LOWRANCE

SIMRAD

Outboard and DrivePilot **Installation Guide**

ENGLISH

988-10717-005

www.simrad-yachting.com | www.lowrance.com

Technical specifications

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NAC™-1	
Operating temperature	-25 °C to +55 °C (13 °F to 131 °F)
Protection	Splashproof, IPx5
Weight	0.6 kg (1.3 lbs)
Power supply/Load	9-16 V DC/140 mA + drive unit load
Performance	Drive: 8 A cont., 16 A for 1 s
Pump-1	
Operating temperature	-15 °C to +75 °C (5 °F to 167 °F)
Protection	Splashproof, IPx5
Weight	2.2 kg (4.9 lbs)
Hydraulic thread size	1/4 NPT
Load	5 A at 8 bar (116 psi), 7 A at 24 bar (350 psi)
Performance	0.8 l/min at 24 bar (350 psi)
Point™-1AP™	
Operating temperature	-25 °C to +60 °C (13 °F to 140 °F)
Protection	Watertight, IPx7
Weight	0.14 kg (0.31 lbs)
Power supply/Load	9-16 V DC/<100 mA @ 12 V DC
Performance	Heading: +/- 3°, Horiz. accuracy: 3 m (9.8 ft)
Compass safe distance	1 m (3.3 ft)
Auto/Stby Button	
Operating temperature	-25 °C to +55 °C (13 °F to 131 °F)
Protection	Splashproof, IPx5
Weight	0.04 kg (0.09 lbs) (including cable)
Precision™-9	
Operating temperature	-25 to + 65 °C (-13 to + 149 °F)
Protection	IPx7
Weight	165 g (5.8 oz) + 130 g (4.6 oz) (Bracket)
Power supply/Load	8-16 V/1.4 W
Accuracy	± 2 degrees after calibration
Compass safe distance	0.5 m (1.7 ft)

Compliance statements

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The Outboard and the DrivePilot:

- Comply with CE under EMC Directive 2014/30/EU.
- Complies with UKCA under The Radio Equipment Regulations 2017.
- Complies with the requirements of level 2 devices of the Radiocommunications (Electromagnetic Compatibility) standard 2017.

Point™-1AP™:

- Complies with RED Directive 2014/53/EU.
- Complies with UKCA under The Radio Equipment Regulations 2017.
- Complies with the requirements of level 2 devices of the Radiocommunications (Electromagnetic Compatibility) standard 2017.

The relevant Declaration of Conformity is available on the following websites under model documentation section:

www.simrad-yachting.com, www.lowrance.com

Warning: The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Tools needed

- Screwdriver
- Drill
- Wrenches
- Cup or can
- Tape
- Gloves (disposable)

Check the contents

- NAC™-1 Autopilot computer
- Point™-1AP™ or Precision™-9 compass
- Auto/Stby button
- NMEA 2000® network kit
- Pump-1
- Pump fitting kit

PLANNING: Dimensions

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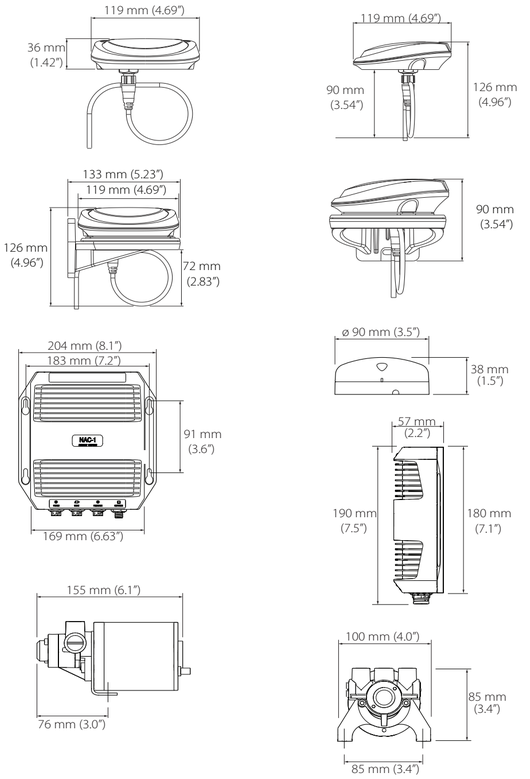

PLANNING: Point™-1AP™ and Precision™-9 mounting location

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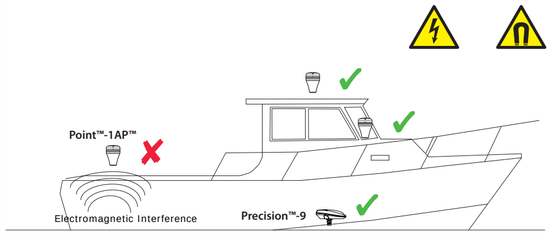

Point™-1AP™ and Precision™-9

The compasses contain a magnetic heading sensor and should not be mounted close to any potential magnetic source. They should be mounted as close to the vessel's centre of roll and pitch as possible. Refer to Technical specifications (section 1).

Potential sources for magnetic/electromagnetic interference include:

- Electrical motors, magnets and moving metal items
- Outboard engines
- High current electrical sources such as main power cables, batteries, and distribution panels

The Point™-1AP™ compass also comes with a GPS antenna and should be mounted as far away as possible from disturbing magnetic/electromagnetic interferences.

If mounting the Point™-1AP™ on or above a hard top, beware of audio speakers which may be mounted in the deckhead. Speakers can be a strong source of magnetic interference.

PLANNING: Pump-1 mounting location

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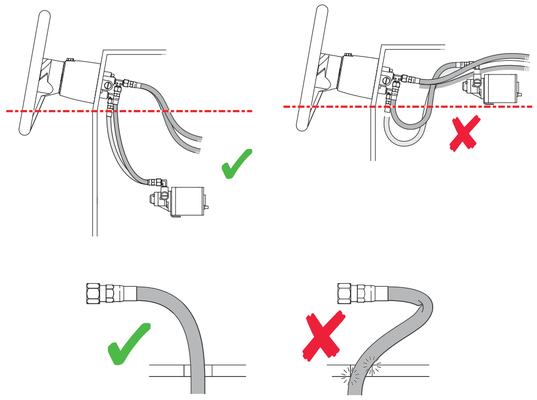

Compatibility information

The hydraulic kit comes with both 1/4 NPT 9/16 UNF fittings and ORB fittings, which make them ideally suited for the following steering systems:

- Teleflex™ SeaStar® HC5345, HC5347, HC5348, HC5358.
- Teleflex™ BayStar® HC4600, HC4645, HC4647, HC4648, HC4658.
- Hynautic® K6 Steering rams.
- Steering rams from Vetus®, Uflex®, and Lecomble & Schmitt™.

→ ***Note:*** Newer SeaStar®/BayStar® helm pumps require the use of ORB fittings (supplied in the kit).

MOUNTING: Precision™-9

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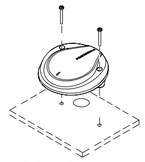
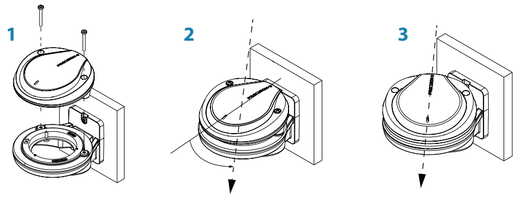
Without bracket

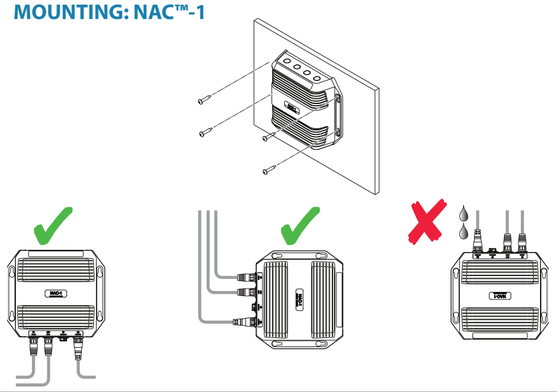


For more details about mounting Precision™-9, refer to the Precision™-9 Mounting Template and Installation Guide, available for download on:
www.simrad-yachting.com
www.lowrance.com
www.bandg.com

With bracket



MOUNTING: NAC™-1



MOUNTING: Point™-1AP™

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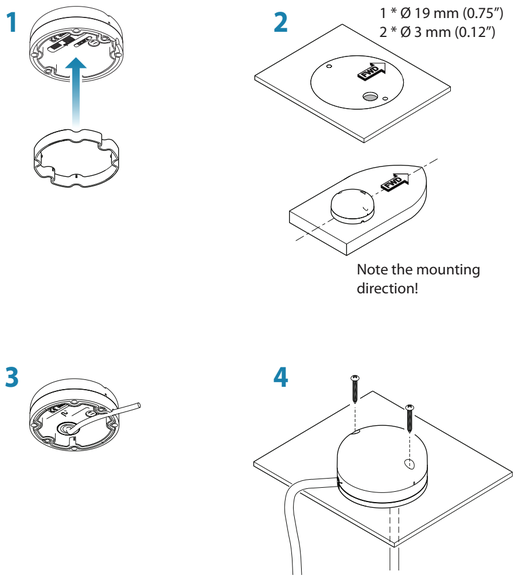

WIRING: Wiring diagram

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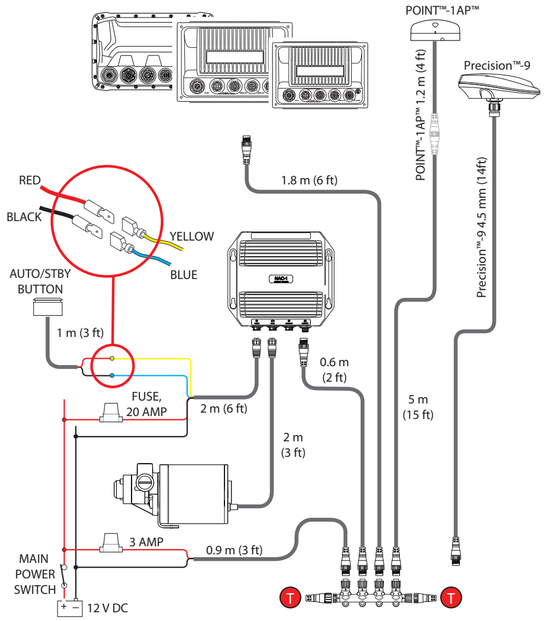

Installing with optional Verado® fitting kit for Pump-1

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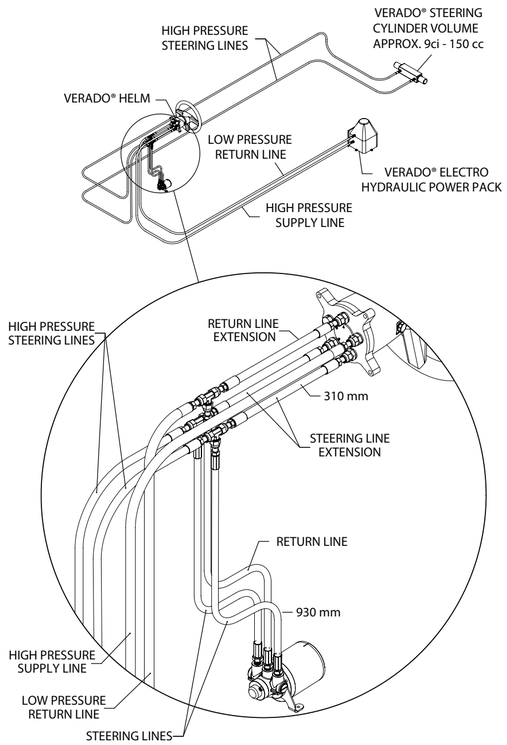
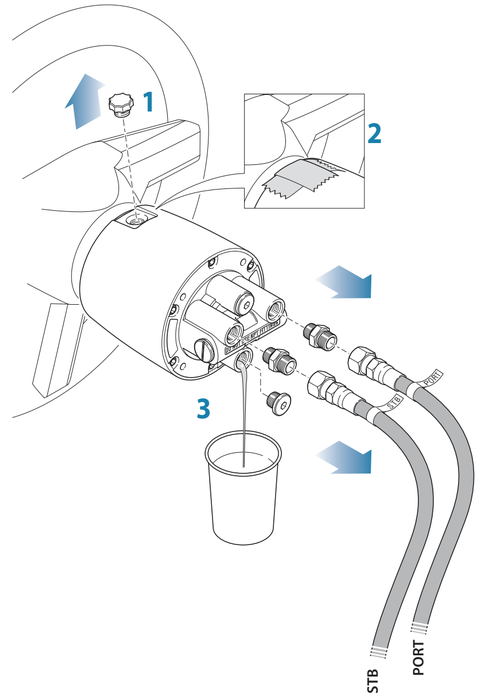


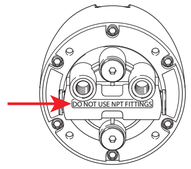
MOUNTING: Disconnect hoses from helm pump

10



MOUNTING: Identify type of fitting required

11



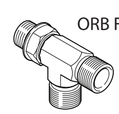
Text engraved on the back of this SeaStar helm pump helps you identify the correct fittings.

→ *Note:* Helm and fittings required may vary by manufacturer.

→ *Note:* ORB and NPT fitting kits are supplied in separate bags. Discard the fittings not used.

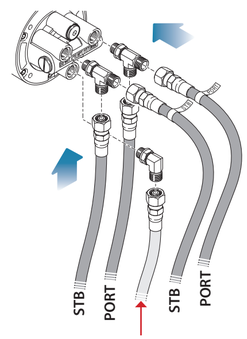
→ *Note:* Pay attention to the ports on the helm pump to ensure you are using the correct fittings.

MOUNTING: Connect hoses to helm pump



ORB Fittings

NPT Fittings



IMPORTANT: TRANSPARENT HOSE

MOUNTING: Pump-1, Connect hoses

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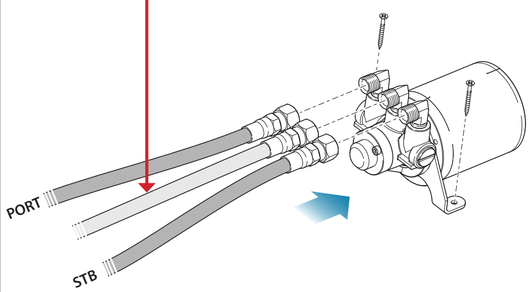
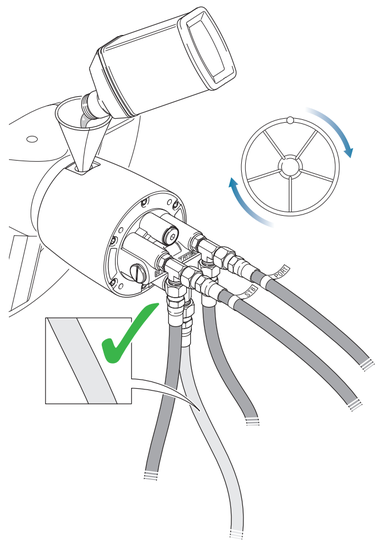
IMPORTANT: TRANSPARENT HOSE



MOUNTING: Bleed the hand steering

13



Turn the wheel until the cylinder reaches max travel in both directions, and refill oil.

Keep turning and refilling oil until the oil level is stable and the outboard engine responds firmly.

If air bubbles remain in the system, follow the bleeding procedure described for the outboard cylinder.

→ *Note:* It is recommended to use a threaded filler tube if available.

MOUNTING: Bleed Pump-1

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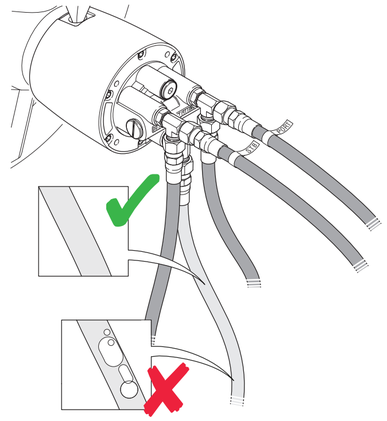

Activate Power Steer mode.

Press and hold the arrow keys/buttons on the Autopilot controller in steps less than 3 seconds at a time, until the cylinder reaches max travel in both directions.

Continue to run the pump in both directions until no air bubbles are left in the transparent tube.

IMPORTANT: Check fluid level

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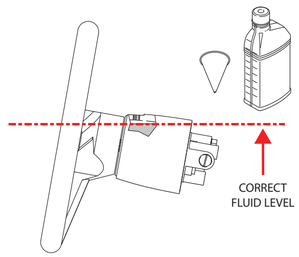

Check all fittings for leaks.

Configuration

Refer to your Autopilot controller's documentation for setup instructions.