Software Manual for PC

Deflection Indicator DI-5C

Version 4.01

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CHAPTER

1. GENERAL INFORMATION

This manual provides the basic information required to operate the PC program together with the crankshaft Deflection Indicator DI-5C. The program can be used in Windows 98, Millenium, 2000, XP, NT and Vista.
Peripheral information such as Ship/Plant names and comments may be added at the PC. Should a measurement contain faults, it is possible to manually correct it in the program. <u>Even the standard "non-PC" DI-5 model can use this program</u> since all measurement input can be done manually, box by box, cylinder by cylinder. Then all the program functions may be used, just as if the data was transferred from a DI-5C.

2. INSTALLING THE PC PROGRAM

The DI-5C is supplied with a CD-rom containing the program.
Follow these steps for installation:
1. Load the CD into your PC.
2. Connect the DI-5C and follow the wizard to install USB driver from the CD.
3. Install the software by opening the Start/ Run menu and enter
   D:\DI5C-application\SETUP.EXE click OK and follow the wizard for installation.

3. THE MENU BAR

<u>File</u> contains NEW Doc, LOAD Doc, SAVE Doc, CREATE new ship folder, PRINT Doc, and EXIT.

- CREATE new ship folder is used to create a file strukture for each engine (main, gen, aux), with crankshaft and ovality measurement folders for each one. When you save the ship folder, sub-menus are automatically created.
- LOAD searches for a DI-5C document already saved in PC.
- NEW is used if you want to input data manually, from scratch.
- SAVE your readings in folder of choice.

<u>DI-5C Communication</u> is used to transfer a document from the DI-5C to PC, refer to chapter 4 "TRANSFER DOCUMENT TO PC".

<u>Preferences</u> sub-menu`s contains: <u>Options,</u> allows change of measuring point angles, graph zero line position and colours. <u>Number of Digits,</u> select 3 or 4 digit display. <u>Language,</u> select English, French or German.

<u>Windows</u> contains the six different pages of the program, they are also accessed using the indicator bar below the menu.

<u>About</u> shows installed version number.

4. TRANSFER DOCUMENT FROM DI-5C TO PC

Normally, all documents stored in the DI-5C are transferred and saved in a PC. The document number consists of 8 figures, the first two represent the document consecutive numbering followed by the 6 figures date, i.e. year, month, day (yy-mm-dd). This document number is used to locate a document in the DI-5C.

An USB cable between DI-5C and PC is supplied with the instrument.

1) Ensure that both ends are firmly connected between the USB ports on PC and DI-5C.

2) Start the DI-5C instrument (OK-button) and leave it in <u>Date/Time</u> mode.

3) Start the DI-5C program on your PC.

Select from the Menu Bar:

a)   <u>DI5C Communication</u> and…

b)   <u>Choose document From DI5C</u> (Transfer Screen appears)
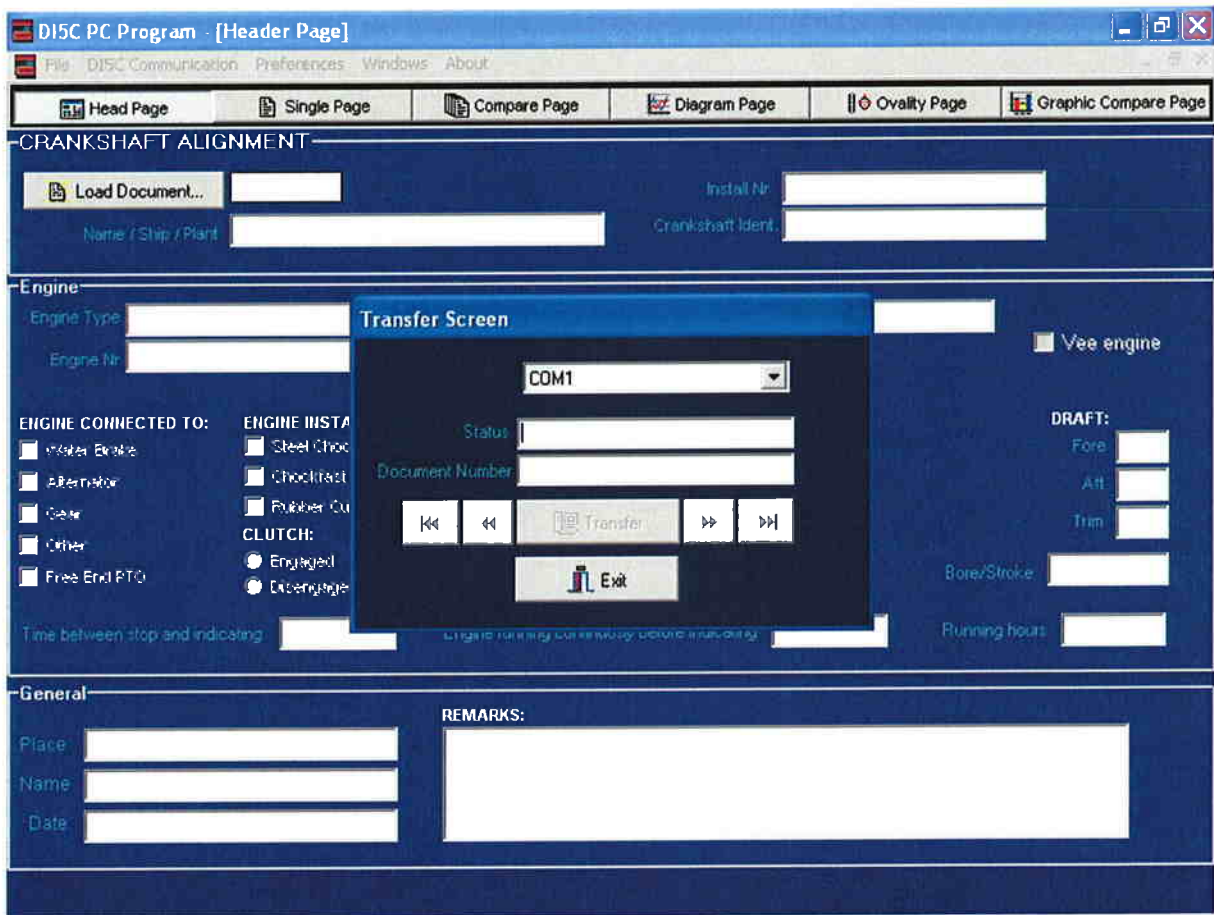
Select the COM-Port on which the instrument is connected in the Transfer screen.

Find your document in the DI-5C by clicking the arrows buttons L / R.

When you find the correct document, click ´Transfer´ and it will be transferred to the PC.

NOTE! The documents will NOT be automatically saved in the PC. Use FILE from the menu bar and SAVE, rename or number the document to your own preference, and put it in your selected ship folder with its sub-folders.

5. HEAD PAGE

The HEAD page (F1) allows you to register Ship / Plant name, and other basic information such as engine type and number. If measuring a "Vee" engine, check the Vee engine box. Then the word "CYL" will be replaced by "WEB" in the program. You may write down additional information in the "Remarks" box at the bottom of the screen. To printout the page, go to "File – Print Document", check the requested page(s) and press OK.

6. SINGLE PAGE

The SINGLE page (F2) shows the DI-5C readings in sequential cylinder order. For Crankshaft deflection measurement the Header is Cyl 1, Cyl 2, Cyl 3 etc. (cylinder). If the "Vee engine" box on the Head page is checked, "Cyl" will be exchanged to "Web". If the document is a cylinder liner Ovality measurement the Header will state Lev 1, Lev 2 etc. (level). The top left picture illustrates the meaning of positive and negative deflection.

Max Deflection is displayed for each cylinder at the bottom of the column. The deflection Limit Value can be changed to match the specified tolerances. The limit is saved together with the document. If the deflection remains within the pre-set limit the field will be Green. If the limit is exceeded, the field will indicate Red, as seen in screenshot above.

Use the red arrows to scroll through cylinders/levels. For crankshaft measurement the maximum number of cylinders are 24. To check a different document, click the 'Load' button and to remove all data, click 'Clear'.

NOTE ! If a new document is loaded, the previous document will be cleared.

To printout the page, go to "File – Print Document", check the requested page(s) and press OK.
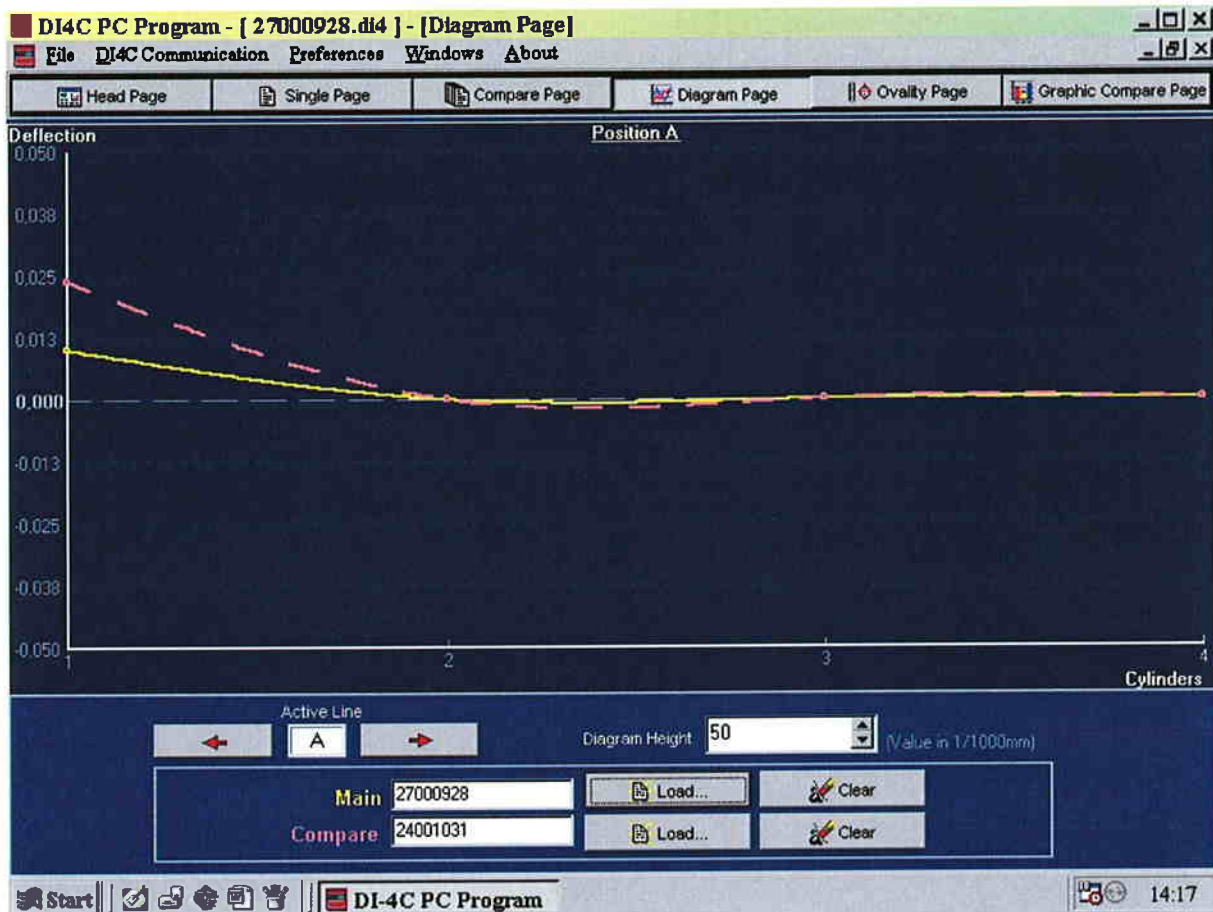
7. COMPARE PAGE

On the COMPARE page (F3), the left hand column contains the new (latest) document data loaded and the right side shows a previous reading from an older document, for comparison.

Print, Load and Clear documents at will, as previously described.

8. DIAGRAM PAGE

The DIAGRAM page (F4) produces a +/- deflection curve for each position of the crank/cylinders, e. g. all position "A" crank readings for each cylinder, maximum 24 cylinders per document in a crankshaft measurement.

If it is an Ovality measurement, 1 document per cylinder is used and the A-E positions describe the readings obtained when rotating the instrument to the desired position. The X-axle show the levels.
The maximum deflection is graphically illustrated, showing the variances between the highest and lowest readings of each cylinder.
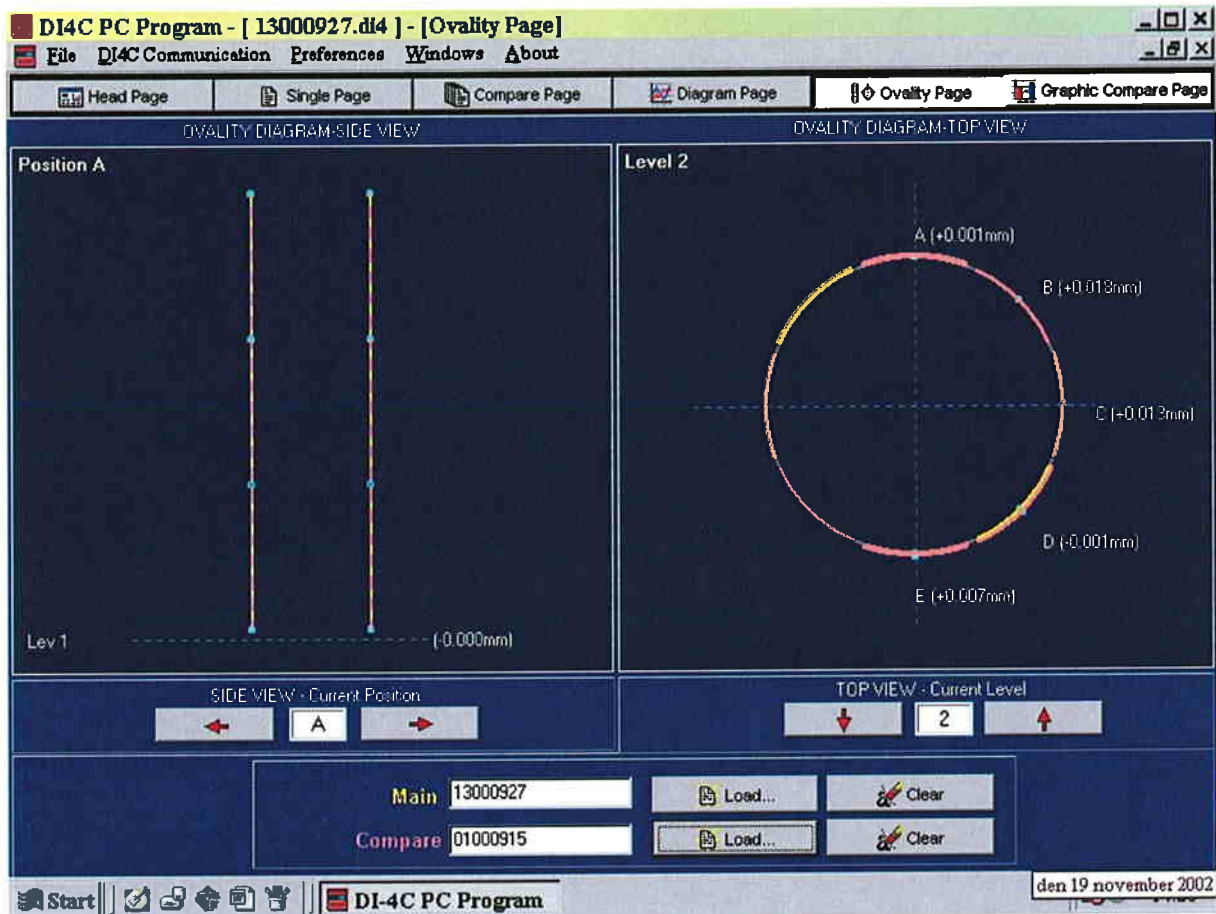
This graph is also an extension of the previous Comparison Page where an older document reading can be displayed together with the new document data.
The diagram height (scale) can be adjusted by clicking the adjustment arrows. The height adjustment affects both "+" and "-" simultaneously.

Print, Load and Clear documents at will, as previously described.

9. OVALITY PAGE

The OVALITY page is intended for cylinder liner ovality measurements only.
Page **F5** will display "OVALITY DIAGRAM". This is automatically changed by the DI-5C when selecting ´Crankshaft measurement´ or ´Ovality measurement´ during set-up of the DI-5C.

Each level is displayed for each position on the screen left side.

The profile displayed on the right side shows the ovality for each level.

Ensure that measurements are recorded with **Level 1 at the bottom of the cylinder liner**, otherwise the readings will be reversed (upside down).

Should you wish to alter measurement angles, go to ´Preferences´ window in the menu and select ´Options´.

Print, Load and Clear documents at will, as previously described.

10. GRAPHIC COMPARE PAGE
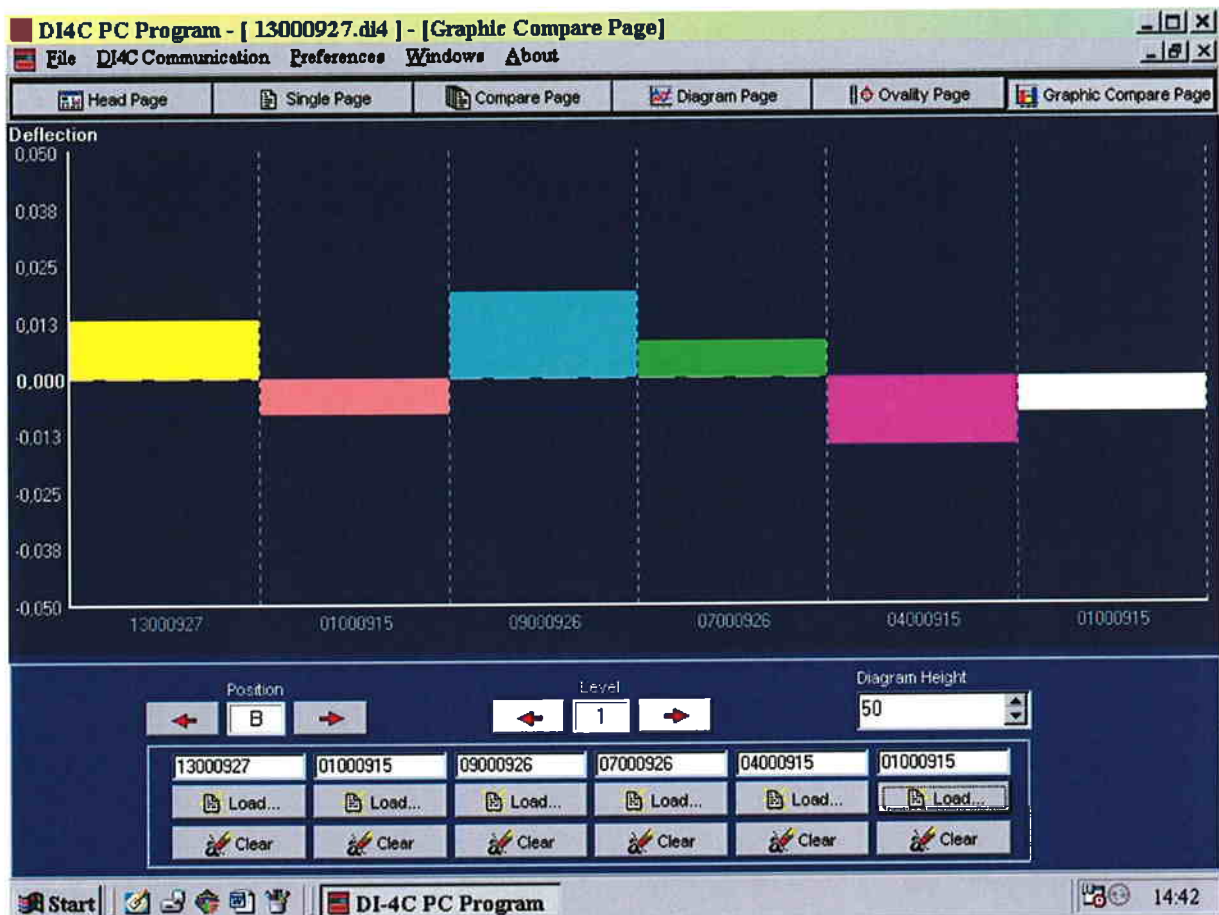
Pressing the **F6** key brings up the GRAPHIC page, where up to six different document readings may be displayed and compared on-screen, to show trends and to ease decision of necessary actions. It can also be found under the ´Windows´ menu.

Print, Load and Clear documents at will, as previously described.

We know this instrument will provide many years of precision measurement in your service - Thank You for using it.
Your feedback on our products are most welcome.

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