# Test Case TC58 Select and show GL polar

**Belongs to Plan(s):** TP5 dashboard_tactics...

**Belongs to Suite(s):** TS21 NMEA simulator ...

**Case Type:** Functionality

**Label(s):** windows linux

**Test Quality:** **EXCELLENT** Defects Closed Fixed

**Assign To:** Petri Makijarvi

**Case Priority:** Medium

**Estimate:** 60

**Is Automated**

## Precondition

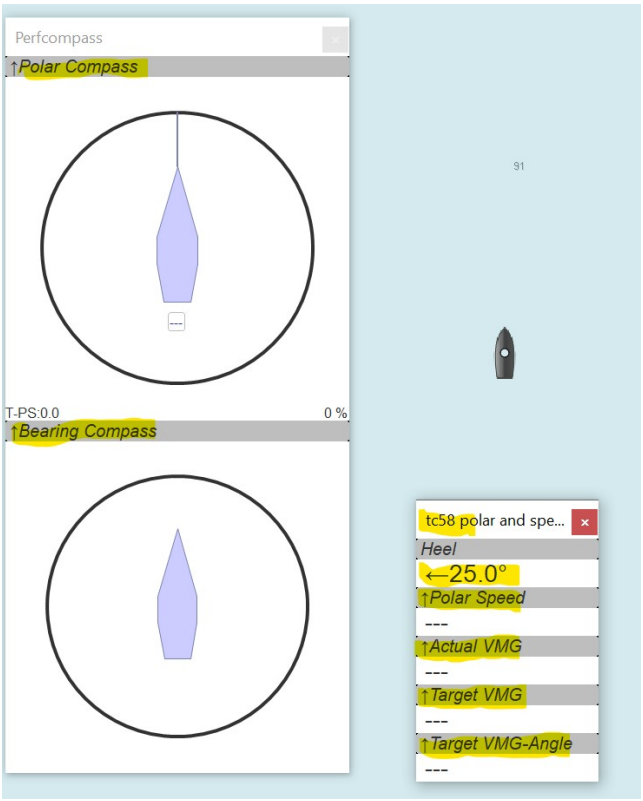
It is recommended but not mandatory to execute the tests in the test suite without polars because the starting point of the execution of this test is the settings with the current for Leeway, see TC54. Therefore, it is recommended not to dismantle the previous test bed. In this test we use NMEA simulator http://www.kave.fi/Apps/ to create and control speed on water, it is also to make the apparent wind consistent with the heel (in this, pro-forma). It will be used also to provide SOG and COG needed in calculations. The NMEA Simulator not sending XDR-sentences for heel, they are generated with NMEA Converter plugin. The test polar file is coming from the examples of weather_routing_pi plugin, but it is not needed to activate that plugin or even install it, the polar file used is here, as attachment:

Example-15-30.pol

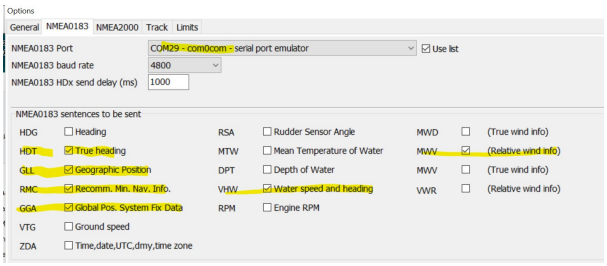
## Steps

Click "**Tab**" or "**Shift** + **Tab**" to navigate grid

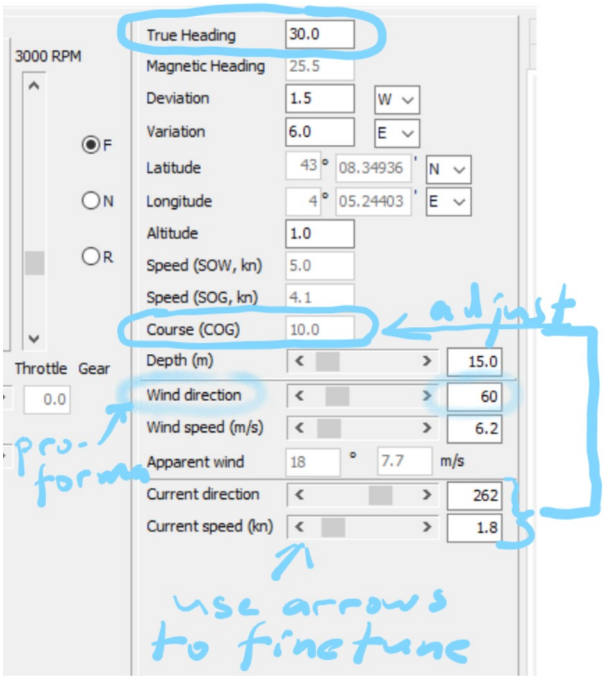
**1** Arrange the instruments needed for this test as depicted in the below picture. Arrange the boat heel as before, with NMEA Converter generated sentences to 25 degrees to port side, as illustrated:



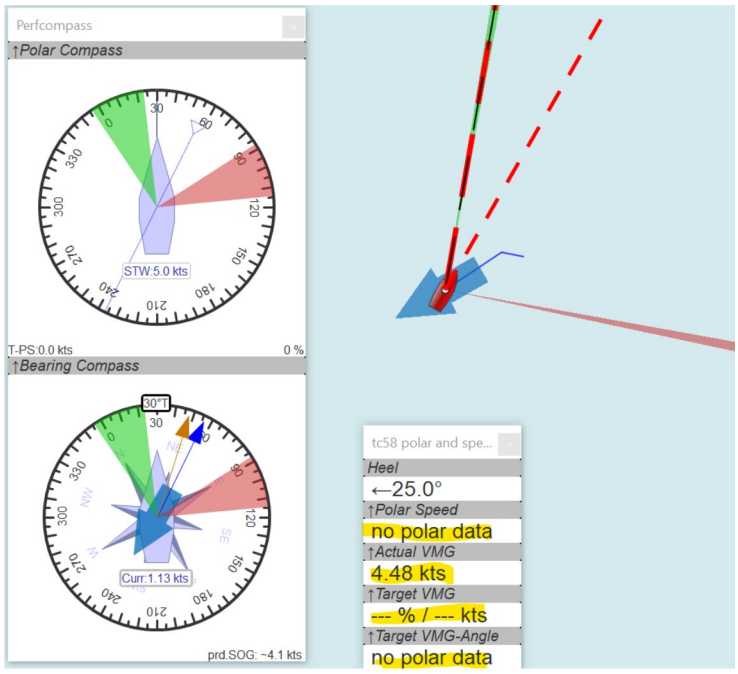

**2** This is a reminder of the NMEA sentences which should come from the NMEA Simulator



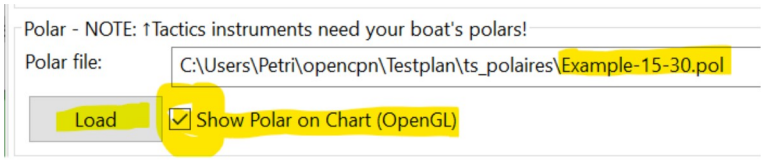
**3** The settings of the NMEA simulator are the same as in the current / Leeway test:




**4** The result without a polar file:



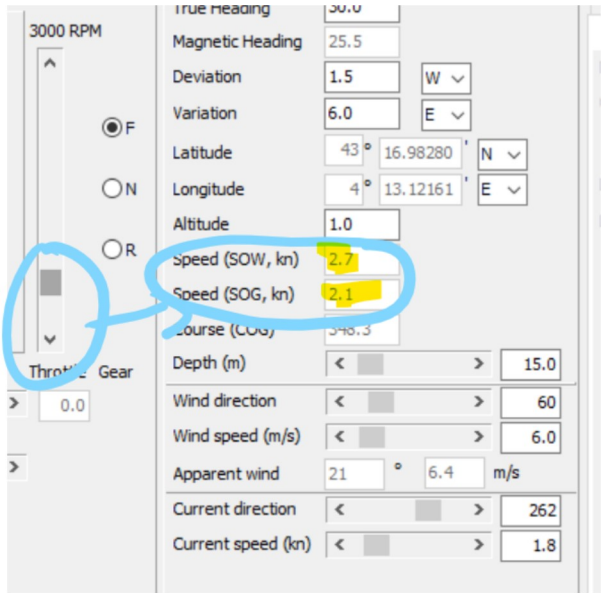
**5** Load the polar file (see prerequisites) (user name based path vary):



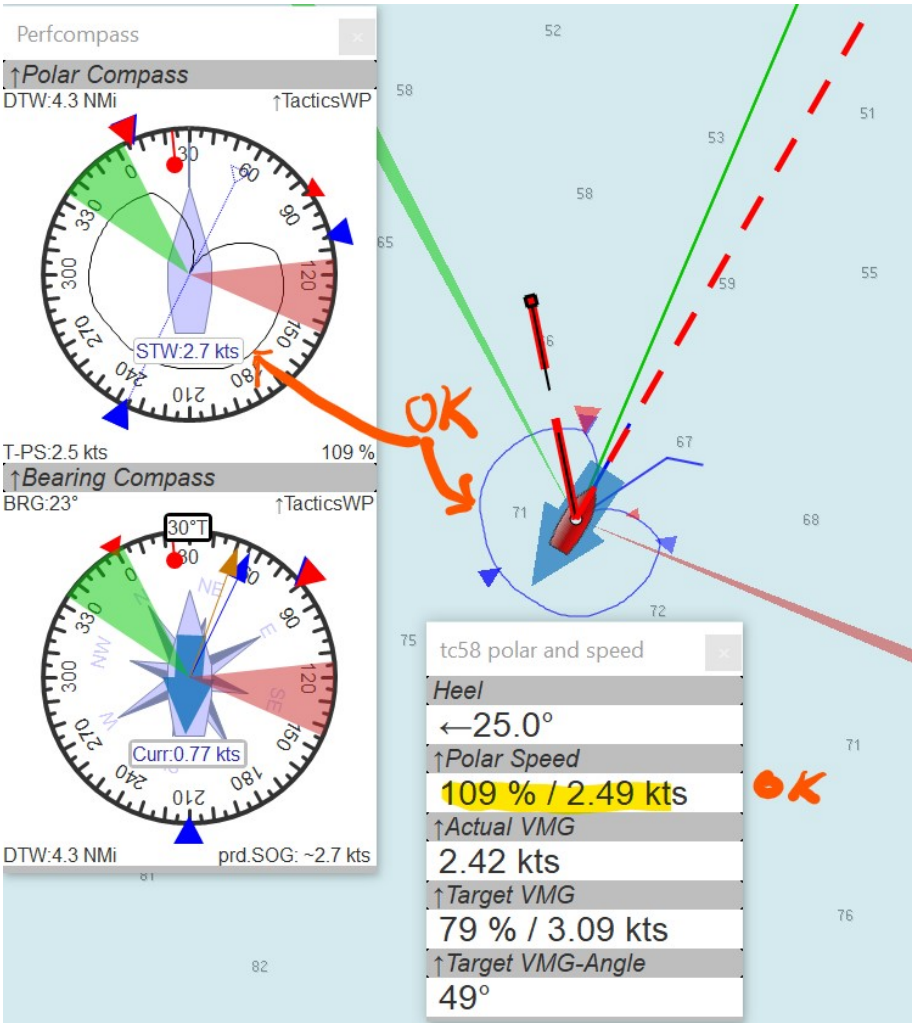

**6** Close the OpenCPN application, wait until it is completely closed and edit the opencpn.ini or cnf-file. Search for the Example-15-30.pol and add manually an output file for the resulting lookup-table file, like this (again, adapt the user name based path):

```
[PlugIns/Dashboard/Tactics/Performance]
PolarFile=C:\\Users\\Petri\\opencpn\\Testplan\\ts_polaires\\Example-15-3
0.pol
PolarLookupTableOutputFile=C:\\Users\\Petri\\opencpn\\Testplan\\ts_polair
es\\Example-15-30-out.txt
```

**7** In the NMEA Simulator reduce the speed, this polar is not for a racing boat but for a Sherman tank!



**8** Start the OpenCPN application and, with the previous setup, **add a Tactics WP (waypoint)** to get a bearing value. The resulting output should contain the following components, polar illustrated on polar compass and on the chart, indicated Polar speed (percentage and value), Actual VMG, Target VMG (percentage and value) adn Target VMG-Angle:



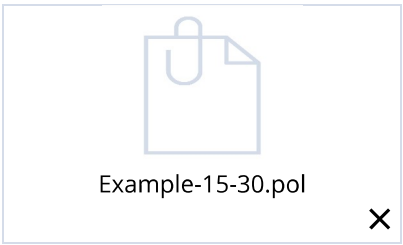

PASS or FAIL

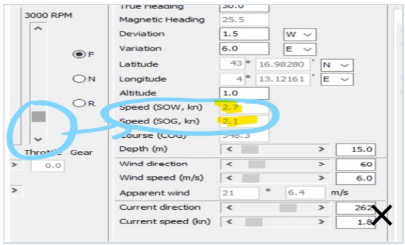
**9** Close the OpenCPN application and verify that it has created the twa/tws lookup table so that it has averaged all values within the range both for TWA and for TWS, like in this reference output:

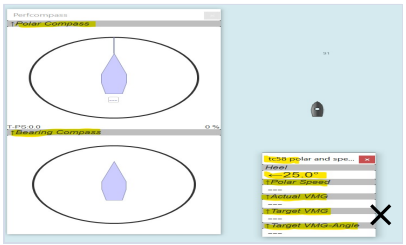
Example-15-30-out.csv

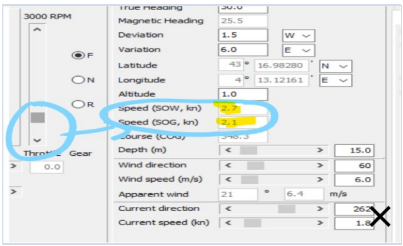
**Add Step**

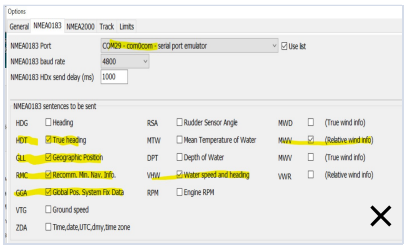
## Attachments

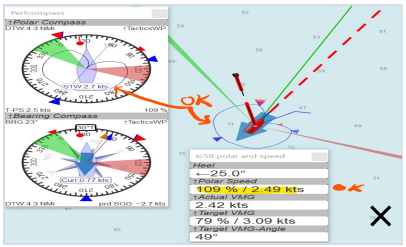










« ‹ 1 2 › »

**Add Attachments**

| RESULTS | DEFECTS | REQUIREMENTS |
|---|---|---|

| Status | Test Plan Run | Assigned To | Updated At↑ | Actions |
|---|---|---|---|---|
| ✔ Pass | TPR43 dashboard_tactics_pi_... | Petri Makijarvi | about a year ago | |
| ⏩ Skip | TPR44 dashboard_tactics_pi_... | Petri Makijarvi | about a year ago | |
| ⏩ Skip | TPR47 dashboard_tactics_pi_... | Petri Makijarvi | about a year ago | |
| 🔄 Pending | TPR81 dashboard_tactics_pi_... | Petri Makijarvi | about a year ago | |
| 🔄 Pending | TPR82 Signal K HDG sentenc... | Petri Makijarvi | about a year ago | |

« ‹ 1 2 3 › »

| ACTIVITY | HISTORY | COMMENTS |
|---|---|---|