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**IMPORTANT:** Make sure remote control assembly is secure and does not move during operation.

**Refer to specific outboard installation instructions for information related to connecting remote controls to outboard.**

## Electrical Connections

Connect neutral safety switch wiring.



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**IMPORTANT:** Apply a light coat of *Electrical Grease™* onto the electrical connector seals. Push connectors together until latched.

Connect trim and tilt switch wiring. Connect key switch wiring (if equipped).



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## REMOTE CONTROL OPERATION TEST

**CAUTION**

Operation Tests must be performed with outboard stopped. Disconnect emergency stop lanyard, disconnect battery cables, and remove spark plug wires from spark plugs and/or disconnect crankshaft position sensor (CPS) connector to prevent accidental starting of outboard.

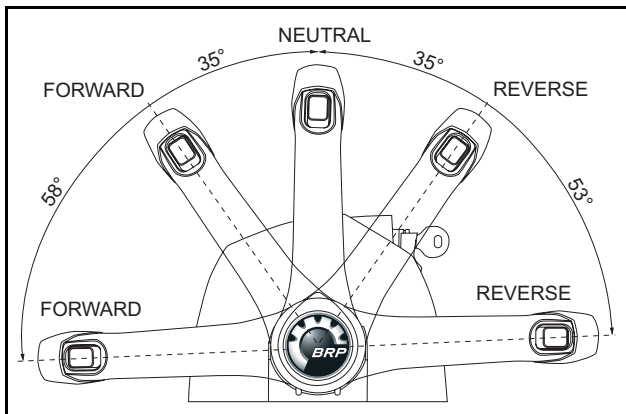
**IMPORTANT:** If remote control cables are connected to outboard, turn propeller shaft while shifting remote control.

Shift control handle into FORWARD and advance throttle to FULL THROTTLE. Next, move handle back to IDLE position and then back into NEUTRAL. Notice detent function of remote control handle. Repeat process moving control handle into REVERSE.



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Remote control must shift smoothly and accurately into FORWARD, NEUTRAL, and REVERSE and throttle must move smoothly through the entire throttle range from IDLE to FULL THROTTLE (WOT). Check throttle operation in both FORWARD and REVERSE.



005502

## NEUTRAL START TEST

**WARNING**

Make certain starter will not operate when the outboard is in gear. The start-in-gear prevention feature is required by the United States Coast Guard to help prevent injuries.

Remote control is designed to crank outboard in NEUTRAL only.

Use this “non running” test to make certain the starter motor will **NOT** operate when control lever is in FORWARD or REVERSE.

The lanyard clip may be attached to key switch or removed for the following test.

**IMPORTANT:** Disconnect all spark plug wires and/or disconnect crankshaft position sensor (CPS) connector to prevent outboard from starting during test procedure.

With control handle in NEUTRAL position, turn key switch to START. The starter should operate.

With the key switch in START position and the starter cranking the engine move control handle to FORWARD. The starter should stop as handle leaves NEUTRAL.

Release key and move control handle to NEUTRAL. Turn key to START. The starter should operate.

With key switch in START position and the starter cranking the engine move control handle to REVERSE. The starter should stop as handle leaves NEUTRAL.

## OPERATOR TESTS AND ADJUSTMENTS

**IMPORTANT:** Test operation of emergency stop switch at each outing. Refer to **EMERGENCY STOP SWITCH TEST**. If outboard does not stop, return control to dealer for repair.

Check throttle friction. When properly adjusted, control lever should have low friction to allow easy movement in FORWARD throttle range, and not allow vibration to change throttle setting. Refer to **Control Handle Friction Adjustment**.

### ON-WATER TEST



Secure boat to dock to prevent motion. Attach lanyard to key switch. Place control handle in NEUTRAL position. If needed use fast idle feature. Turn key ON. (Warning horn should sound momentarily as self-test on *SystemCheck* equipped installations.) Turn key to START. Release key as soon as outboard starts. (Push in on key for enrichment function if outboard is equipped.) Do not turn key to START while outboard is running. Refer to outboard's operator's guide.

**IMPORTANT:** Do not exceed 2500 RPM in NEUTRAL during warm-up.

Check shift operation. Check that outboard shifts to FORWARD when control is shifted to FORWARD, and shifts to REVERSE when control is shifted to REVERSE.

Check that remote control operates freely and equal friction is felt in FORWARD and REVERSE throttle range of control handle.

## EMERGENCY STOP SWITCH TEST

	<b>WARNING</b>	
<b>Always use the safety lanyard when operating boat to help prevent a runaway boat and reduce the risk of personal injury or death. Check emergency stop function often.</b>		

Check emergency stop function. Install lanyard clip on key switch and start outboard.



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With outboard running, remove emergency stop lanyard. Outboard must STOP. If outboard does not stop, check key switch and wiring. Repair as needed.

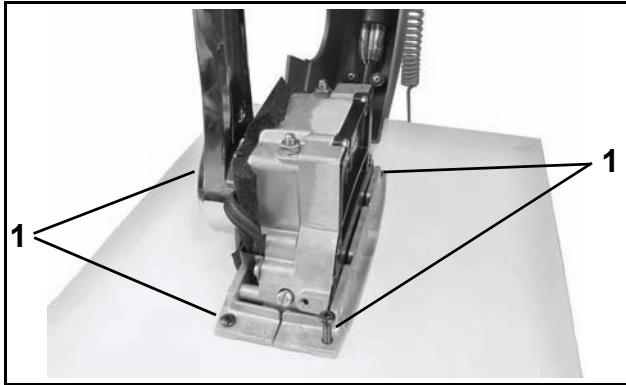


## MAINTENANCE

**CAUTION**

Inspection and maintenance must be performed with outboard stopped. Disconnect emergency stop lanyard, disconnect battery cables, and remove spark plug wires from spark plugs and/or disconnect crankshaft position sensor (CPS) connector to prevent accidental starting of outboard.

Check mounting of remote control. Tighten screws or secure as needed.



1. Screws (4)

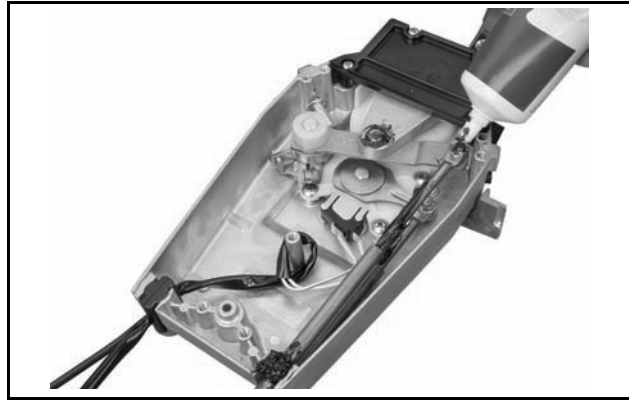
005503

While turning propeller, check for smooth and correct operation of remote control. Observe linkages at outboard and be sure shift and throttle linkages move accurately and completely for each remote control setting.

If an abnormal condition is found, repair as needed. Replace all damaged parts. Recheck operation of remote control after servicing. Remote control must shift smoothly and accurately into FORWARD, NEUTRAL, and REVERSE, and throttle must move smoothly through the entire throttle range from IDLE to FULL THROTTLE (WOT). Check throttle operation in both FORWARD and REVERSE.

Check remote control for looseness, damage, and corrosion. Clean and replace parts as needed.

Use *Triple-Guard* grease to lubricate all moving mechanisms and remote control cables.



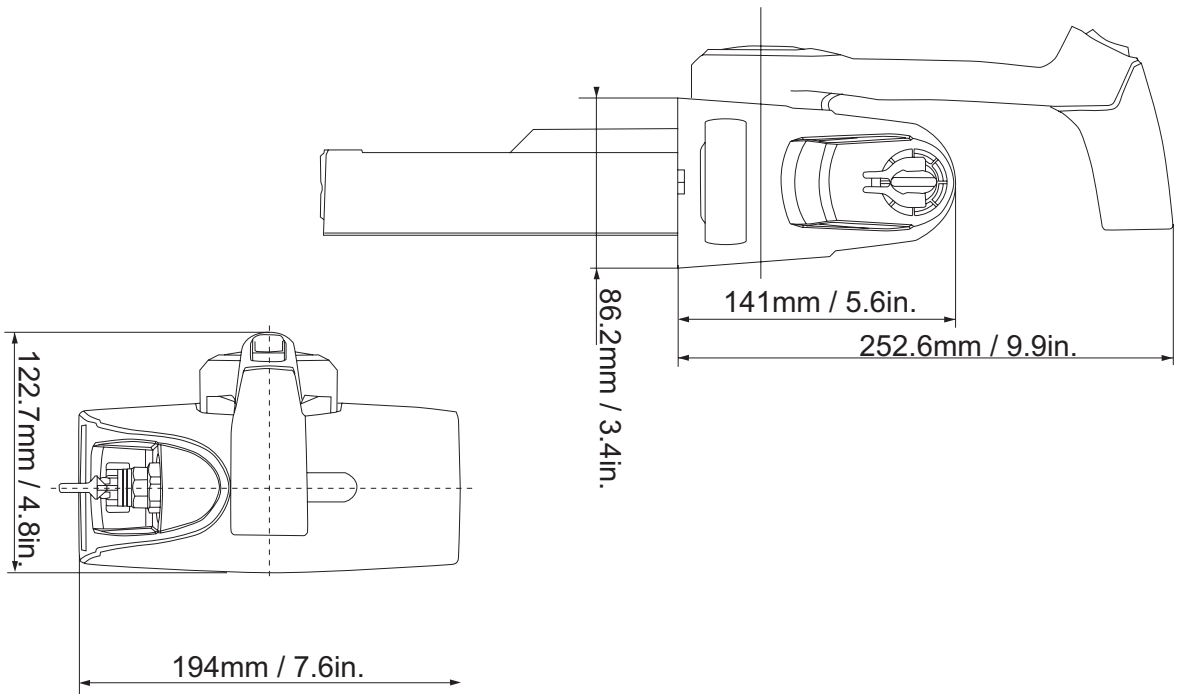
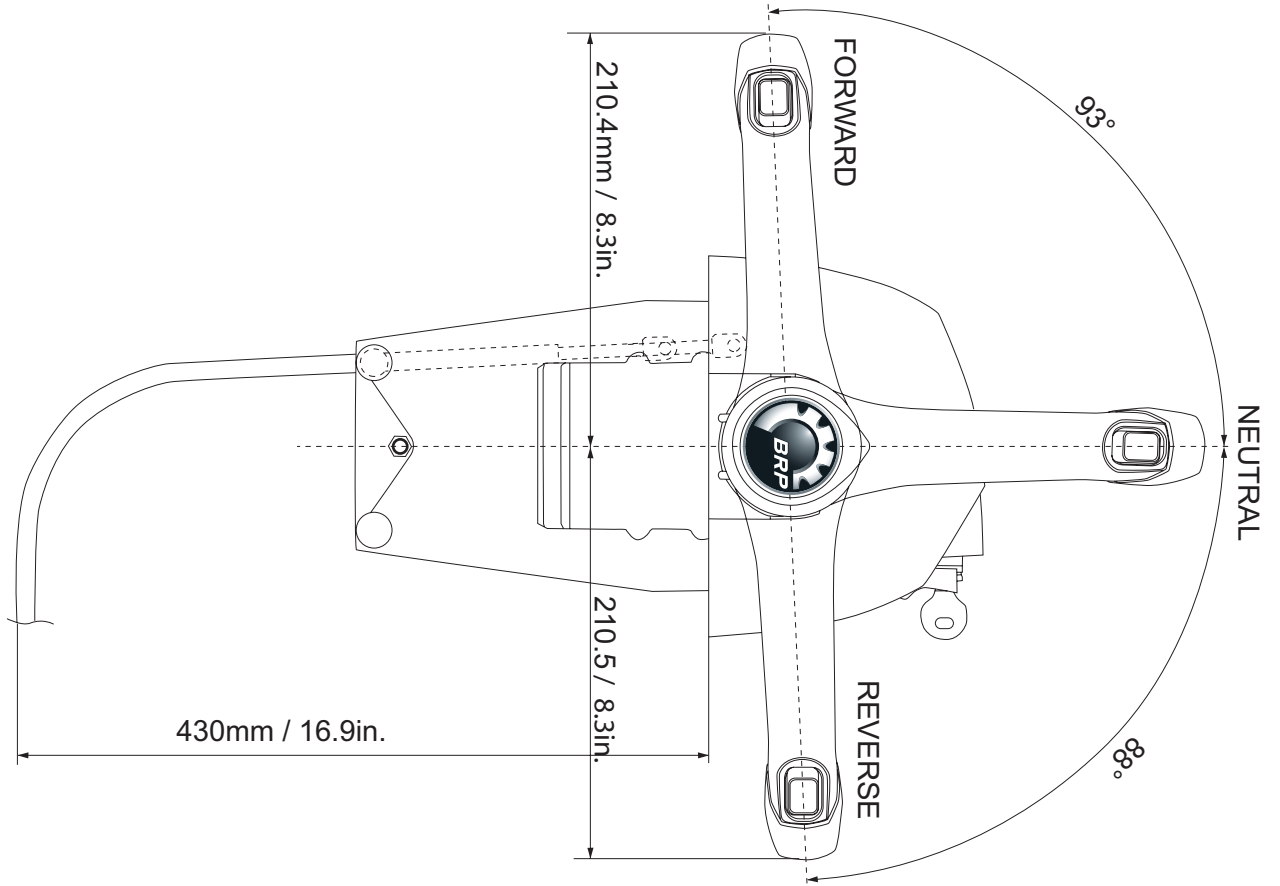
005509

Reassemble all components disassembled for inspection and servicing. Check operation of remote control.

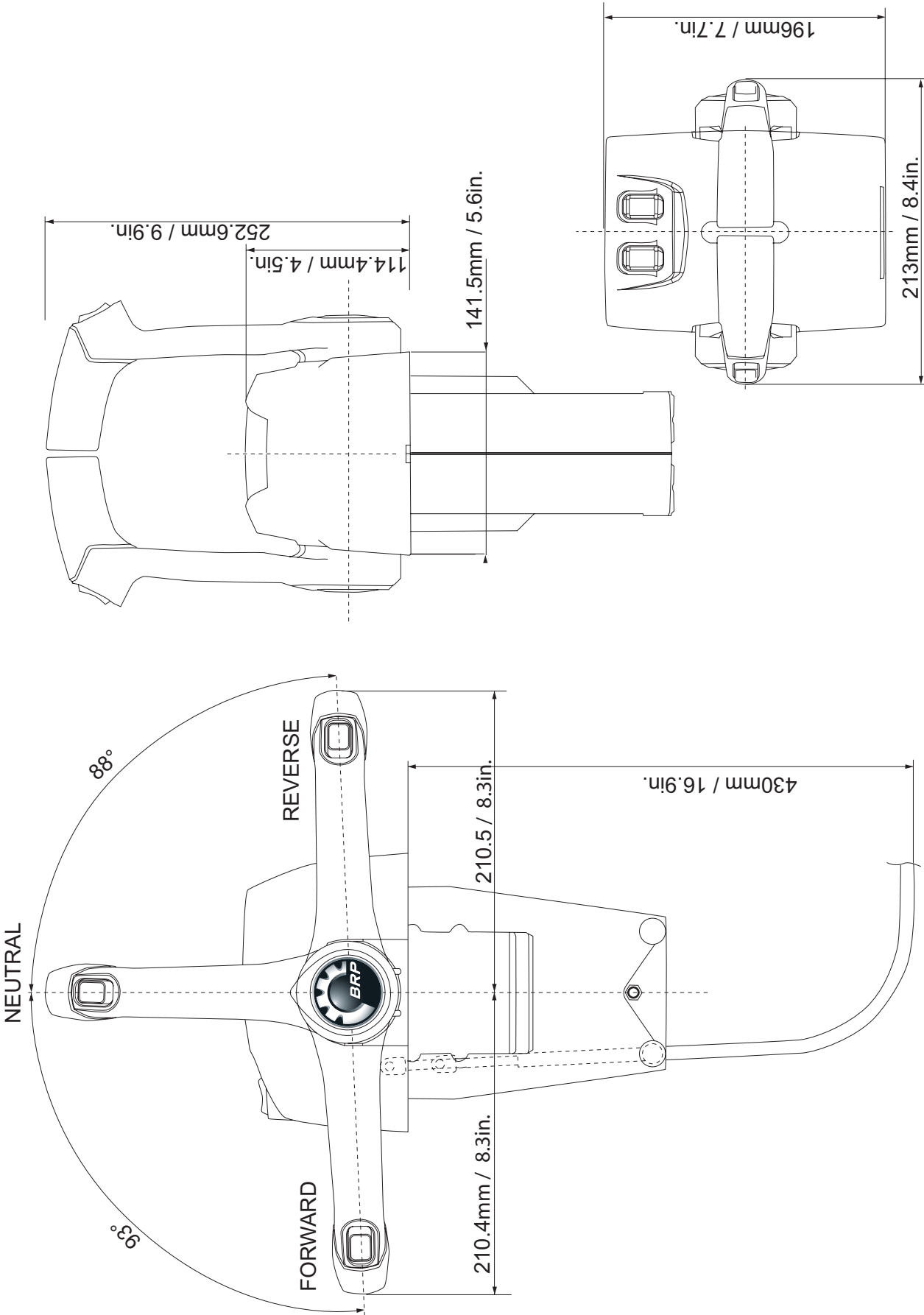
Start outboard and check shift and throttle operation.

With outboard running, remove emergency stop lanyard. Outboard must STOP. If outboard does not stop. Check key switch and wiring. Repair as needed.

# SINGLE LEVER BINNACLE MOUNT REMOTE CONTROL PROFILE DIMENSIONS

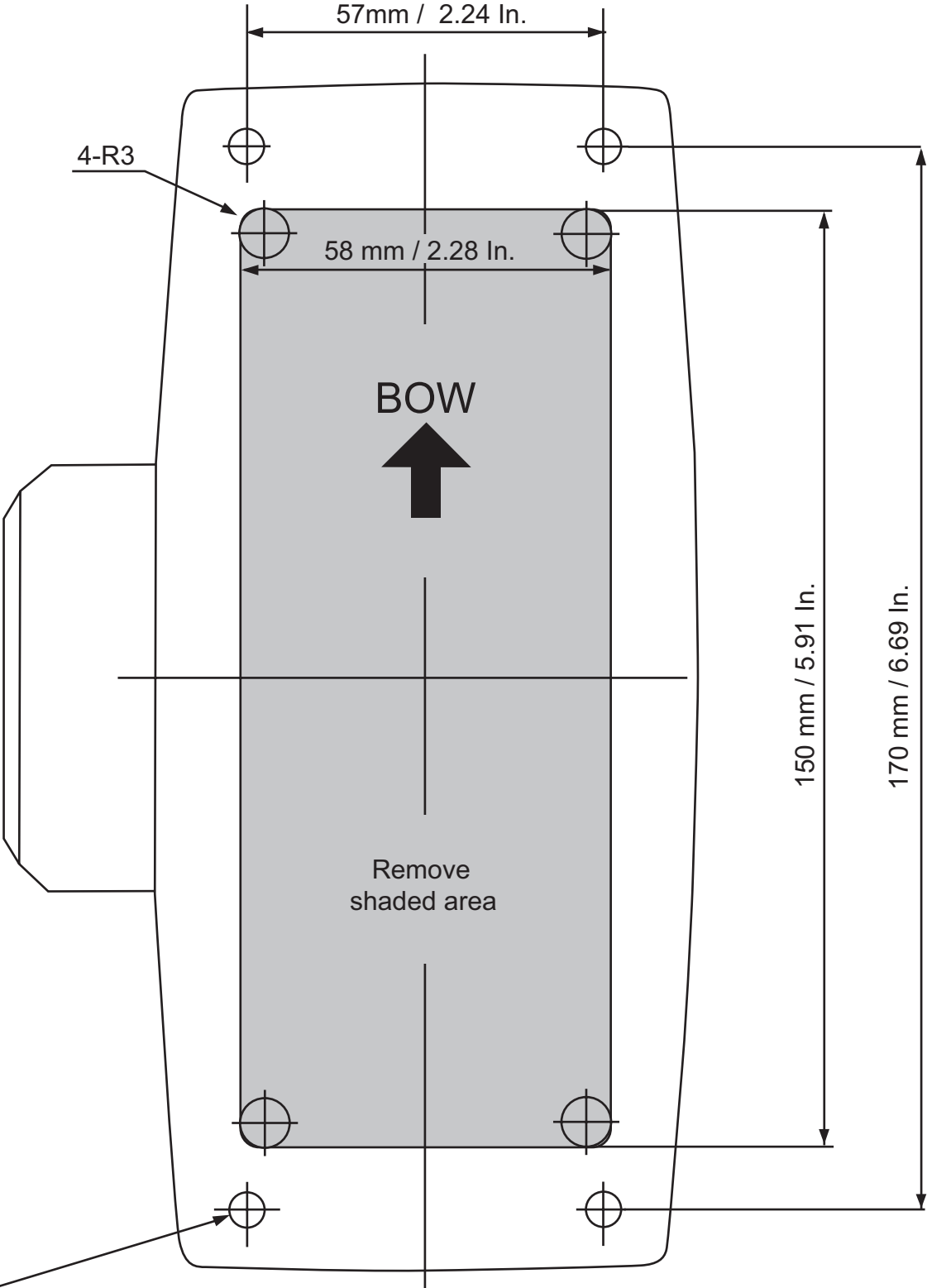


# DUAL LEVER BINNACLE MOUNT REMOTE CONTROL PROFILE DIMENSIONS



# DRILL TEMPLATE

## Single Lever Binnacle Mount Remote Control



Note: For mounting surface less than 25mm thick use bolts and nuts.  
Drill 4-6mm dia. through-holes.  
For mounting surface more than 25mm thick use selftapping screws.  
Drill 4-3.5mm dia. through-holes.

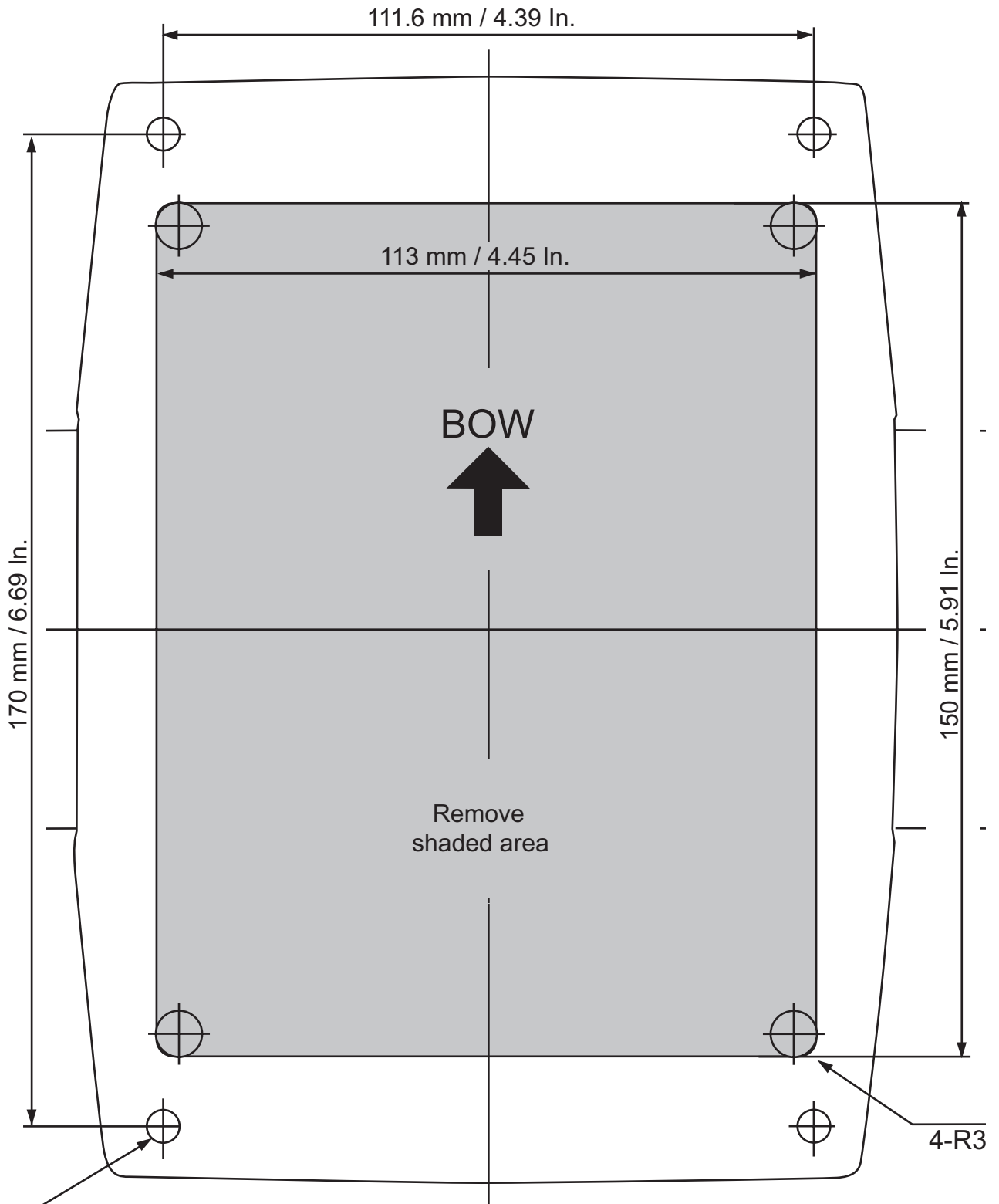
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# DRILL TEMPLATE

## Dual Lever Binnacle Mount Remote Control



Note: For mounting surface less than 25mm thick use bolts and nuts.  
Drill 4-6mm dia. through-holes.  
For mounting surface more than 25mm thick use selftapping screws.  
Drill 4-3.5mm dia. through-holes.

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