



# STEERING SYSTEMS

# STEERING ACCESSORIES

**INSTALLER: THESE INSTRUCTIONS CONTAIN IMPORTANT SAFETY INFORMATION  
AND MUST BE FORWARDED TO MARINE CRAFT OWNER.**

## EN Dual Cable Steering Bracket Service Kit Instructions

**USA & CANADA**  
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This Service Kit Instruction (SKI) contains important supplementary information or notifications for the Dual Cable Steering Bracket. It is not intended to provide all information, instruction, and/or safety messaging related to the product. For complete information, refer to the product manuals.

308949 Kit Contents	Qty.
Steering Cable Mounting Bracket	1
Steering Cable Support Tube	1
Adjustment Nut	2
Locking Tab Washer	2
Nylon Bushing	1
Seal	1
Cable Connector	1
3/8 in. Self-locking Nut	2
3/8 in. Flat Washer	3
Mounting Bolts	4

**i** The images used in this document are for reference purposes only.

Before beginning with the installation, confirm the contents of the service kit are present.

## 1 Explanation of Symbols and Safety Instructions

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.

### 1.1 Recognize Safety Information

**!** **This is the safety alert symbol.** It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### 1.2 Understand Signal Words

A signal word will identify safety messages and property damage messages, and it will indicate the degree or level of hazard seriousness.

**!** **WARNING**  
Indicates a hazardous situation that, if **not** avoided, could result in death or serious injury.

**NOTICE:** Used to address practices **not** related to physical injury.

**i** Indicates additional information that is not related to physical injury.

### 1.3 General Safety Messages

**!** **WARNING: STEERING CONTROL HAZARD.**  
**Failure to obey the following warnings could result in death or serious injury:**

- The boat should be operated with caution until the steering system has been thoroughly checked out under normal operating conditions to ensure that the installation is correct and complete.

- Read these instructions thoroughly before beginning installation.
- Use the parts provided only as instructed. Do **not** substitute parts.

**NOTICE:** In order to obtain the best steering performance, the outboard motor **must** be installed and lubricated and the trim tab adjusted in accordance with the motor and boat manufacturer's specifications.

## 2 Equipment Removal

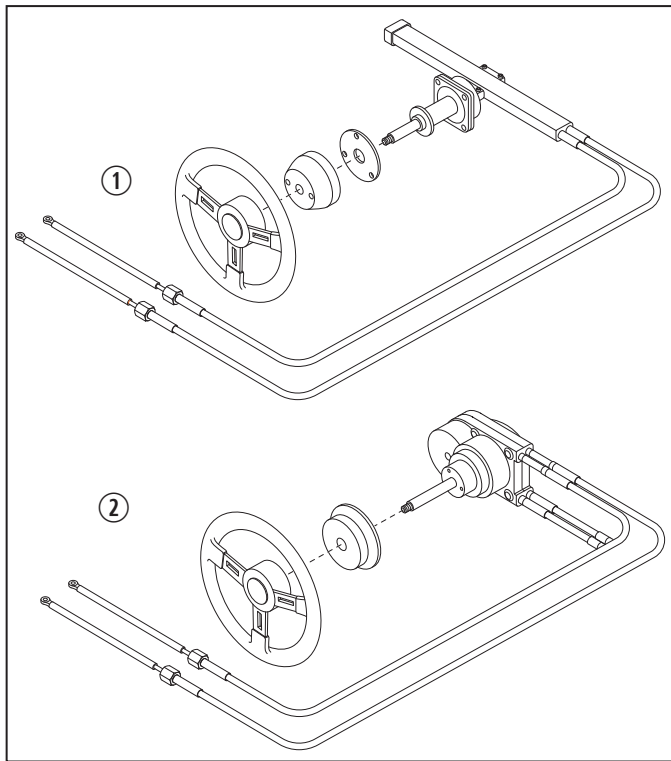
This section describes the proper technique for removing the existing equipment in preparation for installing the new steering bracket.

Consult the manuals for your current equipment for the proper technique to remove the existing steering arm assembly from the motor tiller arm.

- i** Be sure to retain the flat washers and 3/8 in. elastic stop nut from the existing steering arm assembly.

## 3 Installation

This section describes the proper technique to install and adjust the steering arm and cables.



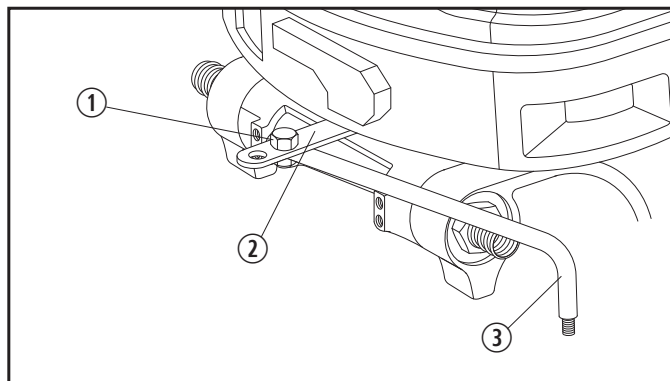
**1** Gear Rack and Rotary Head Configurations

① Gear Rack

② Rotary Head

**NOTICE:** Both gear racks or rotary steering heads **must** be installed so that both steering cables will be routed together on the same side of the boat and will push-pull together.

### 3.1 Installing the Steering Arm



**2** Steering Arm Installation

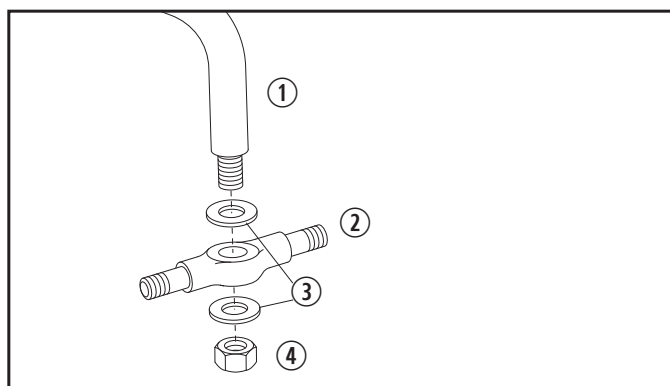
① Pivot Bolt and Ball Joint Connection

② Engine Tiller Arm

③ Steering Arm

1. Install the steering arm to the engine tiller arm using the inner (rearmost) bolt hole, and torque to specification.

- i** Be sure to use the elastic stop nut, as shown in the engine rigging specifications for your boat.



**3** Cable Connector Installation

① Steering Arm

③ Flat Washers\*

② Cable Connector

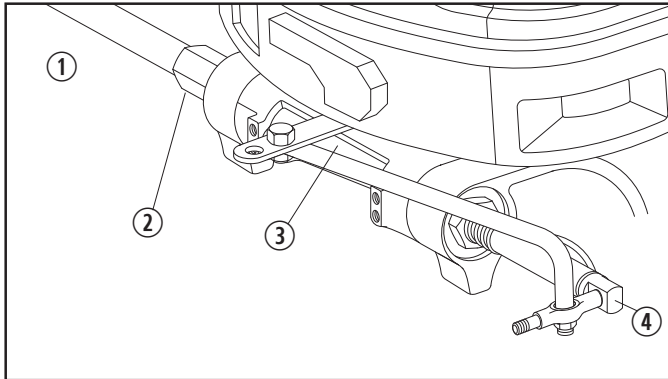
④ Elastic Stop Nut\*

\* These parts are not included in the service kit. See "Equipment Removal" on page 2

2. Assemble the cable connector onto the steering arm.

**i** Do **not** tighten the installation together at this time.

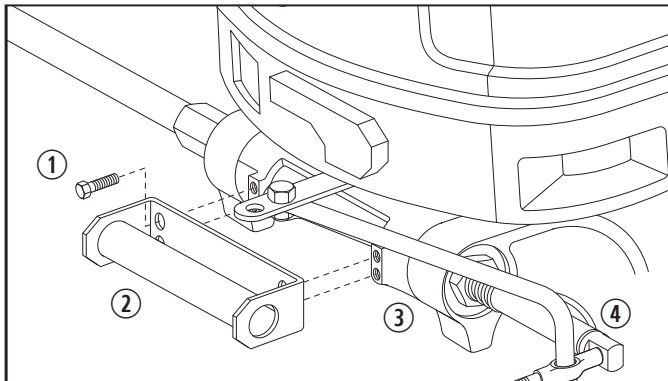
### 3.2 Installing the Steering Cables



**4** Steering Cable 1 Installation

- ① Steering Cable 1                      ③ Engine Tilt Tube
- ② Holding Nut                            ④ Output End

1. Lubricate the inside of the engine tilt tube, the inside of the steering cable support tube, and the output end of the cable with a coat of good quality waterproof marine grease.
2. Install steering cable 1 into the engine tilt tube and tighten the holding nut.

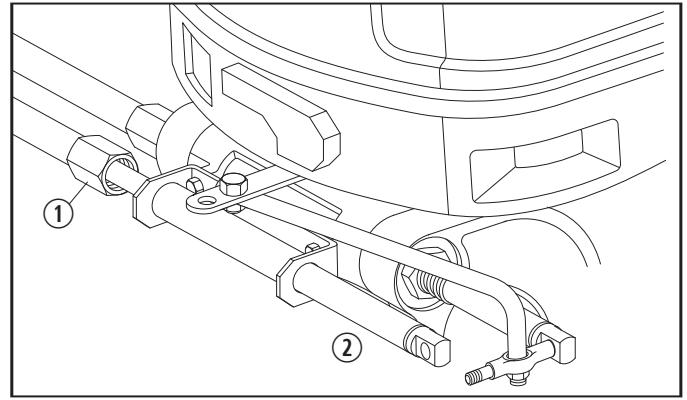


**5** Mounting Bracket Installation

- ① Mounting Bolts (4)                      ③ Engine Mount
- ② Mounting Bracket                      ④ Steering Cable 1

**NOTICE:** Some engines require metric hardware. Make sure to use the proper size mounting bolts.

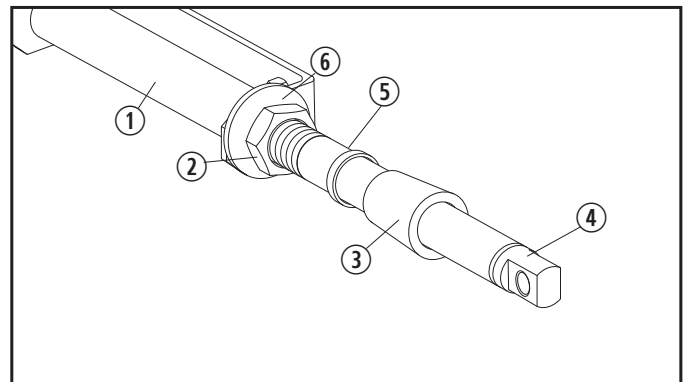
3. Install the mounting bracket onto the engine mount with the mounting bolts provided, torquing to **100 lb in. (11.3 Nm)**.



**6** Steering Cable 2 Installation

- ① Adjustment Nut                      ② Steering Cable 2

4. Slip the adjustment nut and locking tab washer over steering cable 2.
5. Apply a coat of marine grease to the cable end.
6. Insert steering cable 2 through the mounting bracket holes **WITHOUT** the support tube installed.
7. Turn the steering wheel to extend the steering cables to their full length, then turn the steering wheel back one-quarter turn.

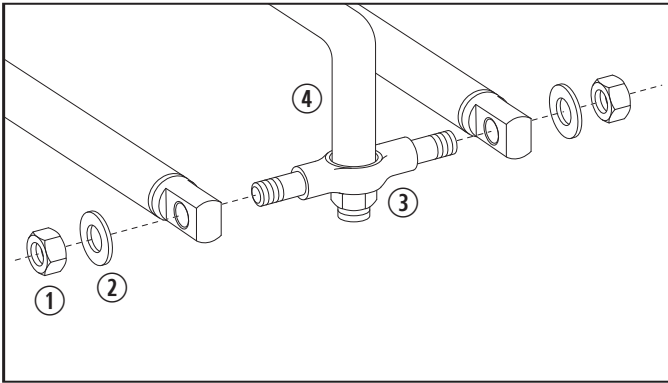


**7** Support Tube Installation

- ① Support Tube                            ④ Steering Cable 2
- ② Adjustment Nut                      ⑤ Nylon Bushing
- ③ Seal                                        ⑥ Locking Tab Washer

8. Install the support tube onto the extended portion of the steering cable 2 and through only **ONE** hole in the mounting bracket.
9. Slide the adjustment nut and locking tab washer over the end of the steering cable 2 and tighten onto the support tube a few turns.

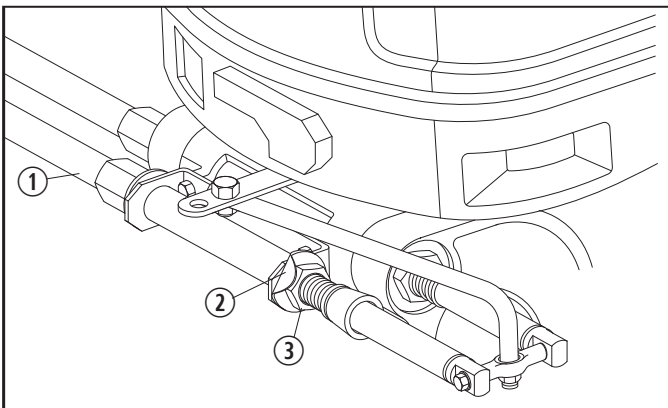
10. Slide the nylon bushing and seal onto the steering cable, but NOT into the support tube at this time.



**8** Cable Connector Connection

- ① 3/8 in. Self-locking Nut      ③ Cable Connector  
② 3/8 in. Flat Washer      ④ Steering Arm

11. Carefully spread both steering cables to allow the installation of the cable connector, but do NOT tighten the self-locking nut at this time.



**9** Completing the Installation

- ① Steering Cable 2      ③ Adjustment Nut  
② Locking Tab Washer

12. Fully install the support tube to the mounting bracket with the adjustment nut and the locking tab washer.
13. Position the starboard end of the support tube so that it is approximately even to the starboard end of the engine tilt tube.
14. Tighten the two self-locking nuts while holding the adjustment nuts.

15. Tighten the two self-locking nuts and the elastic stop nut, torquing to **120 lb in. (13.6 Nm)**, then back the nuts off one-quarter turn.

16. Insert the nylon bushing into the steering tube.

17. Slide the seal onto the end of the support tube. See "Support Tube Installation" on page 3.

### 3.3 Adjusting the Steering Cables

1. Center the engine.
2. Loosen the support tube holding nuts (both ends) approximately ten turns.
3. Take up any play in the cables by pushing the engine slightly in the direction of a turn to starboard.
4. Tighten the port support tube nut finger-tight.
5. Use a wrench to tighten the port support tube ONE additional turn.
6. Torque the starboard support tube nut to **35 lb ft (47.5 Nm)**.
7. Bend the locking tabs on the locking tab washers over onto the mounting bracket or nut.

## 4 Disposal



Place the packaging material in the appropriate recycling waste bins, whenever possible. Consult a local recycling center or specialist dealer for details about how to dispose of the product in accordance with all applicable national and local regulations.

## 5 Warranty Information

LIMITED TWO-YEAR WARRANTY AVAILABLE AT [WWW.SEASTARSOLUTIONS.COM/SUPPORT-2/WARRANTY-2/SEASTAR-SOLUTIONS-WARRANTY](http://WWW.SEASTARSOLUTIONS.COM/SUPPORT-2/WARRANTY-2/SEASTAR-SOLUTIONS-WARRANTY).

IF YOU HAVE QUESTIONS, OR TO OBTAIN A COPY OF THE LIMITED WARRANTY FREE OF CHARGE, CONTACT:

DOMETIC CORPORATION: SEASTAR SOLUTIONS  
640 NORTH LEWIS ROAD  
LIMERICK, PENNSYLVANIA 19468  
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[TS.MECHANICAL@DOMETIC.COM](mailto:TS.MECHANICAL@DOMETIC.COM)

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