2.7A-10001-A02

QuickData®

Diagnostic Software
for Pump 233 and
Centralized Lubrication System QLS 331

4364a01

Requesting a service page in French, Italian/Spanish language, see page 17
Ordenar manual en español: página 17
Pour la commande de ce manuel en français, voir page 17
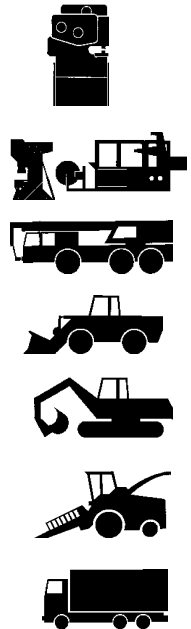**Ordinazione della documentazione italiana, vedi pagina 17**

810-55294-1

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SURVEY

Pump	Voltage	Control Unit	Setting Ranges	Part N°.	Fields of Application
P233	12/24 VDC	integrated MDF 00	Pause time: 4 min to 59 hours and 59 min	236-10111-1 consisting of: control p.c.b. 236-10097-1 data logger 236-10096-1	
QLS 331	12/24 VDC	integrated MDF 00	Pause time: 4 min to 59 hours and 59 min	236-10112-1 consisting of: control p.c.b. 236-10095-1 data logger 236-10096-1	

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Table of Contents

Description of the Diagnostic Software

Components of the QuickData

Fig. 1 - Components of the QuickData

- The QuickData consists of:
- Pump with integrated control unit and data logger module
- IR interface module
- Diagnostic software

Hardware Requirements
Computer: IBM AT or compatible device,
486 DX or faster,
16 MB RAM hard disk with at least
1MB free memory and free serial connection
(COM-Port, 9poles)
mouse,
CD-Rom drive

Software Requirements
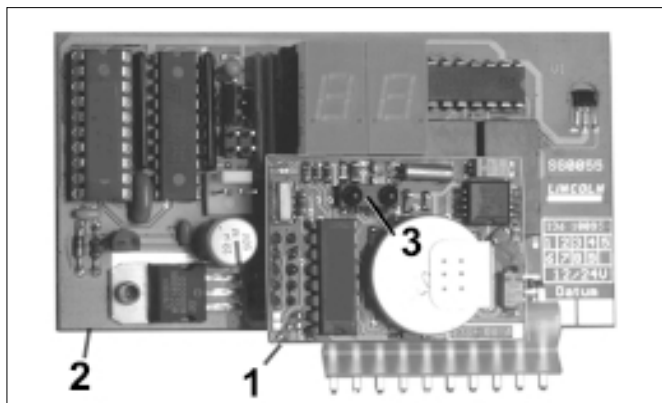Operating system:
MS Windows 95, 98, ME, NT, 2000

Fig. 2 - Control p.c.b. MDF 00 with data logger module plugged on

Controlling and monitoring system „QuickData"
- The controlling and monitoring system consists of:
– control unit with membrane keypad and display
– data logger module with IR interface
– IR interface module RS 232 (COM)
– software "QuickData"

1 - data logger module
2 - control p.c.b.
3 - IR interface

External infrared interface module

- If there does not exist any infrared interface, the infrared interface module, as described in the following, can be plugged onto the COM 1 socket.

Data of the external IR interface module
Part N°. 236-10127-1
Protocol : IrDA 1.219200/8/N Baud
Plugable for COM-Port (RS 232,
SubD plug with 9 poles, socket)
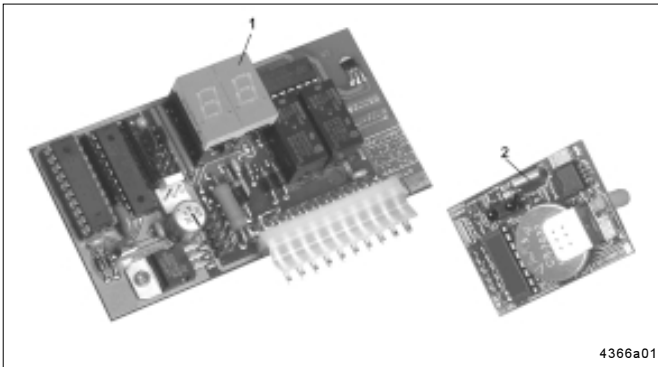Reach approx. 1 m

Fig. 3 - Infrared interface module RS (COM)

Fig. 4 - Control p.c.b. MDF 00 and data logger module

1 - Control p.c.b.
2 - Data logger/4 bit

Control p.c.b. with data logger

• The control p.c.b. 1, fig. 4, with interface to the data logger module 2 forwards the following information to the data logger:

Events	Switchings
Power supply	On/OFF
Pump, automatic lubrication cycle	ON
Pump, manual lubrication cycle	ON
Low level (LL)	ON/OFF
Malfunction(Er)	ON/OFF
Pause time setting	

• The data logger module 2 with interface to the control p.c.b. 1 is provided with:
- Real time clock with battery
- EEPROM memory
- IR interface for the data transmission
• The data logger module 2 with interface to the control p.c.b. stores:
- information given by the control unit with date and time
- ident number, software status and production date
- input of customer identifications.

Diagnostic Software

* The diagnostic software serves for the reading of data from pump 233 and from the lubrication system QLS 331. The following description informs on the use and the setting of the diagnostic software following the order of the terms listed in the menu bar.
* If you have not made use of the software yet, we recommend you to use it at least once following the order of this description in order to get familiar with it.
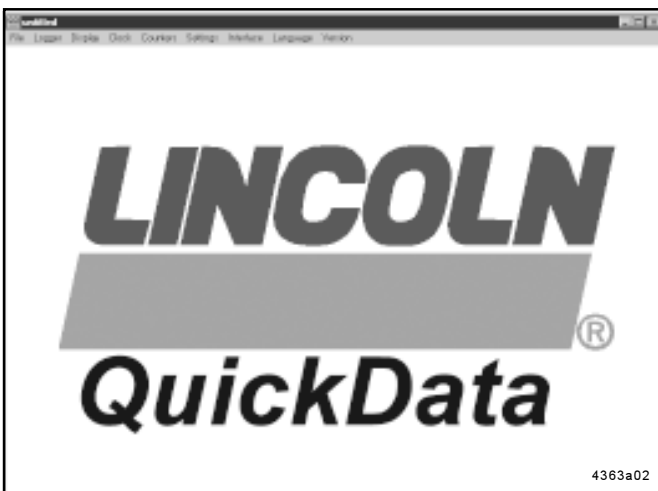

Fig. 5 - Operating screen of the diagnostic software

How to install the diagnostic software part n°. 810-55291-1

* Insert the CD in the corresponding drive of your laptop.
* An installation routine is given for the installation of the software. Change to the CD drive via the data manager/ explorer.
* Start „INSTALL".
* The program is copied into the directory:
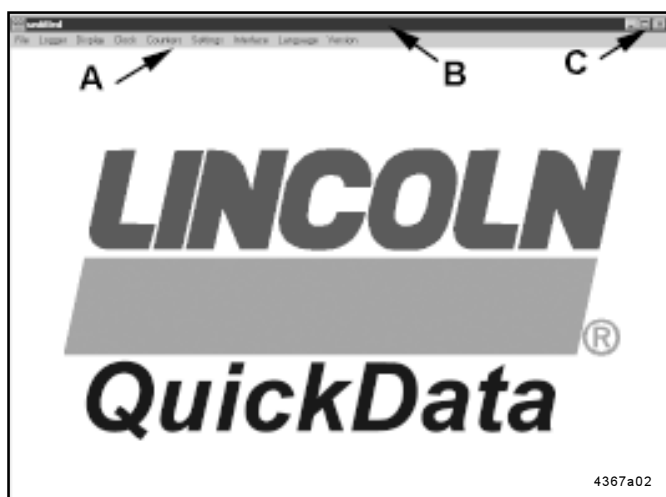 C:\programs\QuickData

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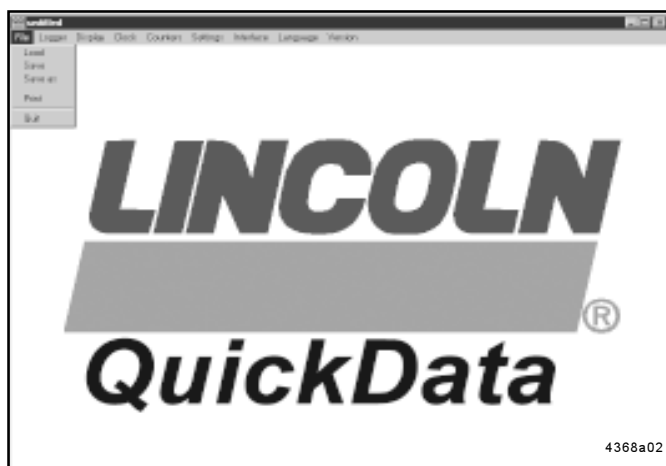**How to start the diagnostic software**

* You can start the diagnostic software either by clicking onto the start menu which you previously installed under MS Windows, or
* You start by double-clicking onto the **QuickData 00. exe** in the QuickData-file which you filed under: C:\programs\QuickData

Title and Menu Bars

Fig. 6 - Operating surface of the software

• The **title bar** displays the name of the file which is presently open.
• The **menu bar** is divided into the following terms:
- File
- Logger
- Display
- Clock
- Counter
- Settings
- Interface
- Language
- Version

A - Menu bar
B - Title bar
C - Closing field, full screen, minimizing field, sectional screen button

Fig. 7 - Menu bar **File**

File
• In the **File** menu the usual software functions, like those possible under MS Windows, can be carried out. These are:
- Load
- Store
- Store under
- Print
- Quit
• The files stored (Quicklog files) receive the file suffix ***.lqd**

Load File
* Under **Load File** you select the required file out of your directory with the files read out and stored. Open the file which will be opened invisibly in the background. It can be displayed under the **Display** menu.
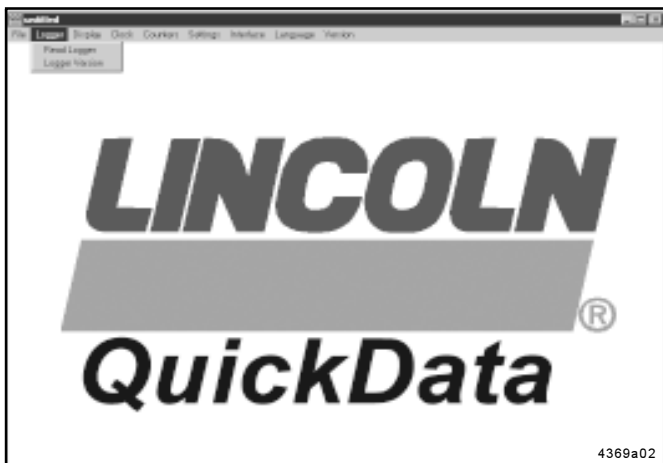
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Fig. 8 - Menu bar: Logger

Logger
• Under **Read Logger** all data stored on the EEPROM of the data logger can be read.

Important:
* Before reading the data logger, carry out the following settings in the **Settings** menu, also see fig. 26.
- Enter user identification data
- Display the pause time set on the control p.c.b.
- Synchronize time/date according to the data of the laptop.

Fig. 9 - Read Data

Read Logger
* To read data from the data logger, lift the infrared interface of your laptop to the height of the reading window of the membrane keypad at a distance of approx. 300 to 800mm (max. 1000 mm).
* Read the data in the **Logger** menu by clicking on the button **Read Logger**, see fig. 8. A display window like shown in fig. 10 will pop up.

Note: If your laptop does not have an integrated IR interface or if it is not suitable for a readout, the external IR interface module (see fig. 3) can be used.
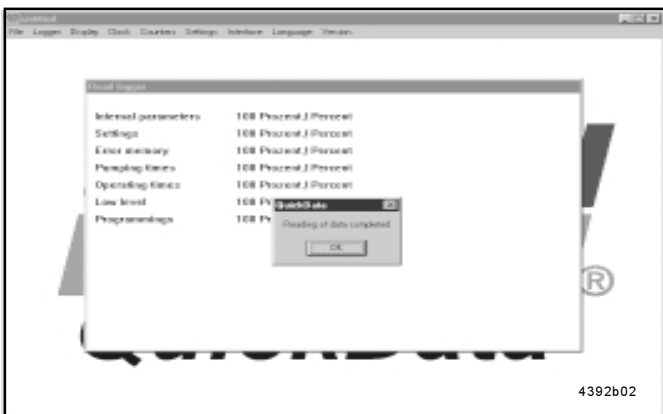
Fig. 10 - Reading of Data completed

* When all data has been read to 100 %, click **OK**. The reading process is completed.
* Then the data has to be filed under a name chosen by you in the **File** menu by clicking onto **Store under**.

Note: If during the reading process your laptop's distance, direction or angle of inclination to the reading window of the membrane keypad changes too much, the reading process will be interrupted. After correcting the distance, the direction or the angle of inclination the reading process will be continued and completed.
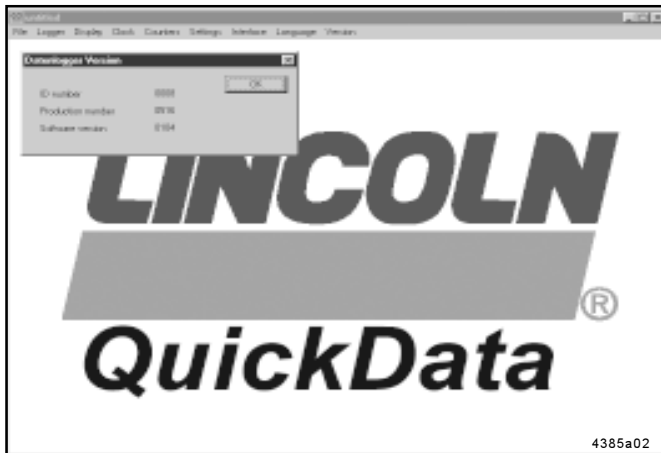
Fig. 11 - Display of the data logger version

Logger Version
• The **Logger Version** menu displays:
- the identification number of the data logger
- the production code
- the software version.

Fig. 12 - **Display** menu

Display
• The **Display** menu provides you with information
  regarding:
  - general data
  - settings
  - lubrication cycles
  - operating times
  - malfunctions
  which was read on the displayed date.

*Note: For the display of the data, first load the corresponding
file (see page 6 below **Load Data**).*

• From this menu you can switch to the following
  information by clicking onto the corresponding button
  - pump times
  - operating times
  - programming data
  - malfunctions
  - low-level indications.

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Fig. 13 - Display of operating data

Note: If you click onto the closing field [X] *you will get back to the basic window.*
- Below **General Data** you find:
  - current reading date/ time
  - number of production
  - data logger identification number
  - software version
- Below **Settings** you find:
  - identification number of the product or indications put in by the customer
  - pause time set, according to customer's indications
- Below **lubrication pulses** you find:
  - the total number of automatic lube pulses
  - the total number of manually triggered lube pulses
- Below **Operating Times** you find:
  - the total operating time in hours **(h)**
  - the total pump running time in **(min.)**
- Below **Fault Indications** you find:
  - the total number of low-level indications
  - the total number of malfunctions

Note: When the digits for „lubrication pulses, operating times and fault indications" have reached the highest digit 99999, counting starts off from the beginning.
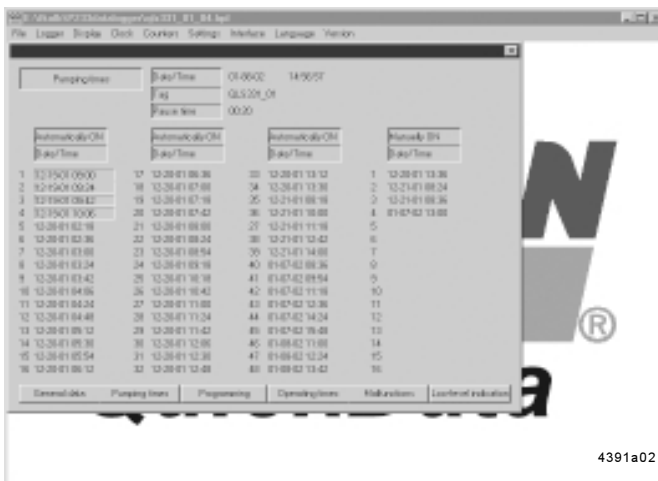
Fig. 14 - Display of pumping times

- The window **Pumping Times** lists all ON-times (operating times) with date and time.
- In the display **48 automatic** and **16 manually** triggered ON-times can be listed. Then, in **Automatic ON** as of **Position 5** the data is being **overwritten newly.**
- In **Manually ON** the data is being **overwritten newly** as of **Position 1.**
- In **Manually ON, positions 1 to 5** (special windows) remain unchanged thus displaying the **first 5** automatically triggered **pump times**

Note: Each window automatically displays:
- *Reading date and time*
- *Identification plate of device or vehicle*
- *Pause time set*

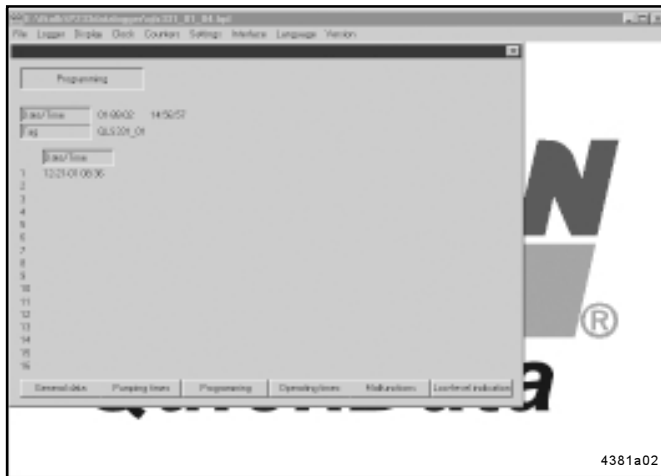Fig. 15 - Display of the user's programming data

- Below **Programming** and **Date/Time** you can see when the first time programming of the control p.c.b. was carried out.
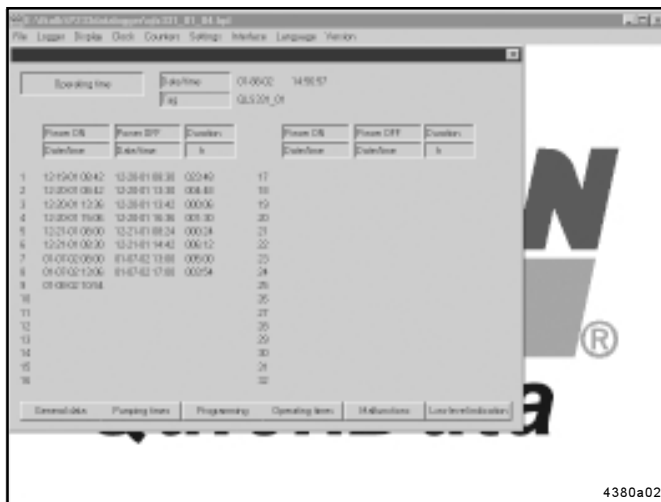- Below point 1....16 you see when the above mentioned programming was modified.

Fig. 16 - Display of the operating times

- Below **Operating Time** you can see when the pump was connected to and disconnected from the power supply (Power supply ON/ OFF). Furthermore, the duration of the power supply is memorized in **hours (h)**.
- When all 32 lines are assigned with data, the software starts overwriting the existing data from line 1 again.
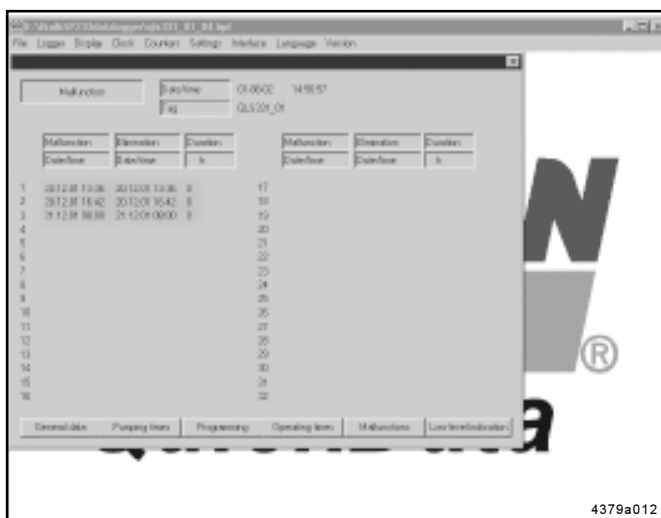
Fig. 17 - Display of malfunctions

- Below **malfunctions** operation-related malfunctions of the centralized lubrication system are displayed.
- Examples of operation-related malfunctions:
- blockages in the lubrication system
- interruptions of the lubricant supply from the pump element to the lube point, e.g. defective pump element, defective check valve, air entrapments in the lubricant
- defective motor
- power supply to the motor interrupted
- defective piston detector (only in case of P 233)
- The causes of possible malfunctions are not listed in detail.
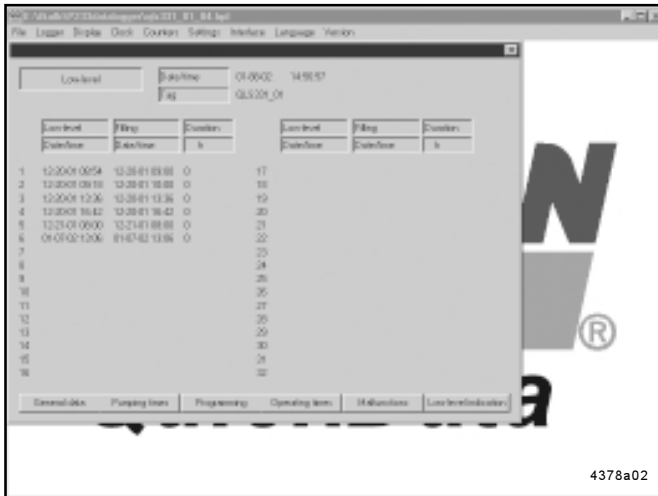
Fig. 18 - Display of low-level indications

- Below **Low-Level Indications** the number of low-level indications is displayed with date/time and duration in hours (h). Further, you find information on when the pump reservoir was refilled and when the pump was put into operation again afterwards.
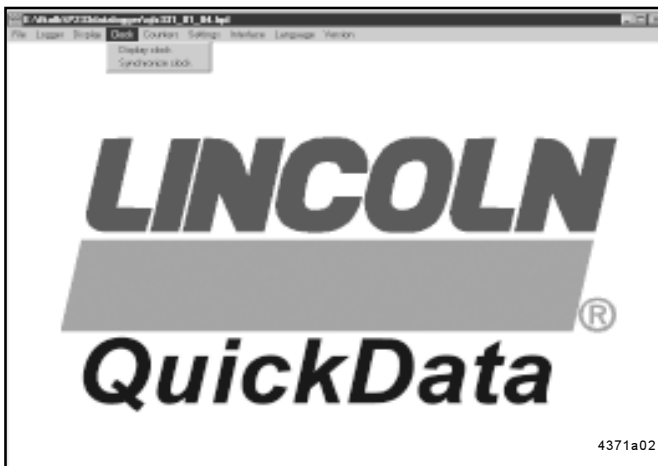
Fig. 19 - Overlaying of the **Clock** menu

Clock
- In the **Clock** menu, date and time of the data logger can be displayed.
- By synchronizing the clock with the internal clock of the laptop, date and time of the data logger can be adopted to the respective time zone.

Fig. 20 - Display of time and date in the control unit

- Display of current time and date in the control unit.

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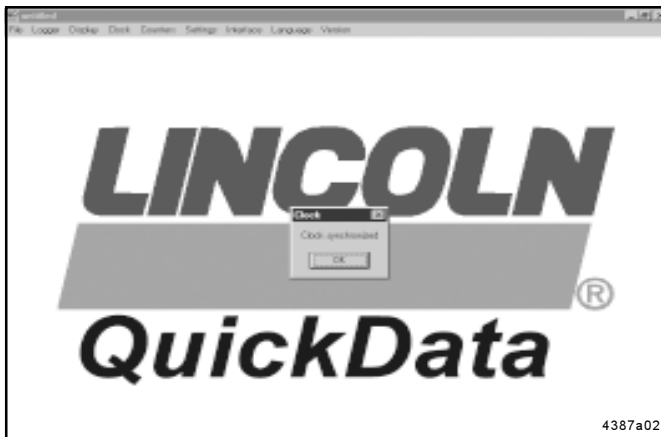
Fig. 22 - Synchronizing the time of the data logger and the laptop.

• Below **Synchronize Clock** date and time of the data logger are synchronized to date and time of the laptop.

Note: For the synchronizing process, the time/date display window must be closed.
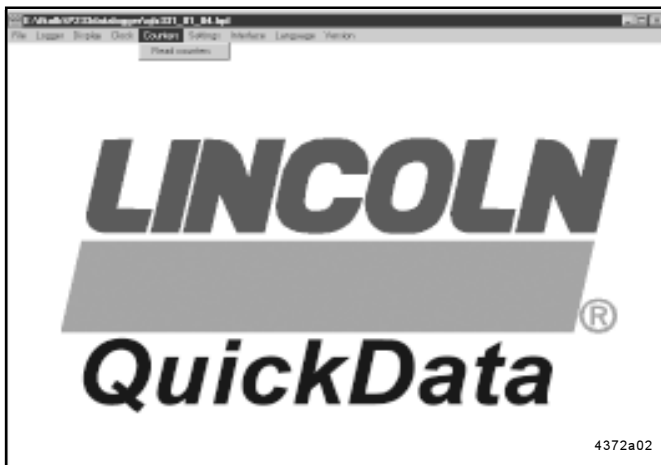
Fig. 23 - **Read counter** for a quick survey over the data

Counter
• Below **Read Counter** it is possible to get a quick survey over the current operating data.
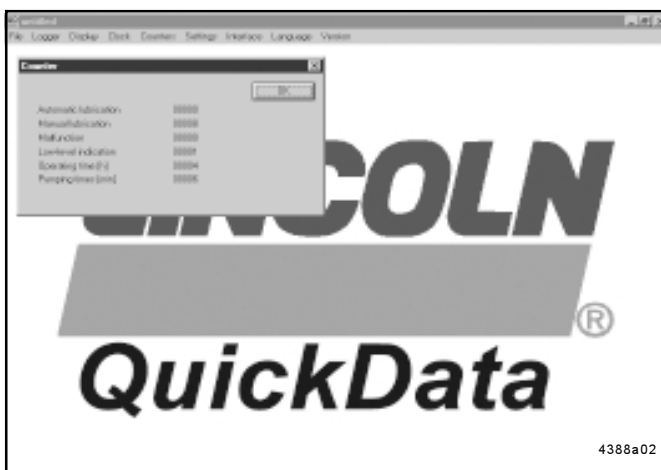
Fig. 24 - **Quick survey** over the current operating data

• Current **Quick Survey** over the number of:
- automatically triggered lube cycles
- manually triggered lube cycles
- malfunctions
- low-level indications
- service hours
- pumping times (operating times)
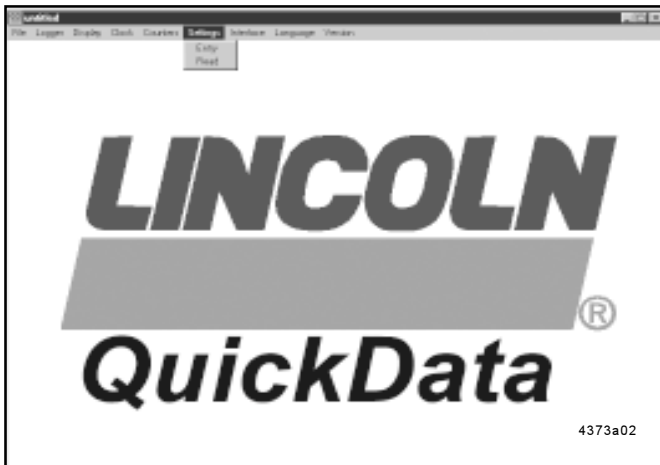
Fig. 24 - Entering of ID data

Settings
- Below **Settings/Entry** the following data can be entered:
- personal ID data
- pause time set on the pump in h:min
- Below **Settings/Read** the existing indications can be read or checked.
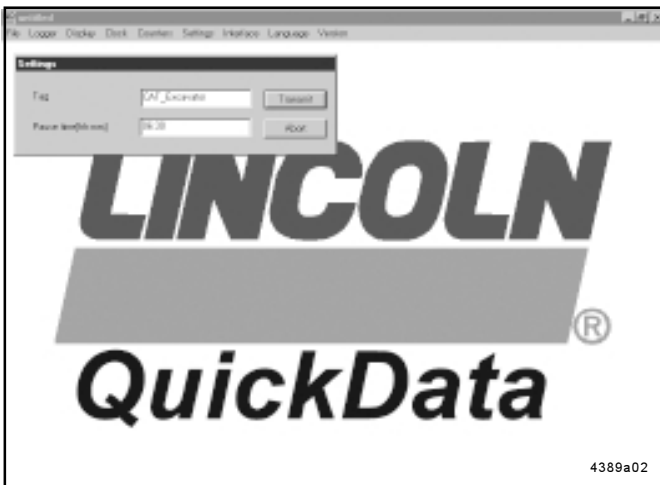
Fig. 25 - Entering of ID data and pause time

- Below **Entry/ Identification**, data such as the name of the device or the vehicle ID number, etc., can be entered.
- A maximum of 16 characters is possible.
- Below **Pause Time,** the pause time presently set on the control p.c.b. must be entered, e.g. 01 : 20.

Note: Pause time setting can only adjust on key pad of the pump.
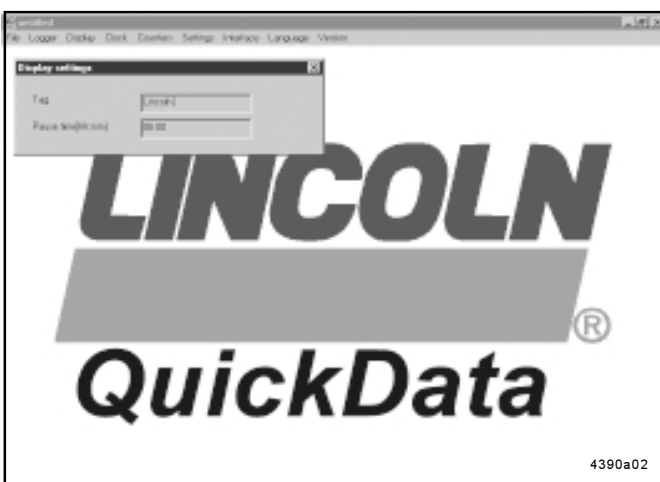
Fig. 26 - Display ID data and pause time

- Below **Entry/Display,** personal ID data as well as pause time settings on the control p.c.b. in **h : min** can be read or checked.
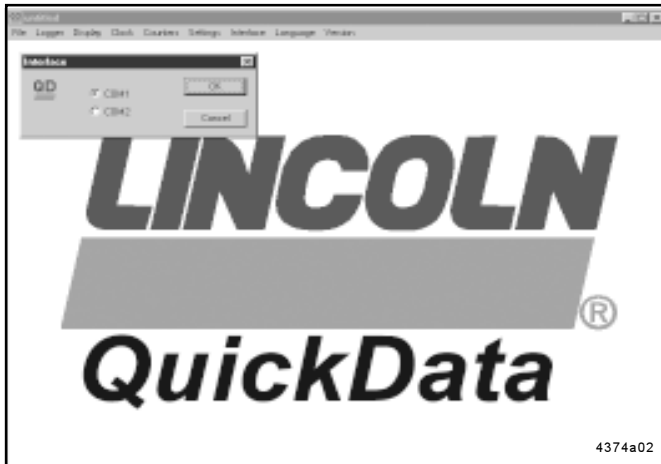
Fig. 27 - Determine type of interface

Interface

• Before reading the data from the data logger, the interface for the laptop has to be selected (external or integrated interface).

* In the case of a laptop **without** integrated infrared interface click on **COM 1**.

Note: Laptops without integrated IR interface must be used with the external interface, part n°. 236-10127-1 (see fig. 3).

* In the case of a laptop **with** integrated IR interface click on **COM 2** (serial interface).
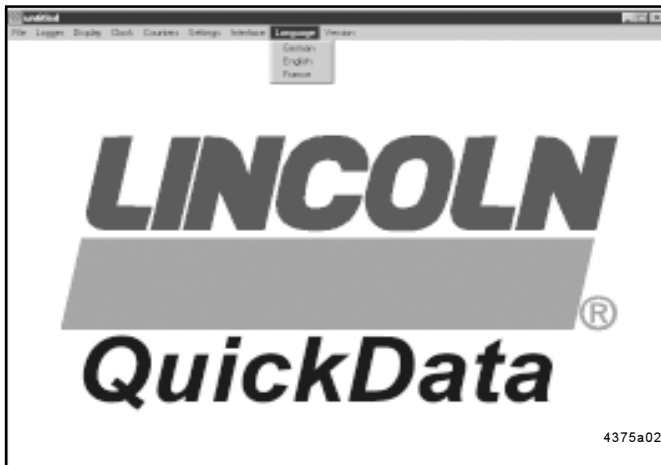
Fig. 28 - Set user language for the software

Languages

• Presently, the languages German, English, French, Italian and Spanish are available asuser languages.

* You can switch between them by clicking on the respective language in the menu.
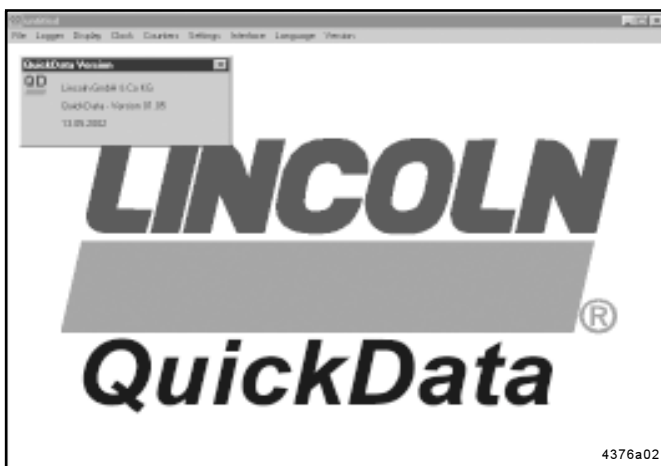
Fig. 29 - Display of the data logger version

Version

• Below **QuickData Version** you find the number of the software version as well as the writing date.

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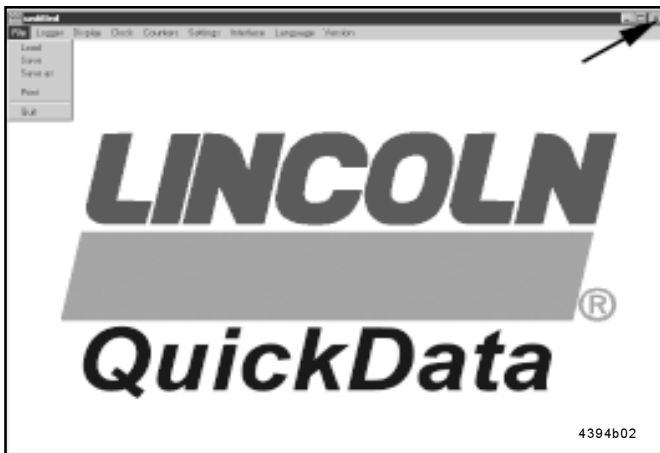
Fig. 30 - Quitting the diagnostic software

How to quit the diagnostic software

* You can quit the diagnostic software either by clicking on the button **Quit** in the menu **File** or by clicking onto the closing field symbol [**X**].

Analysis of the data read

- Important information can be analyzed for the user by means of the pop-up windows (fig. 13 - 18), reports of which can be printed out for:
  - operating data
  - pumping times
  - user programming
  - operating times
  - malfunctions
  - low-level indications.

- The user receives information regarding:
  - regular functioning of the pump
  - number and duration of malfunctions
  - number and duration of low-level indications
  - number of automatically triggered lube cycles
  - number of manually triggered lube cycles.

- This information can be important and meaningful for:
  - the **warranty** of the pump, device, machine or vehicle
  - the **further use** of the pump, device, machine or

    vehicle
  - the **condition and function** of the pump, device, machine or vehicle.

- Furthermore, important data is rendered regarding **malfunctions or low-level indications** which were not recognized in time or not at all or which were not eliminated in time, thus causing damages to the pump, device, machine or vehicle.
- Despite this analysis, a regular visual and function control of the system should still be carried out.

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Overview of information

Display		Qty. of information
Operation datas		
File (identification, adjusted pause time, Reading out date/-time)		5
Datalogger		3
Datas	7	
Mulfunctions		
Mulfunction		32
Mulfunction eliminated		32
Low level indication		
Reservoir empty		32
Reservoir refilled		32
Pumping times		
Automatically lubrication		48
Manually lubrication		16
Operation time		
Power on		32
Power off		32
Programming		
Changes of programming (onpump)		16

• The different ways of analysis are recommended to be carried out in the following order:

Analysis	Menu below:	Page
Did there occur any malfunctions?	**Display/**operating data **Display/**malfunctions	9 10
Did there occur any low-level indications?	**Display/**operating data **Display/**low-level indications	9 11
When were the malfunctions eliminated and how long did they last?	**Display/**malfunction	10
Did the malfunction occur within the preset pause time or not ?	**Display/**malfunctions **Display/**pumping times **Settings/**read/pause time	10 9 13
When was the reservoir refilled?	**Display/**low-level indications	11
Did the low-level indication occur within the preset pause time or not?	**Display/**low-level indications **Settings/**read/pause time	11 13
Were the pumping times (pause and operating times) effected regularly and under consideration of the operating hours of the device, machine or vehicle?	**Display/**pumping time **Display/**operating time **Setting/**read/pause time	9 9 13
Were any lubrication pulses triggered manually? How many were triggered in what time? Were they triggered sporadically or often? Triggering within short time - indication for a too long pause time!	**Display/**pumping times/manually/ON **Display/**operating data	9
Effect a possible modification, or check whether and when the pause time was modified?	**Display/**programming	10
What is the total number of operating hours elapsed?	**Display/**operating data **Read Counter**	9 12
What is the total number of minutes of the pump's running time?	**Display/**operating data **Read Counter**	9 12
How many lubrication pulses were triggered automatically?	**Display/**operating data **Read Counter**	9 12
How many lubrication pulses were triggered manually?	**Display/**operating data **Read Counter**	9 12
What data can be found were?	**Display/**operating data **Settings/**read **Logger/**version **Version/**QuickData version	9 13 14 14

Important: This data can be read out by means of the diagnostic software. The pause time is set on the membrane keypad of the pump and must be entered in the software as a value (h:min). Modifications or settings via software are not possible.

• The evaluation of the analysis gives information regarding the condition, the functionality and the future use of devices, machines, vehicles, etc. as well as of the lubrication system.

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