

Replacement long / short arm wind vane assembly



Warning: Read the expanded handbook

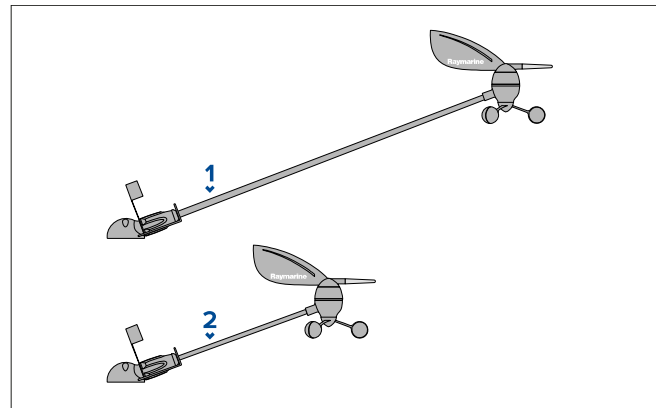
This document is a subset of the full documentation for your product. For the complete documentation and safety information, please refer to the expanded handbook, available on the Raymarine website (www.raymarine.com).

Applicable products

This document is applicable to the following products:

Wind vane replacements

The following replacement wind vane assemblies are available.



1	Replacement short arm wind vane assembly — R28170
2	Replacement long arm wind vane assembly — R28171

Note:

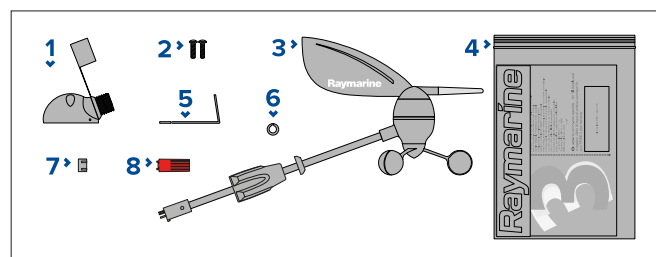
Wind vane replacements are not supplied with a new cable. New cables can be purchased separately:

- 30 m (98.4 ft) cable assembly — A28162
- 50 m (164 ft) cable assembly — A28163

Parts supplied — Replacement wind vane assembly

The following parts are supplied with the replacement short and long arm wind vane assemblies, part numbers: R28170 and R28171.

Unpack your product carefully to prevent damage or loss of parts. Check the box contents against the list below. Retain the packaging and documentation for future reference.



1. Base and protective cap.
2. No 10x3/4" pan head pozi screws (base mounting fixings x 2)
3. Short arm wind vane assembly / Long arm wind vane assembly
4. Documentation pack
5. Arm retaining clip
6. Cable washer
7. Cable nut
8. Cable nut spanner

Location requirements

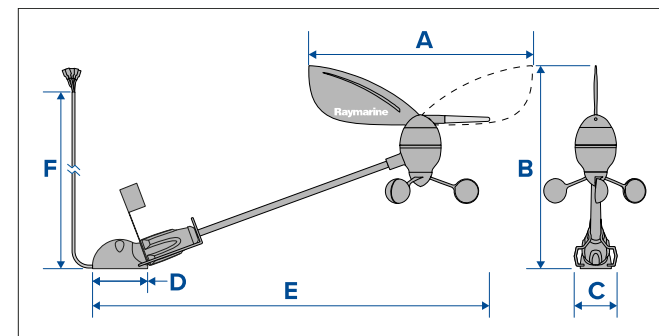
When selecting a location for your wind transducer it is important to consider a number of factors.

The transducer's location must ensure that:

- it is installed facing forwards.
- it is installed on a horizontal surface (If a surface e.g. mast top, is otherwise suitable but not horizontal, make up a suitable wedged piece to provide the necessary horizontal surface).
- it is installed as high as possible and away from any equipment which may shield the transducer or otherwise disturb the air flow to the transducer.
- there must also be a viable route for the transducer's cable to be routed to the display or converter it is to be connected to.
- the vane and cups can spin freely.
- there is sufficient access for installation and servicing.

Wind vane dimensions

Dimensions for the short and long arm wind vanes are shown below.



	Short arm	Long arm
A	272 mm (10.70 in)	
B	248 mm (9.76 in)	345.5 mm (13.60 in)
C	38 mm (1.50 in)	
D	68 mm (2.70 in)	
E	538.5 mm (21.20 in)	803.5 mm (31.63 in)
F	30 m (98.4 ft)	50 m (164 ft)

Replacing an existing wind vane

When replacing an existing wind vane it is important that the latest hardware design is utilized. When considering what needs replacing there are 3 options.

- Option 1 — Replacing wind vane and base. If the wind vane cable is in good condition but your base is an older design then you can replace the wind vane and base using the existing cable. The parts required for this type of replacement are:

- Replacement wind vane short arm assembly — R28170
- Replacement wind vane long arm assembly — R28171

Note: Before deciding to keep the existing cable you must ensure that sufficient slack exists in the cable to allow for the connector to be removed and refitted to the base.

- Option 2 — Replacing wind vane only. If the wind vane cable is in good condition and the base is the new design then you can replace just the wind vane. The parts required for this type of replacement are:

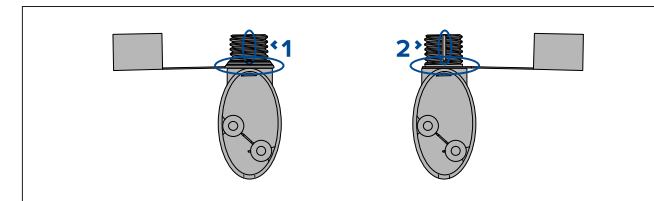
- Replacement wind vane short arm assembly — R28170
- Replacement wind vane long arm assembly — R28171

- Option 3 — Replacing wind vane, base and cable. If the wind vane cable requires replacement then it is advisable to replace the wind vane, its base and the cable. The parts required for this type of replacement are:

- Short arm wind vane transducer — E22078
- Long arm wind vane transducer — E22079

Improved base and protective cap design

The replacement wind vane components utilize an improved design to aid protection against water ingress and prolong the life of your wind vane.



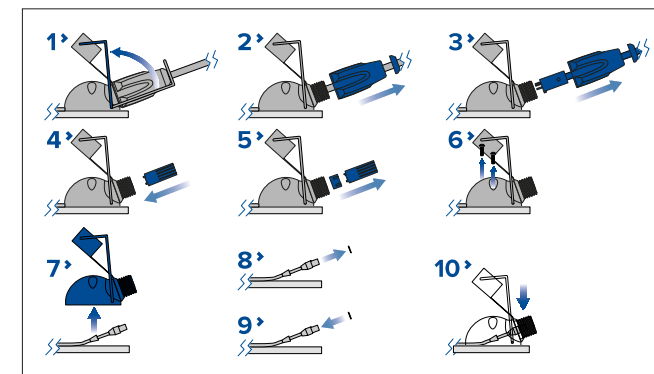
1. New design — The new design has an arm alignment recess instead of a slit through the thread and the new protective cap design includes a tapered collar.
2. Old design — The old design has a slit through the thread that is used for arm alignment.

Important:

- If your current installation uses the old design the base and protective cap must be changed to the new design.
- Failure to replace the base and protective cap with the improved design may affect product warranty.

Replacing wind vane and base using existing cable

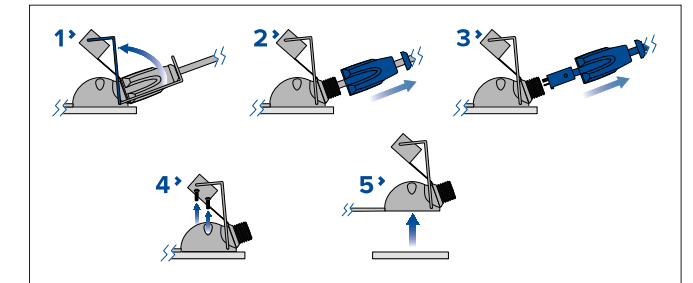
When replacing an existing wind vane you can either fit the new wind vane including the new cable, or you can keep the existing installed cable. It is recommended that the wind vane base is changed. The method below describes replacing the wind vane and base, keeping the existing cable.



1. Release the arm from the retaining clip.
2. Push the plastic sleeve up the arm and unscrew the locking collar
3. Pull the wind vane arm away from its base.
4. Place the cable nut removal tool (supplied with your replacement arm) inside the thread area of the base, aligning the tags with the grooves on the nut.
5. Unscrew the cable retention nut and remove from the base.
6. Unscrew the base fixing screws.
7. Remove the base leaving the cable in place.
8. Remove the cable washer from the end of the cable connector.
9. Replace the cable washer with the new one supplied.
10. Fit the new base to the cable, ensuring the located tag at the top of the cable connector is engaged in the groove in the new base.
11. Re-assemble following the above instructions in reverse order from step 6 to step 1.

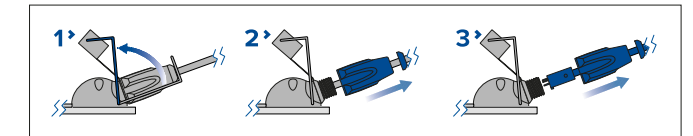
Replacing wind vane and cable

When replacing an existing wind vane you can either fit the new wind vane including the new cable, or you can keep the existing installed cable. It is recommended that the wind vane base is changed. The method below describes replacing the wind vane, base and cable.



1. Release the arm from the retaining clip.
2. Push the plastic sleeve up the arm and unscrew the locking collar
3. Pull the wind vane arm away from its base.
4. Unscrew the base fixing screws.
5. Remove the base and cable.
6. Install the new wind vane and cable, utilizing the existing base fixing holes and following the steps above in reverse order.

Replacing the wind vane arm

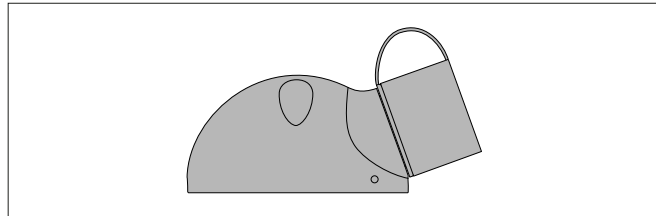


1. Release the arm from the retaining clip.
2. Push the plastic sleeve up the arm and unscrew the locking collar.
3. Pull the wind vane arm away from its base.
4. Using the new wind vane reassemble following the above steps in reverse order.

Protective cap

The protective cap provides protection against water and dust ingress to the cable connector when servicing, maintaining or replacing your wind vane.

If the arm is being removed for servicing, maintenance or replacement, use the protective cap.

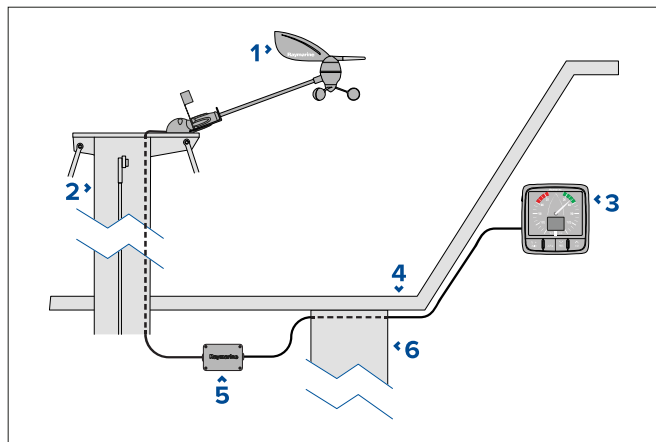


Note:
The tapered collar on the protective cap provides a seal to protect the wind vane cable connector against water ingress and must be used in all installations.

Cable routing

Routing the cable through the deck mast

Follow the steps below to route cable through a deck mast.



1	Wind vane transducer
2	Mast
3	Compatible instrument display
4	Deck
5	Junction box
6	Bulkhead

1. Feed the cable down the mast and out through a suitable below-decks aperture.
2. Run the cable back to the display or converter and connect the spade terminals to the relevant connectors.

Routing the cable through a stepped deck mast

Follow the steps below to route cable through a stepped deck mast.

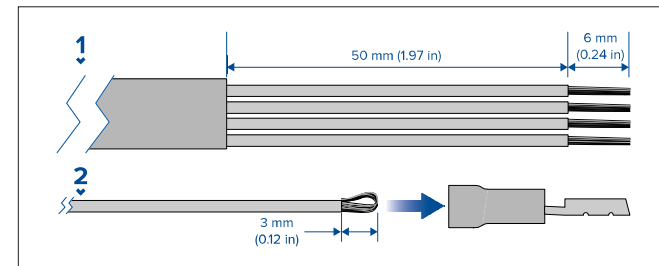
You will require new 1/8th spade terminals to perform this procedure.

1. Remove the existing spade terminals from the end of the cable.
2. Feed the cable down the mast and out through a suitable above-decks aperture.
3. Fit a suitable cable gland to the deck.
4. Pass the cable through the gland and run it back to the display or converter.
5. Crimp the new spade terminals (not supplied) to the end of the cable.
6. Connect the new spade terminals to the relevant connectors on the unit.

Replacing spade terminals

Although the transducer cable is fitted with spade terminals for direct connection to a compatible display or converter, it may be necessary to remove these to allow the cable to be routed through bulkheads or masts etc. 5 x 1/8th spade terminals will be required (not supplied), to replace those removed.

When fitting the new spade terminals, prepare the cables as detailed below:



1. Prepare the cable as shown in 1 above.
2. Fold back the wire strands and insert into the new spade connector as shown in 2 above.
3. Ensure the wire strands do not extend beyond the rear of the spade connector insulation.
4. Crimp the connector to the wire.

Calibration and linearization

In order to achieve optimum data readings from your transducer it must be calibrated and linearized.

Please refer to the operation instructions that accompanied your compatible wind instrument display for calibration and linearization procedures.

Operation instructions

For detailed operation instructions for your product, refer to the documentation that accompanies your display.

All product documentation is available to download from the Raymarine website: www.raymarine.com/manuals.

Wind vane spares and accessories

The following spares and accessories are available for the wind vane transducers.

Spares

Part number	Description
R28170	Short arm wind vane assembly (no cable)
R28171	Long arm wind vane assembly (no cable)
A28159	Wind vane short arm (300 mm)
A28160	Wind vane long arm (600 mm)
A28161	Wind vane base
A28162	Cable assembly (including base) 30 m (98.4 ft)
A28163	Cable assembly (including base) 50 m (164 ft)
A28164	Wind vane PCB assembly
A28165	Wind vane short arm cable 300 mm (11.8 in)
A28166	Wind vane long arm cable 600 mm (23.6 in)
A28167	Wind vane service kit (includes: vane, counterbalance weight, anemometer cups and screws)

Part number	Description
A28168	Wind vane top pod kit (includes: bearing, magnet assembly and O-ring seal)
R28169	Protective cap

Accessories

Part number	Description
E70010	iTC-5
E22068	ST290 wind pod
E22108	ST70 wind pod