Installation Guide

i-Dock Joystick Steering System





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This guide contains the information required to install, calibrate, and operate the *Evinrude*® *iDock* System on a dual outboard engine application.

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Safety Notice

Before working on any part of the outboard, read the SAFETY INFORMATION section in this guide.

This publication is written for qualified, factory-trained technicians who are already familiar with the use of *Evinrude* Special Tools. The included information is not a substitute for work experience. It is an organized guide for reference, repair, and/or maintenance.

The following symbols and/or signal words may be used in this document:

△ DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Indicates a hazardous situation which, if not avoided, could result in minor or moderate personal injury.

NOTICE

Indicates an instruction which, if not followed, could severely damage engine components or other property.

These safety alert signal words mean:

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

IMPORTANT: Identifies information that controls correct assembly and operation of the product.

ENVIRONMENTAL NOTE:

A note which provides tips and behaviors related to protecting the environment.

DO NOT perform any work until you have read and understood these instructions completely.

Strictly adhere to torque wrench tightening specifications.

Should removal of any locking fastener (lock tabs, lock nuts, or patch screws) be required, always replace with a new component.

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

Always wear EYE PROTECTION AND APPROPRIATE GLOVES when using power tools.

The engine must be OFF when performing this work unless otherwise specified.

Always be aware of moving parts such as flywheels, propellers, etc.

Some components may be HOT. Always wait for engine to cool down before performing any work.

If you use procedures or service tools that are not recommended in this manual, YOU ALONE must decide if your actions might cause injury or damage the outboard.

This document may be translated into other languages. In the event of any discrepancy, the English version shall prevail.

Safety Information

The safety information provided here is intended to inform you of the dangers that may be present before, during, and after installation. It is critical to read and understand this information.

Failure to comply with any warning, notice or caution may lead to loss of steering control resulting in a collision or ejection from the boat, possibly resulting in property damage, injury, or death.

Only operate the boat if all components are in proper working condition. Safe operation depends upon proper installation and maintenance of the system, and the common sense, safe judgment, knowledge, and expertise of the operator. Every installer and operator of the steering system should know the following requirements before installing or operating the steering system. If you have any questions regarding any of these warnings, contact the dealer that installed the system.

Installation Requirements

When installing the *Evinrude iDock system*, it is REQUIRED there is one counter rotation outboard and one standard rotation outboard. It is REQUIRED to mount the counter rotation outboard on the port side of the transom and the standard rotation outboard on the starboard side of the transom.

Mount the 74° V6 outboard using a minimum of a 28 inch centerline.

Mount the 66° V6 outboard using a minimum of a 27.5 inch centerline.

Failure to follow these requirements can result in a loss of steering resulting in engine damage, serious personal injury or even death.

- 1. Read and understand this guide and any instructions provided with the system components. Give this guide to the end-user when the installation is complete.
- 2. Ensure that all components required to complete the installation are on hand (including hoses, fittings, oil, and the proper tools).
- 3. Do NOT substitute any component. Substitution with non-*Evinrude* or non-*iDock* components may compromise system safety, performance, and reliability.
- 4. Do NOT use a wheel-mounted, coiled-cord trim switch. The cord can wrap tight around the steering wheel shaft and inhibit steering at all times.
- 5. The *Evinrude iDock* System requires a gauge that supports *Evinrude iDock* fault code notifications. Mount the gauge in an unobstructed area where notifications can be seen by the operator at all times during operation.

Prior to every use:

- 1. Verify immediate steering response when turning steering wheel(s).
- 2. Inspect all steering hoses, fittings, and electrical harnesses for wear, kinks, or leaks.
- 3. Check for binding, loose, worn or leaking steering or shift/throttle control components.
- 4. Verify that proper shift and throttle response is available for all control handles.

During use:

- 1. Wear a Coast Guard-approved PFD with the ignition lanyard attached at all times.
- 2. Only allow those who are familiar with the operation of the steering system operate the boat.
- 3. If boat is equipped with multiple helms, ensure that only one is used at a time.
- 4. Know and adhere to all applicable federal, state, and municipal laws and regulations that govern boating in your area.

Standard Torque Specifications

Size	In. Lb.	Ft. Lb.	N∙m	
No. 6	7–10	0.58–0.83	0.8–1.1	
No. 8	15–22	1.25–1.83	1.7–2.5	
No. 10	24–36	2–3	2.7–4.0	
No. 12	. 12 36–48 3–4		4.0–5.4	
1/4 in.	60–84	5–7	7-9.5	
5/16 in.	120–144	10–12	13.5–16.5	
3/8 in.	216–240	18–20	24.5–27	
7/16 in.	336–384	28–32	38–43.5	
M3	15–22	1.25–1.83	1.7–2.5	
M4	24–35	2–2.9	2.7–4.0	
M5	35–60	2.9–5	4.0-6.8	
M6	84–106	7–8.8 9.5–12		
M8	177–204	14.7–17 20–23		
M10	310–336	25.8–28	35–38	
IMPORTANT: These values apply only when a specific torque for a specific fastener is not listed in the appropriate section. When tightening two or more screws on the same part, tighten the screws evenly. DO NOT tighten the screws one at a time to the torque specification.				

tighten the screws one at a time to the torque specification.

Abbreviations

The following abbreviations are used in this manual:

ABYC	American Boat & Yacht Council
AUX	Auxiliary
BAT	Battery
CAN	Controller Area Network
CAN Bus	Controller Area Network (data) bus. (A harness of wires that carry digital signals and power between electronic modules)
ENG	Engine
EPS	Electronic Power Steering
EVD6	Evinrude Diagnostic 6 software
FT-LB	Foot Pounds
GND	Ground
н	CAN High Signal
IN-LB	Inch Pounds
LED	Light Emitting Diode
LO	CAN Low Signal
MPH	Miles Per Hour
NA	Not Applicable or Not Available
N/C	No Connection
Nm	Newton Meters
NMEA	National Marine Electronics Association
NMEA 2000®	NMEA standard for marine electronics and wiring related to CAN bus.
PFD	Personal Flotation Device
RPM	Revolutions Per Minute
STBD	Starboard (right when facing forward)
SW	Switch
WOT	Wide Open Throttle

NOTE: Some abbreviations not listed here may be found in their respective sections.

iDock Overview

The new *Evinrude iDock* system is used on twin engine installations for both single and second station configurations.

The *Evinrude iDock* system consists of a pressure sensor module, hydraulic steering helm, hydraulic hoses, hydraulic fluid, an electronic joystick control, network wiring, a manifold control module, and a hydraulic steering manifold assembly on each outboard.

The control module monitors and controls the steering system. The *EMM* monitors the control module, stores fault codes and activates the engine monitor should a fault code be generated.

As the steering wheel is turned hydraulic fluid in the helm begins moving through the steering system.

The pressure sensor module broadcasts the hydraulic pressure on both helm lines.

The control module also monitors the steering position sensor. As the outboard approaches the steering system stop, the control module turns OFF the steering pump to maximize system efficiency.

When the joystick is activated, the mode valve locks out hydraulic fluid from the helm enabling the joystick to control direction.

Joystick inputs control operation of the direction valve. The direction valve reverses the flow of hydraulic fluid through the steering manifold, depending on joystick inputs, and turn the outboards to port or starboard.

Component Installation

Components

IMPORTANT: Strictly adhere to the compass safe distance for the joystick and the pressure sensor module. if the compass safe distance is ignored, the reading on the compass will be inaccurate due to the interference of the magnetic field created by the pressure sensor module and the joystick.

P/N	Description	Quantity
764161	BACKBONE CABLE 6 FT	2
587178	CABLE-EXTENSION 4 FT	2
770304	HOSE, HYD STEER 4 FT	2
587172	HUB 6 PORT	1
769949	HUB, NMEA 2000	1
587230	Y-HARNESS	2
5010371	KIT, JOYSTICK RIGGING	1
324956	*WASHER	4
359214	*NUT, FLANGE - 10-24	4
587408	*CABLE ASSY, POWER AND CAN	1
360939	*DECAL, iDOCK	1
5010224	*JOYSTICK CONTROL ASSEMBLY	
5010632	PRESSURE SENSOR KIT	1
355965	*FITTING, ELBOW	2
361102	*CLAMP, PRESSURE SENSOR	2
361148	*SCREW, PRESSURE SENSOR	2
587451	*PRESSURE SENSOR MODULE	1
764806	*TEFLON SEALER STICK	1
360394	iDock INSTALLATION GUIDE	1
361817	iDock USER'S GUIDE	1

iDock Rigging Kit - P/N 5010582

Alignment Valve, P/N 5010646

P/N	Description	Quantity
5010672	ALIGNMENT VALVE	1
358192	FITTING, 37 DEGREE	1
361315	TEE FITTING, 3/8	1

Second Station Joystick Kit, P/N 5010815

P/N	Description	Quantity
587172	HUB 6 PORT	1
769949	HUB, NMEA 2000	1
587230	Y-HARNESS	1
5010371	KIT, JOYSTICK RIGGING	1
769958	CABLE 2 FT. EXTENSION	

Hydraulic Hose Options

IMPORTANT: Hydraulic hose lengths may vary depending on application.

Hydraulic Hose Requirements:

- 3X *Evinrude* 1000 PSI Hydraulic Hoses (sizes will vary depending on installation)
- Additional 1000 PSI Hydraulic Hoses required for installations using an autopilot system (sizes will vary depending on installation).

2X - Evinrude 3000 PSI Hydraulic Hoses (sizes will vary depending on installation)

1000 PSI Hoses				
P/N	Description			
5009496	Steering Hose, 18 inch			
770304	Steering Hose 4 Ft.			
770306	Steering Hose 6 Ft.			
770308	Steering Hose 8 Ft.			
770310	Steering Hose 10 Ft.			
770312	Steering Hose 12 Ft.			
770314	Steering Hose 14 Ft.			
770316	Steering Hose 16 Ft.			
770318	Steering Hose 18 Ft.			
770320	Steering Hose 20 Ft.			
770322	Steering Hose 22 Ft.			
770324	Steering Hose 24 Ft.			
770326	Steering Hose 26 Ft.			
770328	Steering Hose 28 Ft.			
770330	Steering Hose 30 Ft.			

3000 PSI Hoses			
P/N	Description		
768204	Hydraulic Hose Kit - 4' (1.22 M)		
768206	Hydraulic Hose Kit - 6' (1.82 M)		
768208	Hydraulic Hose Kit - 8' (2.44 M)		
768210	Hydraulic Hose Kit - 10' (3.04 M)		
768212	Hydraulic Hose Kit - 12' (3.66 M)		
768214	Hydraulic Hose Kit - 14' (4.26 M)		
768216	Hydraulic Hose Kit - 16' (4.88 M)		
768218	Hydraulic Hose Kit - 18' (5.48 M)		
768220	Hydraulic Hose Kit - 20' (6.10 M)		
768222	Hydraulic Hose Kit - 22' (6.70 M)		
768224	Hydraulic Hose Kit - 24' (7.32 M)		

The following components are required for purging the steering system:

2X - Seastar Hydraulic Fluid HA5430 - 1 qt. (0.9 l), P/N 770891

2X - Steering Lock Tool, P/N 357717

The following component is NOT required yet highly recommended for purging the steering system:

1X - Seastar Optimus Power Purge Tool

Review each of the components. Consider each components location and mounting restrictions.

Verify the harness connections can be made without violating any restrictions. Determine if additional harnesses or cables are required.

Identify where components will be installed on the vessel. Harness length will determine the choice of component locations. Verify the correct harness lengths are available for installation.

IMPORTANT: Use the Mounting Templates at the back of this document. Mount all of the components in serviceable dry locations. Excessive vibrations or heat can damage the components.

OPTIONAL: Some auto pilot installations will require two additional tees, P/N 361315.

iDock Engine Models

Цр	Model Number	Shaft Length	G	Gearcase	Midsection
111	Nodel Number	(in)	Style	Gear Ratio	and Steering
150	C150AXHAA	25	SLX	12:26 (0.46) (2.16:1)	iDock
150	C150AXCAA	25	SLX Counter Rotation	12:26 (0.46) (2.16:1)	iDock
200	C200AXAA	25	SLX	12:26 (0.46) (2.16:1)	iDock
200	C200AXCAA	25	SLX Counter Rotation	SLX Counter Rotation 12:26 (0.46) (2.16:1)	
200	E200AXHAG	25	SLX	13.24/0.542/1.85:1	iDock
200	E200AXCAG	25	SLX Counter Rotation	SLX Counter 13.24/0.542/1.85:1 Rotation	
250	E250AXHAG	25	SLX	13.24/0.542/1.85:1	iDock
250	E250AXCAG	25	SLX Counter 13.24/0.542/1.85:1 Rotation		iDock
250	E250AZAG	30	SLX	13.24/0.542/1.85:1	iDock
250	E250AZCAG	30	SLX Counter 13.24/0.542/1.85:1 Rotation		iDock
300	E300AXCAG	25	SLX Counter 13.24/0.542/1.85:1 Rotation		iDock
300	E300AXUAG	25	SLX	13.24/0.542/1.85:1	iDock
300	E300AZCAG	30	SLX Counter 13.24/0.542/1.85:1 Rotation		iDock
300	E300AZUAG	30	SLX	13.24/0.542/1.85:1	iDock

See model list in front of electronic Parts Catalog for updated model lists.

Engine Installation

When installing *iDock*, it is required there is one counter rotation engine and one standard rotation engine. It is required to mount the counter rotation engine on the port side of the transom and the standard rotation engine on the starboard side of the transom. Be sure to use the appropriate prop shaft length for the specific transom of the vessel.

Install the outboards according to the instructions in the Installation and Predelivery Guide.

When installing the *Evinrude iDock system*, it is REQUIRED there is one counter rotation outboard and one standard rotation outboard. It is REQUIRED to mount the counter rotation outboard on the port side of the transom and the standard rotation outboard on the starboard side of the transom.

Mount the 74° V6 outboard using a minimum of a 28 inch centerline.

Mount the 66° V6 outboard using a minimum of a 27.5 inch centerline.

Failure to follow these requirements can result in a loss of steering resulting in engine damage, serious personal injury or even death.

EXAMPLE: 27.5 in. (698.5 mm) dual outboard spacing would result in two outboard centerlines, each 13.75 (349.25 mm) from the hull centerline.

This is to ensure the outboards do not contact one another at all steering and trim angles.



1. PORT Centerline

2. Hull Centerline

3. STARBOARD Centerline

Outboard Rigging Configuration:



- 1. Port Counter-Rotation Engine
- 2. Starboard Standard Rotation Engine

Propeller Selection and Outboard Setup

Propeller selection, trim angle, and engine or jackplate height can strongly affect boat performance while docking. Three blade propellers, which generally have greater reverse thrust, will improve docking performance. While docking, engine height and trim angle should be set so that the minimum amount of reverse thrust impacts the hull.

Gauge Installation

The *Evinrude iDock* System requires a gauge that supports *Evinrude iDock* fault code notifications. Mount the gauge in an unobstructed area where notifications can be seen by the operator during operation.





Joystick Installation

Plan the installation of the Joystick Assembly carefully. Select an appropriate location based on the boat configuration.

IMPORTANT: The compass safe distance for the joystick is 27.56 in. (0.7 m).

Use the mounting template at the back of this document for proper installation.

IMPORTANT: The mounting location must be strong enough to provide rigid support. Strengthen the mounting surface as necessary.

Use tie straps to relieve any strain on the joystick harnesses.



JOYSTICK

Hydraulic Helm Installation

Use the instructions included with the helm for mounting details.

IMPORTANT: Do NOT use a helm that is rated for more than 1000 PSI for the pressure relief.



HELM

Recommended Helm Chart

Standard Series Helm Chart						
	Displa	cement	ent Pressure Relief		Mount	
Helms	in ³ /rev	cc/rev	psi	kPa	Туре	Heim P/N
SeaStar 1.4	1.4	23.0	1000	6895	Front	HH5269
SeaStar 1.4	1.4	23.0	1000	6895	Rear	HH5260
SeaStar Classic Tilt	1.4	23.0	1000	6895	Tilt	HH6544
Ultraflex UP25 F	1.5	25.0	1000	6895	Front	39618 R
Ultraflex UP25 T	1.5	25.0	1000	6895	Tilt	40803 T
Mavimare GM2-MRA01	1.7	27.0	1000	6895	Front	GM2-MRA01
SeaStar 1.7	1.7	27.8	1000	6895	Front	HH5271
SeaStar 1.7	1.7	27.8	1000	6895	Rear	HH5261
SeaStar Classic Tilt	1.7	27.8	1000	6895	Tilt	HH6541
SeaStar Sport Plus Tilt	1.7	27.8	1000	6895	Tilt	HH6491
Ultraflex UP28 F	1.7	28.0	1000	6895	Front	39443 F
Ultraflex UP28 T	1.7	28.0	1000	6895	Tilt	39445 K
Ultraflex UP28 R	1.7	28.0	1000	6895	Rear	39970 F
Hydrive 401	1.7	28.0	1000	6895	Front	401
Hydrive 501	1.7	28.0	1000	6895	Front	501
Hydrive 402	2.0	32.8	1000	6895	Front	402
Mavimare GM2-MRA03	2.0	32.0	1000	6895	Front	GM2-MRA03
SeaStar 2	2.0	32.8	1000	6895	Front	HH5273
SeaStar 2	2.0	32.8	1000	6895	Rear	HH5263
SeaStar Classic Tilt	2.0	32.8	1000	6895	Tilt	HH6543
SeaStar Sport Plus Tilt	2.0	32.8	1000	6895	Tilt	HH6445
Ultraflex UP33 F	2.0	33.0	1000	6895	Front	39422 X
Ultraflex UP33 T	2.0	33.0	1000	6895	Tilt	39446 M
Ultraflex UP33 R	2.0	33.0	1000	6895	Rear	39969 X
Mavimare GM2-MRA04	2.4	32.0	1000	6895	Front	GM2-MRA03
SeaStar 2.4	2.4	39.3	1000	6895	Front	HH5272
SeaStar 2.4	2.4	39.3	1000	6895	Rear	HH5262
SeaStar Classic Tilt	2.4	39.3	1000	6895	Tilt	HH6542
SeaStar Sport Plus Tilt	2.4	39.3	1000	6895	Tilt	HH6492
Ultraflex UP39 F	2.4	39.0	1000	6895	Front	39415 A
Ultraflex UP39 T	2.4	39.0	1000	6895	Tilt	39447 P
Ultraflex UP39 R	2.4	39.0	1000	6895	Rear	39444 H
Ultraflex UP45 F	2.7	45.0	1000	6895	Front	41276 B
Ultraflex UP45 T	2.7	45.0	1000	6895	Tilt	41277 D
Ultraflex UP45 R	2.7	45.0	1000	6895	Rear	41278 F

Alignment Valve Installation

Apply Pipe Thread Sealant onto the threads of the fittings that attach to the alignment valve.

Install the high and low pressure fittings onto the Alignment Valve according to the image below.



- 1. High pressure Alignment Valve fitting installation location
- 2. Low pressure Alignment Valve fitting installation location

Mount the Alignment Valve in a convenient location near the rear of the vessel using the included Alignment Valve hardware kit.



ALIGNMENT VALVE

Pressure Sensor Module Installation

Mount the Pressure Sensor Module in a convenient location. Use the included hardware to mount the Pressure Sensor Module.

Pressure Sensor Module can be mounted in any orientation.

IMPORTANT: The compass safe distance for the Pressure Sensor Module is 2.0 in. (0.05 m).

IMPORTANT: The pressure sensor module cannot be more than 48 in (1.21 m) away from the helm.

IMPORTANT: Use the fasteners included with the hardware kit to ensure proper mounting has been achieved.



1. Screws

iDock Wiring Diagram

Install the network and electrical systems according to the diagram at the back of this manual.

IMPORTANT: When installing the network and electrical systems it is a requirement to use a Dual Binnacle Rigging kit.

NOTE: It is not BRP approved to install just an *iDock* joystick at a second station. When installing a second station *iDock* joystick, it is required that an *ICON II* DTM Remote Control, helm and START/STOP switch/ emergency STOP switch are present at the second station.

Hydraulics Installation

Use hydraulic hoses capable of at least 3000 PSI for the high pressure side of the *iDock* system.

Failure to use hydraulic hoses with at least a 3000 PSI rating or incorrect installation of hydraulic hoses can result in loss of steering control, possibly resulting in property damage, injury, or death.

Only use standard hydraulic hoses on the low pressure side of the *iDock* system.

Failure to use the proper hydraulic hoses or incorrect installation of hydraulic hoses can result in loss of steering control, possibly resulting in property damage, injury, or death.

Consider the following when planning your hose routing and determining the required lengths:

- Route hoses in an area where they can be easily inspected for wear on a regular basis.
- Use labels to identify hose ends for the pumps and the engines. Attach the labels to the hoses BEFORE routing the hoses in the boat. Place all labels so they can be easily read after the installation is complete.

IMPORTANT: Labels for hydraulic hoses are not provided by BRP.

- Do not remove protective caps until the hoses have been routed and are ready to be connected.
- Ensure there is sufficient hose length to allow full, uninterrupted steering motion through all of the trim and tilt ranges.
- Do not bend hoses tighter than a 3.5 in. (89 mm) radius. Be sure the hoses do not kink in any areas.
- Secure hoses in 1ft. (31 cm) or smaller increments along their routing path. Always route hoses through rigid rigging tubes. Refer to the correct Installation and Pre-delivery Guide for hydraulic hose installation procedures.
- Do not install any pipe sealant onto the "hose" side of a fitting.
- Protect the hydraulic hoses from damage at all times.
- Do not install hoses in an area where they will be exposed to high heat, such as engine manifolds or engine compartments.
- Do not route the hoses in highly corrosive areas such as battery compartments. Do not route the hoses near electrical connections as a fluid leak could cause damage to the electrical system.
- Mount the Pressure Sensor Module using the hardware included with the Pressure Sensor Module. Do NOT
 suspend the Pressure Sensor Module from the hydraulic hoses.

Hydraulic Hose Routing Diagram

2 Engine 1 Station



2 Engine 2 Station



2 Engine 1 Station Equipped With Autopilot

IMPORTANT: Auto pilot systems are approved for use with the *Evinrude iDock* system. Follow the manufacturer's instructions when installing the auto-pilot system.

IMPORTANT: If using an autopilot system with the *Evinrude iDock* system, plumb the autopilot pump between the Pressure Sensor Module and the Alignment Valve as seen in the image below.

IMPORTANT: The auto-pilot system must be disabled when the *Evinrude iDock* system is in use.

IMPORTANT: Do not use rudder feedback systems. It is recommended to use an auto-pilot system that is sized for an 8.9 cu. in. cylinder.

Option 1 - Tees Located Between Hoses

IMPORTANT: This rigging requires five additional hydraulic hoses and two additional tees. These tees are 9/ 16 - 24 UNEF-2A 3-Way. These tees are NOT supplied by BRP.



Option 2 - Tees Off Of Pressure Sensor Module

IMPORTANT: This rigging requires three additional hydraulic hoses and two additional tees, P/N 361315.



Option 3 - Tees Off Of Auto-Pilot Pump

IMPORTANT: This rigging requires three additional hydraulic hoses and two additional tees, P/N 361315, can be used if the auto-pilot threads are 1/4-18 NPTF.



Connect the 4' 1000 PSI hydraulic hoses supplied in Rigging Kit, P/N 5010582, to the port and starboard side of the helm and to the proper ports on the Pressure Sensor Module Assembly.



Connect a 1000 PSI hydraulic hose from the Pressure Sensor Assembly to the Alignment Valve.



Connect a 1000 PSI hydraulic hose from the Alignment Valve to the port side of the port engine.



Connect a high pressure (rated for 3000 PSI) hydraulic hose from the Alignment Valve to the starboard side of the port engine. Torque the hose fittings to 13 ft. lbs. (18 N·m).



Connect a high pressure (rated for 3000 PSI) hydraulic hose from the Alignment Valve to the starboard side of the starboard engine. Torque the hose fittings to 13 ft. lbs. (18 $N \cdot m$).



Connect a 1000 PSI hydraulic hose from the Steering Pressure Sensor to the port side of the starboard engine.



iDock Bleeding Procedure

Verify all components are installed properly prior to performing the *iDock* bleeding procedure.

NOTICE

Bleed the system one outboard at a time.

IMPORTANT: If the vessel is equipped with auto-pilot, the auto-pilot system must be bled at the same time as the starboard outboard.

IMPORTANT: Be sure the boat is level on all planes before starting the bleeding procedure.

IMPORTANT: Make sure the engine is trimmed to the full DOWN position before beginning this procedure. Air will NOT bleed completely from the steering system if the engine is even slightly trimmed up.

IMPORTANT: The bleeding procedure shown in this manual is for the procedure to be conducted using a *SeaStar Power Purge*.

IMPORTANT: The bleeding procedure must be performed with the key in the OFF position. Performing the bleeding procedure with the key in the ON position may cause a code 12 to become active when entering joystick mode.

Required components:

2X - Steering Lock Tool, P/N 357717 (one for each outboard)

Recommended Components:

1X - Seastar Power Purge

1X - 1/4" Drive - 1/2" Crows Foot

Open both bleeder screws on each engine and lightly seat them.

Turn both engines to port lock.



Install one Steering Lock Tool, P/N 357717, onto each outboard to hold the outboards in a full port turn.

NOTE: This step may require an assistant to hold the outboard.

Use the shipping bracket screw to attach the long end of the tool to the steering arm. Attach the short end of the tool to the stern bracket using the provided nut and washer.



STEERING LOCK TOOL, P/N 357717, INSTALLED

Remove the two black caps from the purge fittings on each outboard.

Connect the purge hose to the helm and the starboard outboard.



- 1.
- Purge hose Purge fitting locations 2.
- 3. Helm
- 4. SeaStar Power Purge

Turn the handle on the Alignment Valve until it is perpendicular with the valve to open the Alignment Valve.



1. Alignment Valve open

Open both bleeder screws on the starboard engine. **NOTE:** A 1/4" Drive - 1/2" Crows Foot will ease this process.



1. Bleeder screws

Turn the *SeaStar Power Purge* ON and turn the helm to both full port for 10 seconds and full starboard for 10 seconds. Repeat this procedure until no bubbles are seen in the bleed hoses of the *SeaStar Power Purge*.



Close the bleeder screws on the starboard engine.

NOTE: A 1/4" Drive - 1/2" Crows Foot will ease this process.

Turn OFF the SeaStar Power Purge.

Disconnect the SeaStar Power Purge hoses and move the hoses to the port engine.

Turn ON the SeaStar Power Purge.

Open the lower bleeder screw on the port engine.

NOTE: A 1/4" Drive - 1/2" Crows Foot will ease this process.



1. Lower bleeder screw

Turn the helm ONLY to port until there are no air bubbles seen in the SeaStar Power Purge hoses.



Close the lower bleeder screw on the port engine and open the upper bleeder screw.

NOTE: A 1/4" Drive - 1/2" Crows Foot will ease this process.



Upper bleeder screw Lower bleeder screw 1. 2.
Turn the helm ONLY to port until there are no air bubbles observed in the SeaStar Power Purge hoses.



Close the upper bleeder screw on the port engine.

NOTE: A 1/4" Drive - 1/2" Crows Foot will ease this process.



1. Upper bleeder screw

Turn OFF the SeaStar Power Purge.

Close the Alignment Valve by turning the valve handle to the vertical position.



Remove the SeaStar Power Purge hoses from the helm and the port outboard.

Remove the Steering Lock Tools from both the port and starboard outboards.

Install the two black caps onto the purge fittings on each outboard.

Repeat the bleeding procedure as necessary to ensure the hydraulic system is free of all air before water testing the vessel. Refer to the Evinrude E-TEC G2 Installation and Pre-Delivery Guide for the procedure to check for air in the hydraulic steering system.

Tie Bar and Steering Lock Kit Installation

Always remove this steering lock device before turning the key switch ON. Engine will not steer with this device in place.

NOTICE

Failure to remove this steering lock device before turning the key switch ON can result in damage to the steering lock device if the steering wheel is turned while the system is powered.

Install the tie bar bracket, P/N 357685, on the outboard with two locking tab washers, P/N 357825, and two M8 x 35 screws, P/N 357884. Make sure the locking tab washers are oriented as shown.



1. Tie bar bracket, P/N 357685

2. Locking tab washers, P/N 357825

3. Screws, M8 x 35, P/N 357884

Tighten the screws to a torque of 18.0 to 20.5 ft.lbs. (24.5 to 28 N·m).



Use a punch to bend one tab of each washer into the hex of each screw.



1. Tab bent into hex of screw

If needed, steer the outboard to center. Slide the steering lock device over the bracket as shown. **NOTE:** The alignment valve may need to be opened to allow both engines to be centered.



Install two quick release pins through the holes on each side of the stern bracket.



1. Quick release pin (STARBOARD side shown)

Remove the quick release pins and the steering lock device BEFORE turning the key switch ON.

iDock Configuration Process

Connect the vessel to a laptop equipped with the latest version of *Evinrude Diagnostics* 6 software.

Turn the key switch to the ON position.

IMPORTANT: Code 8 will become active and an audible alarm may sound if a warning horn is connected. Disregard this as there is not a file in the joystick at this point.

Go on the network.

Choose the *BRP Steering/Control Surfaces Mode Controller* instance 0 to communicate with the port outboard mode controller.

Evinnude Diagnostics File Edit Data Logging View Help Window	Screen Selection		×
Network Diagnostics Go Off Network BRP Steering/Control Surfaces Mode BRP Sensor Communication interface Teleflex Propulsion System Throttle/ BRP Propulsion System Engine (EMM) BRP Steering/Control Surfaces Follov Lowrance Instrumentation General Sensor	Disconnect Device Controller Instance: 0, Address: 0xA1 Pressure Instance: 0, Address: 0x26 Shift Control Instance: 0, Address: 0x1) Instance: 0, Address: 0x96 ~up Controller Instance: 0, Address: 0x24 Box Instance: 3, Address: 0x6		
	View Fluid Senders	1	
Status	10/19/2017	3:44 PM 6.3.10088.0	

1. BRP Steering/Control Surfaces Follow-Up Controller

Select the *Configuration* icon at the top of the screen and use the *iDock Manifold Controller Config* Screen to set the different aspects of the mode controller.

ACK reply address: A1 View Active Faults	ACK reply address: A1	Evinude Diagnostics File Edit Data Logging View Help Window Screen Selection Immore Tests Data Logging Identification Software Fault Immore Network Data Logging Identification Software Fault Immore Network Data Logging Identification Software Fault Immore Network Data Logging Identification Software Fault Immore Configuration BRP Sensor Communication Interface Pressure Instance: Instance: Instance: Instance: Instance: Instance: Instance: Instance: Lowrance Instrumentation General Sensor Box Instance: Instance: Instance: Instance: Instance: In	Disconnect Device 2: 0, Address: 0xA1 2: 0, Address: 0x26 1: 0, Address: 0x26 2: 0, Address: 0x28 2: 0x6 2: 0x7 2: 0x7
		ACK reply address: A1	View Fluid Senders View Active Faults

1. Configuration icon

Fill in the following fields within this screen:

· Wedge Kit - use the drop down to make the proper choice

IMPORTANT: Only use this option if the vessel is equipped with a wedge kit. 10° is the maximum allowed for a wedge kit when using the *Evinrude iDock* system.

IMPORTANT: If this option is used, be sure the same option is used for the configuration of the starboard outboard manifold controller and the configuration of the joystick.

Toe Angle can be set in the configuration screen. The range for toe angle is -5° / +5° per engine. A negative
number is used for toe in while a positive number is used for toe out. Adjust the toe angle as needed based
on the hull configuration of the vessel.

IMPORTANT: If toe angle is adjusted, be sure the same setting is used for the configuration of the starboard outboard manifold controller and the configuration of the joystick.

	File Edit Data Logging View Help	Window Screen Selection Of tware Faults Configuration		ð	
2	Network Biamontier	Steering Sensor Calibration Port Limit Stbd Limit Current Steering Angle -32.0	Controller Instance DPS Assist MED Update Controller		
	Status		D VIEW ALLIYE FOULS	/19/2017 3:49 PM 6:310088.0	

1. Wedge kit drop down

2. Toe angle field

Click the Update Controller box when the fields are completed.

Toe Angle Port Limit Stbd Limit DPS Assist MED -4 Current Steering Angle -32.0 Update Controller ACK reply address: A1		Evinude Diagnostics File Edit Data Logging View Help Window Monitor Tests Data Logging View Help Window P Monitor Tests Data Logging View Help Window P Wedge Kit Wedge Kit Ste Ste Output Por Toe Angle -4 Cu Cu Output Cu ACK reply address: A1 ACK Ste Ste Ste	Screen Selection The Configuration reing Sensor Calibration t Stbd Limit DPS Assist MED -32.0 Update Controller View Active Faults		
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1. Update Controller box

Repeat these steps, however, connect to the *BRP Steering/Control Surfaces Mode Controller* instance 1 to communicate with the starboard outboard mode controller.

IMPORTANT: If the wedge kit degrees have to be set, make sure they are set to the same setting as the port outboard.

Click the *Disconnect Device* button.

Click the *BRP Steering/Control Follow-up Controller Instance 0* to communicate with the joystick and start the joystick calibration process.

|--|

1. BRP Steering/Control Follow-up Controller Instance 0

Click the Configuration icon at the top of the screen to set the different configuration aspects of the joystick.

Go Off Network BRP Steering/Control Surfaces Mode C BRP Sensor Communication interface I Caleflex Propulsion System Throttle/S BRP Propulsion System Engine (EMM) BRP Steering/Control Surfaces Follow Lowrance Instrumentation General Sensor Ba	Disconnect Device Disconnect Device Disconnect Device Disconnect Instance: 0, Address: 0xA1 ressure Instance: 0, Address: 0x26 ift Control Instance: 0, Address: 0x1 nstance: 0, Address: 0x96 p Controller Instance: 0, Address: 0x24 x Instance: 3, Address: 0x6	
	View Fluid Senders	
Session Started with iDock lovetick	View Active Faults	

1. Configuration icon

Fill in the following fields within this screen:

- File name (if desired)
- · Wedge Kit use the drop down to make the proper choice

IMPORTANT: Only use this option if the vessel is equipped with a wedge kit. 10° is the maximum allowed for a wedge kit when using the *Evinrude iDock* system.

IMPORTANT: If this option is used, be sure the same option that was used for the configuration of the port and starboard outboard mode controllers.

Toe Angle can be set in the configuration screen. The range for toe angle is -5° / +5° per engine. A negative
number is used for toe in while a positive number is used for toe out. Adjust the toe angle as needed based
on the hull configuration of the vessel.

IMPORTANT: If toe angle is adjusted, be sure the same setting is used for the configuration of the port outboard and starboard manifold controllers.



- 1. File name field
- 2. Toe angle field
- 3. Wedge kit field

Click the Update Controller box when the different fields have been completed.

	File Edit Deta Logging View Help Window Screen Selection Image: Segure Jack Logging Identification Software Faults Configuration Monitor Deal Logging Identification Software Faults Configuration
Ĺ	Verweit Devention Joystick Instance Default calibration Image: Configuration Toe Angle Max. Forward Throttle 0.0 100.0 Wedge Kit Max. Reverse Throttle Image: Controller Load From File Vew Huld Senders View Huld Senders ACK reply address: 24 View Active Faults
	Status 10/19/2017 351 PM 6.3.1008.0

1. Update Controller box

Load From File Option

If the vessel has already been calibrated and the calibration points were properly saved, a file containing the calibration points will be available to load at this point.

Click the Load From File box.

Navigate to and select the file that should be loaded into the joystick.

Click the Open button or double click on the file to load the file to the joystick.

When the file has been successfully loaded, click the Update Controller box to save the settings.

If this process has been completed, it is not necessary to perform the calibration process unless changes to the different calibration points are necessary.

(1	Text Description Control Screen Selection Weak Weak Weak Screen Selection Description Description <thdescription< th=""> Description</thdescription<>
	Status 10/19/2017 3-51 PM 63.10088.0

1. Update Controller box

2. Load From File box

Click the *iDock Calibration* icon at the top of the screen to access the calibration screens and start the calibration process.

Annior Data Legging Identification Software Faults Configuration IDeck Calibration Vertrack Distancedize Occk Reystick Configuration IDeck Calibration IDeck Calibration Vertrack Distancedize Max. Forward Throttle LED Bi Oo 100.0 10 Wedge Kit Max. Reverse Throttle Solution Load From File View ACK reply address: 24	stance hess To File Id Senders tive Faults
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1. iDock Calibration icon

iDock Calibration Procedure

Improper installation can result in loss of steering control and severe personal injury. Check that proper installation of the iDock System has been achieved before conducting any sea trial or before starting the calibration procedure.

It is recommended to practice using the joystick in all operating ranges before starting the calibration procedure. Improper use of the joystick can result in machine damage or personal injury.

NOTICE

On boats where the engines violate the edges of the vessel when turned, be sure to have enough room around the docks so the engines do not hit the dock.

IMPORTANT: Perform the calibration procedure on a calm day. If the water is rough or if it is extremely windy, the calibration points will be incorrect in calm weather conditions.

IMPORTANT: Prior to starting the *Evinrude iDock* Calibration procedure, select the correct propellers based on the information found in the *Evinrude E-TEC G2* Installation and Pre-Delivery Guide.

IMPORTANT: In strong currents or extremely windy conditions, the joystick may not be able to overcome the yaw of the boat. If this happens, stop the movement of the boat, realign the vessel, and continue docking.

IMPORTANT: All calibrations and corrections during this procedure will be based off of the movements of the bow of the boat. If any other part of the boat is used for reference during the calibration procedure, the calibration will be incorrect and will need to be repeated.

Calibration Using Evinrude Diagnostics Software

IMPORTANT: The calibration procedure must be performed when the vessel is on the water.

Connect the vessel to a laptop equipped with the latest version of *Evinrude Diagnostics* 6 software.

Start both engines.

Turn the joystick ON by pushing the power button.

NOTE: When the joystick is ON the power button will be illuminated in blue.

Open the Evinrude Diagnostics software program.

Follow the directions at the top of the screen as shown in the image below.

File Edit Data Logging View	Help Window Screen Se Software Faults Configuration iD	lection			
Network Diagnostics Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C De-Lowrance Instrum ACK reply address: 2-	iDock Joystick Calibration	Move the joystick left, to the first detent, to move the boat th PORT. Adjust the throttle setting to achieve the desired docking spe Press the Increase Throttle button or Decrease Throttle button adjust the throttle. Wat for boat speed to stabilize after make changes. Press the AFT+ button to correct forward drft. The start of the AFT+ button to correct forward drft. Press the AFT+ button to correct forward drft.	ed. n to ng tton to FORWARD AFT ++	Compensation 55	
Status		10/19/2017 3:2	9 PM 6.3.10088.0		

1. Directions at top of screen

Move the joystick to the left, to the first detent, to move the boat in a lateral port direction.



While holding the joystick left, use the *Increase throttle* and *Decrease throttle* buttons to set the desired port speed.

IMPORTANT: Be sure to let the boat speed stabilize while determining the desired port speed.



1. Increase throttle

2. Decrease throttle

If the vessel starts to move in an aft direction while holding the joystick left, correct the action by clicking the *FORWARD*+ button until there is a true port movement of the vessel.

ile Edit Data Logging View	Help Window Screen Selection Software Faults Configuration iDock Calibration
Network Diagnostics	Dock Joystick Calibration Image: Contract Calibration More the joystick left, to the first detent, to more the boat to form. And the the thotte setting to achieve the desired docking speed. Press the Increase Throttle button or Decrease Throttle button to correct rearward drift. Throttle % 45.7 % Image: Contract Team and the contract of the contract dirt. Press the AFT+ button to correct forward drift. Image: Contract Team and the contract of the contract dirt. Image: Contract Team and the contract dirt. Image: Contract d
Status	10/19/2017 3:29 PM 6.3.10088.0

1. FORWARD+ button

If the vessel starts to move in a forward direction while holding the joystick left, correct the action by clicking the *AFT*+ button until a true port movement of the vessel has been achieved.

Evinude Diagnostics	Help Window Screen Selection Software Faults Configuration iDock Calibration	
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C De Lowrance Instrum	ibody Joyetick Calibration Image: Calibration Move the joystick left, to the first detent, to move the boat to port. Adjust the throttle setting to achieve the desired docking speed. Press the increase Throttle button to achieve the desired docking speed. Press the increase Throttle button to correct reavard diff. Throttle % 45.7 % Image: Decrease Throttle Previous Step Previous Step Next Step	Compensation 55
Status	10/19/2017 3:29 PM 6.3.10088.0	

1. AFT+ button

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When a true port movement and a desirable throttle range has been achieved, click the *Next Step* box to continue the calibration procedure.

File Edit Data Logging Vi	iew Help Window Screen Selection
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Lowrance Instrum	Image: block defined and the state of the first detent, to move the bast of the state docking speed. The state state docking speed or state state state of the state docking speed or state stat
Status	10/19/2017 3:29 PM 6.3.10088.0

1. Next Step button

Follow the directions at the top of the screen as shown in the image below.

File Edit Data Logging View	Help Window Screen S Noftware Faults Configuration i	election Dock Calibration		
Network Diagnostics	iDock Joystick Calibration		A	
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Lowrance Instrum	Increase Throttle	Move the joystick right, to the first detent, to move the boat to STARBOARD. Adjust the throttle setting to achieve the desired docking speed. Press the increase Throttle button or Decrease Throttle button to adjust the increase. Wait for boat speed to stabilize after making during the PORT speed is established press the FORWARD+ button to correct rearward dirft. Press the AFT+ button to correct forward dirft.	FORWARD	Compensation 55
ACK reply address: 24	Decrease Throttle	Previous Step Next Step		
Status		10/19/2017 3:29 PM 6.3.1	088.0	

1. Directions at top of screen

Move the joystick to the right, to the first detent, to move the boat in a starboard direction.



While holding the joystick right, use the *Increase Throttle* and *Decrease Throttle* buttons to set the desired starboard speed.



- 1. Increase throttle
- 2. Decrease throttle

If the vessel starts to move in an aft direction while holding the joystick right, correct the action by clicking the *FORWARD*+ button until there is a true starboard movement of the vessel.

File Edit Data Logging Vi Monitor Data Logging I dentification Metwork Diagnostics BRP Steering/C BRP Sensor Con Teleflex Propulsion BRP Steering/C BRP Steering/C BRP Steering/C ACK reply address: 24	 W Help Window Screen Store Software Faults Configuration ID iDock Joystick Calibration iDock Joystick Calibration increase Throttle Throttle % 45.7 % 	election Cock Calibration Move the joystick right, to the first detent, to move the boat to STARBOARD. Adjust the throttle setting to achieve the desired docking speed. Press the Increase Throttle button or Decrease Throttle button to adjust the throttle. Was for boat speed to stabilize after making changes. After the PORT speed e stabilished press the FORWARD+ button to correct rearward drit. Press the AFI+ button to correct forward drit.	FORWARD 55
	Decrease Throttle	Previous Step Next Step	

1. FORWARD+ button

If the vessel starts to move forward while holding the joystick right, correct the action by clicking the *AFT*+ button until a true starboard movement of the vessel has been achieved.

e Edit Data Logging View itor Data Logging Identification	Help Window Screen Software Faults Configuration	Selection Dock Calibration			
Network Diagnostics	iDock Joystick Calibration				
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Lowrance Instrum	Increase Throttle Throttle % 45.7 %	<text><text><text><text><text></text></text></text></text></text>	FORWARD	Compensation 55	
			· · ·		

1. AFT+ button

When a true starboard movement and a desirable throttle range has been achieved, click the *Next Step* box to continue the calibration procedure.

le Edit Data Logging View Data Logging Identification	Help Window Screen Software Faults Configuration	Selection			
Network Diagnostics	iDock Joystick Calibration				
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Lowrance Instrum	Increase Throttle	Move the joystick right, to the first detent, to move the boat to STARBOARD. Adjust the throttle setting to achieve the desired docking speed. Press the Increase Throttle button or Decrease Throttle button to adjust the throttle. Walt for boat speed to stabilize after making changes. After the PORT speed is established press the FORWARD+ button to correct rearward dift. Press the AFT+ button to correct forward dift.	FORWARD	Compensation 55	
ACK reply address: 24	Throttle % 45.7 %				
	Decrease Throttle	Previous Step Next Step			
Status		10/19/2017 3:29 PM 6.3.1	.0088.0		

1. Next Step button

Follow the directions at the top of the screen as shown in the image below.

Evinrude Diagnostics File Edit Data Logging View File Data Logging Data Logging Data Logging Identification	Help Window Screen Sc Software Faults Configuration iD	election Joint Calibration				- <u>-</u>
Network Diagnostics Go Off Networ BRP Steering/C BRP Sensor Con Br Teleflex Propuls BRP Propulsion	iDock Joystick Calibration	Move the joystick to ful LEFT or ful RIGHT. Press the increase Throttle button or Decrease adjust for higher wind conditions. Wait for boa after making changes. Afterwapeed. Afterwapeed. Press the AFT - button to correct forward drift Press the AFT - button to correct forward drift Press the Next Step button when complete.	? Throttle button to it speed to stabilize + button to correct	(1) ++ FORWARD	Compensation	
BRP Steering/C Lowrance Instrume	Increase Throttle					
ACK reply address: 24	Decrease Throttle	Previous Step Nex	xt Step	AFT +		
Status			10/19/2017 3:30 PM 6.3.10088.0			

1. Directions at top of screen

Move the joystick to full port or full starboard.



Press the *Increase Throttle* button or the *Decrease Throttle* button until a desirable compensation speed is reached.

NOTE: This calibration procedure is to set the compensation speed when in high wind or strong current conditions.

IMPORTANT: Be sure to let the boat speed stabilize while determining the desired port or starboard compensation speed.



- 1. Increase Throttle button
- 2. Decrease Throttle button

If the vessel starts to move in an aft direction while holding the joystick full left or right, correct the action by clicking the *FORWARD*+ button until there is a true port or starboard movement of the vessel.



1. FORWARD+ button

If the vessel starts to move forward while holding the joystick full left or right, correct the action by clicking the *AFT*+ button until a true port or starboard movement of the vessel has been achieved.



1. AFT+ button

Click the *Next Step* button when a desired throttle range and true port and starboard movements have been achieved.

Evinrude Diagnostics File Edit Data Logging View Monitor Data Logging Identification	Help Window Screen Selection	
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Durance Instrum	Dock/Joystick Calibration Wove the joystick to full LEFT or full RIGHT. Press the Increase Throttle button or Decrease Throtta djust for higher wind conditions. Walt for boat speer after making changes. After speed is established press the FORWARD+ buttor rearward drift. Press the AFT+ button to correct forward drift. Press the Next Step button when complete.	ttie button to ed to stabilize ton to correct FORWARD 55
ACK reply address: 24	Throttle % 71.4 %	
Status	Decrease Throttle Previous Step Next St 10/19/	tep 1/2017 3:30 PM 6.3.10088.0

1. Next Step button

Follow the directions at the top of the screen as seen in the image below..



1. Directions at the top of the screen

Twist the joystick counterclockwise to spin the bow of the boat to port.



Press the *Increase Throttle* button or the *Decrease Throttle* button until a desirable port spin speed is reached. IMPORTANT: Be sure to let the boat speed stabilize while determining the desired port speed.



- 1. Increase Throttle button
- 2. Decrease Throttle button

If the vessel starts to move in an aft direction while twisting the joystick counterclockwise, correct the action by clicking the *FORWARD*+ button until a true port spin of the vessel is achieved.

File Edit Data Logging View Help Window Monitor Data Logging Identification Software Faults Configu	Screen Selection	
Network Diagnostics iDock Joystick Calibration Go Off Networ BRP Steering/C BRP Propulsion BRP Steering/C BRP Steering/C Increase Throttl Lowrance Instrum Throttle % ACK reply address: 2 Decrease Throttl	 Twit the joystick to full counterclockwise to spin the bow of the foct to PORT. Press the Increase Throttle button or Decrease Throttle button to adjust the throtte unit the desired rotational speed is activation. To the rotational speed is activative of the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift. To the rotational speed is activative of the AFT+ button to correct orawal drift or the AFT+ button to the AFT+ button to correct orawal drift or the AFT+ button to correct orawal drift orawa	Compensation 52.8

1. FORWARD+ button

If the vessel starts to move forward while twisting the joystick counterclockwise, correct the action by clicking the *AFT*+ button until a true port a true port spin of the vessel is achieved.



1. AFT+ button

When a desirable throttle range and a true port spin of the vessel has been achieved, press the *Next Step* button.



1. Next Step button

Follow the directions at the top of the screen as shown in the image below.

ile Edit Data Logging Vie Data Logging Identification Network Diagnostics	W Help Window Screen S M Software Faults Configuration if Dock Joystick Calibration	election Dock Calibration	1
Go Off Networ -BRP Steering/C BRP Sensor Con Teleflex Propulsion BRP Propulsion BRP Steering/C Decourance Instrum ACK reply address: 24	Increase Throttle	<text><image/><image/><image/><text></text></text>	Compensation 52.8
Status		10/19/2017 3:31 PM 6.3.10	0088.0

1. Directions at top of screen

Twist the joystick clockwise to spin the bow of the boat to starboard.



While twisting the joystick clockwise, use the *Increase Throttle* and *Decrease Throttle* buttons to set the desired starboard spin speed.



- 1. Increase throttle
- 2. Decrease throttle

If the vessel starts to move in an aft direction while twisting the joystick clockwise, correct the action by clicking the *FORWARD* + button until there is a true starboard spin of the vessel.



1. FORWARD+ button

If the vessel starts to move forward while twisting the joystick clockwise, correct the action by clicking the *AFT*+ button until there is a true starboard spin of the vessel.



1. AFT + button

When a true starboard spin and a desirable throttle range have been achieved, click the *Next Step* box to continue the calibration procedure.

Evinude Diagnostics ile Edit Data Logging View Data Logging Uiew Identification	Help Window Screen S Software Faults Configuration it	election Jock Calibration	
Go Off Networ BRP Steering/C BRP Sensor Con Breleflex Propuls BRP Propulsion BRP Steering/C B-Lowrance Instrum ACK reply address: 2	iDock Joystick Calibration	<text><image/><image/><image/><text></text></text>	Compensation 52.8 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Status		10/19/2017 3:31 PM 6.3.	3.10088.0

1. Next Step button

Follow the directions at the top of the screen as shown in the image below.



1. Directions at top of screen

Move the joystick forward to the first detent.



Use the *Increase Throttle* and *Decrease Throttle* buttons to adjust the throttle until the boat reaches a speed of 4 MPH (3.5 KTS). Watch the *Speed Over Ground (SOG (MPH))* box to ensure the vessel reaches 4 MPH (3.5 KTS).

IMPORTANT: Be sure to let the boat speed stabilize after making any changes.



1. Increase Throttle button

2. Speed Over Ground (SOG) box

3. Decrease Throttle button

After the proper speed has been achieved, push the joystick forward to the first detent. If the vessel starts to drift to starboard, use the *PORT*+ button to correct the movement until a true forward movement of the vessel has been achieved.



1. PORT+ button

If the vessel starts to drift to port, use the *STARBOARD*+ button to correct the movement until a true forward movement of the vessel has been achieved.

le Edit Data Logging View	Help Window Screen : Software Faults Configuration i	election				
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C Duwrance Instrum ACK reply address: 2	 Dock Joystick Calibration Increase Throttle Throttle % 20.0 % Increase Throttle 	Move the Joystick FORWARD to Press the Increase Throttle but adjust the throttle to achieve a Wat for boat speed to stabile STARBOARD drift or the STARB Press the Next Step button who SOG (MPH) 0 Previous Step	the first detent. on or Decrease Throttle button to boat speed of 4 MPH (3.5 KTS). after making changes. he PORT- button to correct 0ARD+ button to correct PORT drift. en complete.		Compensation	1
Status			10/19/2017 3:31 PM 6.3.1008	38.0		

1. STARBOARD+ button

When the 4 MPH (3.5 KTS) speed and a true forward movement of the vessel has been achieved, press the *Next Step* button to continue the calibration process.



1. Next Step button

Follow the directions at the top of the screen as shown in the image below.

Evinude Diagnostics le Edit Data Logging View Data Logging Londrification Network Diagnostics	Help Window Screen S Software Faults Configuration if iDock Joystick Calibration	election		(1)		
Go Off Networ BRP Steering/C BRP Sensor Con Caleflex Propuls BRP Propulsion BRP Steering/C Caleflex Propulsion BRP Steering/C Caleflex Propulsion BRP Steering/C Caleflex Propulsion BRP Steering/C Caleflex Propulsion BRP Steering/C Caleflex Propuls Caleflex Propuls Ca	Increase Throttle Throttle % 35.0 %	Move the Joystick to ful FORW/ Press the Increase Throttle but achieve a boat speed of 7 MPH stabilize after making adjustmen After speed is established, use th STARBOARD diff or the STARB Press the Next Step button wh SOG (MPH) 0	ARD to move the boat AHEAD. ton or Decrease Throttle button to (6 KTS). Wait for boat speed to the PORT button to correct OORT drift. en complete.		Compensation 0	
Status			10/19/2017 3:32 PM 6.3.100	188.0		

1. Directions at top of screen

Push the joystick to full forward to move the boat to forward until the vessel reaches 7 MPH (6 KTS). Use the *Increase Throttle* button and *Decrease Throttle* button to achieve the 7 MPH speed. Watch the *SOG (MPH)* box to ensure the proper speed has been achieved.

IMPORTANT: Be sure to let the boat speed stabilize after making any changes.

File Edit Data Logging Vie	v Help Window Screen S	Jock Calibration			
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propulsion BRP Propulsion BRP Steering/C Lowrance Instrum ACK reply address: 24	 iDock Joystick Calibration increase Throttle Throttle % 35.0 % increase Throttle 	Nove the 10 ul FORWARD to move the boat AHEAD. Are speed of 27 MPH (6 KTS), Wait for boat speed		Compensation 0	
Status		10/19/2017 3:32 PM 6.3	10088.0		

- 1. Increase Throttle button
- 2. SOG (MPH) box
- 3. Decrease Throttle button

After the 7 MPH (6 KTS) speed has been achieved push the joystick full forward. If the vessel drifts to starboard when pushing the joystick full forward, press the *PORT*+ button until a true forward movement has been achieved.



1. PORT+ button

If the vessel drifts to port when pushing the joystick full forward, press the STARBOARD+ button until a true forward movement has been achieved.

File Edit Data Logging Vie File Edit Data Logging Vie Monitor Data Logging Identification	ew Help Window Screen Selection	= 0 ×
Network Diagnostics Go Off Networ BRP Steering/Co BRP Sensor Con Teleflex Propulsion BRP Steering/Co Lowrance Instrume ACK reply address: 2-	 ▶ Dock Joystick Calibration ▶ Dock Joystick Calibration ▶ Dock Joystick Calibration ▶ Move the Joystick to full FORWARD to move the boat AHEAD. Press the Increase Throttle button or Decrease Throttle button to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed to achieve a boat speed to achieve a boat speed of 7 MPH (6 KTS), wat for boat speed to achieve a boat speed to achieve achieve	1
Status	10/19/2017 3:32 PM 6:3.10088.0	

1. STARBOARD+ button

When the 7 MPH (6 KTS) speed and true forward movement of the vessel has been achieved, press the Next Step button to continue the calibration process.

Monitor Data Logging Identification	n Software Faults Configuration	Dock Calibration			
Network Diagnostics	b iDock Joystick Calibration				
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C B-Lowrance Instrum	Increase Throttle	Move the Joystick to ful FORWARD to move the boat AHEAD. Press the Increase Throttle button or Decrease Throttle button to stabilize after making adjustments. After speed is established, use the PORT button to correct STARBOARD drift or the STARBOARD button to correct PORT drift. Press the Next Step button when complete. SOG (MPH)		Compensation 0	
ACK reply address: 2-	Throttle % 35.0 %	0 + PORT	1	STARBOARD	
	Decrease Throttle	Previous Step Next Step			

1. Next Step button

Follow the directions at the top of the screen as seen in the image below.

Ionitor Data Logging Identificati	on Software Faults Configuration i	Dock Calibration		
Go Off Network BRP Steering/C BRP Sensor Con Teleflex Propulsion BRP Steering/C BRP Steering/C Lowrance Instrum ACK reply address: 2	iDock Joystick Calibration iDock Joystick Calibration increase Throttle Throttle % 40.0 %	Move the joystick BACK, to the first detent, to move the boat AFT. Press the increase Throttle button or Decrease Throttle button to achieve a boats speed of 3 MPH (2.6 KTS). Wait for boat speed of 3 MPH (2.6 KTS). Wait for boat speed of 3 MPH (2.6 KTS). After speed is established, use the PORT+ button to correct PORT dirt. Press the Next Step button when complete SOG (MPH) 1	Compensation 0 • • • • • • • • • • • • • • • • • • •	
	Decrease Throttle	Previous Step Next Step		

1. Directions at the top of the screen

Move the joystick back, to the first detent, to move the vessel to AFT.



Press the Increase Throttle button or the Decrease Throttle button until the vessel achieves a speed of 3 MPH (2.6 KTS). Watch the SOG (MPH) box to ensure the proper vessel speed has been achieved during this calibration step.

IMPORTANT: Be sure to let the boat speed stabilize after making any changes.



- 1. Increase Throttle button
- 2. SOG (MPH) box
- 3. Decrease Throttle button

When pushing the joystick back, if the vessel starts to drift to starboard, press the *PORT*+ button to correct the movement.



1. PORT+ button

When pushing the joystick back, if the vessel starts to drift to port, press the STARBOARD+ button to correct the movement.



1. STARBOARD+ button

When the proper rearward speed and true rearward movement of the vessel has been achieved, press the Next Step button to continue the calibration process.

tor Data Logging Identification	Software Faults Configuration	Dock Calibration		
Network Diagnostics	iDock Joystick Calibration			
Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propuls BRP Propulsion BRP Steering/C	5	Move the joystick BACK, to the first detent, to move the boat AFT. Press the Increase Throttle button or Decrease Throttle button to achieve a boat speed of 3 MPH (2.6 KTS). Wak for boat speed to stabilize after making changes. After speed is established, use the PORT+ button to correct STARBOAD drit or the STARBOARD+ button to correct PORT drit. Press the Next Step button when complete	Compensation	
ACK reply address: 24	Throttle % 40.0 %	SOG (MPH)	H STARBOARD	
	Decrease Throttle	Previous Step Next Step		
		10 10 10 10 10 10 10 10 10 10 10 10 10 1		

1. Next Step button
Follow the directions at the top of the screen as seen in the image below.

File Edit Data Logging View Monitor Data Logging Identification	Help Window Screen Selection
Network Diagnostics Go Off Networ BRP Steering/C BRP Sensor Con Teleflex Propulsion BRP Propulsion BRP Steering/C Lowrance Instrum ACK reply address: 2	Prock Jaystick Calibration Move the joystick FORWARD to move the boat AHEAD. After the boat has attained a speed of 5 MPH (4.3 kTS), move the joystick to the full BACK position to stop the boat. Increase Throttle Throttle % 70.0 % 0 Image: Constraint of the full BACK position to stop the boat. Press the Save Ext button when complete. SOG (MPH) 0 Image: Constraint of the full BACK position to the full BACK position to stop the boat. Press the Save Ext button when complete. Image: Constraint of the full BACK position to stop the boat. Press the Save Ext button when complete. Image: Constraint of the full BACK position to stop the boat. Previous Step Next Step Save & Extit
Status	10/19/2017 3:32 PM 6.3.10088.0

1. Directions at the top of the screen

Move the joystick forward, to the first detent, to move the vessel forward.



While pushing the joystick forward, watch the SOG (MPH) box until the vessel reaches a speed of 5 MPH (4.3 KTS).



- 1. Increase Throttle button
- 2. SOG (MPH) box
- 3. Decrease Throttle button

When the 5 MPH (4.3 KTS) vessel speed has been achieved, pull back on the joystick until the vessel comes to a complete stop. Use the *Increase Throttle* and *Decrease Throttle* buttons to make speed adjustments until the vessel comes to a complete stop within 3 seconds after achieving the 5 MPH (4.3 KTS) speed. Watch the SOG (MPH) box to ensure the proper vessel speed is achieved before pulling back on the joystick.



- 1. Increase Throttle button
- 2. SOG (MPH) box
- 3. Decrease Throttle button

When the proper stopping speed has been achieved, press the Save & Exit button to complete the calibration process.

If a calibration step needs to be repeated, press the Previous Step button to reach and repeat the different calibration screens.



- 1. Save & Exit button
- 2. Previous Step button

Saving A Calibration File

While still on the BUS and connected to the Surface Follow Up Controller Instance 0, navigate to the iDock Joystick Configuration screen.

			9	
Config File Nam	e			
Default calibrati	on	System Wide		
Toe Angle	Max. Forward Throttle	# Joysticks		
0.0	50.0			
		a Control Hands		
Wedge Kit	Max. Reverse Throttle	# Control Heads		
100	• 75.0			
Joystick Instance	e LED Brightness			
	- 100 -	Update Controller	DAT	
	Joystick Calibration			
A		-		
Load From	n File Save To File	Erase		

Click on the Config File Name field and replace the name with a description of the boat.

iDock Joystick Configuration Config File Name			1		
Manitou Legacy 23 LT		System Wide			
Toe Angle	Max. Forward Throttle	# Joysticks			
0.0	50.0	•			
Wedge Kit	Max. Reverse Throttle	# Control Heads	1		
10° -	75.0				
Joystick Instance	LED Brightness			4	
•	100 •	Update Controller			
	Joystick Calibration				
Load From File	Save To File	Erase			

1. Name replaced in Config Field

Select Update Controller.

Dock Joystick Configuration Config Elle Name				
Manitou Legacy 23 LT		Systein Wide		
Toe Angle 0.0 Wedge Kit 10° •	Max. Forward Throttle 50.0 Max. Reverse Throttle 75.0	# Joys dds # Contro Heads		
Joystick Instance	LED Brightness 100 • Joystick Calibration	Update Controller		
Load From File	Save To File	Erase		

1. Update Controller

Select Save to File.

Dock Joystick Configuration Config File Name			2		
Manitou Legacy 23 LT	/	System Wide			
Toe Angle	Max. Forward Throttle	# Joysticks			
0.0	50.0	•			
Wedge Kit	Max. Reverse Throttle	# Control Heads	1		
10° -	75.0	- 1		`	
Joystick Instance	LED Brightness			1	
- 0	100 -	Update Controller			
4	Joystick Calit/ation				
A					
Load From File	Save To File	Erase			

1. Save to File

When Save to File is selected the following pop-up screen will appear.

Notwork Disconstice	Save Joystick Cal data	Data + BRP + EvDiag6 + Calibration_files	iDock Software Joyst	ick Calibrations	• [69]	Search Joystick Calibrations
Manitou Legacy 23 LT	Organize · New fold	ler				III • 0
Toe Angle 0.0 Wedge Kit 10° Joystick Instance	Computer Computer Computer	Name 1 Sail Fish 32 300 Rebel 19.cnf Bennington20by/0-138Rebel.cnf Dusky278150H/018Rebel.cnf Cocean Runner 32 300Hp mismi.cnf Sail Fish 32 300 Rebel 19.cnf Scott 255LXF 200HP Mami.cnf Shallow Sport 32 300HP RX3.cnf	Date modified 2/1/2018 9:28 AM 2/2/2018 11:44 AM 2/14/2018 10:44 AM 2/15/2018 9:15 AM 1/9/2018 8:38 AM 2/13/2018 1:52 PM 2/14/2018 6:35 AM	Type CNF File CNF File CNF File CNF File CNF File CNF File	Size 1 KB 1 KB 1 KB 1 KB 1 KB 1 KB 1 KB	
Load From File	File name: 2016	Manitou Legacy 23 LT 300HP 21 Rebel				-
	Save as type: Joyst	ick Cal files (*.cnf;*.s19)				-
Enable Drydock Testing					-	

In the file name, the description should be the Year, Boat Model, Engine Horsepower and name of Propeller and Pitch of Propeller.

Click Save.

N	book Joystick Configuration Config File Name Manifour Legacy, 23 LT	Save Joystick Cal data Save Joystick Cal data A O
	Toe Angle 0.0 Wedge Kit	Organize New Tolder El Image: Complexity of the state of the
	Joystick Instance	Pictures
	Load From File	en
	Enable Drydock Testing	Save as type: [keystick Califies (*.cnt/*.s19) Hide Folders Save Cancel

Loading A Calibration File

While still on the BUS and connected to the Surfaces Follow Up Controller Instance 0, navigate to the iDock Joystick Configuration screen.

Select Load From File

National Disconstice	_/			
Config File Name Manitou Legacy 23 LT		System Wide		
Toe Angle	Max. Forward Throttle	# Joysticks		
Wedge Kit	Max. Reverse Throttle 75.0	# Control Heads	- 0	
Joystick Instance	LED Brightness	Update Controller		
	Joystick Calibration			
Load From File	Save To File	Erase		
Enable Davdock Tecting				

1. Load Form File

Select the appropriate file for your model if available from the list.

Net	book Disanactics iDock Joystick Configuration		Select Config File	nData + 889 + EvDiadó + Calibration files +	Dock Software + Joyd	tick Calibrations		Search Joystick Calibrations
	Config File Name	_	Organize - New fol	der	/	/	- 1 -	II • [] 0
	Toe Angle 0.0 Wedge Kit None Joystick Instance	Max 50. Ma 75 LEI 50	Favorites Desktop Deownloads Recent Places Ubraries Documents Music Pictures Videos	Name 1 Sal Fish 22 300 Rebel 19.cnf 2016 Manihou Legacy 23 LT 300HP 21 Re Bennington/30by10-18R/belc.nf Dusly278150H018R/belc.nf Ocean Runner 32 300hp mami.cnf Sal Fish 32 300 Rebel 19.cnf Secur 255LVF 200HP Mami.cnf Shallow Sport 32 300HP RX3.cnf	Dimmodified 2/1/2018 9:28 AM 2/26/2018 10:24 AM 2/2/2018 10:24 AM 2/14/2018 10:44 AM 2/15/2018 9:15 AM 1/9/2018 8:38 AM 2/13/2018 1:52 PM 2/14/2018 6:35 AM	Type CNF File CNF File CNF File CNF File CNF File CNF File CNF File	Size 1 KB 1 KB 1 KB 1 KB 1 KB 1 KB 1 KB 1 KB	
A	Load From File Enable Drydock Testing		S (C) Data (D:)	name				Joystick, Cal files (*.cnf;*.s19) Open Cancel

1. List of available files

Second Station Joystick Setup

Disconnect from the BUS and connect to Surfaces Follow Up Controller Instance 1.

Go Off Network	Disconnect Device		
BRP Sensor Communication interfa BPP Steering /Control Surfaces Foll	ce Pressure Instance: 0, Address: 0x23		
BRP Steering/Control Surfaces Foll BRP Steering/Control Surfaces Foll Teleflex Propulsion System Throttil	ow-up controller Instance: 0, Address: 0x2 ow-up Controller Instance: 1, Address: 0x2 e/Shift Control Instance: 0. Address: 0x1		
BRP Steering/Control Surfaces Mod BRP Steering/Control Surfaces Mod	le Controller Instance: 0, Address: 0x2C le Controller Instance: 1. Address: 0x2C	•	
BRP Propulsion System Engine (EM BRP Propulsion System Engine (EM BRP Propulsion System Engine (EM	M) Instance: 1, Address: 0x97		
Lowrance Navigation system Ownship P	osition (GNSS) Instance: 0, Address: 0x96	BRP	
		-	

1. Surfaces Follow Up Controller Instance 1

Click Configuration at the top of the screen.

Dock Joystick Configuration				
Manitou		System Wide		
Toe Angle 0.0 Wedge Kit 10° Joystick Instance 1	Max. Forward Throttle 50.0 Max. Reverse Throttle 75.0 LED Brightness 100 Joystick Calibration Transfer From Primary	# Joysticks 2 # Control Heads Update Controller	GRP	
	Joystick			

1. Configuration

Click Transfer From Primary Joystick to load the calibration file into the second station joystick.

Network Disconcetice	tion			
Manitou		System Wide		
Toe Angle 0.0 Wedge Kit 10° Joystick Instance 1	Max. Forward Throttle 50.0 Max. Reverse Throttle 75.0 LED Brightness 100	# Joysticks 2 * # Contro Heads Update Controller	GRP	
A Enable Drydock Te	Joystick Calibration Transfer From Primary Joystick	_		

1. Transfer From Primary Joystick

Water Test

Improper installation can result in loss of steering control and severe personal injury. Ensure proper installation of the *iDock* System has been achieved before conducting any sea trial or before starting the calibration procedure.

It is recommended to practice using the joystick in all operating ranges before starting the calibration procedure. Improper use of the joystick can result in machine damage or personal injury.

NOTICE

On boats where the engines violate the edges of the vessel when turned, be sure to have enough room around the docks so the engines do not hit the dock.

IMPORTANT: In strong currents or extremely windy conditions, the joystick may not be able to overcome the yaw of the boat. If this happens, stop the movement of the boat, realign the vessel, and continue docking.

Test the docking of the vessel in all possible directions to ensure the proper settings have been achieved. If the settings have not been achieved or are not desirable in any direction, repeat the calibration process.

Refer to the image below for the operating ranges of the joystick before starting any joystick testing.



Forward

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will be illuminated in blue when power is applied. To move the boat forward, push the joystick slightly forward.



When the joystick is pushed forward, both the port and the starboard engines will apply forward thrust.



To increase the movement, push the joystick harder (past the detent) in the forward direction.

To turn the boat to port while moving the boat forward, twist the joystick counterclockwise.

To turn the boat to starboard while moving forward, twist the joystick clockwise.

To correct for over steering, twist the joystick in the opposite direction.

Port

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will become illuminated in blue when power is applied. To move the boat to port, push the joystick slightly to the left.



When the joystick is pushed to port, the port engine will provide forward thrust while the starboard engine will provide reverse thrust to walk the boat to port.



To increase the movement, push the joystick harder (past the detent) in the port/left direction.

To move the boat forward while moving to port, push the joystick forward.

To move the boat aft while moving to port, push the joystick aft.

To correct for over steering, let go of the joystick to allow the joystick to return to the center position or push the joystick right.

Starboard

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will be illuminated when power is applied. To move the boat to starboard, push the joystick slightly right.



When the joystick is pushed to starboard, the port engine will provide reverse thrust while the starboard engine will provide forward thrust to walk the boat starboard.



To increase the movement, push the joystick harder (past the detent) in the starboard/right direction.

To move the boat forward while moving the boat to starboard, push the joystick forward.

To move the boat aft while moving in a starboard direction, push the joystick aft.

To correct for over steering, let go of the joystick to allow the joystick to return to the center position or push the joystick right.

Aft

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will be illuminated in blue when power is applied. To move the boat aft, push the joystick slightly backwards.



When the joystick is pushed aft, both the port and starboard engines will provide reverse thrust to move the vessel aft.



To increase the movement, push the joystick harder (past the detent) in the aft direction.

To turn the boat to port while moving the boat aft, twist the joystick counterclockwise.

To turn the boat to starboard while moving aft, twist the joystick clockwise.

To correct for over steering aft, let go of the joystick to allow the joystick to return to the center position or push the joystick forward.

Port Spin

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will be illuminated in blue when power is applied. To move the vessel in a port spin, twist the joystick in a counterclockwise motion.



When the joystick is turned counterclockwise, the port engine will provide reverse thrust and the starboard engine will provide forward thrust to spin the boat to port.



To increase the movement, twist the joystick further counterclockwise.

To move the boat forward while in a port spin, move the joystick forward.

To move the boat aft while in a port spin, move the joystick aft.

To correct for over steering in a port spin, let go of the joystick to allow the joystick to return to the center position or twist the joystick clockwise.

Starboard Spin

Place the throttle lever into the NEUTRAL position. Press the power button on the joystick. The power button will be illuminated in blue when power is applied. To move the vessel in a starboard spin, twist the joystick in a clockwise motion.



When the joystick is turned clockwise, the port engine will provide forward thrust while the starboard engine will provide reverse thrust to spin the vessel starboard.



To increase the movement, twist the joystick further clockwise.

To move the boat forward while in a starboard spin, move the joystick forward.

To move the boat aft while in a starboard spin, move the joystick aft.

To correct for over steering in a starboard spin, let go of the joystick to allow the joystick to return to the center position or twist the joystick counterclockwise.

Inspection

Inspect the vessel for any fluid leaks. If leaks are found, repair immediately and perform the puring process explained in this manual.

Ensure all hydraulic hoses are routed properly and there are no kinks in any hoses. If any problems are found, repair immediately.

Inspect all of the electrical connections. Ensure all electrical connections are tight and there are no kinked or broken wires. If problems are found, repair immediately.

Joystick Drill Template

Be sure printer settings are set to 100% when printing this template.





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