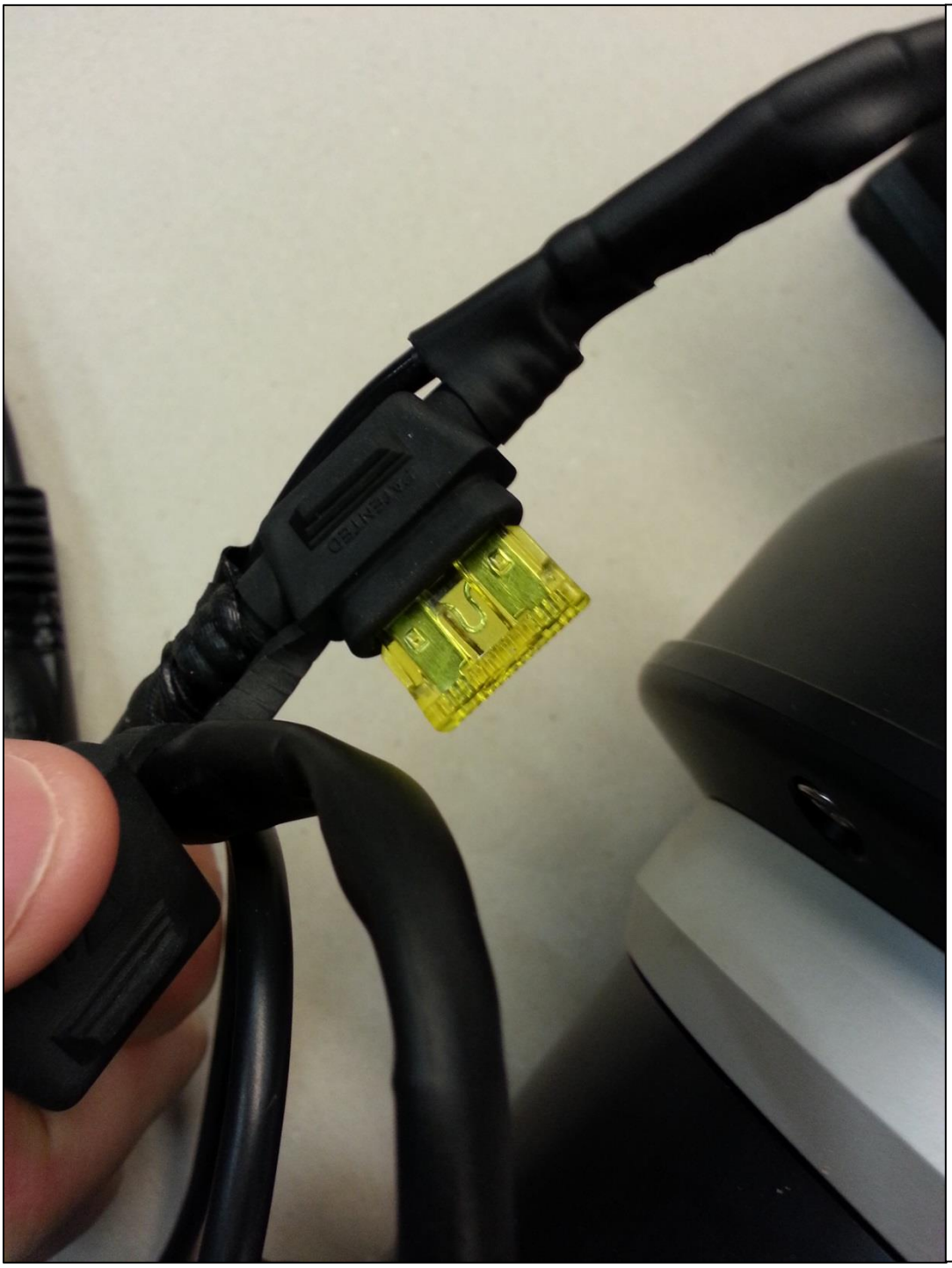
Manual for checking Jefa transmission drive unit – Garmin type



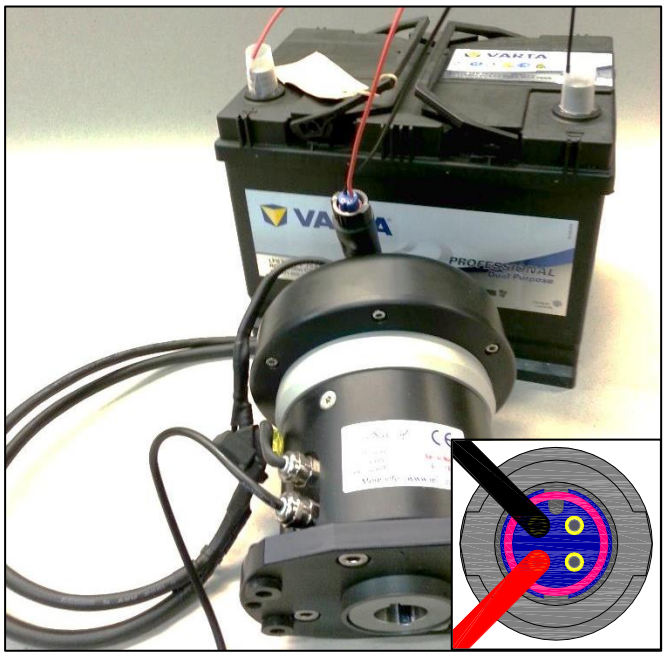
1) Fuse check

If there is no response from the drive unit to the course computer, check if the fuse between the course computer and the drive unit (see picture to the left) is still intact.

When the fuse is intact, please do a “motor and clutch test” as described on page 2.

When the autopilot is not stable on course, go through “Rudder feedback test” to test the internal feedback unit. See page 3. When all tests are passed, the problem is in the autopilot.

Motor and clutch test



1) Clutch test

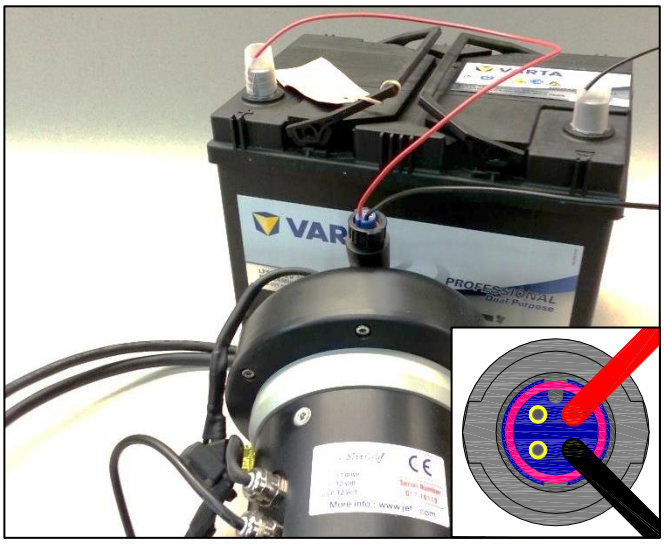
Dismount the drive connector, and find the track in the blue center part.

Use two pieces of standard cable with different colors and connect them to a 12v battery.

Rotate the drive connector till the track points upward, and connect 12v directly to the drive connector as shown in the lower right corner of the picture (Red cable +12v, Black cable -12v)

You should hear a “click sound” from the drive, this is the clutch engaging. Try turning the steering wheel. It should be locked by the drive unit.

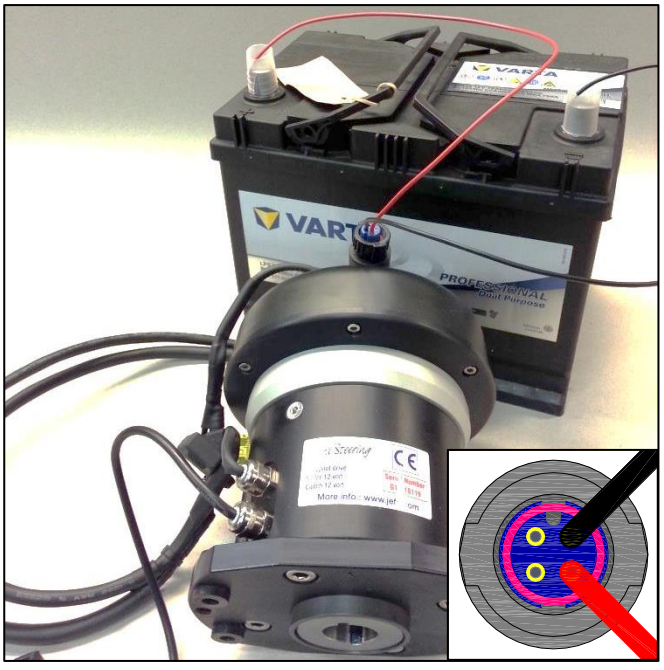
Try disconnecting and connect again several times to be sure the clutch engage correctly. When the clutch is disconnected, the steering wheel should turn easily, as when the autopilot is disconnected.



Motor test

Use the standard cables on the drive connector as shown in the lower right corner of the picture (Red cable +12v, Black cable -12v)

You should be able to hear the motor run.



Motor test in reverse.

Now connect 12v, to the drive connector, as shown in the lower right corner of the picture (Red cable +12v, Black cable -12v)

Now the motor should turn the opposite direction as before

If this test is working, the drive is functional.

NB: Do not test the motor and clutch at the same time. This can damage the steering system if it rotates to the end stop.

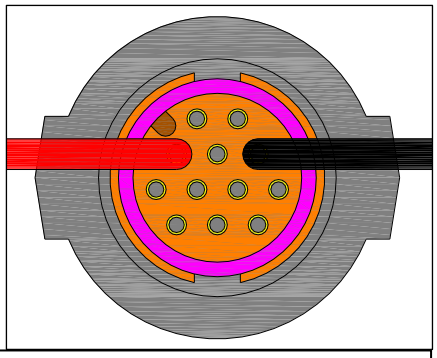
Rudder feedback test

Testing rudder feedback

Dismount the rudder feedback connector.

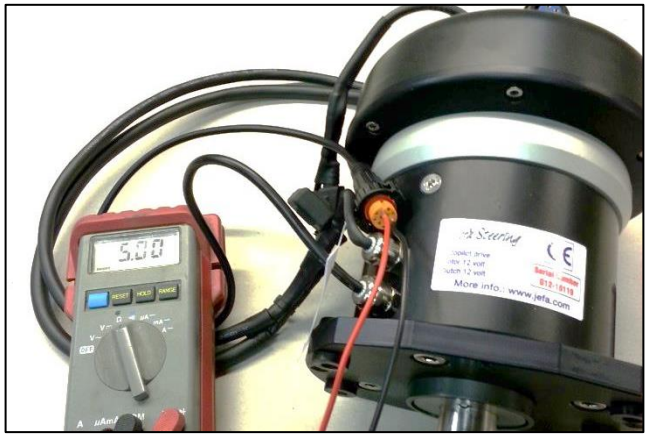
Use a standard multimeter and set it to measure resistance in ohms Ω.

Connect the multimeter to the rudder feedback connector as on the drawing.



Turn the steering system all the way to hard over to get the lowest reading on the multimeter. The multimeter should read from 0Ω to 1,5kΩ

Turn the steering system all the way to opposite hard over to get the highest reading on the multimeter. The multimeter should read from 8,5kΩ to 10kΩ



Now turn the steering system from hard over to hard over slowly and check that the multimeter follows correctly.

It should not stop and jump, but measure every little step of the steering system

If this test is working, the rudder feedback is functional.