



RULE MANAGEMENT GROUP

THE VOLVO OPEN 70 RULE

Memorandum 01

To All Entries and designers
From James Dadd
Re Canting keel angle measurement equipment

Rule 2.14.4(c) states *“The ballast keel may be canted transversely up to a maximum of 40° each side of the centreplane only. The cant angle shall be limited by a mechanical system, which may be adjusted and sealed by the RMG. The angle of 40° shall not be exceeded at any time, and adequate tolerance should be built into the system to ensure compliance at all times whilst racing.”*

The RMG tested several methods of accurately measuring and limiting the cant angle over the past 4 years. In many of the first generation Volvo Open 70s the limited space within the keel head compartment made measurement of the cant angle extremely difficult. As such the RMG would like to establish the method of measurement, equipment and requirements, to ensure that all competing yachts can have the cant angle measured using the same method and equipment.

We are currently testing a pair of linked inclinometers. One is mounted on the vertical axis of the yacht's structure, the other is mounted on the keel head, again on the vertical axis. The relative angle between these two sensors can then be monitored during the measurement process. The sensors will only be fitted for the measurement and will not remain installed.

At the time of cant measurement the team will also be asked to demonstrate the mechanical cant angle limiting device. This limiting device should deform, break or in some way identify if the maximum cant angle is exceeded. The limiting device may be sealed by the RMG.

Diagram 1 gives the basic dimensions of the sensor housing which will be used for each of the two inclinometers. Please ensure that an appropriate location is established for each housing to be fixed, which will enable the keel head to cant through the full range without interference. A 3 metre cable will connect each sensor to a readout, so the sensors should be mounted with this in mind. As relative readings are recorded it is not essential that sensors are in exactly level athwartships (as indicated in diagram 1) before being zeroed. The housings and cable connectors are waterproof so they may be immersed in water during the measurement process.

Diagram 2 gives an example of attachment and measurement for clarification purposes.

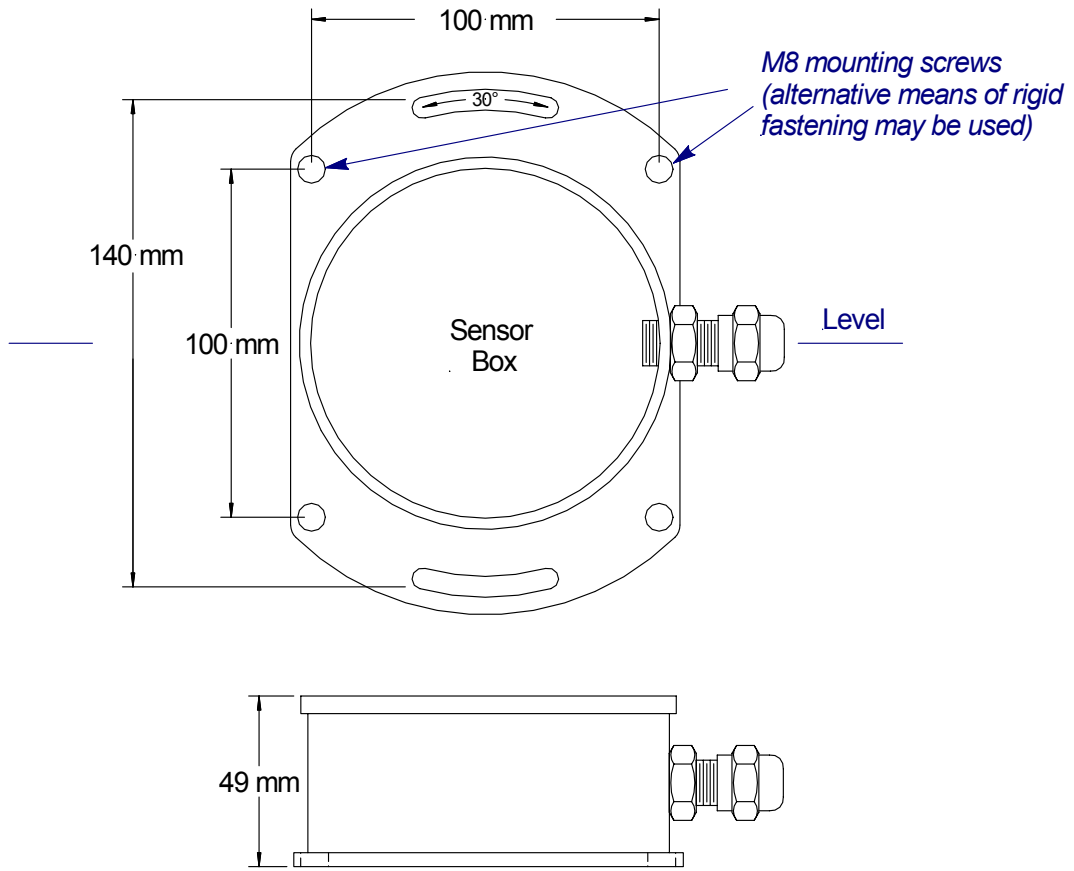


Diagram 1.

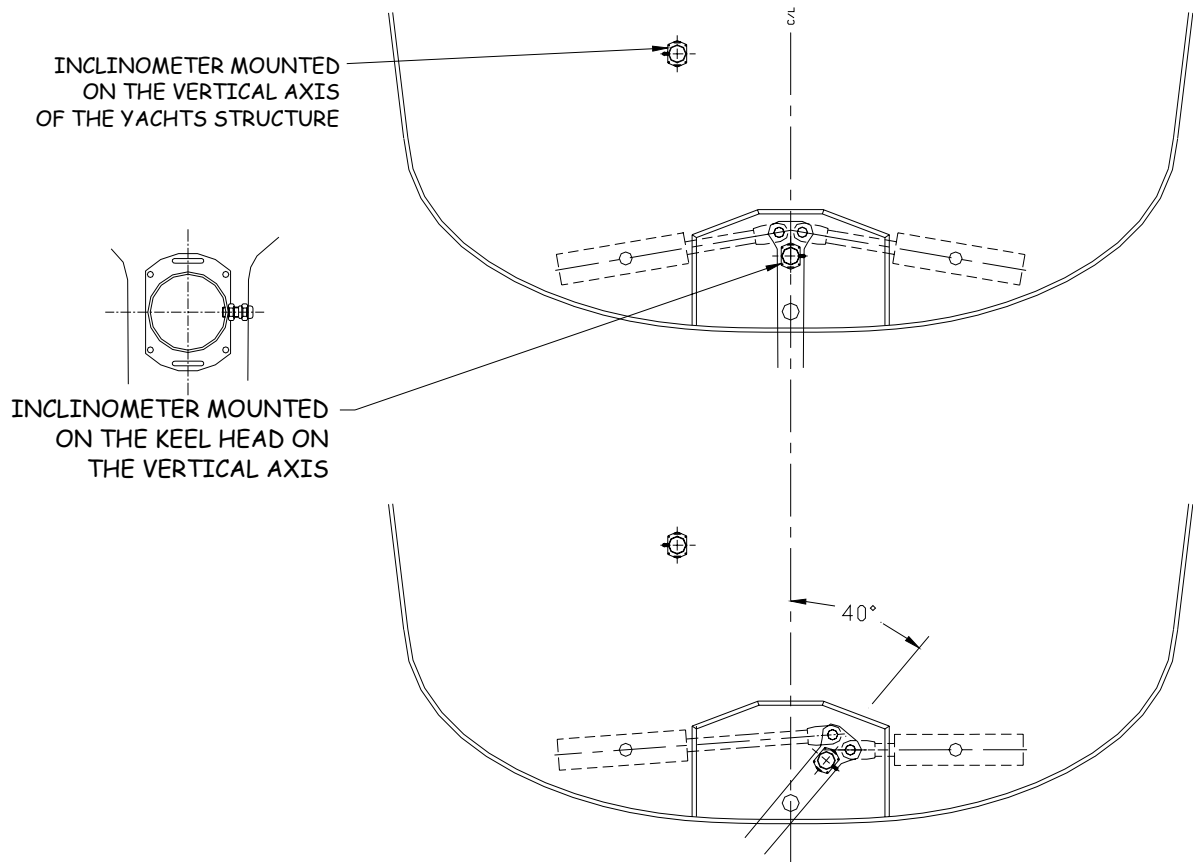


Diagram 2.

END

Signed on behalf of the Volvo Open 70 Rule Management Group

James Dadd, Chief Measurer
24th January 2007