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## INSTALLATION METHOD FOR K115

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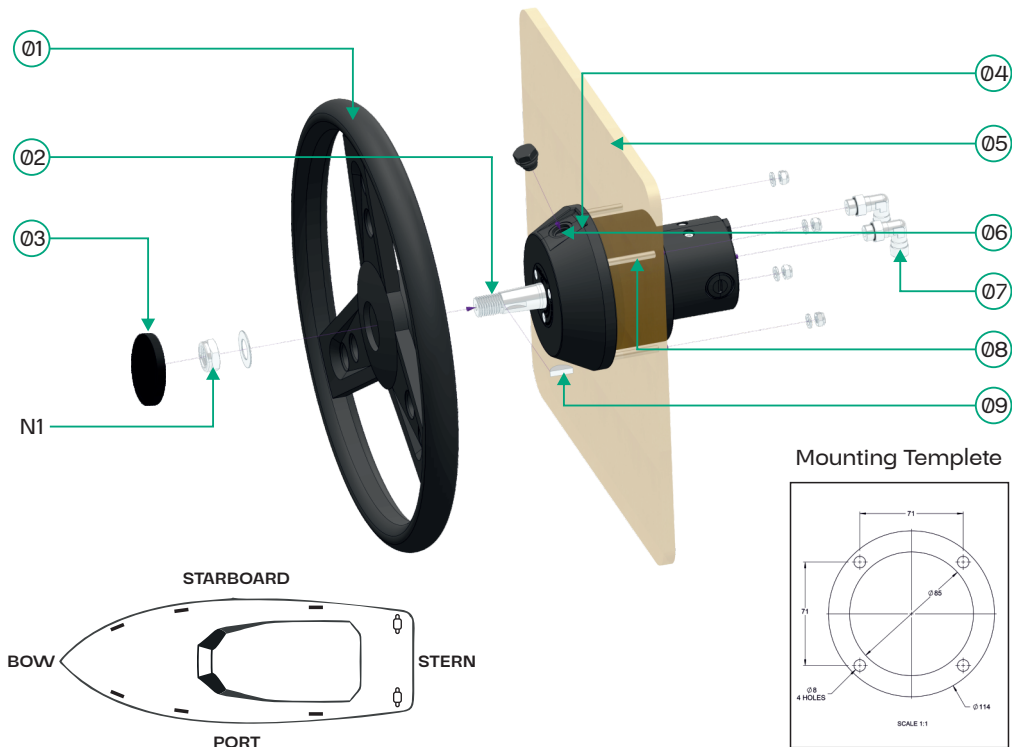
**ENGLISH**

## INSTALLING HELM PUMP

- Step 1: **Choose Installation Location** : Select a suitable spot on the dashboard (5) with enough space for smooth Steering Wheel (1) movement and clearance for the Helm pump (4), hoses, and fittings behind it.
- Step 2: **Prepare the Mounting Holes** : Tape the Mounting Template to the selected position. Drill four flange stud (8) holes and a center hole using a hole saw, as mentioned on the mounting template.
- Step 3: **Remove Protective Components** : Remove the protective plugs from the Elbow Fittings (7) Port and oil filling (6) port. Unscrew and remove all the four Nyloc Nuts and Washers from the Helm's Flange Studs (8).
- Step 4: **Install Elbow Fittings & Oil-Filling Plug** : Hand-tighten the Elbow Fittings (7), then use a wrench to fully secure them. Insert the Oil-Filling Plug (with a breathable hole) into the Oil-Filling Port (6).
- Step 5: **Mount the Helm** : Install the Helm pump (4) onto the dashboard (5) from the front, ensuring the Oil-Filling Port (6) faces upward. Align the Flange Studs (8) with the drilled holes.
- Step 6: **Secure the Helm** : Using a 10mm wrench, tighten the Nyloc Nuts and Washers onto the Flange Studs (8) to secure the Helm firmly.

## MOUNTING STEERING WHEEL

- Step 1: **Attach the Steering Wheel** : Remove the Nyloc Nut (N1) and Washer from the Helm Shaft (2). Apply a small amount of grease to the tapered portion of the Helm Shaft. Align the woodruff key (09) with the keyslot and slide the Steering Wheel (1) onto the shaft.
- Step 2: **Secure the Steering Wheel** : Insert the Washer and tighten the Nyloc Nut (N1) using a 20mm hex wrench. Attach the Steering Wheel Cap (3) into the provided slot at the center.

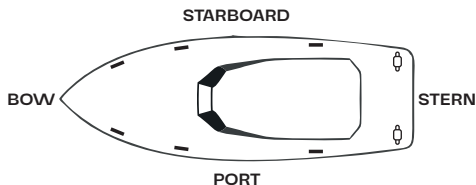
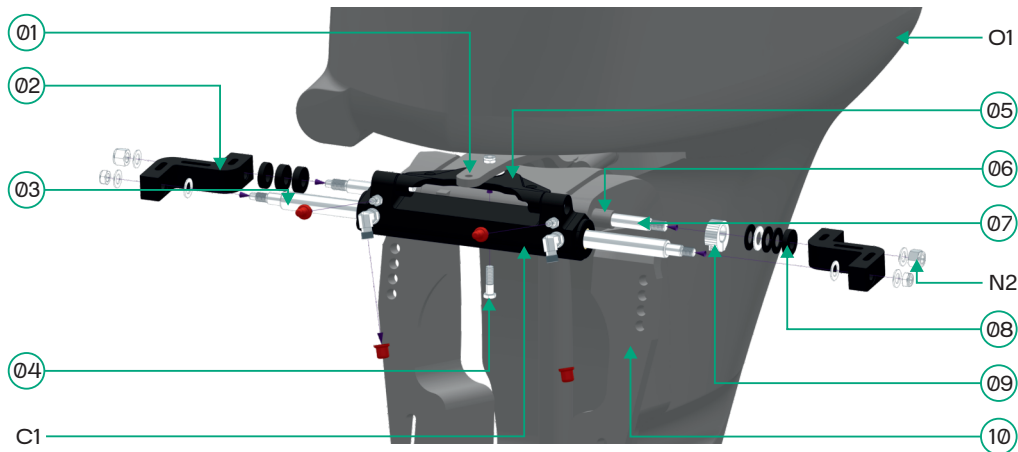


NO.	COMPONENTS
1	Steering Wheel
2	Helm Shaft
3	Steering Wheel Cap
4	Helm Pump
5	Dashboard

NO.	COMPONENTS
6	Oil-Filling Port
7	Elbow Fittings
8	Helm's Flange Studs
9	Woodruff Key
N1	Nyloc Nut

## INSTALLING FRONT MOUNT CYLINDER

- Step 1: **Disassemble Support Brackets** : Remove Nyloc Nut (N2), Washers, Support Brackets (02), Delrin Washers (08), and Space-Adjustable Nut (09) from the Center Shaft (07) and Piston Rod (03).
- Step 2: **Install the Center Shaft** : Apply marine-grade grease to the Center Shaft (07) and insert it into the Tilt Tube (06).
- Step 3: **Assemble the Tiller Hex Stud** : Keep the outboard engine (O1) straight and connect the Tiller Plate (05) to the Tiller Arm (01) using the Tiller Hex Stud (04) and Nyloc Nut (N2). Tighten using a 14mm wrench.
- Step 4: **Reassemble the Support Brackets** : Insert the Space-Adjustable Nut (09) and Delrin Washers (08) into the Center Shaft (07). Choose the correct number of Delrin Washers (08) to center the Cylinder (C1) on the Piston Rod (03). Ensure the Outboard Engine (O1) is perpendicular to the Transom (10). Attach the right and left Support Brackets (02) to connect the Piston Rod (03) and Center Shaft (07).
- Step 5: **Secure & Adjust** : Apply anti-seize grease to the Nyloc Nut (N2) threads. Insert Nyloc Nut (N2) and Washers on both ends of the Center Shaft (07) and Piston Rod (03). Tighten using a 19mm wrench. Adjust the Space-Adjustable Nuts (09) on the Tilt Tube (06) to eliminate clearance.
- Step 6: **Final Check** : Manually move the Outboard Engine (O1) to both starboard and port sides. Verify even displacement for consistent steering angles.

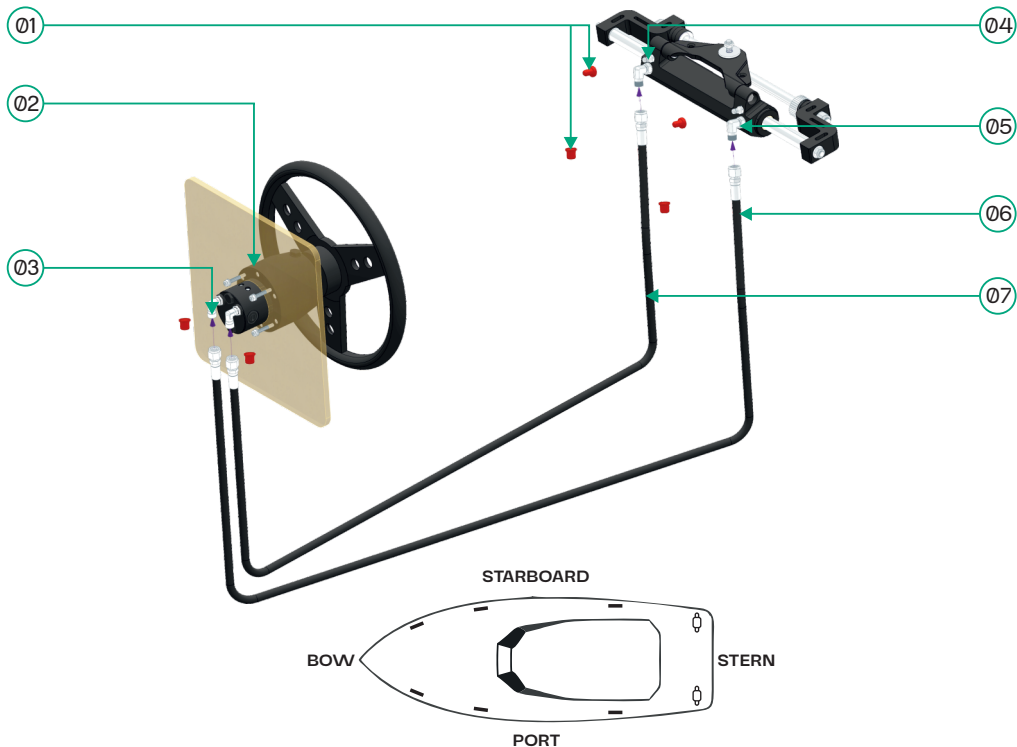


NO.	COMPONENTS
01	Tiller Arm
02	Support Bracket
03	Piston Rod
04	Tiller Hex Stud Assembly
05	Tiller Plate
06	Tilt Tube
07	Center Shaft

NO.	COMPONENTS
08	Delrin Washers
09	Space-Adjustable Nut
10	Transom
O1	Outboard Engine
C1	Cylinder
N2	Nyloc Nut

## HOSE CONNECTION

- Step 1: Remove protective caps (01) from the Cylinders' Air Bleeders (04) and Elbow Fittings.
- Step 2: Connect one end of Hose (06) to the port-side Elbow (05) of the cylinder and the other end to the starboard-side Elbow (03) of the Helm (02).
- Step 3: Similarly, connect one end of Hose (07) to the starboard-side Elbow (05) of the cylinder and the other end to the port-side Elbow (03) of the Helm (02).
- Step 4: Tighten all Hex Nuts using a 19mm wrench to a torque of 15 Nm.
- Step 5: Ensure hose fittings are secure, avoid excessive bending (minimum bend radius: 100 mm), and check for interference during engine tilting or with the Transom.



NO.	COMPONENTS
1	Protective Cap
2	Helm
3	Elbow (Helm)
4	Air Bleeder

NO.	COMPONENTS
5	Elbow (Cylinder)
6	Hose1
7	Hose2

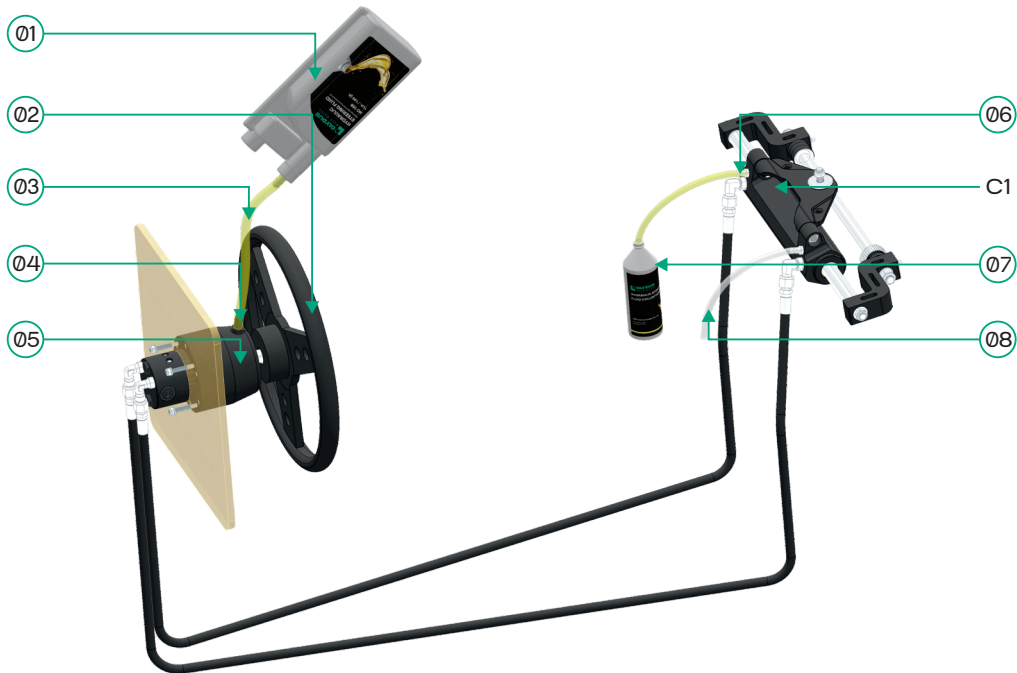
## HYDRAULIC STEERING SYSTEM PURGING PROCEDURE

- Step 1: **Install the Oil Filling Kit** : Replace the main Oil Bottle Cap with the provided Oil Filling Kit (3). Unscrew the Oil Filling Plug from the Helm (5) and screw the threaded end of the Oil Filling pipe into the Helm's Oil-Filling Port (4).
- Step 2: **Fill the Helm with Oil** : Turn the Oil Bottle (1) upside down and unscrew its air passage cap on the Oil Bottle (1) to allow oil flow. Fill the Helm (5) full until oil is visible in the oil filling pipe.
- Step 3: **Prepare for Purging** : Remove the Protective Caps from the Air Bleeders on cylinder. Attach the purging pipe to all the Air Bleeders to direct the oil into the collection bottle.
- Step 4: **Purge the Port Side** : Slowly turn the Steering Wheel (2) towards the Starboard Side Once Cylinder (C1) reaches its extreme end, unscrew the Port Side Air Bleeder (6) to release the trapped air. Continue turning the Steering Wheel (2) towards Starboard until oil flow out of the Air Bleeder (6) without air bubbles, then close the Air Bleeder (6) carefully (avoid overtightening).
- Step 5: **Purge the Starboard Side** : Slowly turn the Steering Wheel (2) towards the Port Side Once Cylinder (C1) reaches its extreme end, unscrew the Starboard Side Air Bleeder (6) to release the trapped air. Continue turning the Steering Wheel (2) towards Port until oil flow out of the Air Bleeder (6) without air bubbles, then close the Air Bleeder (6) carefully.
- Step 6: **Finalizing the Process** : Remove the Oil Bottle (1), Oil Filling Kit (3), and Oil Collection Kit (8).

### Important:

- Do not puncture the oil bottle for air passage. It is designed for self-air passage.
- Avoid overtightening of Air bleeders

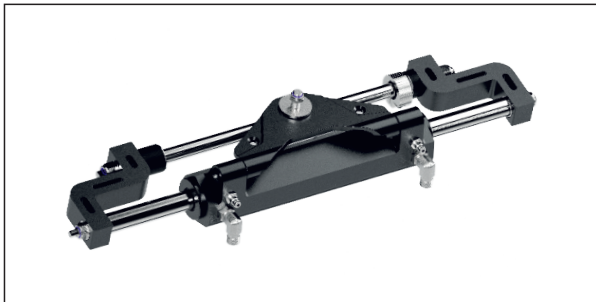




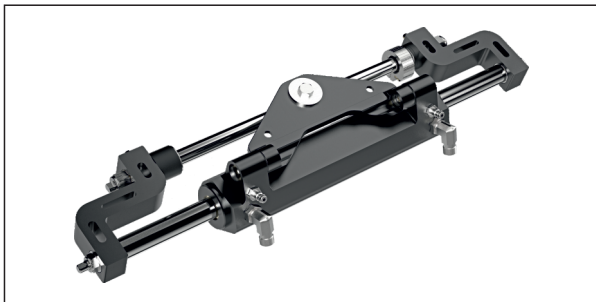
NO.	COMPONENTS
1	Oil Bottle
2	Steering Wheel
3	Oil Filling Kit
4	Oil Filling Port
5	Helm

NO.	COMPONENTS
6	Air Bleeder
7	Oil Collection Bottle
8	Oil Collection Kit
C1	Cylinder

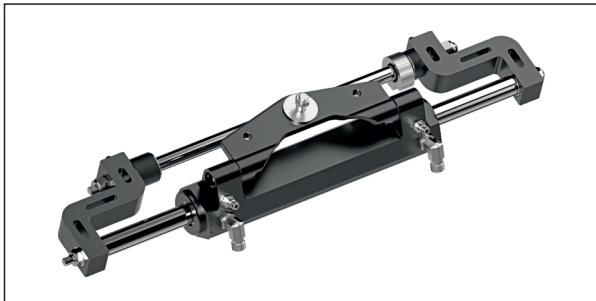
## Cylinder Variant



OC115



OC115I



OC115N

## NOTE:

## SCAN US FOR MULTI LANGUAGES



ENGLISH



DUTCH



FRENCH



GERMAN



NORWEGIAN



SWEDISH



ITALIAN



SPANISH



PORTUGUESE



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