



SEASTAR
SOLUTIONS®

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SA27274, SA27275

SUPPORT TUBE KIT

INSTRUCTIONS

INSTALLER: THESE INSTRUCTIONS CONTAIN IMPORTANT SAFETY INFORMATION AND MUST BE FORWARDED TO THE BOAT OWNER.

FOLLOWING ARE INSTRUCTIONS FOR THE REPLACEMENT OF SUPPORT TUBES IN STEERING CONNECTION KITS MANUFACTURED BY SEASTAR SOLUTIONS.

WARNING

READ THESE INSTRUCTIONS THOROUGHLY BEFORE BEGINNING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS, OR INCORRECT ASSEMBLY COULD RESULT IN STEERING FAILURE WITH SUBSEQUENT PERSONAL INJURY AND PROPERTY DAMAGE. IN ORDER TO OBTAIN THE BEST STEERING PERFORMANCE, THE OUTBOARD MOTOR OR OUTDRIVE MUST BE INSTALLED AND LUBRICATED AND THE TRIM TAB ADJUSTED IN ACCORDANCE WITH THE MOTOR MANUFACTURER AND THE BOAT MANUFACTURER'S SPECIFICATIONS. CHECK THE CONTENTS OF THIS KIT AGAINST THE PARTS LIST ON THIS INSTRUCTION SHEET. USE PARTS SUPPLIED ONLY AS INSTRUCTED ON THIS SHEET. DO NOT SUBSTITUTE PARTS OR COMPONENTS FROM OTHER STEERING MANUFACTURERS. THEY CAN CAUSE A SAFETY HAZARD FOR WHICH SEASTAR SOLUTIONS CANNOT ACCEPT RESPONSIBILITY.

PREPARATION FOR INSTALLATION

1. Disconnect attachment to Tiller Arm and Telescopic Output ram as shown in Figure 1.

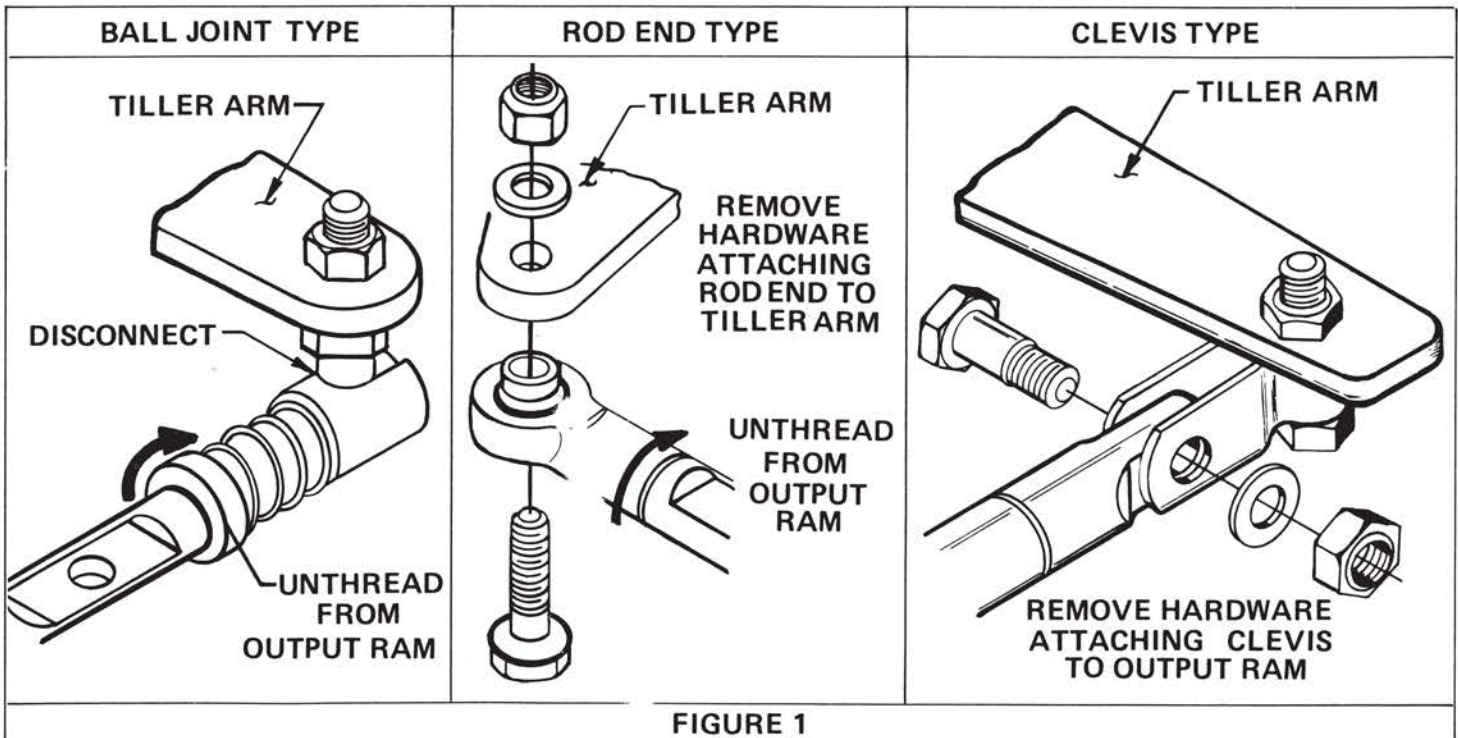


FIGURE 1

CAUTION

If Tiller Arm attachment components show signs of corrosion, new parts should be obtained and installed.

2. Grip Support Tube with a strap wrench or equivalent tool which will not cause surface damage to or collapse Tube. Disengage Coupler Nut and remove Telescopic Output ram from Support Tube.

3. Measure distance from threaded end of Support Tube to Clamp Block as shown in Figure 2.

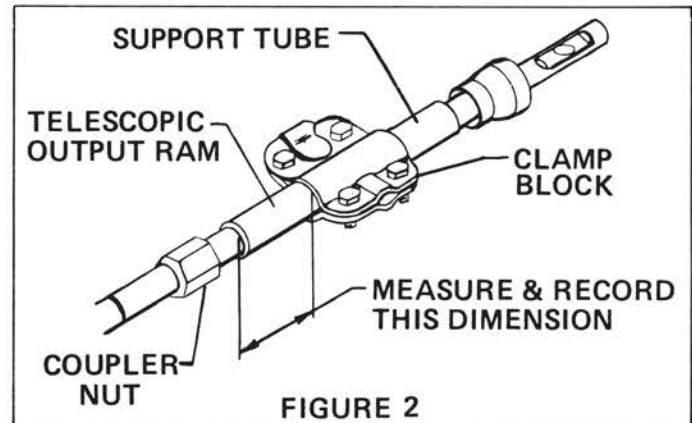
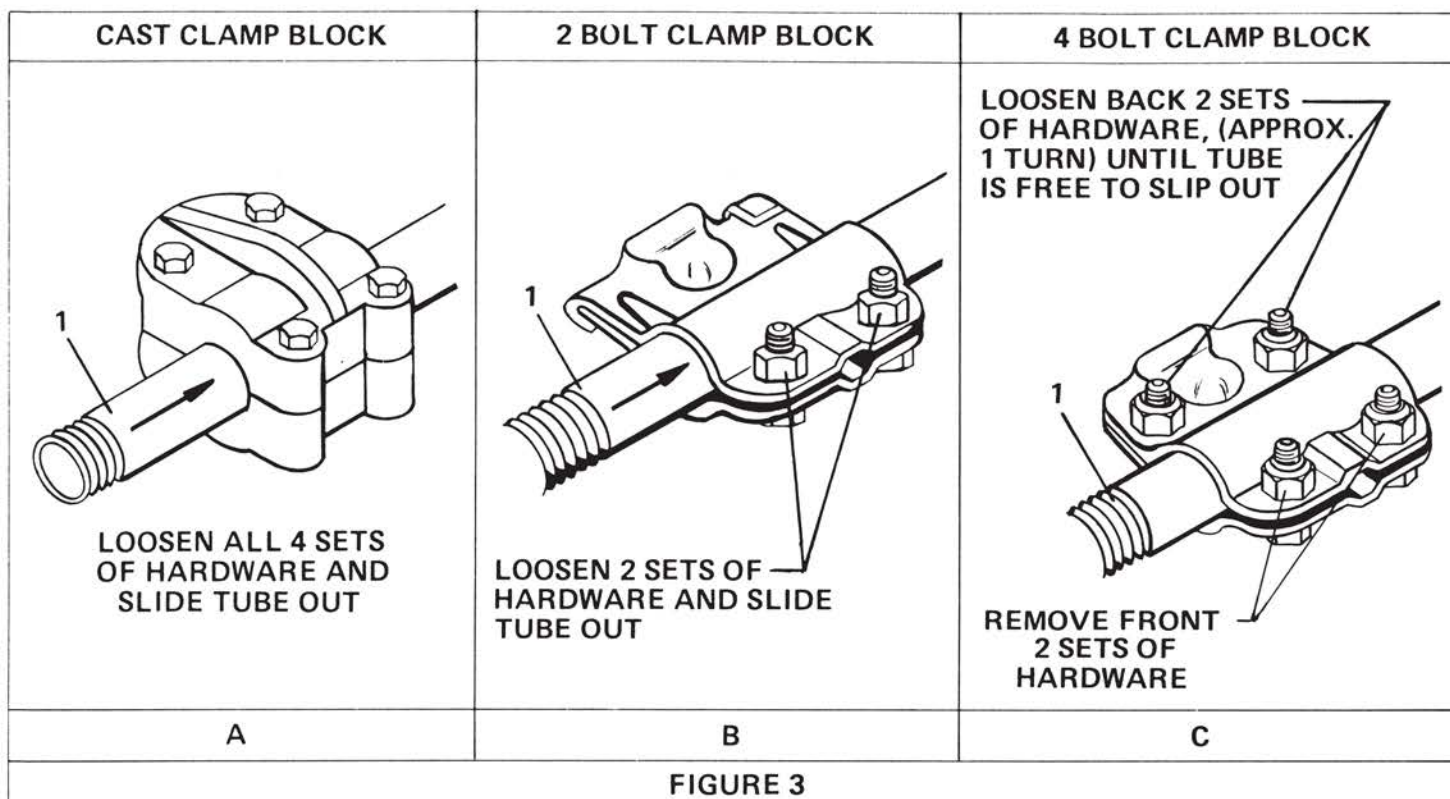


FIGURE 2

4. Loosen or remove Clamp Block hardware as shown in Figure 3. Remove and discard old Support Tube and Boot.

NOTE: IF CLAMP BLOCK COMPONENTS SHOW SIGNS OF CORROSION A NEW CLAMP BLOCK KIT SHOULD BE OBTAINED AND INSTALLED.



INSTALLATION OF NEW SUPPORT TUBE

1. Insert Support Tube (Item 1) into Clamp block Assembly and position threaded end to the dimension taken previously (see Figure 2), then proceed as follows:

CAST CLAMP BLOCK (Figure 3A)

Make sure Clamp Block Assembly is seated properly on Ball Post and Support Tube is at proper location, then torque four sets of hardware to 75 inch/pounds minimum. **DO NOT EXCEED 90 INCH/POUNDS.**

TWO BOLT CLAMP BLOCK (Figure 3B)

Make sure Clamp block Assembly is seated properly on Ball Post and Support tube is at proper location, then torque two sets of hardware to 100 inch/pounds minimum. **DO NOT EXCEED 130 INCH/POUNDS**

FOUR BOLT CLAMP BLOCK (Figure 3c)

Make sure Clamp Block Assembly is seated properly on Ball Post and Support tube is at proper location, then torque two back sets of hardware to 100 inch/pounds minimum. **DO NOT EXCEED 130 INCH/POUNDS.**

Install two front sets of hardware as shown and torque to 100 inch/pounds minimum. **DO NOT EXCEED 130 INCH/POUNDS.**

WARNING

HARDWARE MUST BE INSTALLED AND TIGHTENED IN THIS SEQUENCE. FAILURE TO DO SO COULD ALLOW CLAMP BLOCK TO PULL OFF BALL POST, RESULTING IN LOSS OF STEERING.

STEERING CABLE INSTALLATION

1. Apply a thin coat of lightweight waterproof grease to the Telescopic Output ram and insert ram into Support Tube (see Figure 4).

2. Grip Tube with a strap wrench or equivalent tool which will not cause surface damage to or collapse Tube. Thread Coupler Nut of Steering Cable Assembly on end of Support Tube and torque securely (approximately 15 foot/pounds).

CAUTION

Some Coupler Nuts have a locking feature in the threads. Make sure the Nut is drawn up fully and the locking feature is engaged.

For SA27275 (Stainless) Kit only: Slide plastic Bearing (Item 3) over Telescopic Output ram and insert into end of Support Tube.

3. Slide new Boot and Wiper Assembly (Item 2) over Telescopic Output Ram and press firmly over end of Support Tube until fully seated.

TILLER ARM CONNECTION

1. Reassemble Ball Joint, Rod End, or Clevis as applicable, using hardware saved at disassembly (see Figure 1) reversing the order for assembly. If these parts show signs of corrosion replace them.

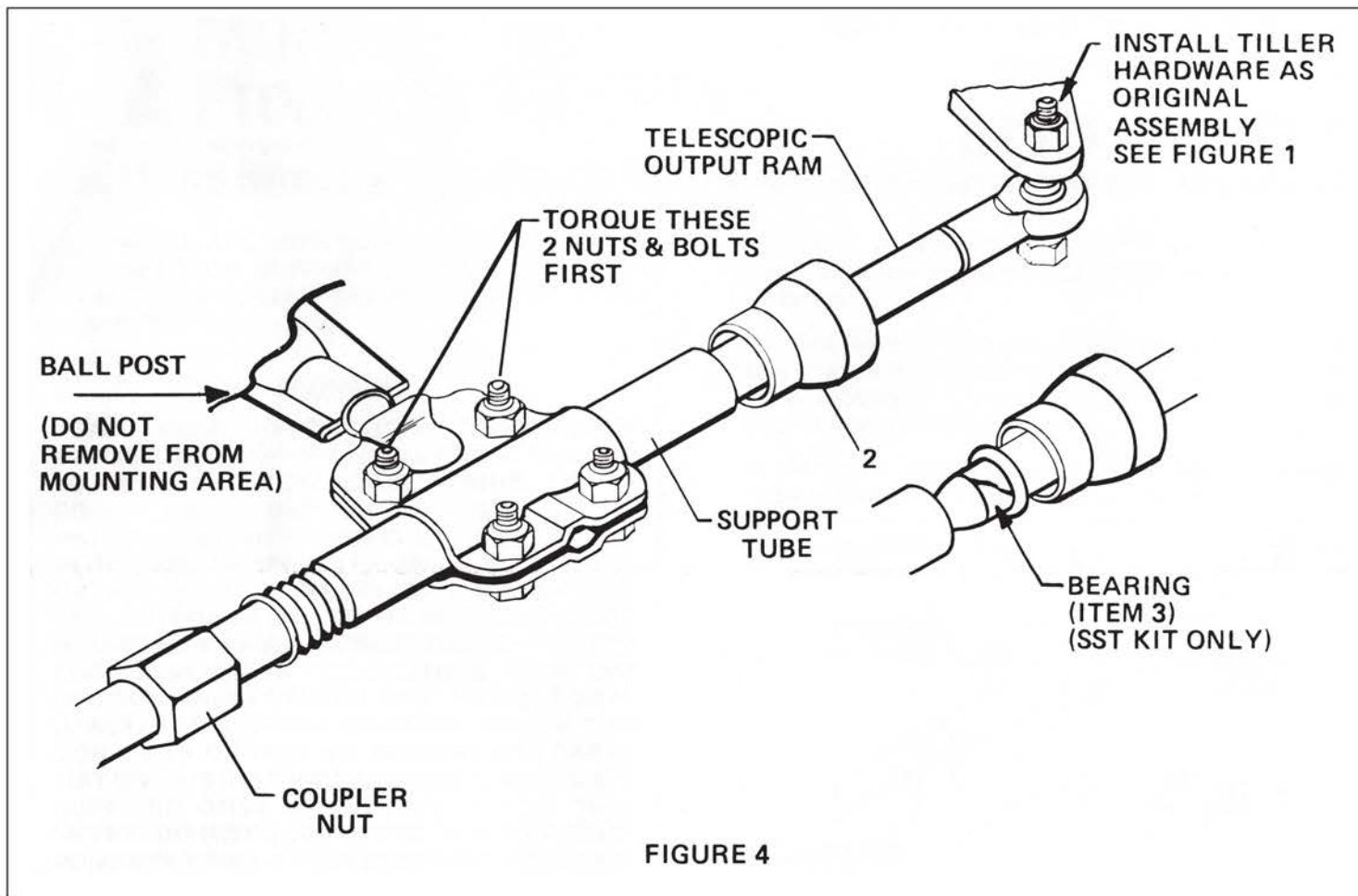


FIGURE 4

FINAL MECHANICAL CHECKOUT

1. Move the motor thru the normal operating positions (side to side and tilting up and down) to assure that no interference or restriction of movement exists.
2. Check Coupler Nut attaching Steering Cable to Support Tube (Item 1) and all attaching hardware for security and re-torque if necessary.
3. Using the steering wheel, check for proper action of steering controls. Rotating the wheel clockwise (to the right) should cause the boat to turn to the right (starboard). The installation is now complete.

WARNING

THE BOAT SHOULD BE OPERATED WITH CAUTION UNTIL THE STEERING SYSTEM HAS BEEN THOROUGHLY CHECKED OUT UNDER NORMAL OPERATING CONDITIONS TO INSURE THAT THE INSTALLATION IS CORRECT AND FUNCTIONING PROPERLY.

MAINTENANCE NOTES

1. AFTER A FEW HOURS OF OPERATING FOLLOWING INSTALLATION OF THIS KIT AND PERIODICALLY THEREAFTER, RE-TORQUE ALL FASTENERS AND CHECK THE STEERING SYSTEM FOR SECURITY AND INTEGRITY. LOOSENING OR SEPARATION OF ONE OR MORE FASTENERS MAY CAUSE FAILURE OF THE STEERING SYSTEM, RESULTING IN PROPERTY DAMAGE AND PERSONAL INJURY.
2. INSPECT PERIODICALLY FOR CORROSION. ALL METAL PARTS MEET OR EXCEED APPLICABLE SPECIFICATIONS FOR CORROSION RESISTANCE; HOWEVER, WITH EXTENDED OPERATION UNDER EXTREME CONDITIONS, CORROSION MAY OCCUR AND AFFECTED PARTS SHOULD BE REPLACED.

PARTS LIST		
Item	Description	Quan.
1	Support Tube	1
2	Boot & Wiper Assembly	1
3	Bearing (s'st kit only)	1

