

877775A15, 877775A17

INSTALLATION INSTRUCTIONS DTS

SHADOW MODE REMOTE CONTROL

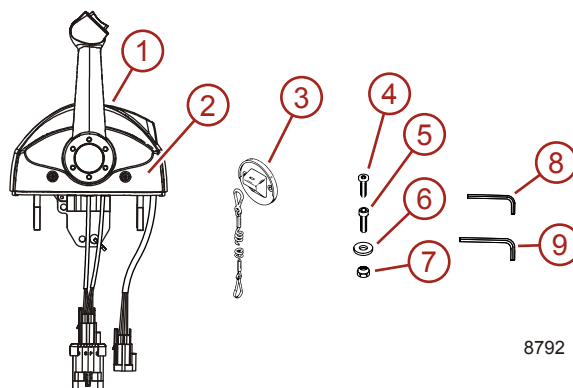
NOTICE

After completing installation, these instructions should be placed with the product for the owner's future use.

NOTICE

This document is written to aid our dealers and company service personnel in the proper installation or service of our products. Persons who are not familiar with these or similar products produced by Mercury Marine, and who have not been trained in the recommended servicing or installation procedures should have the work performed by an authorized Mercury Marine dealer technician. Improper installation or servicing of the Mercury product could result in damage to the product or personal injury to the installer or persons operating the product.

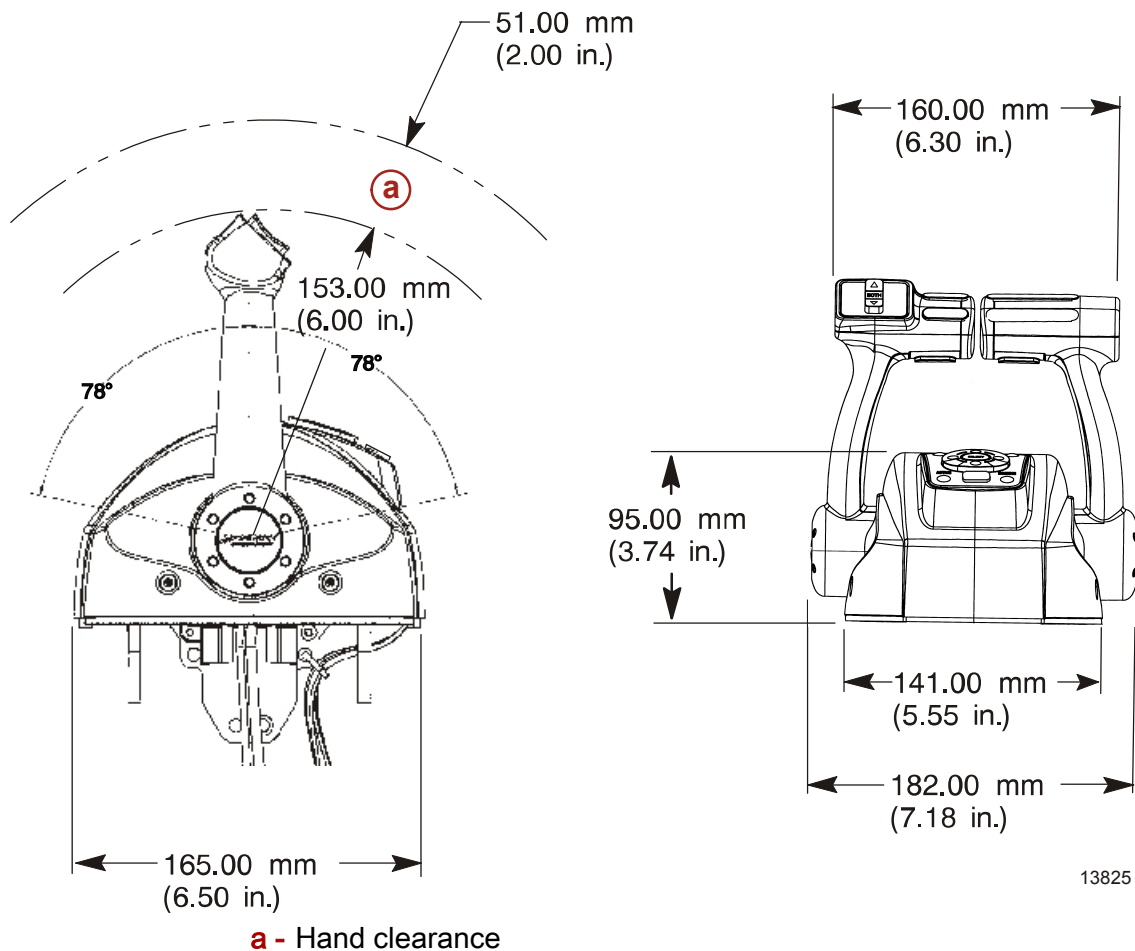
Components Contained in Kit



Ref.	Qty.	Description	Part Number
1	1	Electronic Remote Control (ERC) - Dual	NSS
2	2	Cover - with gasket	877752A1
3	1	Lanyard switch kit	NSS
4	4	Screw - M4 x 20	10-877754
5	4	Screw - M6 x 40	10-40088-40
6	4	Washer	12-40023-16
7	4	Nut - M6, Nylon insert	11-40138-6
8	1	Wrench - Allen 2.5 mm	91-888490-25
9	1	Wrench - Allen 5 mm	91-888490-5

Remote Control Installation

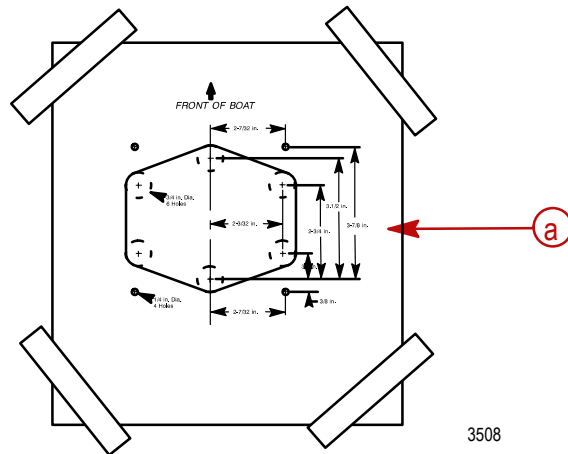
Required Mounting Clearances



Locating and Drilling Mounting Area for Shadow Mode Remote Control

1. Locate area of boat where the remote control is to be mounted. Allow sufficient clearance for handle movement and clearance for the wiring.
2. Select the correct template for mounting application.
3. Place template over mounting area; cut and drill as instructed on template.

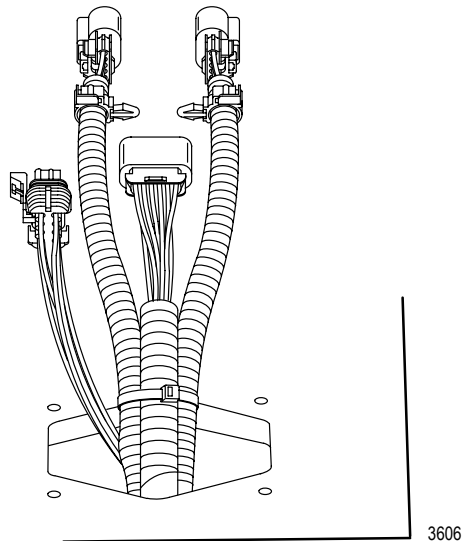
IMPORTANT: After cutting mounting area, make sure opening is free of sharp edges.



a - Template

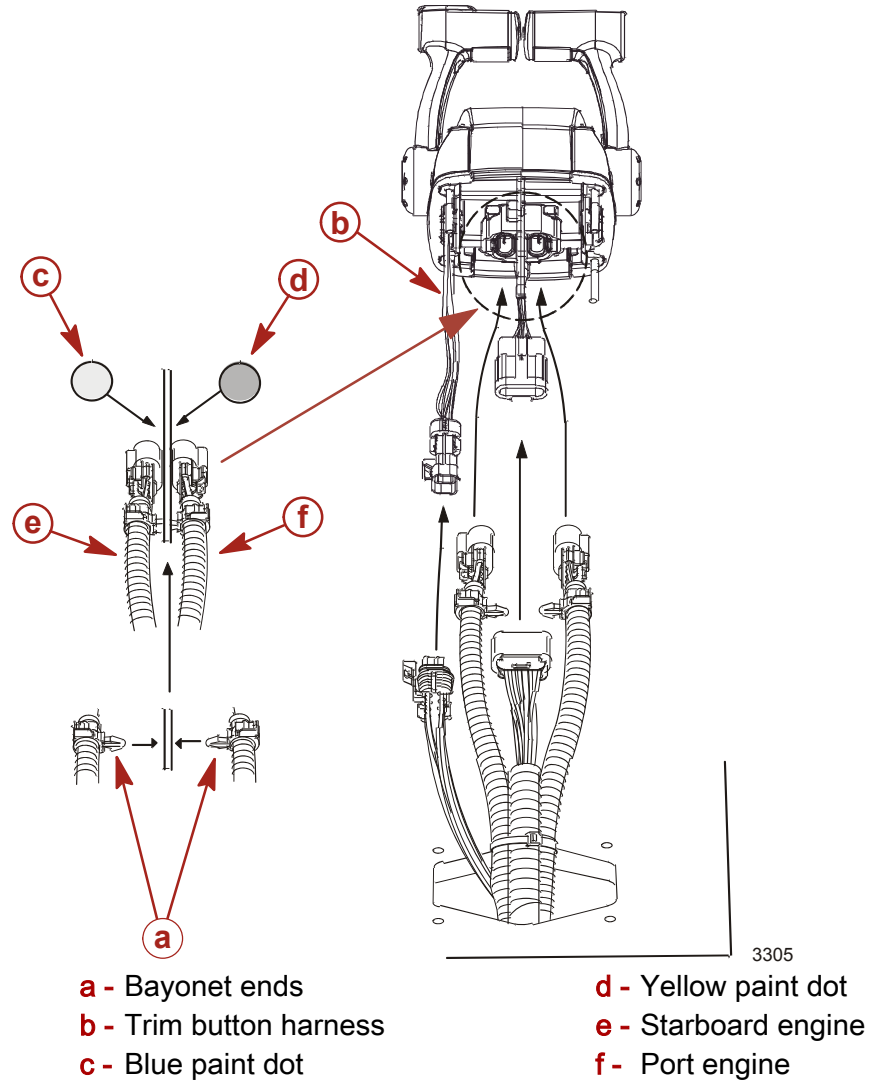
Installing DTS Shadow Mode Remote Control

1. Make sure opening is free of sharp edges.
2. Route wiring for the remote control into opening.

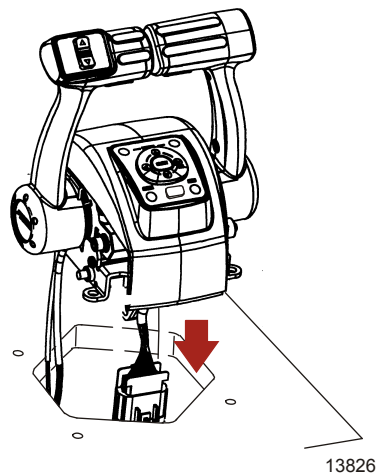


3. Insert the bayonet ends into bracket holes. This will prevent connectors from pulling out.

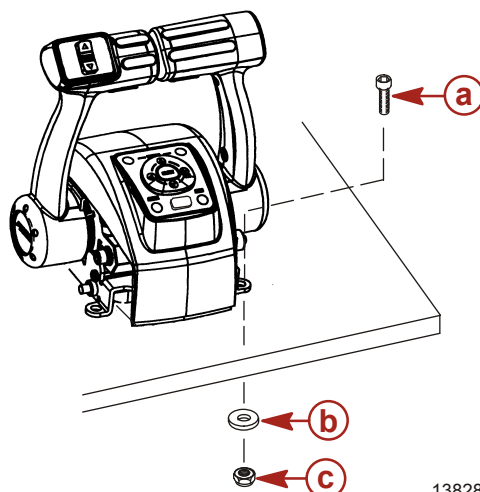
IMPORTANT: Allow slack in the trim button harness going to the control handle. This harness will flex and move during control handle movement.



4. Place the remote control into the opening.



5. Fasten the remote control with four M6 x 40 screws.



13828

a - Mounting Screw (4) M6 x 40

c - Nut - nylon insert

b - Washer

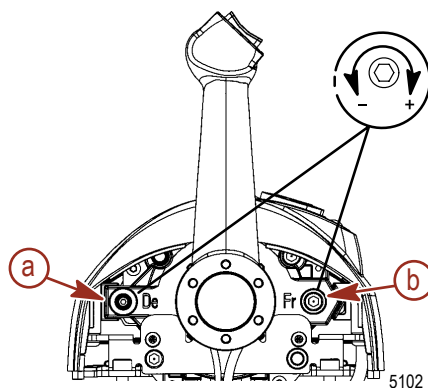
⚠ CAUTION

Do not turn control handle tension adjustment screw clockwise more than 11 turns from the initial point of hex head contact with bracket. Damage to the module may occur.

⚠ CAUTION

Do not turn detent adjusting screw clockwise more than 11 turns from full out position. Damage to the module may occur.

6. Control Handle Tension Adjustment Screw – This screw can be adjusted to increase or decrease the overall effort to move the control handle. This will help prevent the handle from unwanted motion in rough water. Turn screw towards "+" to increase tension or towards "-" to decrease tension.
7. Detent Tension Adjustment Screw – This screw can be adjusted to increase or decrease the effort to move control handle into or out of detent position. Turn screw towards "+" to increase tension or towards "-" to decrease tension.

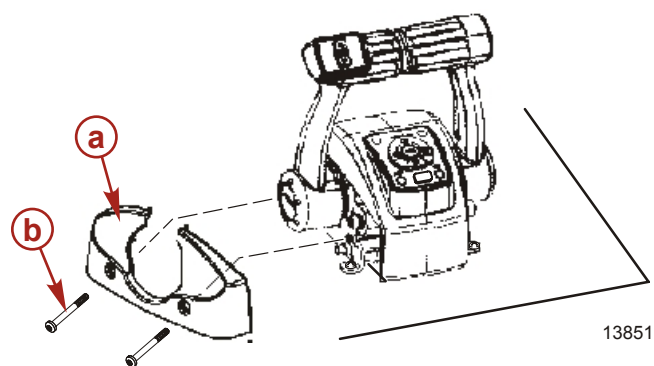


5102

a - Detent tension adjustment

b - Control handle tension adjustment

8. Install the side cover with attaching screws.



a - Side cover (2)

b - Attaching screws (4) M4 x 20

Remote Control Operation, Features and Calibration

Throttle and Shift Operation

Movement of the handles on the remote control allows the boat operator to control the engine throttle speed and gear shift positions of all three engines.

The throttle and shift function is dependant on what engines are running. Refer to the following table.

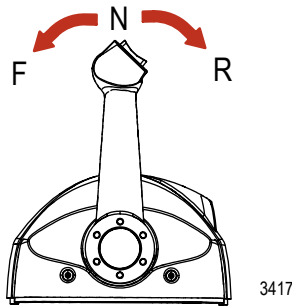
Port Engine	Center Engine	Starboard Engine	Control Handle Function
Running	Running	Running	Port engine throttle and shift = controlled by port control handle
			Starboard engine throttle and shift = controlled by starboard control handle
			Center engine throttle = average of port and starboard engines
			Center engine shift = neutral unless both engines are in the same gear
Running	Running	Off	Port and center engine throttle and shift = controlled by port control handle
Off	Running	Running	Starboard and center engine throttle and shift = controlled by starboard control handle
Running	Off	Running	Port engine throttle and shift = controlled by port control handle
			Starboard engine throttle and shift = controlled by starboard control handle
Running	Off	Off	Port engine throttle and shift = controlled by port control handle
Off	Off	Running	Starboard engine throttle and shift = controlled by starboard control handle
Off (ignition key switch turned on)	Running	Off (ignition key switch turned on)	Center engine throttle and shift = neutral/ idle unless both control handles are in the same gear

Turning off one of the outer engines while underway will cause the center engine to go into forced neutral/idle. Operation to the center engine can be restored by moving the control handle of the functioning outer engine back into neutral position and then re-engaging. The center engine speed and gear shift will then be controlled by the functioning outer engine.

Turning off the center engine while underway will have no effect on the operation of the outer engines.

If a failure should occur while underway, causing one of the outer engines into forced neutral/idle condition, the center engine will also be forced to neutral/idle. Operation to the center engine can be restored by moving the control handle of the functioning outer engine back into neutral and then re-engaging.

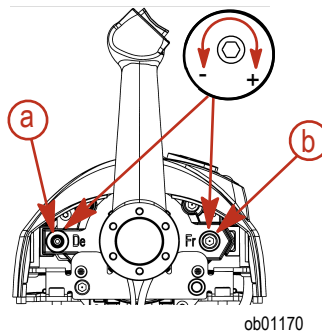
Operation of the shift and throttle is controlled by the movement of the control handles. Push the control handles forward from the neutral to the first detent for forward gear. Continue pushing the control handles forward to increase speed. Pull the control handles back from neutral to the first detent for reverse gear. Continue pulling back to increase speed.



3417

Control Handle Tension Adjustment Screw - This screw can be adjusted to increase or decrease the tension on the control handle (cover must be removed). This will help prevent unwanted motion of the handle in rough water. Turn screw clockwise to increase tension and counterclockwise to decrease tension. Adjust to tension desired.

Detent Tension Adjustment Screw - This screw can be adjusted to increase or decrease the effort to move control handle out of detent positions (cover must be removed). Turning screw clockwise will increase tension. Adjust to tension desired.



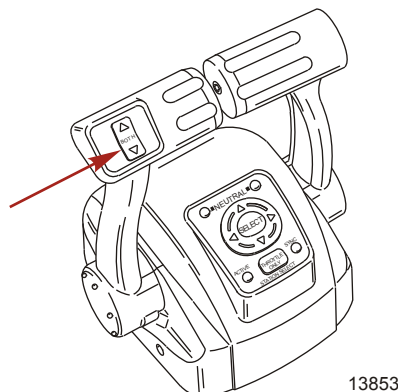
ob01170

a - Detent tension adjustment screw

b - Control handle friction adjustment screw

Trim Switch and Key Pad Features

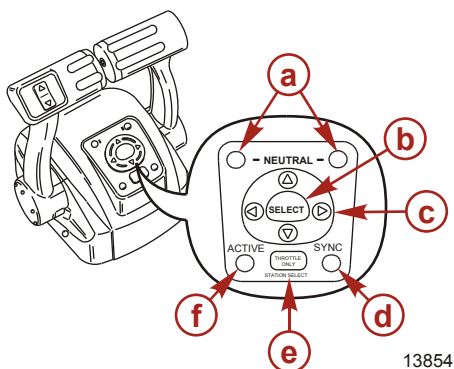
1. Trim Switch (if equipped) - Operates the trim for all three engines. An accessory trim switch panel is required for trimming engines individually. Refer to Power Trim Operation in the engine operation manual. The trim switch will stay in the operation mode for 15 minutes after the engines are turned off. After engines have been turned off for 15 minutes, the ignition switch will have to be turned on for trim switch operation.



2. Throttle Only/Station Select Button - Increases engine RPM for warm-up, without shifting the engines into gear. To engage throttle only, move control handle to the neutral position. Depress and hold the throttle only button while moving the control handle ahead to the forward detent. Continue to hold button until horn sounds twice. The horn indicates the throttle only is engaged. The neutral LED light will also begin to flash. To disengage, return the control handle to the neutral position.
3. Arrow Trackpad - Navigates through System View on-screen function messages.
4. Select Key - Selects System View on-screen options and confirm data entries.
5. Neutral LEDs - The neutral LEDs are illuminated when engine is in neutral gear position. The light will flash when in throttle only mode.

NOTE: Gear position is determined by sensing the position of the shift actuator on the engine, not the position of the control handle.

6. Active LED - The active LED is illuminated to show the helm is active and ready for use.
7. SYNC LED - The SYNC LED is illuminated when the RPM of the three engines are being synchronized by the DTS system.



a - Neutral LEDs
b - Select key
c - Arrow trackpad

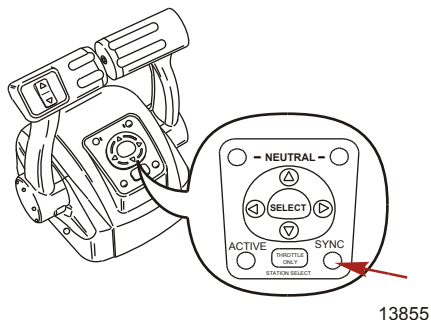
d - SYNC LED
e - Throttle only/Station select button
f - Active LED

Synchronizing Engines

The auto synchronizing feature, when engaged, will automatically adjust the port engine and center engine speed to match the speed of the starboard engine.

Synchronizing of engines will automatically engage when the speed of the engines are over 900 RPM for two seconds and remote control handles are positioned are within 5° of each other.

Auto Synchronizing will stay engaged up to 95% throttle opening. The Sync light will turn on when the engines are synchronized.



To disengage, move one or both control handles until they are more than 5° apart, reduce engine speed below 900 RPM, or increase engine speed beyond 95%.

Dual Helm Station Transfer

The throttle only/station select button allows the boat operator to select which remote control is in control of the engine operation.

The active light is illuminated at the remote control station that is in control of the engine.

⚠ WARNING

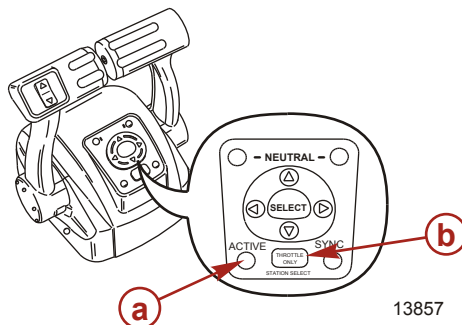
Avoid serious injury or death from loss of boat control. The boat operator should never leave the active station while engine is in gear. Helm transfer should only be attempted while both stations are manned. One person helm transfer should only be performed while engine is in neutral.

NOTE: Idle position is preferred when doing a station transfer. If conditions do not allow the remote control to be placed at idle position, a station transfer can be done while in gear.

NOTE: Pressing and releasing station select button at new station allows the engine control to be transferred to the new station. The control will automatically start adjusting engine RPM and gear position to match the control handle setting at the new station. Adjust control handles to the desired throttle and gear position.

1. Place active remote control lever to idle position.
2. Proceed to the inactive helm station and position remote control lever to the idle position.

3. Press throttle only/station select button once. The "ACTIVE" light will illuminate to indicate the remote control station is in control of the engine.



a - Active light

b - Throttle only/station select button

4. The active light will switch off at the original remote control station.

SYNCHRONIZING DUAL HELMS PRIOR TO STATION TRANSFER

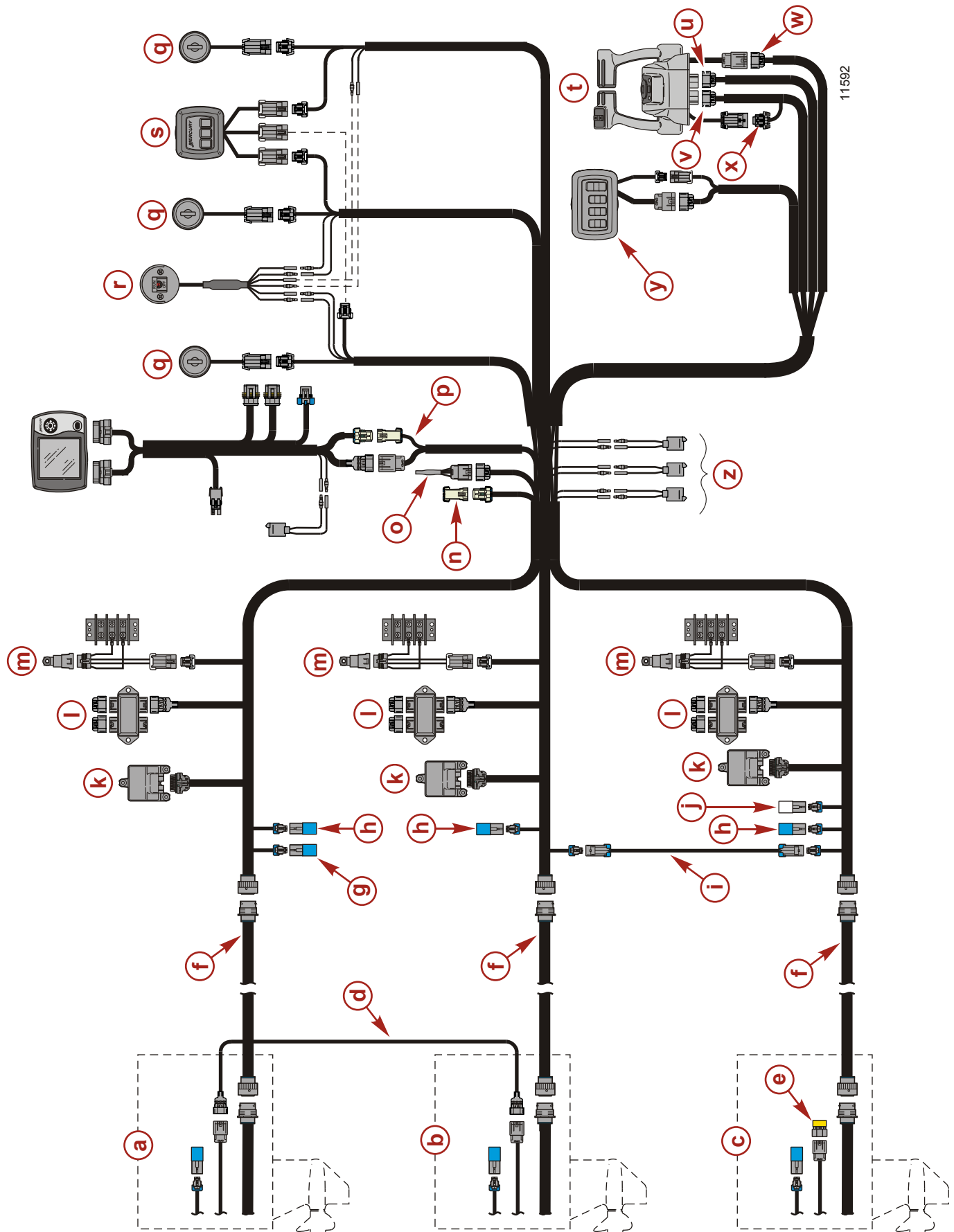
Pressing the station select button and holding it in allows the boat operator ten seconds to match up the control handle settings at the new station with the handle settings that are at the old (to be inactive) station. If the handles are not matched, the neutral light will flash. The light blinks faster as the handles are nearing match position. Once light stays on solid, the handles are matched and the button can be released. Transfer process is complete and the new station is now in control. If the button is held for over 10 seconds, the station transfer is cancelled.

Remote Control and System Calibration

Use Mercury Marine Computer Diagnostic System tool to calibrate the remote control. The tool will detect the remote control and three engines and will provide correct prompts needed to configure the remote control. Follow the on-screen instructions provided.

Notes:

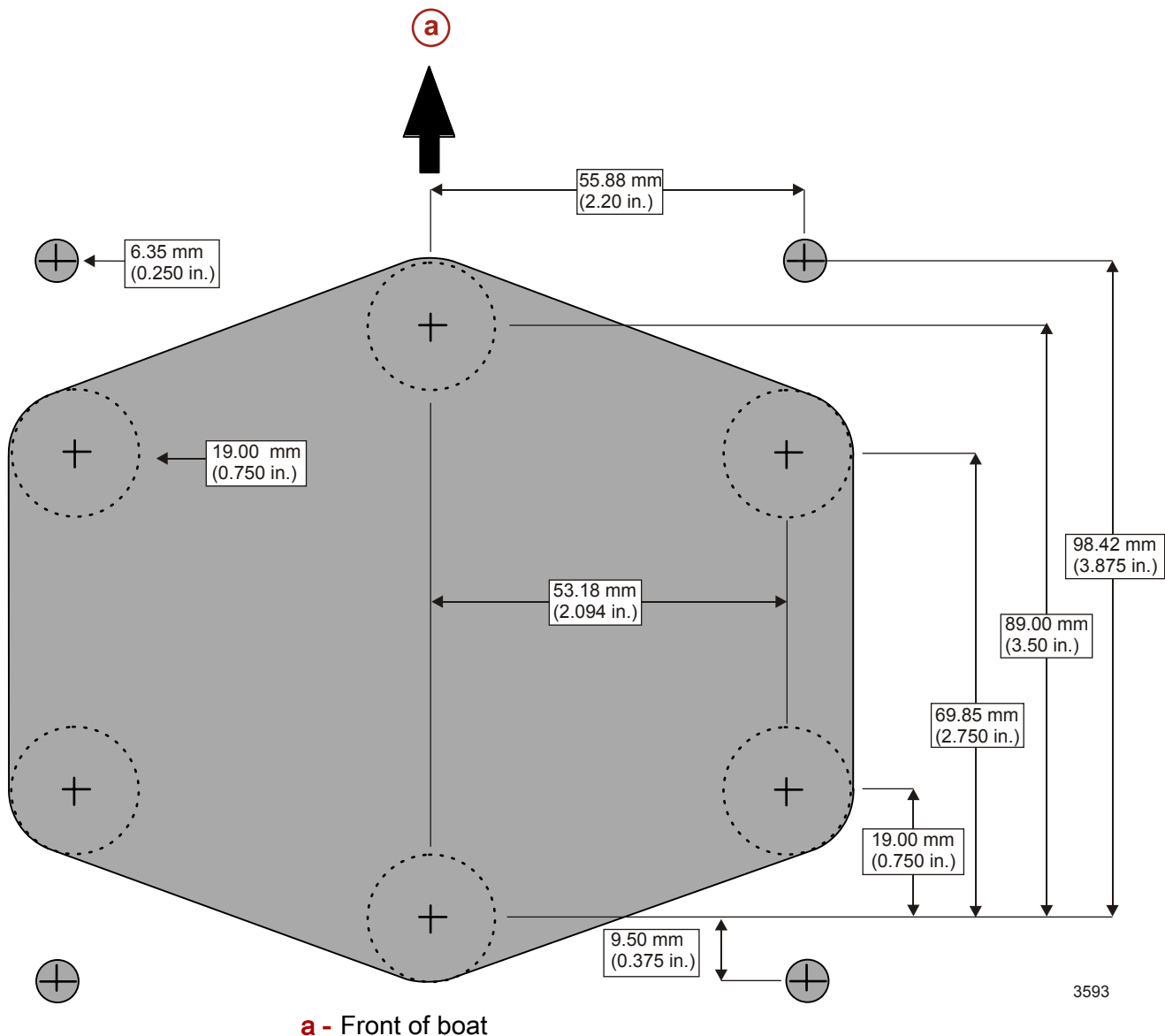
DTS Triple Engine Shadow Mode Control Wiring - Single Helm



- a** - Port engine
- b** - Starboard inner engine
- c** - Starboard outer engine
- d** - 10 pin CAN link harness
- e** - CAN 1 connector - terminator
- f** - 14 pin data harness
- g** - CAN 1 (blue and white) - terminator
- h** - CAN 2 (brown and yellow) - terminator
- i** - 2 pin CAN link harness
- j** - CAN 3 (orange and green) - weather cap
- k** - Command module
- l** - Junction box
- m** - Accessory power relay
- n** - For future use
- o** - Resistor pack (#93)
- p** - Gauge connectors
- q** - Ignition key switch
- r** - Lanyard stop switch
- s** - Start/stop switch
- t** - Shadow mode control
- u** - Lever 1 connector
- v** - Lever 2 connector
- w** - Trackpad connector
- x** - Handle trim connector
- y** - Dash mounted trim switch
- z** - Warning horns

Notes:

DTS Console Cut-Out Template



Products of Mercury Marine
W6250 Pioneer Road
Fond du Lac, WI 54936-1939

Mercury, Mercury Marine, MerCruiser, Mercury MerCruiser, Mercury Racing, Mercury Precision Parts, Mercury Propellers, Mariner, Quicksilver, #1 On The Water, Alpha, Bravo, Pro Max, OptiMax, Sport-Jet, K-Planes, MerCathode, RideGuide, SmartCraft, Zero Effort, M with Waves logo, Mercury with Waves logo, and SmartCraft logo are all registered trademarks of Brunswick Corporation. Mercury Product Protection logo is a registered service mark of Brunswick Corporation.