WinTools Software for LUBE-Master
Monitoring System

Manual

Version 8

(Most is valid also for older versions)

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1. Introduction

The LUBE-Master WinTools software is used mainly for four things,

1. Management and set-up of an LUBE-Master system using a PC computer.
2. Using a PC computer as database for fluids, users, transactions, job numbers, etc.
3. Connections to customer mainframe and DMS systems.
4. Customer tailored functions using scripting.

The software is modularised like the LUBE-Master hardware. This enables the possibility to only use functions needed and by this have software that has lowest possible complexity.

2. Technical demands

To install and use this software the following is needed.

An LUBE-Master system.

A PC computer with properly installed and configured Microsoft Windows 95 /98SE /NT4 /2000 / XP Professional, Vista or Windows 7 operating system. It is recommended that the OS should be patched to the latest level. If Windows 7 is used, some issues may be experienced when using ODBC based drivers, if this is the case, contact Eurolube for more information.

Windows 98 /ME / XP Home are not tested or supported by us but there are no reasons for them not to work.

The PC should have a performance suitable for the used Operating system.

For the LUBE-Master WinTools the,

Minimum demands are Intel Pentium 2-333Mhz compatible, Windows95 and 128Mb RAM.

Recommend demand is a standard PC of today.

General rule -More things running in the PC needs higher performance.

MDAC 2.5 or later should be installed, (Microsoft Data Access Component).

MSJET should be installed, (Microsoft database drivers).

The PC must have one free 16550 compatible serial port. If it is a laptop without a serial port use a PC-card to serial port adapter, **not an USB to serial port adapter.**

An LUBE-Master PC-interface (SIO part number 53403)

A null-modem serial cable (part number 203 02 80), included in part number 53403.

3. Difference between Basic and Professional version

The installation CD is the same for both versions and when you install the software both versions is installed.

3.1. Basic version

The basic version is mainly for graphic visualising of the LUBE-Master system on a PC. It can be used to set the time, update tank levels, make a scheduled simple text file dump of transactions and for synchronisation of the time with the PC. The basic version can be installed on several PC computers.

3.2. Professional version

To convert the basic version to professional version a registration is needed. A unique registration must be done for each PC computer. The professional version is needed if:

The PC should be able to act as the database

The PC should be used for configuration of the LUBE-Master system

Connection to an economic system (DMS) should be used

Customer tailored functions should be used

Multiple receipt printing should be used.

Script service should be used.

4. Installation

Insert the LUBE-Master WinTools CD in the CD reader of the PC computer. Start Windows Explorer open the CD folder.

4.1. WinTools basic software installation

Go to the folder *\LMWT*? (? = Version number) and double click Setup.exe. Follow the instructions on the screen.

Click Next to make a typical installation (default).

It is recommended to use *C:\LUBEMAST* as installation folder (default).

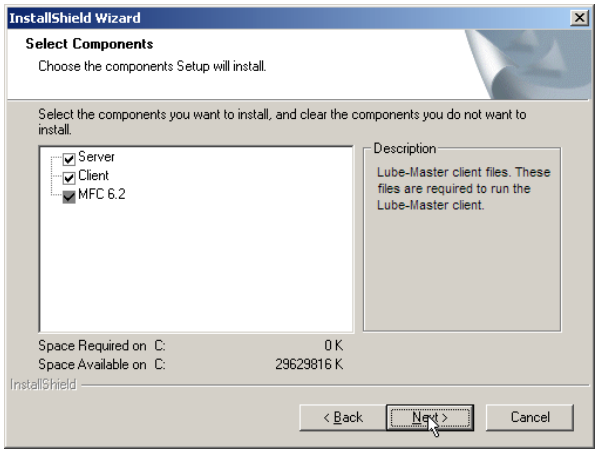
Restart the PC computer.

Click Start button (lower left corner of screen)

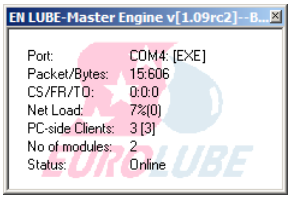
Choose Programs

Choose LUBE-Master

Click Engine



The following window or similar will appear.



A small icon will also appear in the Systray, lower right corner of screen, indicating that the LUBE-Master engine is running. Double-click it and the engine window will be shown and right-click it to show the engine menu.

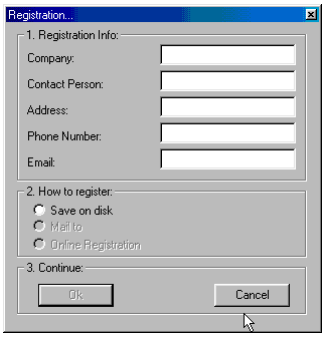
Clicking the X tab in the upper right corner of the window closes the Engine window. **It does not shut down the engine.**

The basic software installation is now finished.

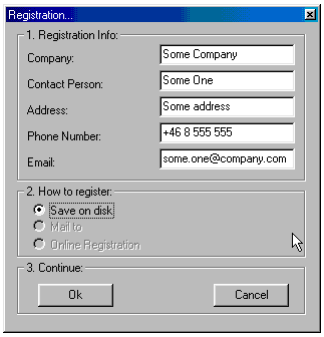
4.2. Convert BASIC version to Professional version (Register)

To convert the software from BASIC to PROFESSIONAL a registration is needed.

To register run the program LICENSER.EXE in the main LUBE-Master folder (default is *C:\LUBEMAST*). A window will appear.

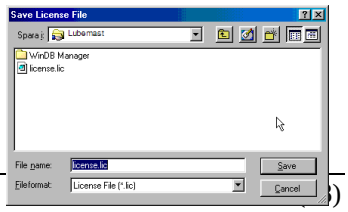


Fill in the information of the company that is going to use the software and mark the choice “Save on disk”.



The direct mail and Online Registration is not in use for now.

When the OK on the OK button becomes black click on the button and the following window will appear.



Choose a save destination, do not change file name, click Save button.

E-mail or post the license.lic file and information about what services and/or OCP-driver you want to use to

E-mail: **lubemaster@eurolube.com**

Post: **Eurolube Equipment AB**
TECHNICAL SUPPORT
BOX 36
S-71121 LINDESBERG
SWEDEN

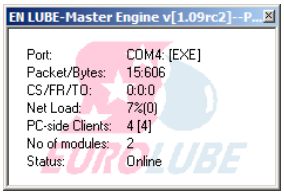
The Licenser.exe can be run on the PC that should be used prior to the installation.

NOTE! If this is done do not run it from a root folder (*C:\, A:*……..). Create a folder (*C:\LIC, A:\LIC,….*) copy Licenser.exe to this folder and run it.

You will receive a validated license file "License.dat" copy this to the LUBE-Master folder (default is *C:\LUBEMAST*). If you get the license file by E-mail the name will be "License.ooo" then rename it to "License.dat".

Restart the engine.

The engine window will now look something like this



4.3. Choose the language.

For LUBE-Master WinTools version 6 or later the language for the Engine, the WinDB Manager and the modules are controlled by the ***Lubemast.ini*** and the ***Lang.lan*** files located in the ***C:\LUBEMAST*** folder.

To set the language,

Either open the lubemast.ini file in C:\LUBEMAST using Notepad and edit the following

[Language]
PreferedLanguage=English

Or,

use ***Ollang.exe*** software for R6

use **HWFlash.exe** for R7 or later.

and select the preferred language. See chapter "9.1 How to change the system language (R7 or later) " or chapter "11.1. Change language for modules" for R6 or earlier".

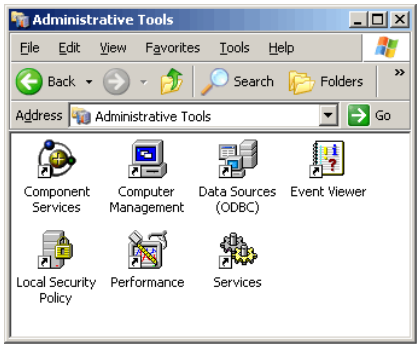
4.4. Setting the ODBC-key “LubeMasterDB” (Professional only)

In the LUBE-Master PC environment all database handling is done by a “standard” called ODBC which stands for “**O**pen **D**ata**B**ase **C**onnectivity”. Using a ”Key” does the ODBC connection. For LUBE-Master the name of this “Key” is “LubeMasterDB” and the database used is MSAccess .mdb.

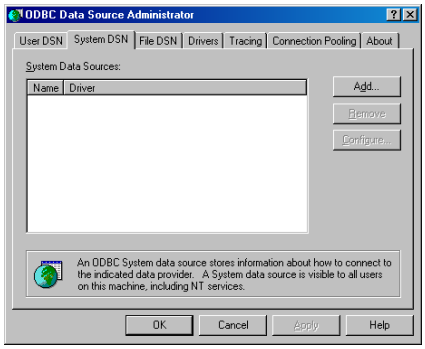
When installing LUBE-Master WinTools version 6 or later this key is set to default by the installation.

For earlier versions or if the database is not placed at the default location (C:\LUBEMAST) the ODBC-key has to be set manually.

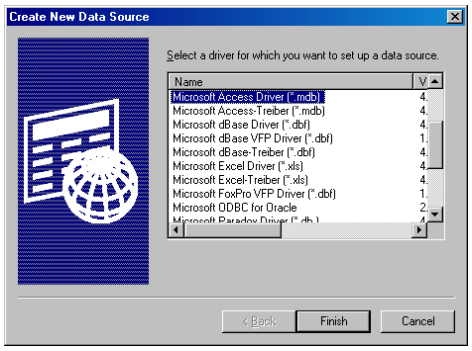
Start Control panel, Can be different between operating systems. Double-click 32-bit ODBC-sources.



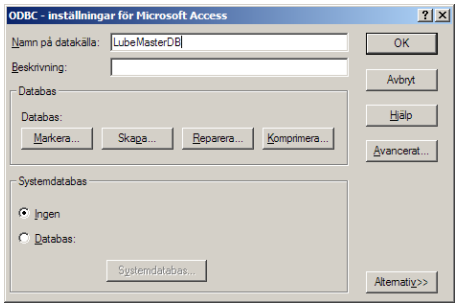
Chose User or System DSN and click Add [1)].



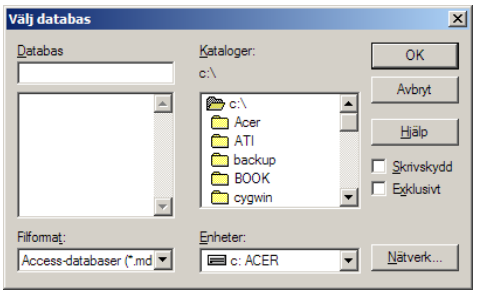
Choose Microsoft Access Driver (*.mdb) click Finish.



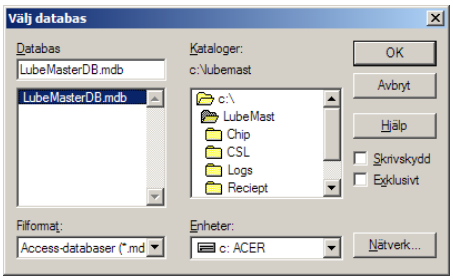
Name the data source LubeMasterDB and then click button Select.



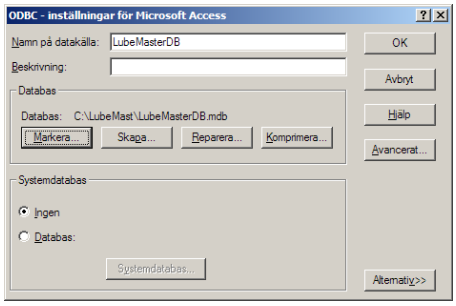
Browse to the LUBE-Master folder.



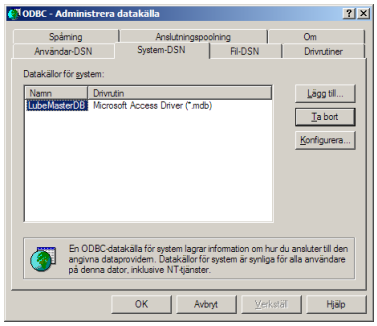
Choose the desired database (.mdb) in the LUBE-Master catalogue, *C:\LUBEMAST* and click OK.



Click OK



Click OK.



If it is done correctly a data source with the name LubeMasterDB is shown in User or System DSN. To decide if the LubeMasterDB should be set-up in User-DSN or System-DSN it must be decided if only one user should be able to use the software or if every user should be able to do it. This decision is very important if the OS is Windows NT/ 2000/ XP because of the much higher level of security.

User-DSN	Enables it to the user that is logged in when it is set-up.
System-DSN	Enables it to all users, mostly used.

4.5. How to set-up COM PORT for improved performance.

The RS-232 Com port for a PC can be based on many different controller chips (UART) but they all have some common features.

The feature that is interesting for the performance of the LUBE-Master system is the communication FIFO buffers, in particular the READ-buffer.

The READ-buffer works like this: When it is full the serial port controller chip (UART) sends an request to the operative system (OS) (Windows) that it has data that needs to be handled. The OS passes the data to the targeted software (LUBE-Master engine).

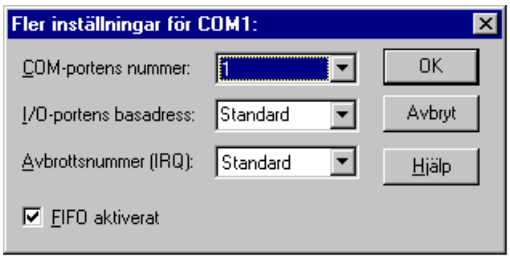
Normally today the READ-buffer is set to 14 (default for 16550 compatible UART) which means that the serial port must receive 14 bytes before it calls the OS.

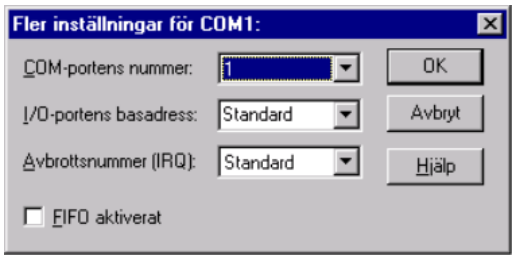
The LUBE-Master system is Real-Time software that wants information in Real-Time and an UART FIFO READ-buffer of 14 can sometimes cause unnecessary delays, especially when a connection to the workshop DMS system is used.

Because of this it is recommended to set the FIFO READ-buffer of the used Com: port to 1.

4.5.1. FIFO READ-buffer in Windows NT.

Open the control panel then double click the “Ports” icon. Select the Com port used for LUBE-Master from the shown list and then Left-Click on the “Configure” button. Now Left-Click on the “More” button. A “More settings for Com(n):” window is shown. In This window there is a check box called “FIFO activated”, uncheck this and Left-Click the “OK”-button. Now the OS asks for a reboot. When the PC is rebooted it is done.





4.5.2. FIFO READ-buffer in Windows 98SE

First Right Click “This Computer” then select “Properties”. Left-Click the “Device manager” tab and a browser for all hardware resources are shown. Left-Click the “+” sign in front of the “Ports (COM & LPT)” group. There will be a list of available serial (Com) and parallel (Lpt) ports.

Right-Click on the one used for the LUBE-Master system and select “Properties”. Now Left-Click the “Port settings” tab and then Left-Click the “Advanced” button.

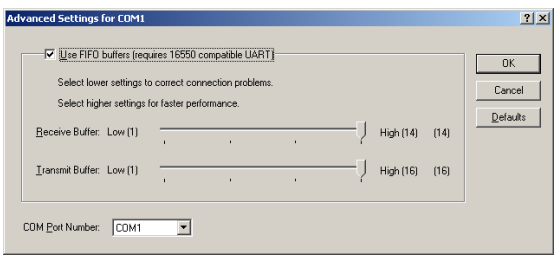
Drag the READ-buffer slider all the way to the left, see pictures below. Then Left-Click the “OK”-button.

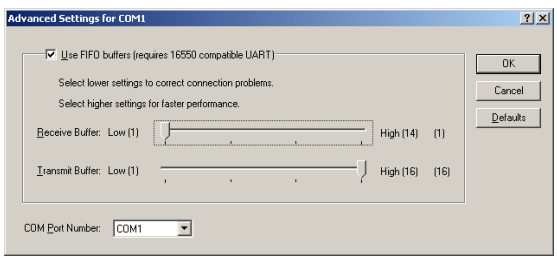
4.5.3. FIFO READ-buffer in Windows 2K/XP

First Right Click “This Computer” then select “Properties”. Left-Click the “Hardware” tab. Now Left-Click the “Device manager” button and a browser for all hardware resources are shown. Left-Click the “+” sign in front of the “Ports (COM & LPT)” group. There will be a list of available serial (Com) and parallel (Lpt) ports.

Right-Click on the one used for the LUBE-Master system and select “Properties”. Now Left-Click the “Port settings” tab and then Left-Click the “Advanced” button.

Drag the READ-buffer slider all the way to the left and then Left-Click the “OK”-button.





4.6. Installing LUBE-Master WinDB Manager (Professional only)

The LUBE-Master WinDB Manager is a database managing software for the PC-database of LUBE-Master. It uses the ODBC-Key "LubeMasterDB" to handle Users, Job numbers, Tanks, Printing… and can also generate some useful reports. It uses the nationality of the Operating system of the PC to use the same language if it is supported.

Go to the *LMWTDBMAN* folder on the LUBE-Master WinTools CD and run Setup.exe. An installation window appears.

Click the OK-button.

Click the "large" button to install the software.

Click the OK-button.

Now the software is installed to the folder *C:\LUBEMAST\WinDB Manager*. If Windows appears that asks you if you want to keep the existing file click on the YES-button.

Now a window pops-up telling that the installation was successful. Click the OK-button.

Restart the computer.

4.7. Check for late updates

On the LUBE-Master WinTools CD go to the *Extras\Patches* folder. In this folder there are late software updates. To each update there is a ReadMe text file describing what the update does and if or when you should use them. In the ReadMe file there is also a description of how to apply them. Normally the only thing to do is to copy them to the *C:\LUBEMAST* folder replacing the existing one.

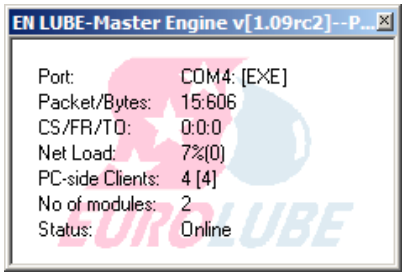
Always make a backup of the files you are going to replace before you replace it.

Hint! **Open the C:\LUBEMAST folder, make a new folder called Backup, Open the Backup folder, Make a new folder called "the date of today" (YYMMDD) and copy the files that are going to be replaced from Lubemast folder to Lubemast\Backup\YYMMDD.**

5. LUBE-Master engine

The LUBE-Master engine is the core of the WinTools software and it is the only thing that needs to be running. It acts as the link between the hardware and software modules. The engine is controlled from its main window. All changes in the engine should be followed by a restart of the system

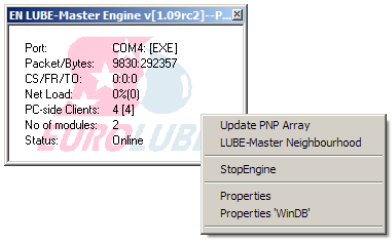
Port:	Shows the used serial port, [ ] shows driver type. [EXE] Standard driver. [WDM] WDM driver.
Packets/Bytes:	Shows communication
CS/FR/TO:	Shows communication errors
Net Load:	Shows load on LUBE-Master communication loop
PC-side Clients:	Shows number of total clients [Services clients] (clients means graphic units and services)
No of modules:	Shows number of hardware modules
Status:	Shows if the LUBE-Master hardware is connected.



A small icon will always be visible in the Systray, lower right corner of screen, indicating that the LUBE-Master engine is running. Double-click it and the engine window will be shown and right-click it to show the engine menu.

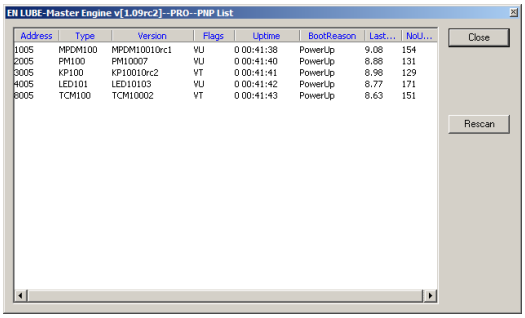
Clicking the X tab in the upper right corner of the window closes the Engine window. It does not shut down the engine.

To open the engine control menu "right-click" some were in the engine window or on the icon in the Systray. The result will be like this.



Below the line under Properties it is possible to add a personal Fast menu containing the most used items. Se chapter "10.3 Creating submenus in the engine control menu"

5.1. Update PNP Array



The "Update PNP Array" tool is used to see a list of hardware modules and some information about them. The shown layout demands the use of engine.exe 107 or later.

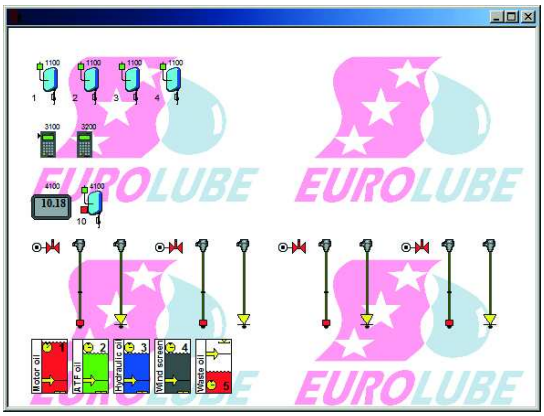
After making changes to the system set-up open this and click the "Rescan" button to issue an order to update the in PC memory stored PNP array.

The system will do this automatically but using the "Rescan" button speeds it up.

Column	Description	Values	Comment	Applies to	Pc demands
Address	Module address	1xxx, 2xxx,……		All modules and module software versions.	All LMWT versions.
Type	Type of module	MPDM100, LED101,…….		All modules and module software versions.	All LMWT versions.
Ver	Software version	VXXXXX(RCYY)		Flash chip (18F452)	Version 6 with engine update version 107RC18 or later.
Flags	Functional information	"O" Old PNP model		Older chip versions	Uncheck "Disable PNP frame…" in engine properties.
		"N" New PNP model		Latest OTP chip versions (16C67)	Check "Disable PNP frame…" in engine properties if all modules have this flag.
		"V" VERBS PNP model		Flash chips (18C452)	Version 6 with engine update version 107RC18 or later.
		"U" Unterminated		Chip versions and PCB versions that support this.	LMWT Version 6 or later
		"T" Terminated		Chip versions and PCB versions that support this.	LMWT Version 6 or later
		"L" Setup Lock jumper off		MPDM's and LED's with chip versions and PCB versions that support this.	LMWT Version 6 or later
		"R" Clock module present.		PM's and LED's with chip versions that supports this.	LMWT Version 6 or later
Uptime	Time since last reboot	DD HH:MM:SS		Flash chip (18F452)	LMWT Version 6 or later
BootReason	Reason for reboot	Unknown	Unknown error	Flash chip (18F452)	LMWT Version 6 or later
		Software	When flashed		
		Power Up	Normal power on		
		WDT	Module hang up		
		BOD	Low voltage		
		Sleep	Resume from sleep mode		
		Reset	Rest button pressed		
		StackOverflow	Software error		
		StackUnderflow	Software error		
LastUpdate	Time since last PNP update.	SS.decimals			LMWT Version 6 or later
NoUpdates	Number of PNP updates.	XXXXXXX			LMWT Version 6 or later

In this list all modules of an LUBE-Master system should appear. If a module does not appear something is wrong. The PNP support of the engine could be set in the wrong way, see 5.4 Properties. Other reasons could be modules with the same address or wrong termination of the communication loop, see installation manual for LUBE-Master.

5.2. LUBE-Master Neighbourhood



The LUBE-Master Neighbourhood is a window that shows a graphic representation of the system. Each individual part of the system is shown as an icon and by right click an icon a control menu appears. With this menu the actual unit could be controlled. With the basic version normal day-to-day tasks can be carried out and the other things can be shown. If the professional version is used every thing can be edited, this is then password protected.

The default password is “2222” for LUBE-Master WinTools R7 or later and “1111” for R6 and earlier. It can be edited in the lubemast.ini file

Editing the file HWMON.BMP changes the neighbourhood background. It should be placed in the LUBE-Master folder, default is C:\LUBEMAST.

5.3. Stop Engine

By clicking on Stop Engine the engine together with the rest of the WinTools software is shut down. To prevent shut down by mistake the shut down must be verified by clicking the OK button in a window that is shown.

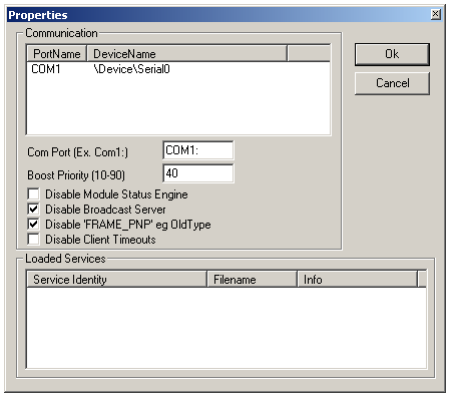
5.4. Properties

Properties are used to change the behaviour of the engine and to add software modules called services and OCP drivers.

In the upper part of the properties window there is a frame named “Communication”. First there is a list of possible communication ports. If one in the list is double clicked it will update the Com Port parameter. Next is the configured parameters that controls the communication between the LUBE-Master system hardware and the WinTools software.

Parameters

Comport



Type the correct Com?:, default is Com1:. For laptops without serial port use a PMCIA serial port card. ***The use of a USB to serial port adapter is not recommended***, it can give random results.

Boost Priority

This is used to alter the PNP update priority for the PC. This should normally not be changed, default is 40.

Disable Module Status Engine

This can be used to improve performance in systems were there is no need to see a graphic representation of the LUBE-Master system. It removes the communication needed for updating the graphic representation.

Disable Broadcast Server

If this is enabled the LUBE-Master server can broadcast its existence in a network. This makes it possible to run a hardware monitor such as HWMon2.EXE (LUBE-Master Neighbourhood and customer layouts) on other PC’s in the network.

Disable “Frame PNP” e.g. Old Type

If all modules show “N” or “V”, when running update PNP array, this should be checked.

If there are modules that show “O” it must be unchecked to make it possible to see these modules on the PC.

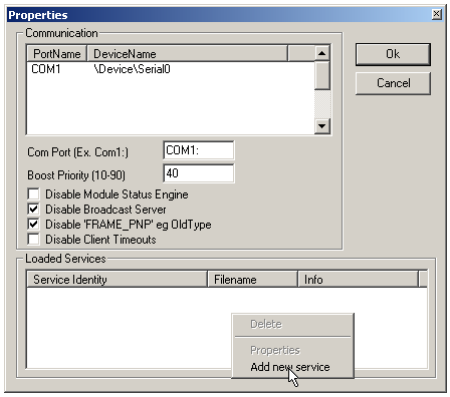
Disable Client Timeouts

This controls if not accessible clients should be disconnected or not, this should normally be unchecked.

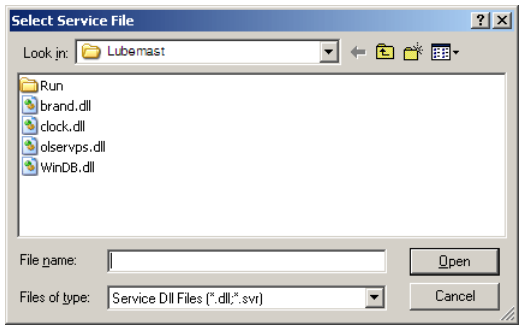
Loaded Services

In the lower part of the properties window there is a frame named “Loaded Services”. This frame contains a table of loaded services. In this window services can be added or removed.

Right-click the white window.



Select service dll file and left-click Open-button.



Right-click a service and the service menu appears.

Left-click on Delete to unload the service.

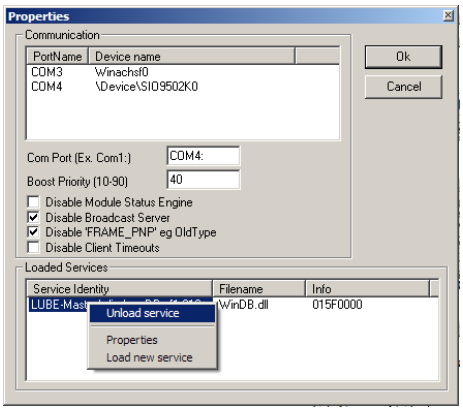
Left-click on Properties to modify the service if the service has some adjustable properties.

Left-click on Add New Service to add a new service.

Editing the corresponding .ini file can also do configuring of the properties for the engine, services and drivers.

The content of the .ini files could vary between versions.

In all .ini files there is a manual section at the end.



Lubemast.ini (R8 example)

[NET]
Port=Com1:
DisableModuleStatusEngine=0
DisableBroadcastServer=1
DisableFramePNP=1
DisableClientTimeout=0
BoostPriority=40

[Log]
FileName=C:\Lubemast \Logs\engine.log
MaxLines=100
Flags=

[Warning]
SilentTime=0

[Language]
PreferedLanguage=English

[PASSWORD]
Password=2222

[DBManager]
Password=1111

[SERVICE]
Service=clock.dll;WinDB.dll

WinDB.ini (R8 example for WinDB service)

[Log]
FileName=C:\Lubemast \Logs\windb.log
MaxLines=200
Flags=

[ForwardTransaction]
FIFO=50000

[OCP]
OCP=XXXX.dll;YYYY.dll
UsePartno=1

5.5. Run

It is possible to create a customized Run item in the engine control menu. How to do this is described in the chapter “Advanced features” subchapter “Creating a engine control menu run item”.

6. LUBE-Master Neighbourhood

LUBE-Master Neighbourhood is a shortcut to a software called HWMon2.EXE. It generates graphic representation of an LUBE-Master monitoring system. This type of software is called Hardware Monitor, it is modularised as everything else for LUBE-Master.

Different layouts of the graphic Neighbourhood can be obtained by the use of “switches”.

6.1. Start

The hardware monitor can be started in three ways.

By clicking <Start> (lower left corner of screen), select <Programs>, select <LUBE-Master> and then click on <LUBE-Master Neighbourhood>

If the LUBE-Master engine is running right click the small Eurolube logo in the Systray (lower right corner of screen) and the engine menu appears. Left click <LUBE-Master Neighbourhood>. Or by running,

“HWMon2.exe –PNP”	The full neighbourhood is shown, same as selecting LUBE-Master Neighbourhood from the engine menu.
“HWMon2.exe –EDIT”	HWMon2 starts in edit mode with a blank layout.
“HWMon2.exe –PNP –Edit”	Starts HWMon2 in edit mode with a full layout.
“HWMon2,exe –WARNING”	Starts HWMon2 showing all things that has a warning status.

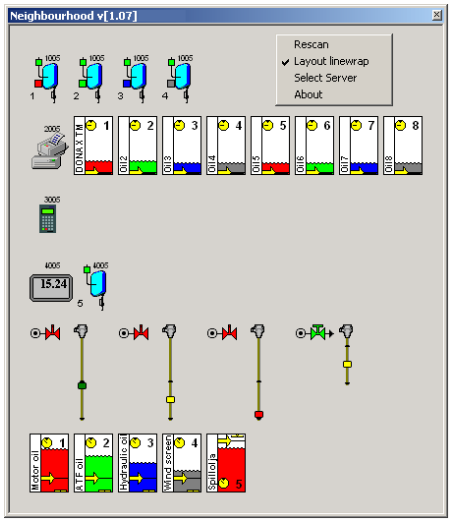
6.2. Technical description

The Hardware monitor HWMon2.EXE uses a “hard coded” background and .OCX files to create controls for modules / units of the system.

The hardware monitor can be used to show and control an LUBE-Master system connected directly to the PC or to another PC in a TCP/IP based network. All changes can be made during operation, which results in a minimum disturbance in the workshop.

If the hardware monitor is started on a PC directly connected to an LUBE-Master monitoring system and the engine is running the hardware monitor will connect to the server (engine) as a client and automatically activate (show) OCX controls for all LUBE-Master modules in the system. Each module (unit) will be presented with an icon together with the address of the module.

6.3. Neighbourhood Menu (R6)

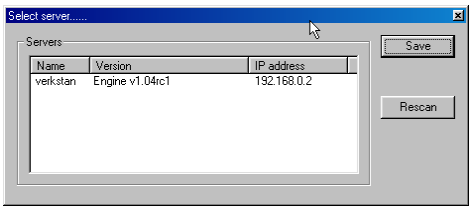


The Neighbourhood has a menu that opens by “Right-Click” on its background.

“Rescan” will start a rescan and rebuild of the Neighbourhood window.

“Layout line wrap” will toggle between line wrap or not when showing graphic controls.

“Select Server” will open a window that will display all available LUBE-Master servers in the network.



In this example it has found an LUBE-Master server with the network name “verkstan” at IP-address 192.168.0.2.

Select it and “Left-Click” the Save button and the Neighbourhood will show all units LUBE-Master modules connected to this server. If an LUBE-Master server should be visible on a network it must have remote COM access enabled, se chapter “LUBE-Master Server-Client Set-up”.

“About” will show information about version etc.

6.4. Neighbourhood Menu (R7 or later)

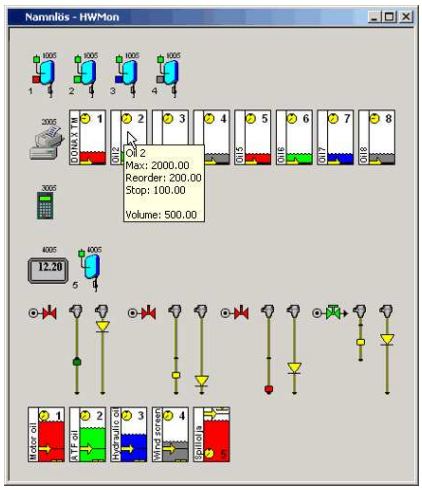
The Neighbourhood has a menu that opens by “Right-Click” on its background.

“Rescan” will start a rescan and rebuild of the Neighbourhood window. Observe that it will only rescan the modules found when it was opened so if it is opened to soon after the engine was started some modules may be missing. These are solved by closing down the Neighbourhood and open it again.

“About” will show information about version etc.

6.5. Quick status information

To get a quick status information about a module or part of a module hold the mouse pointer over the graphic symbol for the object that you want information about (hover).

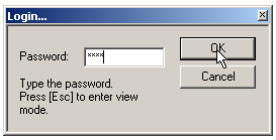


6.6. Password protection

Right-click on any graphic control in the LUBE-Master Neighbourhood will open an item specific menu.

With the Basic version the configuration can be shown but not changed.

With the professional version the configuration can be changed and it is password protected.

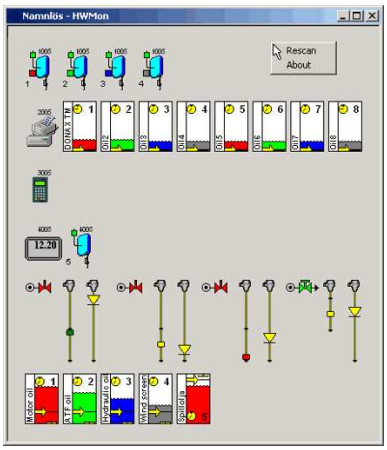


The default password is “2222” for LUBE-Master WinTools R7 and later. For R6 and earlier it is “1111”.

It can be changed by editing the “Password=”, header [PASSWORD], line in the lubemast.ini file.

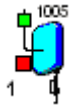
[PASSWORD]
Password=2222

If the wrong password is typed in or the ESC button is pressed the control will open in view only mode. Fields that cannot be edited are greyed out.

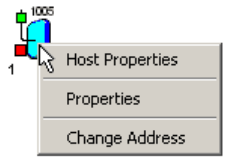


6.7. MPDM (53400)

The Port (Reel) is a member of an MPDM. The MPDM is called the host. Each of the four ports in a MPDM is presented with a reel icon. Above the icon is the address shown and to the lower left the reel number is shown. If the little square in the upper left corner is green the reel is available for dispense and if it is red the reel is occupied with a dispense. Between the reel number and the reel there is a coloured square, this has the same colour as the tank it is connected to.



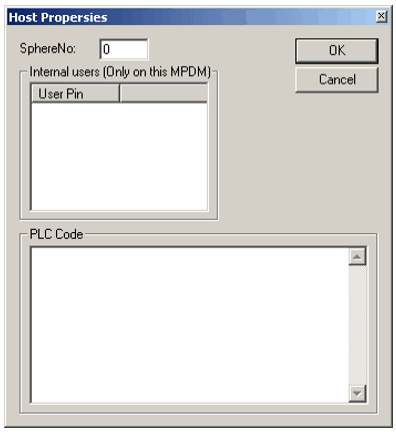
"Right-Click" on the icon will open a menu. This menu is used to configure the hose reel and the MPDM it is connected to.



6.7.1. Host Properties

With host properties means properties that are valid for the MPDM rather than each individual port.

First there is a login window, fill in the password and the press OK button.



SphereNo: Sets to which sphere the MPDM belongs. The sphere property can be used to limit the use of the MPDM to one or several keypads that belongs to the same sphere. This can be used to set the reel numbers of the same oil grade to the same as in other spheres.

For example

	Work bay 1	***Work bay 2***	***Work bay 3***
Sphere number	***1***	***2***	***3***
Oil grades	***Reel number***	***Reel number***	***Reel number***
Motor oil	***1***	***1***	***1***
Gearbox oil	***2***	***2***	***2***
Hydraulic oil	***3***	***3***	***3***
Coolant	***4***	***4***	***4***

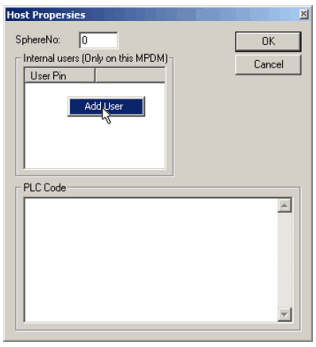
This can also be used to disable the possibility to open a dispense point from a graphic system layout on the PC. This is done by setting the Sphere number for the MPDM's and the LED's to something else than 0 because the Sphere number of the PC is always 0.

It is possible to open a dispense point in another sphere by typing the "ReelNo.SphereNo" at the Reel prompt on a keypad.

Reel:2.1

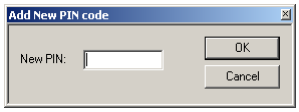
will open Reel number 2 in sphere 1.

Internal users: The MPDM has a small local user database that can store up to 16 users, a four digit PIN code only.



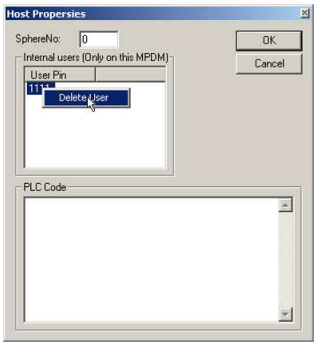
By "Right-Click" on the white background a User Pin can be added.

If Add User is selected an Add New PIN-code window appears.



Type a new PIN-code and then Left-Click OK.

By "Right-Click" a User Pin it can be deleted.



Select Delete User and "Left-Click" the OK then the selected the user is deleted.

PLC Code: ***In this window PLC code can be added to create advanced functions for the MPDM, see.Chapter "12. Using the MPDM as a PLC (Programmable Logic Controller)".***

6.7.2. Port(n) properties.

This choice opens the reel property window. First there is a login window. If ESC or wrong password is typed the reel property window opens but only for viewing. See also the MPDM manual.

ReelNumber: Is the Reel identification number.

Group: Sets to which group(s) the reels belong(s) to.

Mask: Sets the functionality of the dispense point.

Timeout: Specifies the dispense no activity timer.

PPU: PulsesPerUnit, the calibration.

Min volume: Minimum dispensable volume, use decimal point. (Do not set this lower than 0.050 and "Use pulse compensation" at the same time without proper testing.)

Max volume: Maximum dispensable volume, use decimal point (also used as dispense volume when "Use PortB as trigger" is enabled).

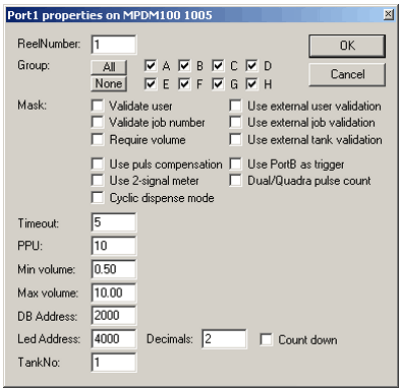
DB Address: Data base address (2XXX). Must be set to 2999 if the reel should use the PC database.

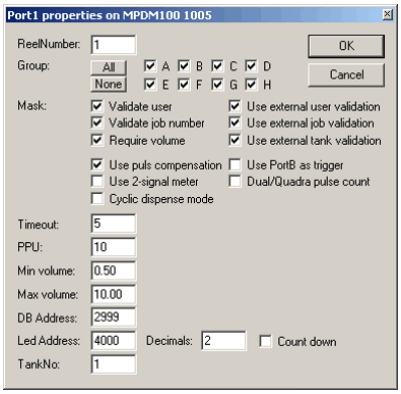
LED Address: Led display address (4XXX).

Decimals: Sets the number of decimals shown on the display specified at LED Address.

Count down: Sets whether the display should count up or down.

TankNo: Which tank the reel is connected to.



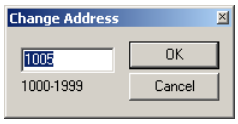


When everything is properly set "left-Click" OK button to save the set-up.

Each port must be configured according to the wanted functionality. The ports can be completely individually configured.

To the left is a normal configuration for a port that should fully work with the LUBE-Master PC database.

6.7.3. MPDM change address.



This choice is used to change the address of the MPDM. First there is a login window then the “Enter New Address” window opens. Type the new address and then “Left-Click” OK button to save the setting. See LUBE-Master manual for address recommendations.

6.8. KeyPad (53401)

The address of the KP is shown above the icon. “Right-clicking” the icon open the KP menu.

The KP icon changes the visual appearance according to the status of the physical KP.

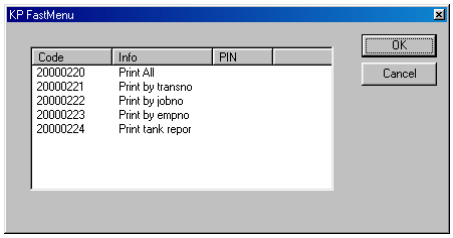
The KP icon changes when it is equipped with a serial port interface kit and a chip *v1.00.00* or later, the small triangle on the left side.

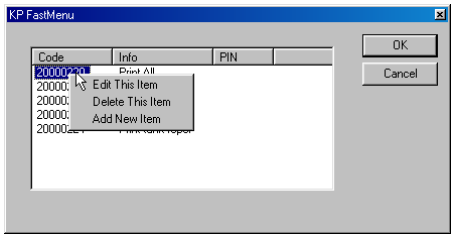
6.8.1. Edit Fast Menu

Selecting this opens a window for editing the Fast Menu. The Fast Menu is accessed by pressing the “?” mark on the KP.

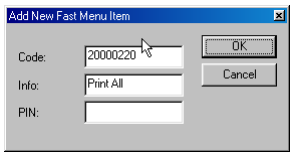
First there is a login window, fill in the password and the press OK button.

Then the KP FastMenu window opens. By “Right-Click” on a code items could be added, edited or removed.





Adding a Fast Menu item is done through the Add New Fast Menu Item window.



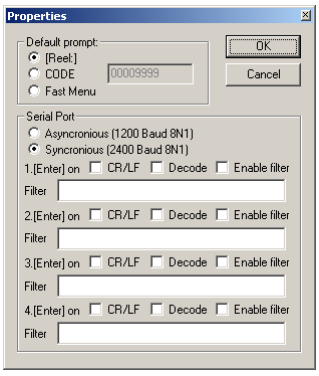
To create the ***Code***, see manuals for the specific module.

The ***Info*** field will be shown on the KP display.

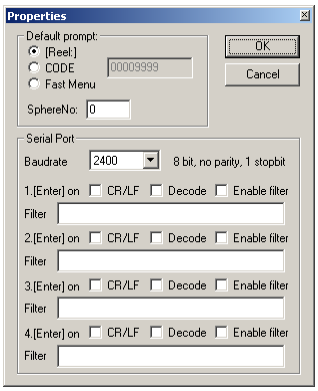
If a ***PIN*** code is added (4 figures) to the fast menu item it must be typed in from the KP when this item is used

6.8.2. KP properties.

This choice is used to define how the KP should be set-up. First there is a login window, fill in the password and the press OK button. There are two different possible properties windows, one older and one newer.



Older



Newer

The KP could be set-up in three different ways,

REEL: This is default normal workshop use.

CODE: This is for special use for example only JOB number input. See manual for the appropriate module.

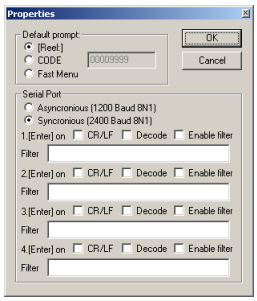
Fast Menu: This set the KP for Fast Menu use for example Office or Stock use.

SphereNo This can be set if the keypad is equipped with a FLASH chip and LUBE-Master WinTools R7 or later is installed.

If the keypad is equipped with an OTP chip the SphereNo is always “0”.

Next part of the KP properties window is the set-up for the optional serial interface.

If a graphic control (KP100.OCX) version 1.08.00 or older is used two different serial communications set-ups can be used.



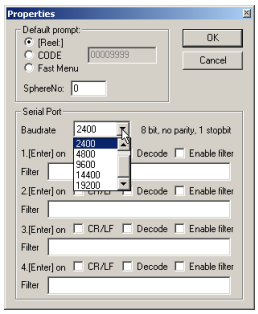
Asynchronous: Is used for equipment without hardware handshake like most magnetic card readers.

Synchronous: Is the preferred one and is used for equipment that uses hardware handshaking like most barcode readers.

If a graphic control (KP100.OCX) version 1.09RC2 or later the baud rate can be set by selecting from a list.

If the keypad is based on 2 printed cirquit boards (older type) only 1200 and 2400 Baud is possible. If something else is selected it will default to 1200.

If the keypad is based on 1 printed cirquit board (newer) and the module software is Kp10010RC1 or later any of the listed baud rates could be selected. The keypad will automatically detect asynchronous or synchronous communication.



Up to four different inputs can be configured. Each has 4 ways of triggering, ENTER-button on keypad, CR/LF, Decode and CR/LF or Decode.

CR/LF and Decode unchecked: Makes it possible for the user to verify the input by pressing ENTER-button on Keypad.

Only CR/LF checked: Results in “auto-ENTER” if the reader sends CR/LF at the end of the information. All other inputs must be verified by pressing ENTER-button on Keypad.

Only Decode checked: Results in “auto-ENTER” if the reader sends a “complete decode” signal. All other inputs must be verified by pressing ENTER-button on Keypad.

Both CR/LF and Decode checked: Results in “auto-ENTER” if the reader sends CR/LF or a “complete decode” signal. All other inputs must be verified by pressing ENTER-button on Keypad.

In addition to this an individual input filter can be used for each possible input. A “0” will drop the character in that position and a “1” will pass the character in that position to the system.

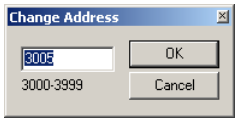
This can be used to extract a part of the read data.

Example: A barcode with a 10-character serial number is read, A1209/54EH, were the A1209 is the identifier for the object that should be filled. Set the reel to ask for Job number, enable input filter 2 and type 1111100000 in the filter field

When everything is set, left-click the OK-button.

6.8.3. KP change address.

This choice is used to change the address of the MPDM. First there is a login window then the “Enter New Address” window opens. Type the new address and then “Left-Click” OK button to save the setting. See LUBE-Master manual for address recommendations.



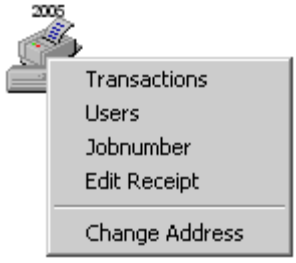
6.9. Printer Module (53402)

The Printer Module (PM) contains a printer interface and a database. In this database there are 8 software tanks, room for 32 users and 900 transactions. A customized receipt layout can be programmed.

6.9.1. Printer interface and database.

This icon represents the Printer interface and the database.

Right-click the icon and a menu will be shown.



6.9.1.1. Transactions

If transactions are selected a window for handling the transaction database appears.

From this window it is possible to,

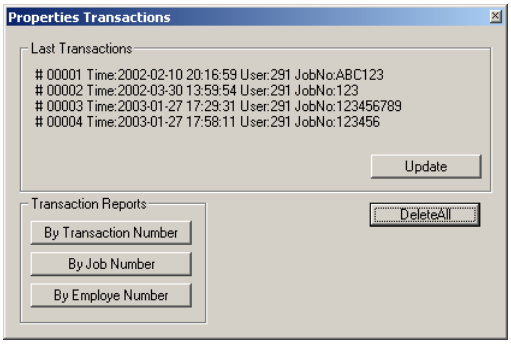
Update: Updates the Last Transactions area to see if any new transactions have been made.

DeleteAll: Empties the database.

ByTransactionNumber: Prints a transaction report for an interval of transactions.

ByJobNumber: Prints a transaction report for a job number.

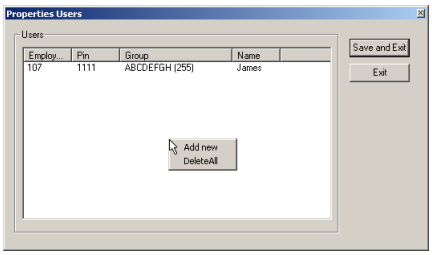
ByEmployeNumber: Prints a transaction report for an employee number.



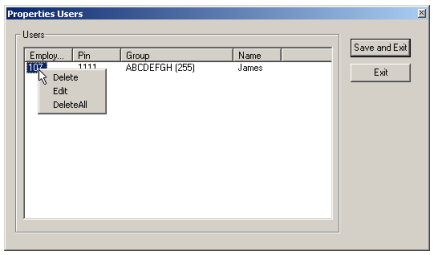
6.9.1.2. Users

If users are selected a window for handling the user database appears.

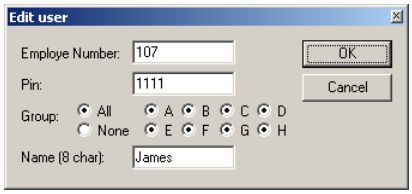
Right-click the window and users can be added or all users could be deleted.



Right-click a user and it can be deleted or modified. All users could be deleted also.



The user Add/Edit window looks like this.



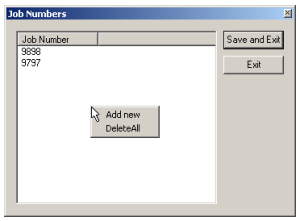
6.9.1.3. Job number

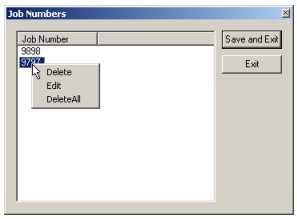
If Job number is selected a window for handling the job number database appears.

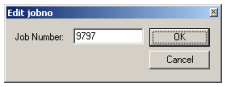
Right click on the white window and select Add new to add job numbers.

Right-click on a job number edit or delete that job number.

Fill in or edit and then click OK-button.







If the printer module is equipped with a FLASH chip (yellow label) the use of wild card characters are possible. This feature can be used to make the system to only accept JOB numbers with a certain layout.

The wild card feature supports three different wildcard placeholders.

?	Accepts any alphanumeric character in this position
#	Accepts any numeric character in this position
@	Accepts any alphabetic character in this position

Below there are some samples of how to use wildcards.

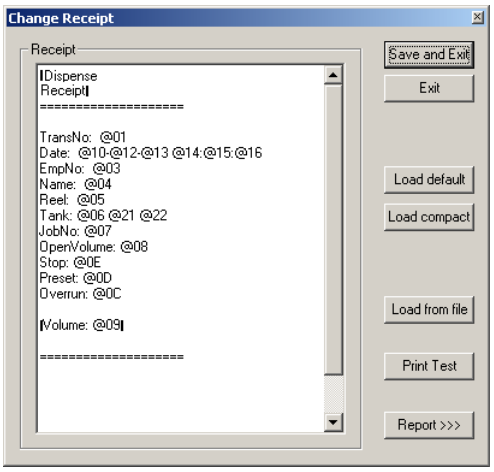
ABC###	results in ABC123 valid but not ABC1234 or ABC12D
???????	7 signs must be typed
SE@@@@	6 characters is OK as long as it the 2 first are SE
#### **#####**	4 or 5 figures are OK

6.9.1.4. Edit Receipt

If Edit receipt are selected a window for handling the receipt layout appears.

From this window it is possible to,

Load default:	This can be used to reload the default receipt if something has gone wrong.
Load compact:	This can be used to load a more compact receipt.
Load from file:	Can be used to load a custom made receipt from a text file.
Print Test:	Can be used to test the printer.
Report>>>:	Can be used to edit the report layout.
Save and Exit:	Downloads the receipt to the printer module and exits.
Exit:	Exits without doing anything.



The Receipt window:
Can be used to edit the receipt in the printer module directly. All text and underlining without @-symbol in front of it can be edited normally. All characters after or between @-symbols must be edited with knowledge of what they mean. The same goes for the thick vertical line-symbol in front and end of "receipt title" and "volume: @09".

The @-symbol is a placeholder for a field value from the database and the two following characters identify the field.

The thick vertical line-symbol in front and end of is control codes for the printer to start and stop big

character printing. These characters cannot be typed in easily but they can be copied and pasted. The one in the beginning and the one at the end is not the same.

On the LUBE-Master WinTools CD in the folder "?:\Extras\Reciept files\PM\" there are some sample layout text files.

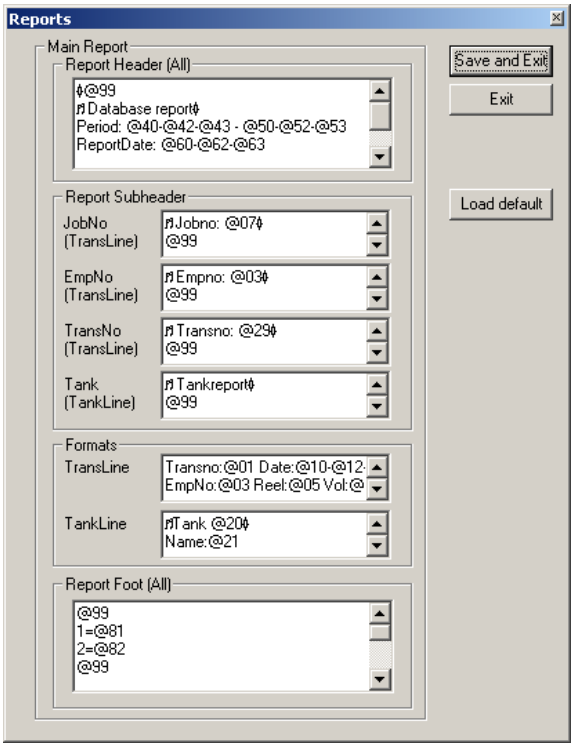
When creating or editing the PM report layout the rules stated in ReadMePM.txt file must be followed.

The ReadMePM.txt file can be found in the "C:\LUBEMAST\Reciept\PM" folder or on the CD in the folder "?:***EXTRAS\Reciept Files\PM)"***

To restore the default report layout click the "Load default" button and then the "Save and exit" button.

6.9.1.5. Edit Report

If the Report >>> button is clicked the edit window for the report is opened.



This window has one white editing area for each part of the report. The fields placement holders, beginning with a @ sign is the same as for receipts.

Click in an area at the desired input place and edit like with for example notepad.

When you are finished click the Save and Exit button.

When creating or editing the PM report layout the rules stated in ReadMePM.txt file must be followed.

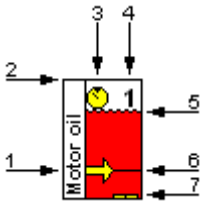
The ReadMePM.txt file can be found in the "C:\LUBEMAST\Reciept\PM" folder or on the CD in the folder "?:***EXTRA\Reciept Files\PM)"***

To restore the default report layout click the "Load default" button and then the "Save and exit" button.

6.9.2. Tank properties

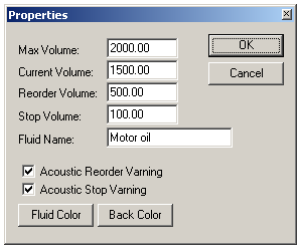
8 icons like this represent the tanks.

1. Shows fluid name.
2. Shows total tank volume.
3. Shows update timer, double-click and it updates immediately.
4. Shows tank number.
5. Shows stock level.
6. Shows reorder level.
7. Shows Stop level.



If the mouse pointer is held over the icon for a short while the status of the tank will show.

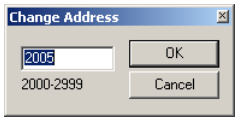
By "Right-Clicking" a tank icon its properties can be edited.



When selecting "Properties" a login window appears. Type the password and "Left-Click" the OK button.

Now the tank property window appears. If a valid password is typed everything can be edited but if wrong password is typed or ESC is pressed only the Current Volume can be updated.

6.9.3. PM change address



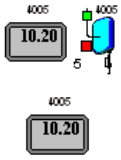
This choice is used to change the address of the PM. First there is a login window then the "Enter New Address" window opens. Type the new address and then "Left-Click" OK button to save the setting. See LUBE-Master manual for address recommendations.

6.10. Serial interface (53403)

For now the LUBE-Master SIO module (Serial In/Out module, PC-Interface) only acts as a router and a communication line amplifier. It has no address or other configurable parameters and because of this no graphic representation in the LUBE-Master Neighbourhood.

6.11. LED display (53404)

A LED graphic icon can have two different looks. It depends on if it is an older LED100 or the newer LED101 type. LED101 has a PCB version of ***"203 02 66C"*** or later. On the LED101 the built in dispense point controller port can be used as a normal dispense point.



LED101 shows both a LED and a REEL.

LED100 shows only a LED.

The LED icon changes the visual appearance according to the status of the physical display. The change is a real time status so there will be a difference between the icon and the physical display.

The address of the LED is shown above the icon(s).

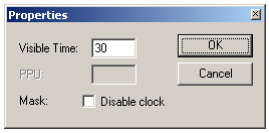
"Right-clicking" the LED icon open the LED menu.

"Right-clicking" the REEL icon (only LED101) opens the REEL menu.

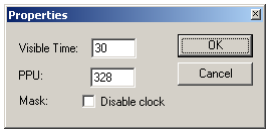
6.11.1. LED properties.

This choice is used to define how the LED should be set-up. First there is a login window, fill in the password and the press OK button.

The LED could be set-up in three different ways,



Visible Time: This sets how long a finished dispense should be shown before the LED times out to show the time or a "-" sign, the value is in seconds. A "0" means "Do not time-out".

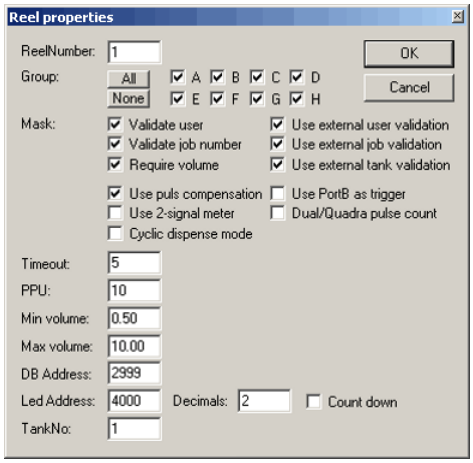


PPU: This is the calibration for the built in dispense point controller. For LED101 the PPU: field is greyed out and cannot be used. For LED100 all fields are usable.

Mask: This sets whether the LED should time-out to showing the clock or a "-" sign.

6.11.2. REEL properties, only for LED101.

This choice is used to define how the LED101 built in dispense controller port should be set-up. First there is a login window, fill in the password and the press OK button.



ReelNo: Is the Reel identification number.

Group: Sets to which group(s) the reels belong(s) to.

Mask: Sets the functionality of the reel. For information see the MPDM Manual.

Timeout: Specifies the dispense no activity timer.

PPU: PulsesPerUnit, the calibration.

Min volume: Minimum dispensable volume, use decimal point. (Do not set this lower than 0.050 and "Use pulse compensation" at the same time without proper testing.)

Max volume: Maximum dispensable volume, use decimal point (also used for dispense volume when "Use PortB as trigger" is enabled).

DB Address: Data base address (2XXX). Must be set to 2999 if the reel should use the PC database.

LED Address: Led display address (4XXX). This field has no effect for a LED101, it will always use its own address.

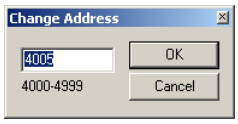
Decimals: Sets the number of decimals shown on the display specified at LED Address.

Count down: Sets whether the display should count up or down.

TankNo: Which tank the reel is connected to.

When everything is properly set "left-Click" OK button to save the set-up.

6.11.3. LED change address.



This choice is used to change the address of the MPDM. First there is a login window then the "Enter New Address" window opens. Type the new address and then "Left-Click" OK button to save the setting. See LUBE-Master manual for address recommendations.

6.12. Clock module (53405)

The LUBE-Master CM module (Clock Module) has no graphic control or graphic representation of its own in the LUBE-Master Neighbourhood.

In the Engine menu "Update PNP Modules" all modules with a CM will have the "R" flag set.

If there is a CM installed in the system (on LED or PM) it will be automatically detected and will supply the date and time to all modules that needs it.

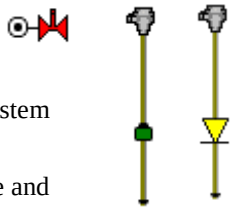
The date and time for a CM can be set from a Keypad or by using the software Olset.exe found in the C:\Lubemast folder.

Observe! **There can only be one date and time source in a system.**

See also chapter "7.1 Time synchronisation"

6.13. Tank control module (53408)

The graphic control for a TCM (Tank Control Module) is divided in three objects for each port, one solenoid valve one discrete level sensor symbol and one analogue level sensor symbol.



The symbols change their graphical appearances according to the physical status and the system set-up.

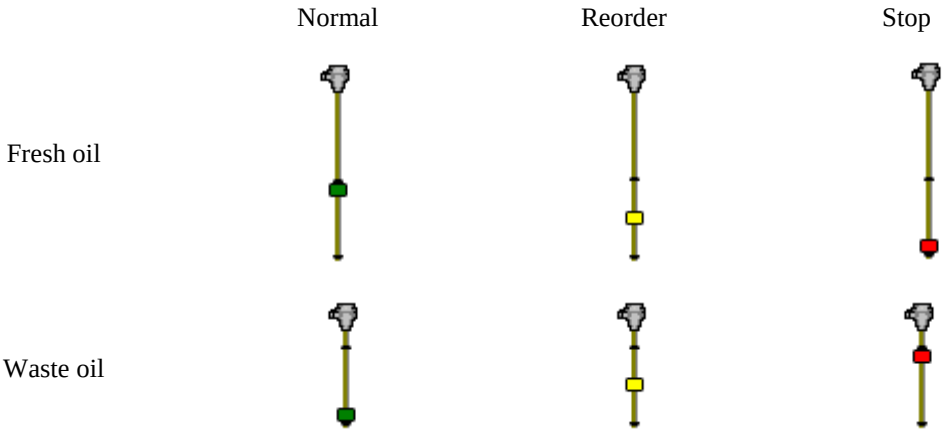
A TCM has 4 ports witch results in that the graphic representation will be 4 groups of valve and level sensor symbols.

6.13.1. Valve symbol

The valve symbol shows if the valve is open or closed.

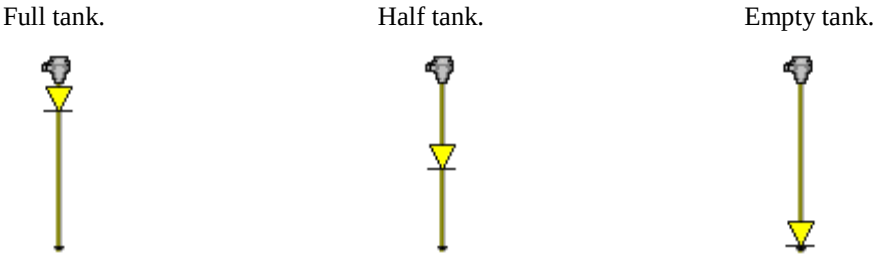
6.13.2. Discrete level sensor symbol

The discrete level sensor symbol shows both the tank type and the status of the tank.



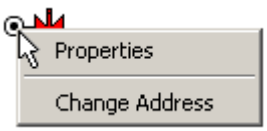
6.13.3. Analogue level sensor symbol

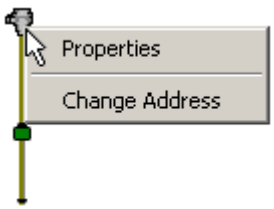
The analogue sensor symbol shows graphically in real-time the current volume of the tank.



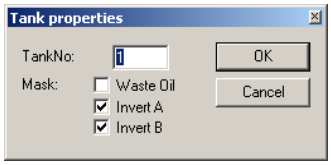
6.13.4. Tank properties

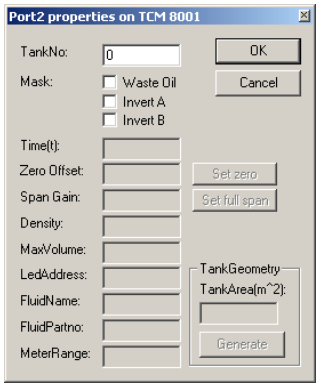
To set-up a TCM port right click on the valve or the sensor symbol to open the menu. It does not matter which you use because they are the same.

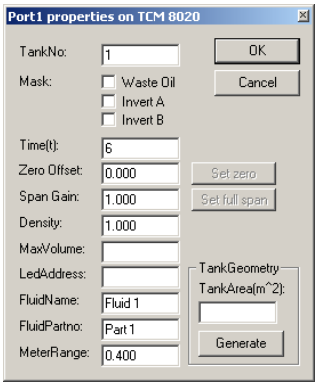




Then left click properties. First there is a login window, fill in the password and the press OK button. If the password is correct a properties window will open. This properties window can look in three different ways.







TCM100 old style | TCM100 R7 or later | TCM200 R7 or later

TankNo: Is not really used by the system but is good to fill in properly as information.

Mask: The functional mask is used to set if it is a waste oil or fresh oil tank. It is also used to adapt the Input A and Input B connections to the used discrete level sensor, normally open or normally closed switches.

Waste oil – Leave it unchecked for a fresh oil tank and check it for a waste oil tank.

Invert A – Is used to set if the input on INP A should be inverted or not. If you use an active closed type sensor and check this field the system will disable pumping if the sensor is removed or disconnected.

Invert B – Is used to set if the input on INP B should be inverted or not. If you use an active closed type sensor and check this field the system will disable pumping if the sensor is removed or disconnected.

Only for TCM200 that supports analogue level sensors !

Time(t): Sets the time interval for the integrated mean value calculation. A low value will result in faster update but a more turbulent value. Higher value will give a slower update but a more stable value. Default is “6” witch will give about 30 s update interval.

Zero Offset: This value is used to set the level reading to zero when when the tank is empty. If the level sensor 23417 is used a normal value is “–0.120”.

Span Gain: This value can be used to fine tune the amplification. Adjust so that the reading gives the correct value with a full tank), when all other parameters are set. The default value is 1.000 and should normally be that.

Density: Sets the density of the fluid that is in the tank at the normal temperature. It is 1,000 for water at 20°C. A good estimation for mineral oil is 0,875 at 20°C.

MaxVolume: This value is not necessary but must be set to have a correct % statement for the quick status window in graphic layouts.

LED Address: This can be used to use a LED display for remote reading of the tank level. OBSERVE that if this is set that LED will be unavailable for showing dispensing!

Fluid Name: This value is not necessary but should be set to the same value as in WinDB Manager.

FluidPartNo: This value is not necessary but should be set to the same value as in WinDB Manager.

MeterRange: This value specifies the measuring range for the used level sensor.
If a 53417 level sensor is used it should be set to 0.500.
If a sensor with a maximum pressure of 0.1 bar is used it should be set to 0.100.

TankGeometry: This value is used to define the shape of the tank. Currently only tanks that have the same projected area from the bottom to the top is supported. That is round standing, quadratic or rectangular tanks or similar. The area should be given in square m (m2).

6.13.5. TCM change address

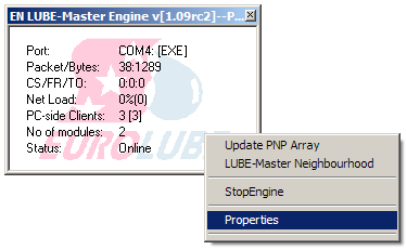
This choice is used to change the address of the TCM. First there is a login window then the "Enter New Address" window opens. Type the new address and then "Left-Click" OK button to save the setting. See LUBE-Master manual for address recommendations.

7. Services

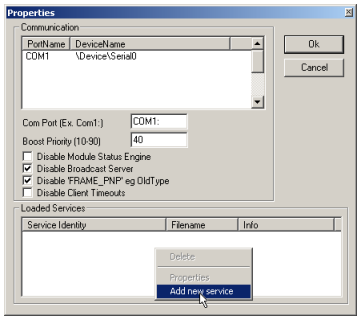
In an LUBE-Master PC based system it is possible to load system functions called Services. Some services are installed as standard when LUBE-Master WinTools is installed but to enable them they have to be loaded.

A service is loaded by selecting properties from the Engine Menu.

Left-Click the "Engine" window and select "Properties".



Right-Click the "Loaded Services" window and select "New Service".



Standard services installed by the installation of LUBE-Master WinTools are Clock Service (Clock.dll), WinDB Service (WinDB.dll) and DBDock Service (DBDockS.dll).

7.1. Time synchronisation (clock.dll Basic and Professional)

If it is desired to use the PC clock as master clock in the LUBE-Master system, the service clock.dll should be loaded.

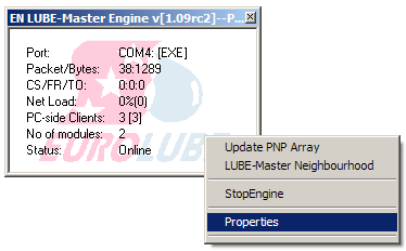
Before loading it all clock modules (CM part number 53405) must be removed from Printer and LED modules. If a LED module has a clock chip/module this is shown by that the (:) between hours and minutes is flashing. If the LED has a soldered clock chip (Dallas DS1603) disable it by unsolder it or cutting the four copper traces on the PCB.

NOTE! There can be only one clock source in the system!

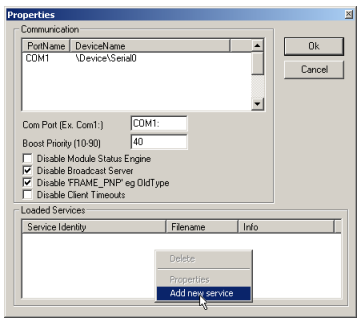
If the PC running LUBE-Master WinTools is connected to a network and it synchronises time to the network the LUBE-Master system will also be time synchronised to the network.

7.1.1. Loading the Clock Service

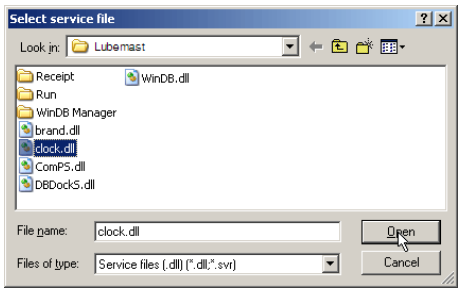
Left-Click the "Engine" window and select "Properties".



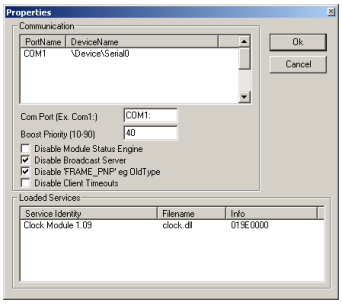
Right-Click the "Loaded Services" window and select "Add new Service".



Select a Service dll and Left- Click Open-button.



The result will be something like this. Left-Click the OK-button.



Shut down and then restart the engine.

Check the Engine.log file to verify that the Clock Service is started properly.

7.2. PC as database (WinDB.dll only Professional)

By loading the service WinDB.dll a Microsoft Access database on the PC can be used instead of the database in a Printer module. If a database on a PC is used the number of users, fluid grades, stored transactions, etc is almost infinite (size of hard disk and limitations of MS ACCESS is the limit). It also gives the possibility to have multiple printouts with different layouts on the same or multiple printers.

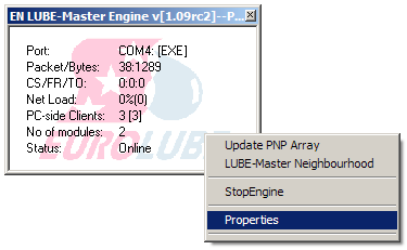
The WinDB service is also needed for connections to customer mainframe systems and script handling.

The LUBE-Master WinTools software must be professional version to be able to use WinDB service.

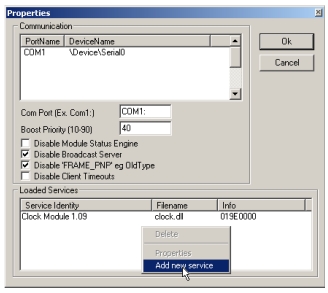
7.2.1. Loading WinDB service

Right-Click engine window and select properties.

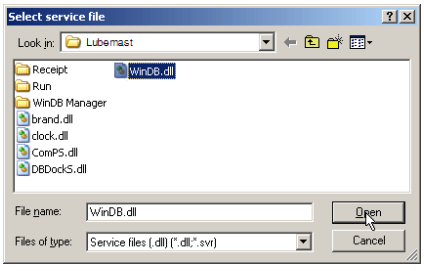
Left-Click the “Engine” window and select “Properties”.



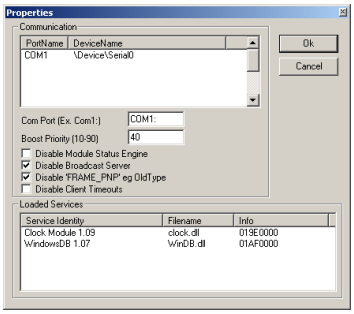
Right-Click the “Loaded Services” window and select “Add new Service”.



Select WinDB.dll and Left- Click Open-button.



The result will be something like this. Left-click the OK-button.

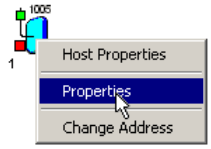


Shut down and then restart the engine.

Check the Engine.log and WinDB.log files to verify that the service is started properly.

7.2.2. Set-up a dispense point to use PC database

Open the LUBE-Master Neighbourhood and “Right-Click” the desired reel icon and select properties.

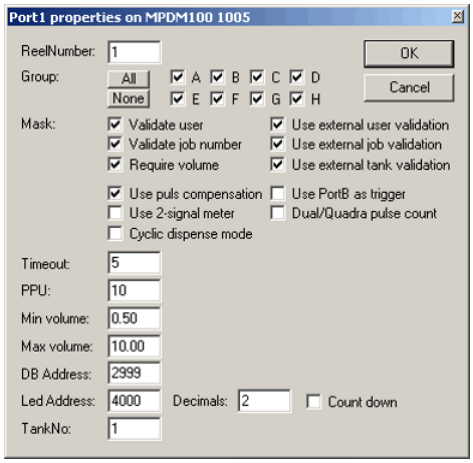


First there is a login window, fill in the password and the press OK button.

Select the things you want to validate external. Right column of Mask check boxes

Then set DB Address to 2999. The address of the PC database is hard coded to 2999.

“Left-Click” the OK button to save the changes. Repeat this for all reels that should use the PC as database.



7.3. Auto detect and download from PM module (DBDock Service only Professional)

In LUBE-Master WinTools R6 or later there is a new loadable Service called DBDockS included.

This service can be used to automatically detect a connected printer module and download all transactions that have not been downloaded before.

When the service downloads transactions it inserts them into the standard LUBE-Master access database.

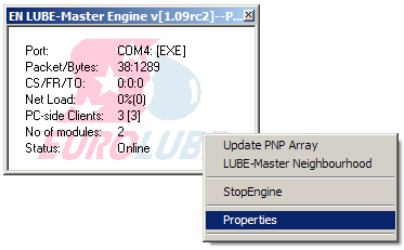
Then these transactions can be used in WinDB Manager standard reports or handled through MSExcel, MSAccess or any other ODBC compatible spreadsheet program.

It is recommended to set up the printer module tanks according to created PC database tanks before making dispenses that are stored in the printer module.

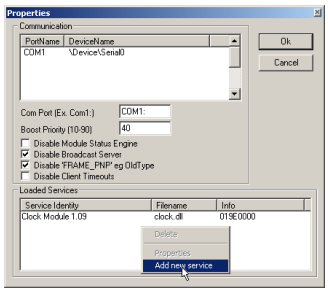
To be able to load the service there must be a License.dat file that is validated for this service.

To load the DBDockS Service

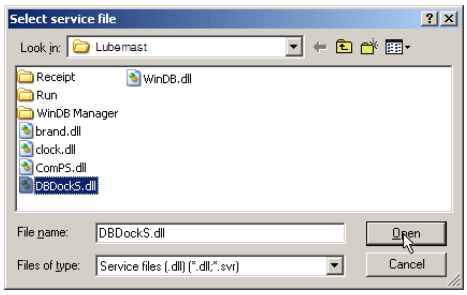
Right-Click the engine window.



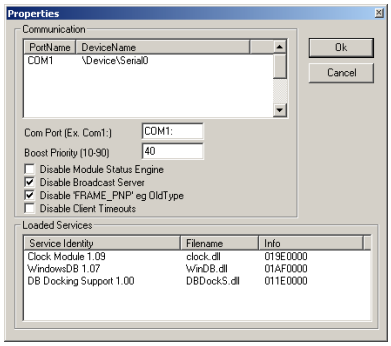
Then select properties, Add new service.



Select the DBDockS.dll file and left-click the Open-button.



Left-Click the OK-button.



Shut down and then restart the engine.

Check the Engine.log and DBDockS.log files to verify that the service is started properly.

8. Using the WinDB Manager software.

The LUBE-Master WinDB Manager is a software tool for administration of the LUBE-Master PC database.

LUBE-Master WinDB manager is dependant of that MDAC 2.5 or later and MSJET are properly installed on the PC and that the ODBC key “LubeMasterDB” is properly set.

8.1. Start

Click Start button (lower left corner of screen)

Choose Programs

Choose LUBE-Master

Click LubeMasterDB Manager

A login window will appear. The user will show the currently logged in user. Type the password 1111 (Default) and click “OK” button.

The WinDB Manager starts.

The program follows a standard windows application.

All task windows contain a <REFRESH> button. This button is used to update the window with the current values in the database. This is needed because the database is multi user and can be altered by a dispense or some other LUBE-Master activity.

8.2. Changing password

Editing the lubemast.ini file can change the password. Find the part that looks like this,

[DBManager]
Password=1111

Edit the *Password=* line.

Password=2323

Will give the password 2323

8.3. View Menu

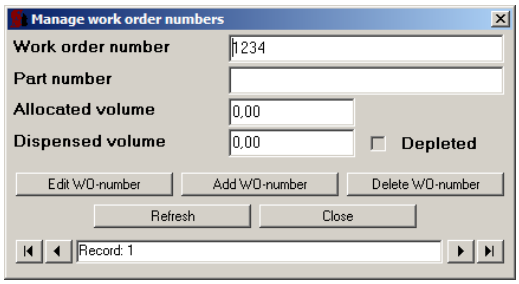
In the view menu there is a utility to view stored dispenses. It is only possible to view the transactions not edit or delete them.

8.4. Managing Menu

The managing menu is used for adding, removing or editing users, job numbers, or tanks. It is also used for updating tank levels.

8.4.1. WO- numbers

The “WO numbers” submenu (**W**ork **O**rder) can be used to add WO/job numbers or other object identifiers that should be allowed to dispense on. It can be up to 16 alphanumeric characters long.



The use of wild card characters are possible. This feature can be used to make the system to only accept JOB numbers with a certain layout.

The wild card feature supports three different wildcard placeholders.

?	Accepts any alphanumeric character in this position
#	Accepts any numeric character in this position
@	Accepts any alphabetic character in this position

Below there are some samples of how to use wildcards.

ABC###	results in ABC123 valid but not ABC1234 or ABC12D
???????	7 signs must be typed
SE@@@@	6 characters is OK as long as it the 2 first are SE
#### **#####**	4 or 5 figures are OK

8.4.2. Users

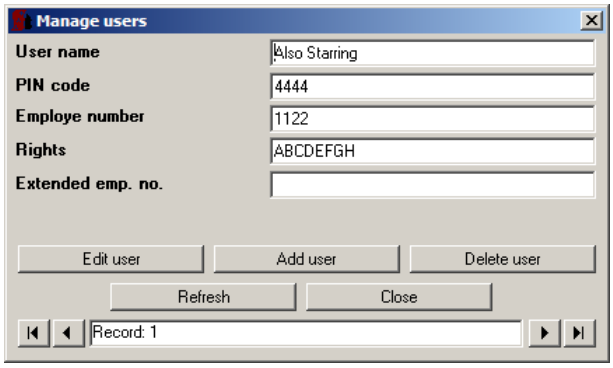
The “Users” submenu is used to set-up users that are allowed to issue dispenses.

User name can be up to 16 alphanumeric characters long.

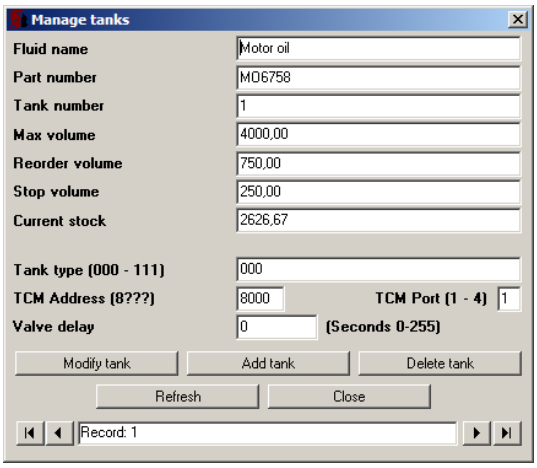
PIN code is 4 figures.

Employee number can be 1-65535 numerics. It cannot have leading zeros. If this limitations cause a problem take contact with your LUBE-Master supplier for assistance.

Rights can be used to divide users and dispense points into groups. Any combinations of A, B, C, D, E, F, G and H can be used such as AB, ACH, DG and so on.



8.4.3. Tanks



This submenu is used to set-up PC-tanks.

Scroll to through the tanks using the arrow buttons in the bottom.

To modify a tank left-click the Modify tank button. Edit the values you want and then left-click the OK-button.

"Fluid name" and **"Part number"** can be up to 16 alphanumeric characters long.

The value Tank type (000-111) must be set it cannot be blank. This value tells the system if it is a fresh oil or waste oil tank, there is a sensor connected and the type of sensor.

0XX = Fresh oil (Default)
1XX = Waste oil

X0X = No discrete sensor
X1X = Discrete sensor (1 or 2-levels)

XX0 = No analogue sensor
XX1 = Analogue sensor

The value "Valve delay" can be used to keep a pump pressurised a certain time after the last dispense point connected to this tank has closed. It can be used to avoid unnecessary delay time in a busy workshop.

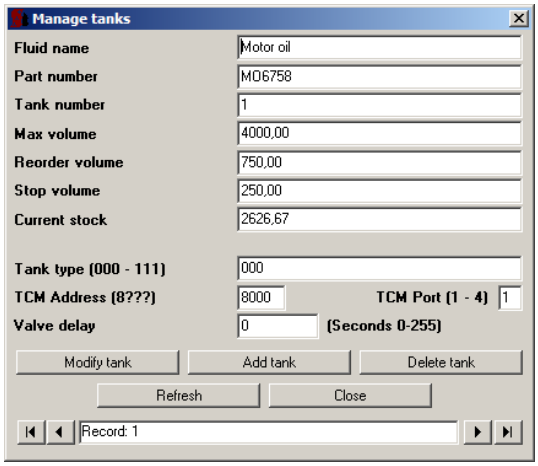
If there is a TCM module with level sensor and/or pump air solenoid valve the values TCM Address and TCM Port must be set accordingly.

To have the best and safest solution use one TCM Port with level sensor and air valve for each Tank/Pump.

It is possible to have one air valve to all Tanks/Pumps then set the TCM Address and TCM Port to the same value for all tanks. Then of course it is not possible to use level sensors and the TCM port Input A and B must be set up correctly.

The Manage tanks window has different looks depending on if the tank is set to use an analogue level sensor or not.

Without an analogue level sensor.



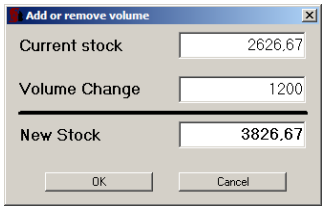
The current stock can be updated in two different ways.

Left-click in the white value box and just edit it or by left-click the "Update Stock" button.

When the "Update Stock" button is left-clicked a new form is shown.

Fill in the volume change and the form automatically adds it to the current stock.

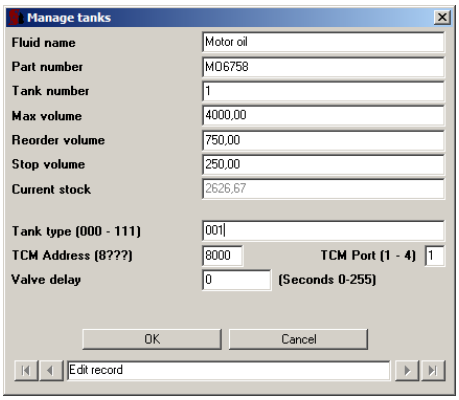
Use a - sign to reduce the current stock. Left-click the OK-button to update the database.



With an analogue level sensor.

If there is an analogue level sensor the current stock is automatically updated by this sensor. Because of this the possibility to manually edit the current stock is disabled and there is no “Update Stock” button.

Observe! If an analogue level sensor is used the “Tank type” value should be set to XX1.

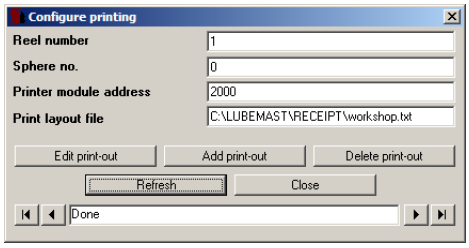


8.4.4. Printing

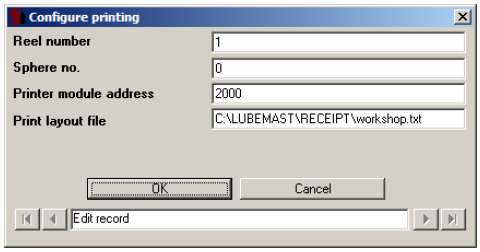
With this submenu receipts can be directed to 1 or more printers (print modules). The receipts can also have different layouts depending of dispense point and/or printer.

First copy a receipt layout file from the CD or create a receipt layout file for example “workshop.txt”, see Readme.txt for receipt for PC on the CD (*\Extras\Receipt files\For PC*). Store this file in *C:\LUBEMAST\Reciptes*.

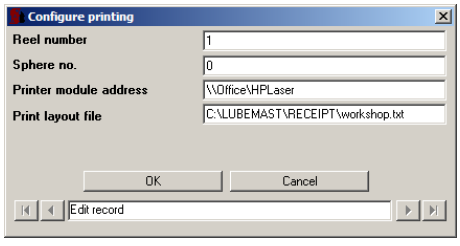
Open the Printing utility and Click the <Add> button, or the <Edit> button if you want to edit a present print out.



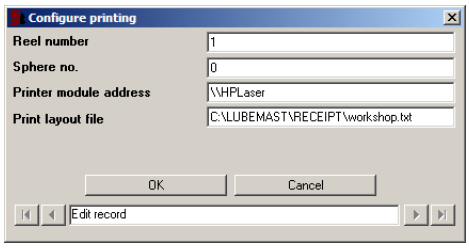
Fill in the information and click on <OK> button. Do the same for all desired dispense points.



The receipte can also be printed on a local printer. To do this type in the search path “\\ComputerName\PrinterName” instead of a printer module address.



Or a network printer.



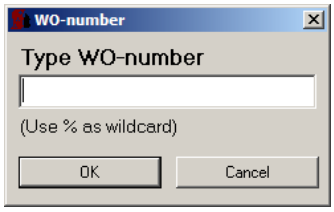
If a local or network printer is going to be used it must be PCL compatible or similar it cannot be a GDI printer (Windows printer). If it is a GDI printer it may be possible if the GDI printer comes with a PCL emulating driver.

8.5. Report Menu

The report menu of WinDB Manager is divided in two sub menus, one for total reports and one for periodic reports.

For some of the reports an input window will appear.

8.5.1. Input WO-number.



Wildcards could be used when typing a WO-number.

The wildcard sign % can be used as follows,

203164% will give a report for all WO's that begins with 203164.

%32% will give a report for all WO's that contains 32

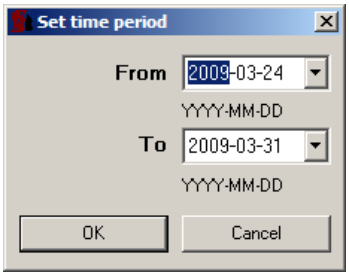
8.5.2. Input dates

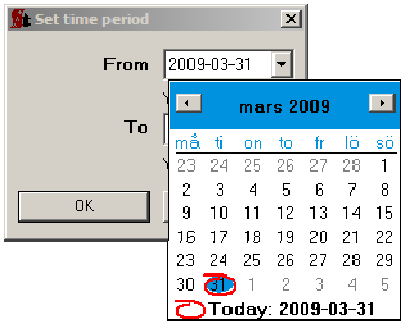
Date it should be typed in the format YYYY-MM-DD for example 2003-02-29. For the "Start time" input the software assumes time to be 00.00.00 and for the "End time" input it assumes 23.59.59.

The dates can also be changed by Left-Click on the "drop-down" button to the right of the date. Then a calendar will appear.

The default report period is the last 7 days, 00:00:00 day one to 23:59:59 day seven.

If the same date is typed for both values the report will cover that date.





8.6. Window Menu

The windows menu can be used to arrange the different utilities windows.

8.7. Help Menu

In this menu an online manual will be placed. In this release it is not implemented.

8.8. Close the program

The program is closed as normal Windows software.

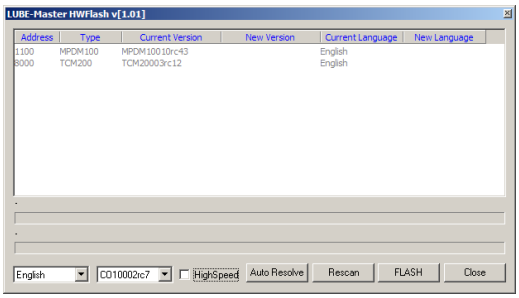
9. HWFlash tool (HWFlash.exe)

The hardware flash tool (HWFlash.exe) replaces all other previous tools for programming and resetting the hardware modules.

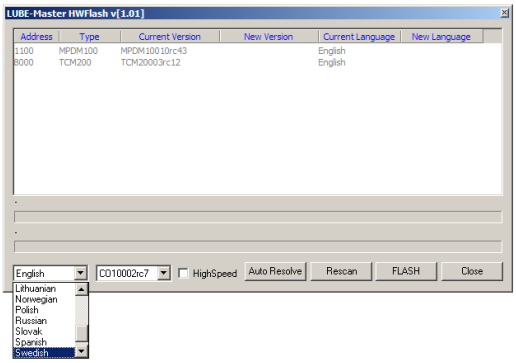
The HWFlash tool can be found in the LUBE-Master main folder, default is C:\LUBEMAST. It is started by double clicking the HWFlash.exe file. It supports all types of modules with OTP or Flash chips.

9.1. How to change the system language (R7 or later)

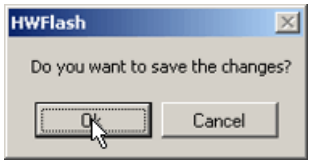
First start the LUBE-Master engine if it is not already running. Then start the HWFlash tool. The default language for booth LUBE-Master WinTools and modules is English.



To change it select the new language from the language selector in the lower left corner of the HWFlash main window.

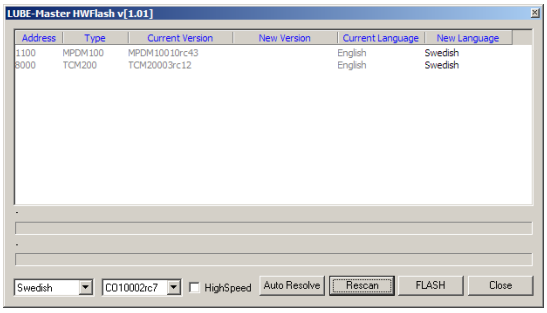


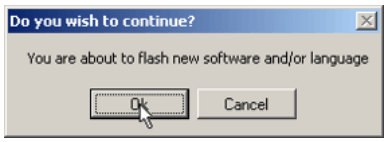
Click OK button to accept the language change.



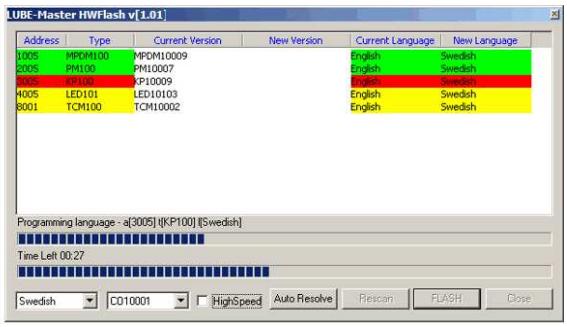
Then click the Rescan button.

Now click the Flash button, The High speed check box can be checked if there are only flash modules in the system. Then click the OK button to accept to flash the modules.

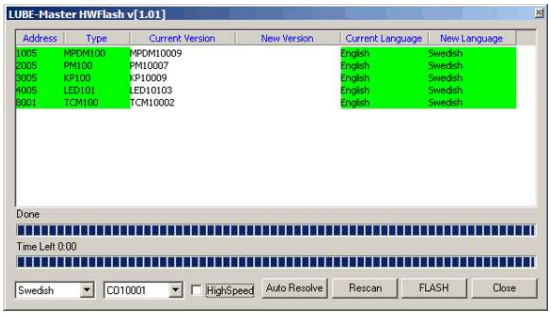




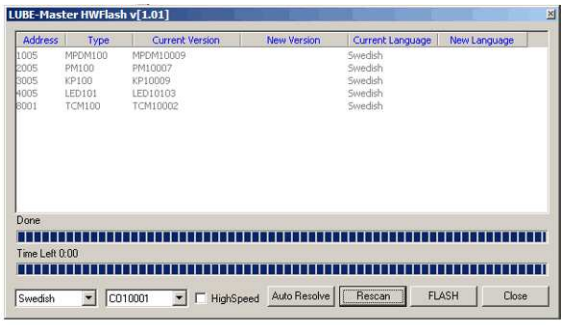
The flash procedure starts. Modules marked with yellow are going to be flashed, module marked with red is currently being flashed and modules marked with green have been flashed.



When all modules are marked green the flashing process is finished.



Now first do a Rescan from the engine menu "UpdatePNP array" item. Then click the Rescan button in HWFlash window.



Now the system language is Swedish.

Observe !

The language changing currently only supports hardware modules, the engine and WinDB Manager. It does not support the graphic representation of the modules in the LUBE-Master Neighbourhood (HWMon2).

9.2. How to update chip software and/or language for modules.

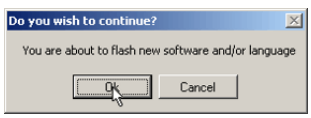
When the HWFlash tool is started the first thing that happens is that it looks in ***C:\LUBEMAST\Chip*** folder and compare the chip software file versions there with the current ones in the hardware modules. If there are newer ones in the chip folder it automatically list suggested updates in the HWFlash start-up window.

The second thing that happens is that it compares the language setting of the system with the one of the current hardware modules. If any of the modules has another current language than the system it is shown as a suggested update in the HWFlash start-up window.

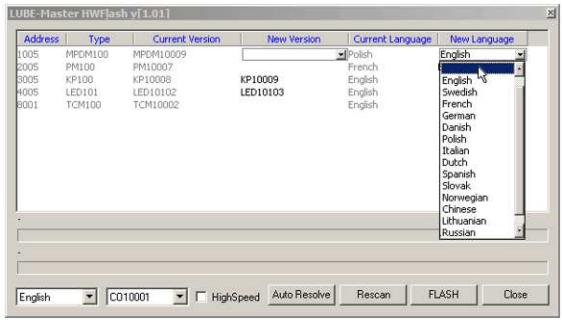
It can look something like this.

To make the suggested updates click the Flash button. The High speed check box can be checked if there are only flash modules in the system.

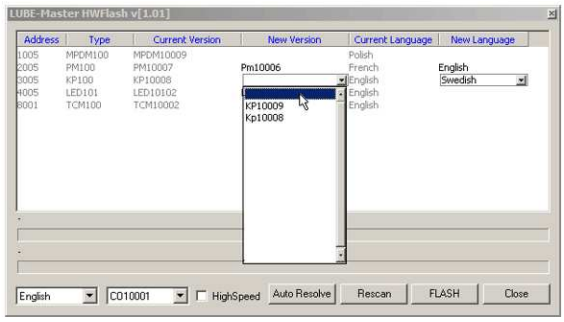
Then click the OK button to accept.



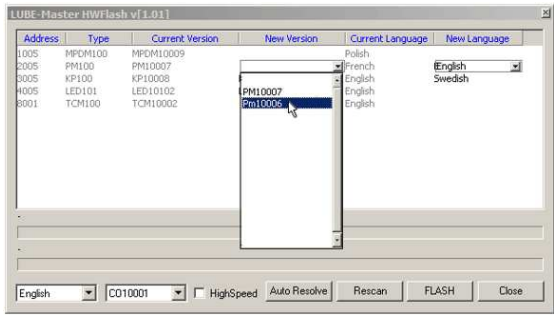
To skip a suggested language update select the empty line in the "New language" selector.



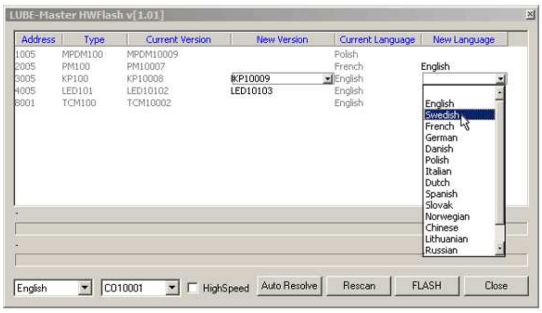
To skip a suggested chip software update select the empty line in the “New version” selector.



To down flash a module to an earlier software version select it from the “New version” selector.



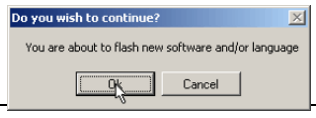
To select a unique language for a module.

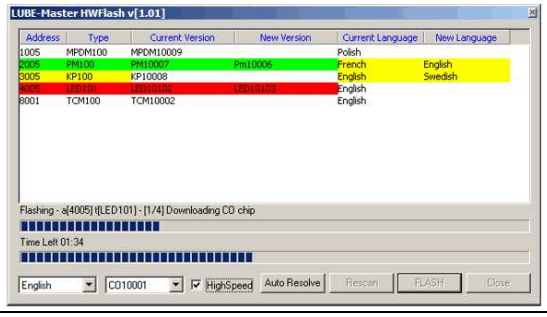


The result will be this.

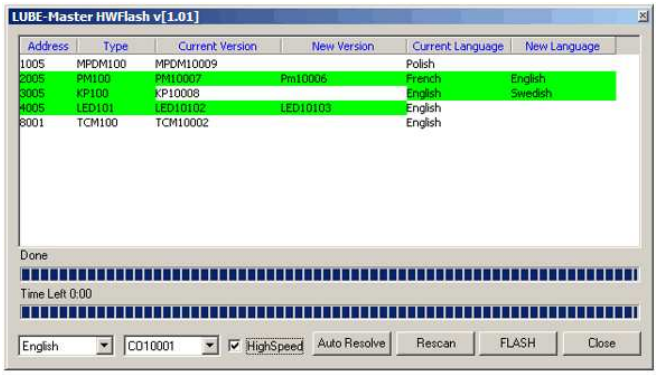
Then click the Flash button. The High speed check box can be checked if there are only flash modules in the system.

Then click the OK button to accept.





When all selected modules are marked green the flash process is done.

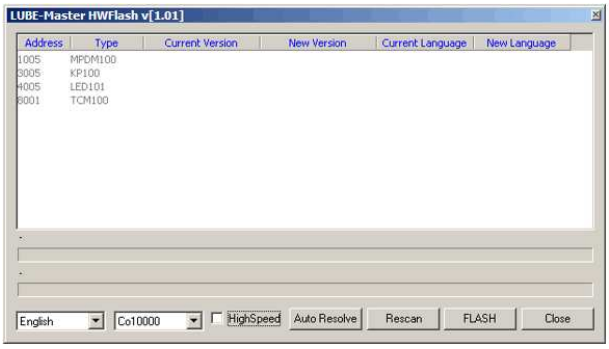


Now first do a Rescan from the engine menu “UpdatePNP array” item. Then click the Rescan button in HWFlash window. If all is as it should be you are done. Close HWFlash.

9.3. How to update to flash chip technology (R7 or later).

LUBE-Master WinTools R7 or later is needed to be able to see and configure modules equipped with flash chip from the PC.

LUBE-Master WinTools R6 can easily be upgraded to R7 or R8. LUBE-Master WinTools R5 or earlier must be reinstalled, old database can be converted. Below is a general description. For more information or questions mail to lubemaster@eurolube.com



To change from OTP chip to flash chip is also easy.

First update LMWT to R7 or R8 or install R7 or R8.

Make sure that the LUBE-Master communication loop is ok, termination, addresses and drivers.

Reflash the language using HWFlash tool, see above “9.1 How to change the language.

Do not use HighSpeed option in a mixed chip system!

After re-flashing the language or flashing a new language there are two ways to continue depending on the flash chips you have.

9.3.1. If the flash chip already contains module software.

Change the chips. Do not forget to power down the module before changing the chip.

Click the “Rescan” button first in “Update PNP Array” and then in HWFlash. If all is OK it is done.

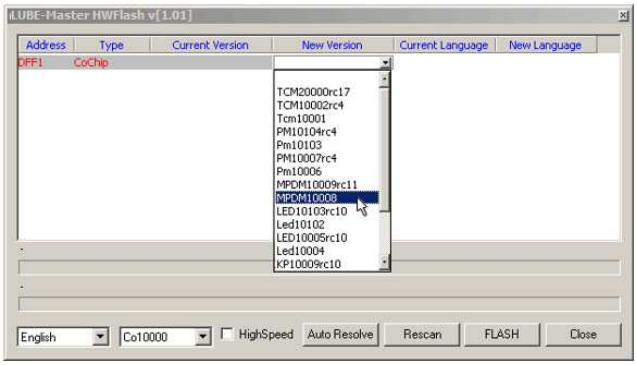
9.3.2. If the flash chip comes with only CO software.

Change chip in one module. Do not forget to power down the module before changing the chip.

The CPU LED will flash ”blink, blink,……, blink, blink, ……, etc.”.

Click the “Rescan” button in HWFlash and the module will be detected as CO module.

Select the proper module software in the “New Version” column.



Verify that the correct software is selected, then click flash. After the line has turned GREEN click the “Rescan” button. Now all modules should be visible again.

Repeat the process for the next module. Click the “Rescan” button HWFlash and the module will be detected as CO module.

Select the proper module software in the “New Version” column and then flash. After the line has turned GREEN click the “Rescan” button. Now all modules should be visible again.

Continue with the next module until all is done.

Click the “Rescan” button first in “Update PNP Array” and then in HWFlash. If all is OK it is done.

9.4. Set modules to production default (R7 and later)

If you have managed to destroy or mix up the setting of a module the module can be restored to factory default by using the “Autoresolve” feature in HWFlash.

This can be done within the system if no modules in the system have their address set to factory default (X000) or if the system only contains one of each type of module. The reason for this is that the module you are restoring will have it’s address set to factory default which is X000 and if any other module of the same type has address set to X000 there will be a collision and the system will not work or behave strange.

Start the LUBE-Master engine if it is not running and wait until all modules are found.

Close WinDB Manager, Neighbourhood and custom layouts if any of them are running.

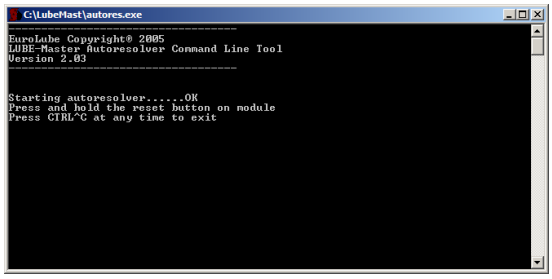
If the script service is used it must be unloaded.

It is recommended to not dispense while using the “Autoresolve” feature.

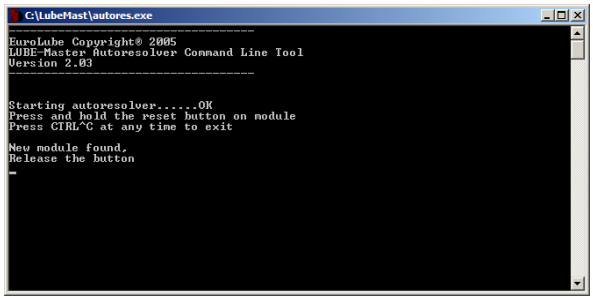
Start the HWFlash tool and then click on the Autoresolve button.

NOTE! **Everything in the module will be set to default. Databases will be cleared and receipt, fast menu, reels, serial ports on keypads etc will be set to default.**

The “Autoresolve” feature is started as a Command window.

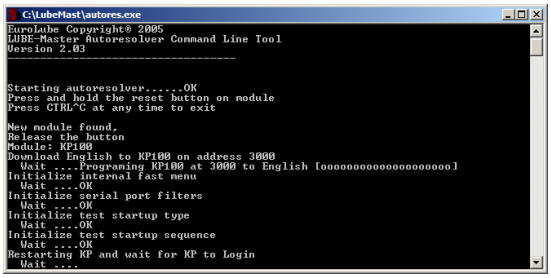


Next press and hold the reset button on the module until the Autoresolver tells you to Release the button.



Now the restoring starts, here for a keypad. During the process the Autoresolver and sometimes the module will ask for som input or show some output depending on module type. Here the autoresolver waits for you to press <ENTER> on the keypad. The keypad also shows this. Press <ENTER> on the keypad.

Here the Autoresolver asks you to type something on the keypad and the keypad shows you what to type. Type 159. and the <ENTER> on the keypad



To shutdown the “autoresolver”, press CTRL and C at the same time.

10. Error handling

When installing computer software, configuring it and running it problems could sometimes appear depending on how the computer is set up and what kind of other software is installed and running in it.

All LUBE-Master software is based on Microsoft standard components and we have tried to make it similar to any standard windows program to handle.

Depending of the operating system administrator rights can be needed to install the software.

10.1. LUBE-Master basic WinTools errors

LUBE-Master needs four standard Microsoft components: DCOM, MFC6.2, MDAC and MSJET.

DCOM is as standard installed for Windows 98SE/2K/XP but must be installed for Windows 95/NT. For NT it is installed by service pack 6 and for 95 it has to be installed separately.

MFC 6.2 is installed when LUBE-Master WinTools are installed.

MDAC and "MSJET" are normally already installed by other software for example MSOffice, DMS programs, Spreadsheet programs …etc.

Errors during installation of LUBE-Master WinTools depend usually on that some of them are missing or wrongly installed.

Symptom	**Cause**	**Remedy**
Errors during installation of LUBE-Master WinTools	Missing or faulty DCOM or failure of installing MFC6.2.	Update the OS with latest patches. Reinstall the OS.
Failure to connect to LUBE-Master network. Engine does not find any modules. Engine does not find some modules	Wrong Com port is used, some other software uses the same comport, faulty wiring of the LUBE-Master network or terminations. Some modules have software with “Old PNP” support and the support for it is disabled in the engine. LUBE-Master network line driver faulty on one or more modules.	Change Com port check wiring and termination of the LUBE-Master network. Check that any unused LUBE-Master lines in PC-interface are terminated. Uncheck the Disable “Frame PNP” e.g. Old Type check box in engine properties window. Use a digital volt meter and check voltage GND-B and A-B on the LUBE-Master network with low level of communication. B-GND should be about 2 VDC with few modules connected and lower with more modules. A-B should be about 0,5 VDC with few modules connected and slightly lower with more modules. If not replace the faulty driver, the changeable 8pin DIL chip named MAXIM MAX485E CPAxxxxx Check the engine.log file in the LUBE-Master folder.
Failure to start.	The database or some other files are flagged Read-Only because it has been copied from	Verify that the Read-Only flag is unchecked for all files in the LUBE-Master folder.

	a CD.	
System work but randomly hangs or crashes	Bad or distorted of OS installation. A lot of junk programs running. PC hardware error. Virus protection software not set correctly or set to scan all files combined with a too slow PC.	Reinstall OS Shut down and / or uninstall unnecessary software. Use a PC hardware analysing program on the PC. Set virus protection to only scan executable files or not to scan LUBE-Master folder. Use a faster PC.
Wrong password when trying to change something.	The password has been forgotten.	Check it in lubemast.ini file.

10.2. LUBE-Master professional version errors

The same as for basic version with one exception,

Symptom	**Cause**	**Remedy**
Failure to load professional version	Missing or not a valid License.dat file	Run the Licenser.exe file and send the created License.lic file to your representative for validation.

10.3. ODBC-key errors

To be able to set up an ODBC-key the OS must have properly installed MDAC and MSJET environment. This is normally done at installation of Windows 98SE/2K/XP but can be missing on 95/NT.

Symptom	**Cause**	**Remedy**
Failure to select MSAccess .mdb driver at ODBC-key set-up.	Missing or faulty MDAC/MSJET. The database or some other files are flagged Read-Only because it has been copied from a CD.	Install the latest version of this in the same language as the OS. If this cannot be found use the English ones found on LUBE-Master WinTools CD in the *\MS Data Access files* folder. If you do not now use MDAC version 2.52….. MSJET40Sp3 More information can be found at www.microsoft.com/technet. Verify that the Read-Only flag is unchecked for all files in the LUBE-Master folder

10.4. WinDB Manager Errors.

WinDB Manager uses the ODBC-key LubeMasterDB to connect to the database and must have properly installed MDAC and MSJET environment. This is normally done at installation of Windows 98SE/2K/XP but can be missing on 95/NT.

Symptom	**Cause**	**Remedy**
Language does not work	WinDB Manager does not support the selected language.	Change preferred language in the lubemast.ini file. To solve it permanently fill in the LUBE-Master WinDB

		translator.xls supplied by your representative.
Failure to open a menu item	Missing or faulty MDAC/MSJET. Missing or faulty LubeMasterDB ODBC-key. The database is flagged Read-Only because it has been copied from a CD.	Install the latest version of this in the same language as the OS. If this cannot be found use the English ones found on LUBE-Master WinTools CD in the *\MS Data Access files* folder. If you do not now use MDAC version 2.52….. MSJET40Sp3 More information can be found at www.microsoft.com/TechNet.
Failure to start	The database or some other files are flagged Read-Only because it has been copied from a CD	Verify that the Read-Only flag is unchecked for all files in the LUBE-Master folder.
Wrong password.	The password has been forgotten.	Check it in lubemast.ini file.

10.5. Service and OCP errors

All OCP-drivers and Services except Clock has log files were the operation could be checked.

Symptom	**Cause**	**Remedy**
Clock service started but time is not synchronised	One or more clock modules or chips are present in the system.	Remove all clock modules and clock chips from the system.
WinDB service fails to load.	WinDB.ini is missing or configured wrong. Missing or not a valid License.dat file. The database or some other files are flagged Read-Only because it has been copied from a CD	Put a WinDB.ini file in the LUBE-Master folder. Run the Licenser.exe file and send the created License.lic file to your representative for validation. Verify that the Read-Only flag is unchecked for all files in the LUBE-Master folder. Check WinDB.log file for error messages.
OCP-driver fails to load or does not work properly.	The INI file for it is missing or configured wrong. Missing or not a valid License.dat file. The database or some other files are flagged Read-Only because it has been copied from a CD.	Put the proper INI file in the LUBE-Master folder and verify the configuration. Run the Licenser.exe file and send the created License.lic file to your representative for validation. Verify that the Read-Only flag is unchecked for all files in the LUBE-Master folder. Check Log file for the OCP-driver for error messages.
OCP-driver cannot connect to DMS system.	Wrong configuration in INI file. Customer network error.	Verify the configuration. Check customer network

	DMS server name and/or IP-address changed. Network folders sharing not properly set or changed.	functionality. Verify the DMS server name and/or IP-address. Verify network folder sharing.

11. Advanced features

11.1. Module PNP update priority (Large systems)

The LUBE-Master communication network is of collation type like Ethernet, the first module that demands net network gets it and the others have to wait. If all modules tries to issue or answer to a general PNP update request in a system with a lot of modules there would be a lot of net requests at the same time during a very short period of time. LUBE-Master uses PNP update priority based on the address of the module to spread this over a longer time period.

In a large system with a lot of modules it is recommended to set the addresses of the modules so that the update priority is spread evenly. This is called fragmented updating.

The PNP update priority of a module is based on the first and the last figure of the address and a lower figure has higher priority than a higher.

	MPDM	**PM**	**KP**	**LED**	**Vacant**	**Vacant**	**Vacant**	**TCM**	**Vacant**
Address	**X=1**	**X=2**	**X=3**	**X=4**	**X=5**	**X=6**	**X=7**	**X=8**	**X=9**
X??0	30	34	38	42	46	50	54	58	62
X??1	31	35	39	43	47	51	55	59	63
X??2	32	36	40	44	48	52	56	60	64
X??3	33	37	41	45	49	53	57	61	65
X??4	30	34	38	42	46	50	54	58	62
X??5	31	35	39	43	47	51	55	59	63
X??6	32	36	40	44	48	52	56	60	64
X??7	33	37	41	45	49	53	57	61	65
X??8	30	34	38	42	46	50	54	58	62
X??9	31	35	39	43	47	51	55	59	63

The LUBE-Master engine always has a PNP update priority of 10.

This is an example of how setting the address sets the priority.

Priority	Module	Address	
31	MPDM	1001	The order between these two will be random
	MPDM	1011	
32	MPDM	1092	The order between these three will be random
	MPDM	1032	
	MPDM	1046	
33	MPDM	1023	The order between these two will be random
	MPDM	1013	
38	KP	3004	The order between these two will be random
	KP	3074	
41	KP	3013	The order between these two will be random
	KP	3023	
43	LED	4001	
59	TCM	8005	

11.2. Change language for modules (R6 or earlier)

In the LUBE-Master folder (*C:\LUBEMAST*) there are a program Ollang.exe and a Lang.lan file, these two files are used to change the language of the modules.

Start the LUBE-Master engine if it is not running and wait until all modules are found.

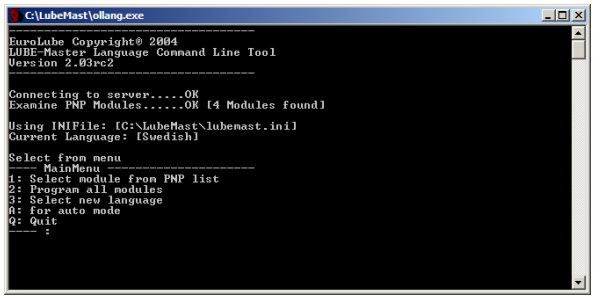
Close WinDB Manager, Neighbourhood and custom layouts if any of them are running.

If the script service is used it must be unloaded.

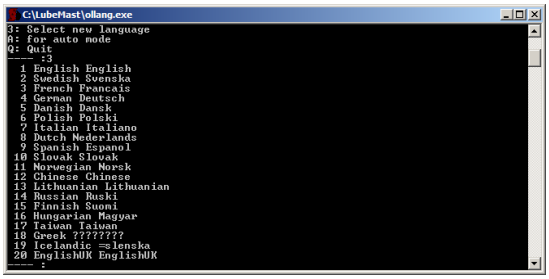
It is recommended to not dispense while using Ollang.exe.

Start Ollang.exe by double click on it or use a shortcut if one is created. A short cut is not created by default because it should not easily be possible for a user to run Ollang.exe.

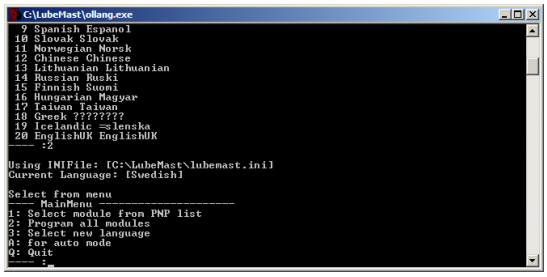
The Ollang.exe is a command line application and does not have a graphical user interface.



First step is to set the desired language. Type 3 followed by <ENTER>.



To change to Swedish type 2 followed by <ENTER>.



This can also be changed by editing the lubemast.ini file, look for the part that looks like this

[Language]
PreferedLanguage=English

Change it to,

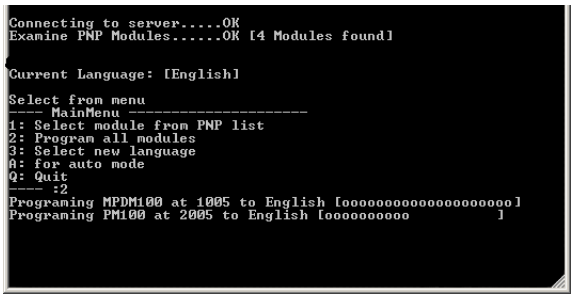
[Language]
PreferedLanguage=Swedish

This will be the same as above.

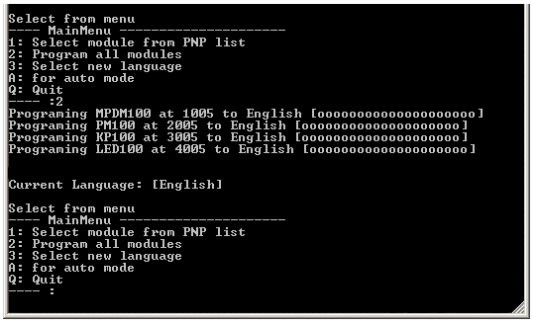
If your language is missing ask for a translator file. This file is a normal MSExcel2000 .XLS file with three columns Swedish, English and Your language. Fill in the Your Language column and return it.

You will receive a new Lang.lan file to put in the LUBE-Master folder (*C:\LUBEMAST*).

Second step is to program all modules to the preferred language, here English. Type 2 followed by <ENTER>.



This is how it looks when it is finished. Type Q followed by <ENTER> to quit.



It is also possible to have different languages in different modules this is done by setting the language to desired one and then use menu item 1.

When the preferred language is set, here English, Type 1 followed by <ENTER>. Select module from PNP list, here MPDM100 with address 1005. Type 1 followed by <ENTER>.

This is how it looks when it is finished. Type Q followed by <ENTER> to quit.

11.3. Set modules to production default (R6 or earlier)

If you have managed to destroy or mix up the setting of a module the module can be restored to factory default by using the Ollang.exe program with the Lang.lan language file.

This can be done within the system if no modules in the system have their address set to factory default (X000) or if the system only contains one of each type of module. The reason for this is that the module you are restoring will have its address set to factory default which is X000 and if any other module of the same type has address set to X000 there will be a collision and the system will not work or behave strange.

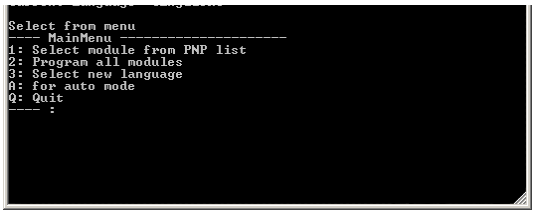
Start the LUBE-Master engine if it is not running and wait until all modules are found.

Close WinDB Manager, Neighbourhood and custom layouts if any of them are running.

If the script service is used it must be unloaded.

It is recommended to not dispense while using Ollang.exe.

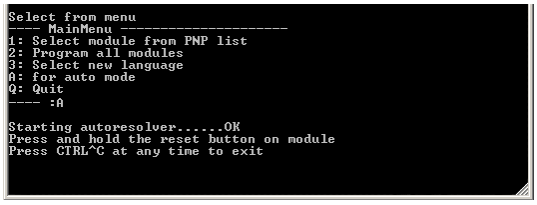
Start Ollang.exe by double click on it or use a short cut if one is created. A short cut is not created by default because it should not easily be possible for a user to run Ollang.exe.



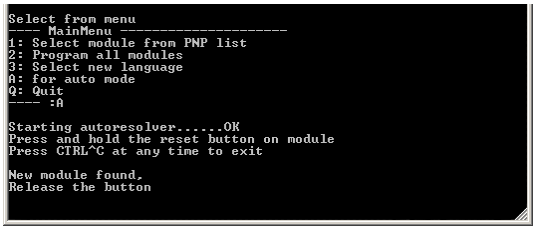
The Ollang.exe is a MS-DOS program and because of this a MS-DOS window opens

NOTE! **Everything in the module will be set to default. Databases will be cleared and receipt, fast menu, reels, serial ports on keypads etc will be set to default.**

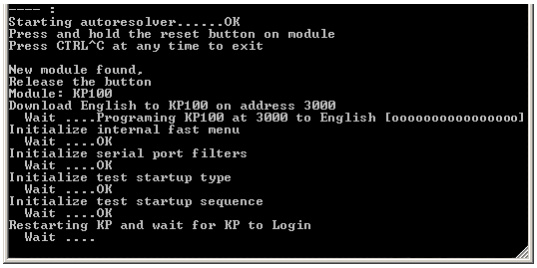
First step is to start the “autoresolver”. Type A followed by <ENTER>.



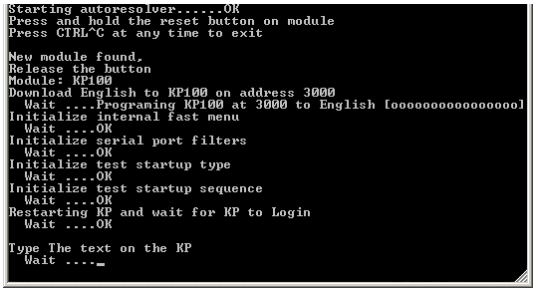
Next press and hold the reset button on the module until Ollang tells you to Release the button.



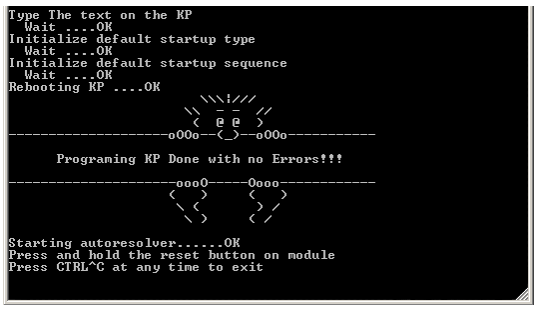
Now the restoring starts, here for a keypad. During the process Ollang and sometimes the module will ask for som input or show some output depending on module type. Here Ollang waits for you to press <ENTER> on the keypad. The keypad also shows this. Press <ENTER> on the keypad.



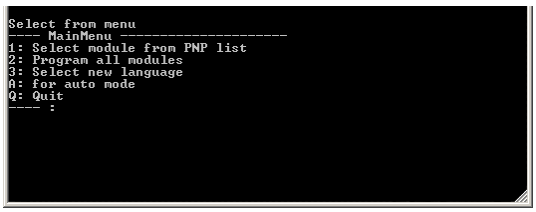
Here Ollang asks you to type something on the keypad and the keypad shows you what to type. Type 159. and then <ENTER> on the keypad



When it is finished and everything went OK it looks like this. To continue with another module press and hold it’s reset button and so on. The shutdown the “autoresolver” press CTRL and C at the same time.



Then to shutdown Ollang type Q followed by <ENTER>.



11.4. Creating submenus in the engine control menu

The first step is to create a Run folder in the LUBE-Master main folder; this is done during installation for R7 and later.

C:\LUBEMAST\Run

Now create some usable folders in the C:\LUBEMAST\Run folder like this,

C:\LUBEMAST\Run\Data

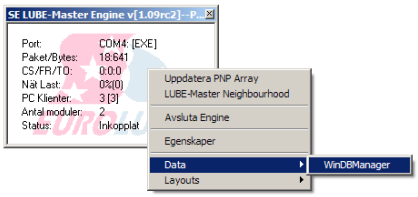
C:\LUBEMAST\Run\Layouts

If the engine control menu is opened after this is done there will be two new submenus in the Control menu, Data and Layouts.

Now we shall put some useful things in these two items.

Put a short cut for the WinDB Manager.exe file in the Data folder and put a short cut for the HwMon2.exe in the Layouts folder.

If the engine control menu is opened after this is done the result will be this.



Left-click on a short cut and the software will start.

This is a good way to create an LUBE-Master customized user menu.

You can change the names for the submenu items by changing the names of the short cuts in the folders.

11.5. Design a custom system graphic layout (HwMon2)

A customer specific monitoring system layout could be created by the use of the software HWMon2.exe. HWMon2 does exactly the same as HWMon (The LUBE-Master Neighbourhood in R6 and earlier) but with HWMon2 the different parts of the system can be arranged to look similar to the actual workshop.

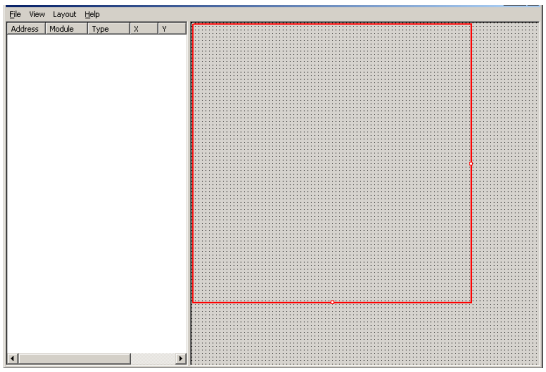
Creating an LUBE-Master Layout file with the extension .OLL does this.

You can have several different layout files for the same workshop for example one for each working bay.

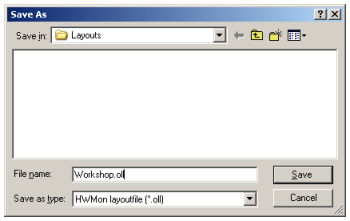
It is possible to have multiple layouts shown at the same time but remember that they are real-time software and uses computer power.

11.5.1. Create a new layout file.

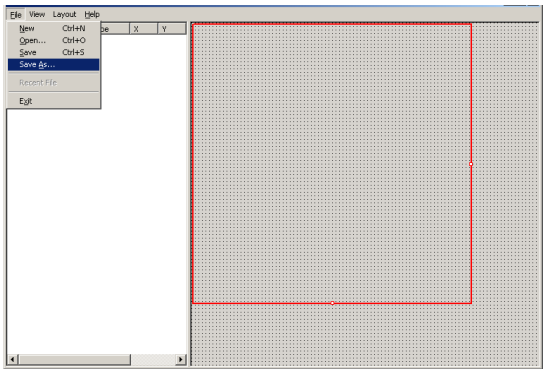
First start by click ***HWMon2-Create New Layout*** in the Start>LUBE-Master menu this will make the default HWMon2 start window to appear.



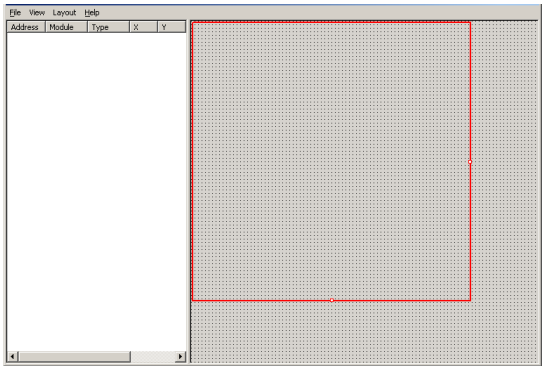
Browse to a suitable folder for example ***C:\Lubemast*** or ***C:\LUBEMAST\Layouts*** if doesn't exist create one and type in a name, here Workshop. Then click the Save button.



First save the layout to give it a name. Remember to save the layout file regulary as the layout grows.

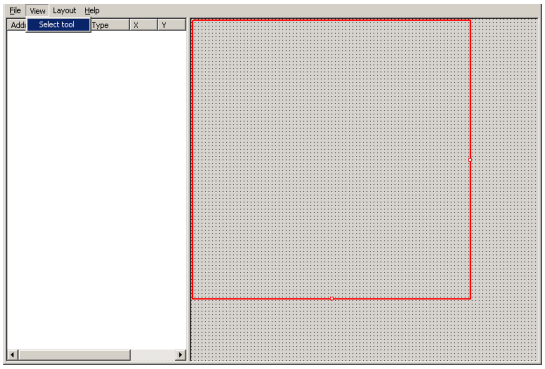


Now we can start selecting what to show in the Workshop Layout.

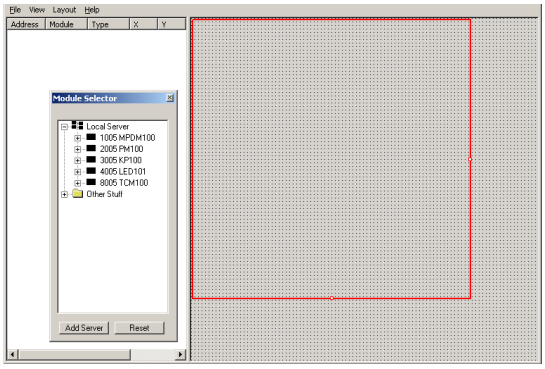


Open the Select Tool. Viewing the select tool is toggled, select it once shows it select it again hides it.

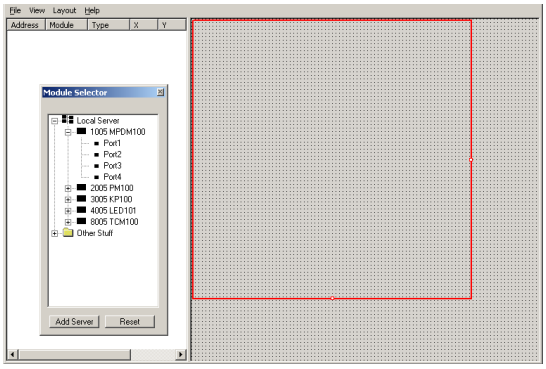
The red square shows the start-up size of the layout in normal run time mode. It can be sized to fit the amount of controls by left click hold and drag the small squares on the left and lower boarders.



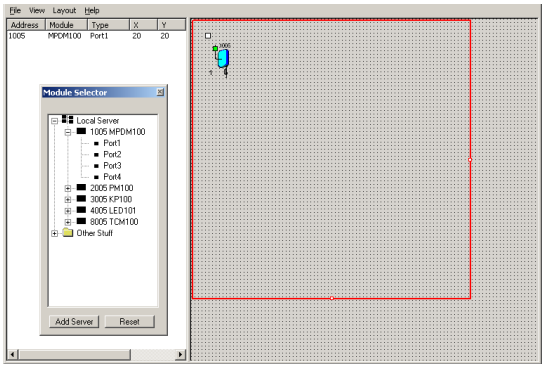
Then open the ***Local Server***, click the small "+" sign. A computer name might also be showing here, this is explained under chapter "Creating a Client layout file". The module selector works in a similar way as the Windows explorer. If you single click an item it is opened, if there is something in it and if you double click an item it is selected if possible.



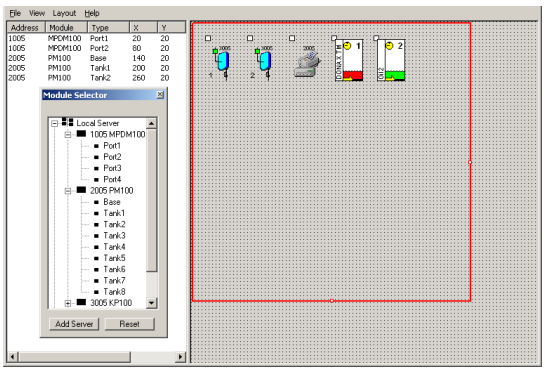
Now open a module, click the small "+" sign. Here a MPDM.



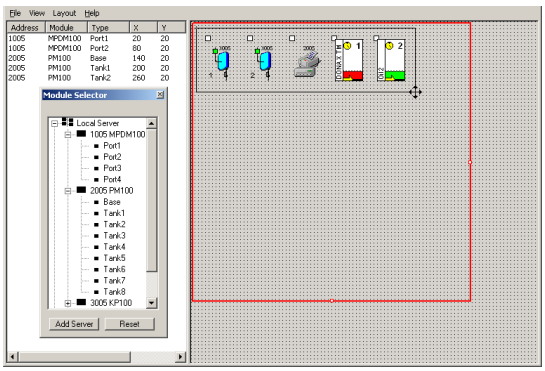
Now select the graphic control for the wanted part of the module by doubble clicking on it in the module selector. Here Port1 of the MPDM.



Add more graphic controls in the same way. When the HWMon2 graphic window "top row" is getting full select the controls using the mouse.



Place the cursor above and to the left of the white small square of the first "reel" press and hold the left mouse button. Release the mouse button when the created rectangle covers the desired controls.

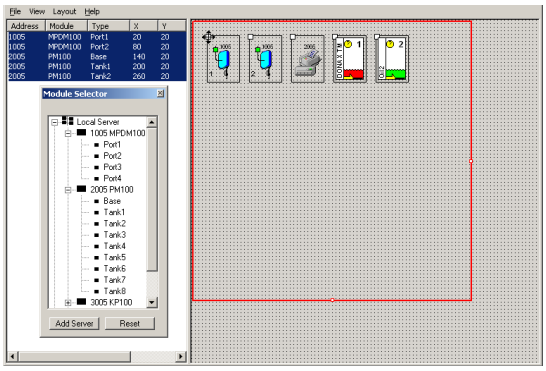


The controls can be moved in three different ways.

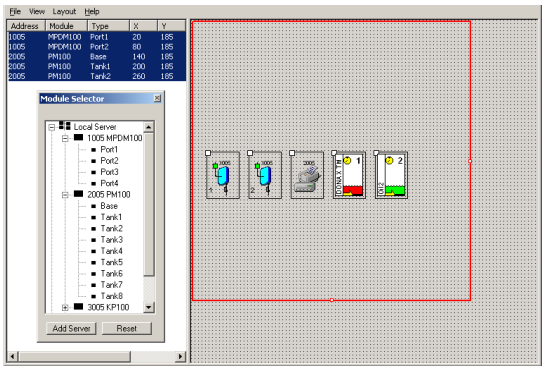
Using the keyboard arrow keys.
Typing in the coordinates in the table view to the left
Using the mouse.

Here we will show how to move them with the mouse. The controls are grabbed by the “handle”, the small white square in the upper left corner of a control. If more than one control are selected place the cursor over one of the handles, hold down the keyboard CTRL button. Press and hold the left mouse button and drag the controls to were you want them and release the mose and then the control button.

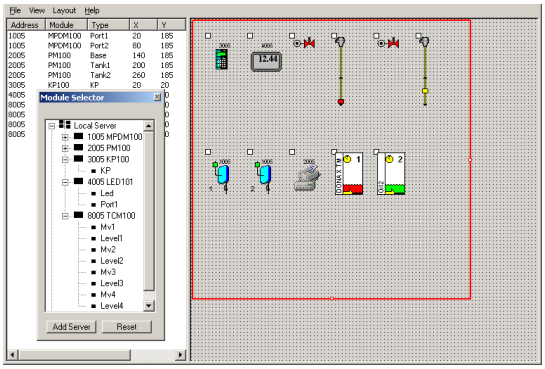
Like this.



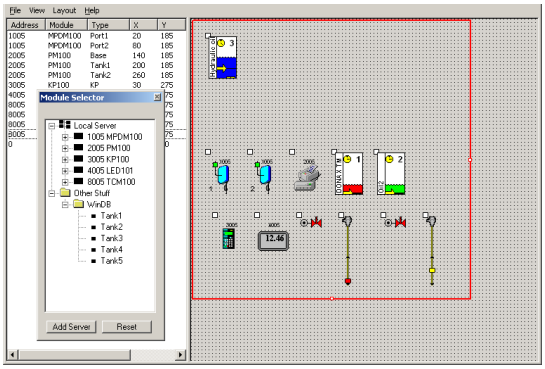
Here we move the controls down to free up space for more controls. To unselect controls left click on the graphic background.



Now click on the Module Selector Reset button to set the insertion point for new controls to the upper left corner of the HWMON2 graphic window. Then add some more controls.

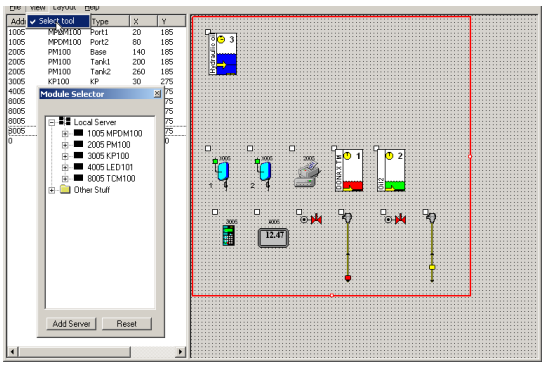


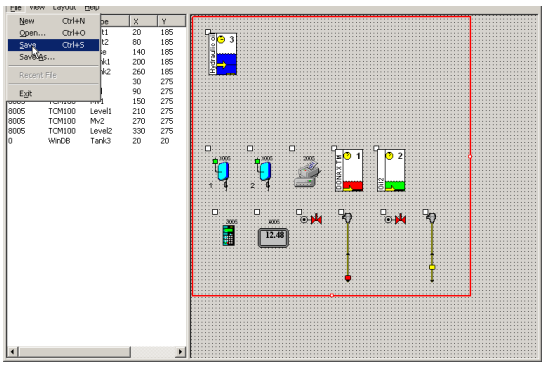
If the service WinDB.dll is loaded and there are configured tanks in the PC database Contols for these tanks are found under Other Stuff>WinDB in the module selector.



When all wanted controls are visible in the graphic window you can hide the Module selector if you like

Now save the layout.





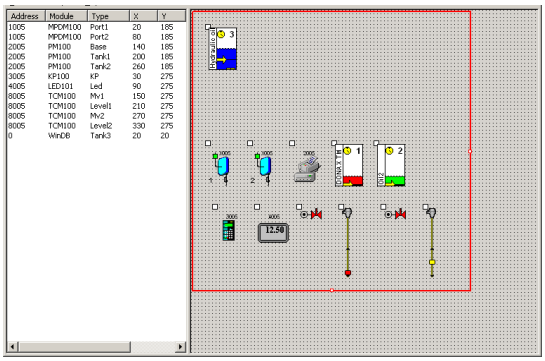
11.5.2. Edit a layout.

If the layout you want to edit is closed it can be opened for editing in two ways.

1) In windows explorer right click the layout file (.OLL) and select edit.

2) From Start>LUBE-Master menu left click “HWMon2-Create New Layout”. Then open the wanted .OLL file.

The result in our example (workshop.oll) would be this.



Before editing it is good to know the basics of how the graphics work.

The red rectangle shows what will be shown when the layout is are started in normal running mode. Dragging the small red squares at the right and bottom lines can modify this.

All graphic controls are placed, selected and handled through its “handle”. The handle is the little white square in the upper left corner.

All properties for a control can be set as in the LUBE-Master Neighbourhood or a Layout in normal running mode by right click on it. The only difference is that it must be selected first by left-click on the handle.

Controls can be selected and moved as any normal graphic objects in any standard windows application. It can be done in the graphics window to the right or in the table view to the left.

Left-Click on the handle in the graphics view or on the module address in the table view.

Select one control – Left-click on the handle or on the module address.

Select spread multiple controls- Select first module press and hold down the PC keyboard Ctrl-button and then select the rest of the wanted modules.

Select grouped multiple controls- It can be done as above but it can also be done only with the mouse. Place the cursor above and to the left of the handle of the upper left control of the group. Press and hold down the left mouse button. Drag the mouse until the created selection rectangle covers the handles of all wanted controls.

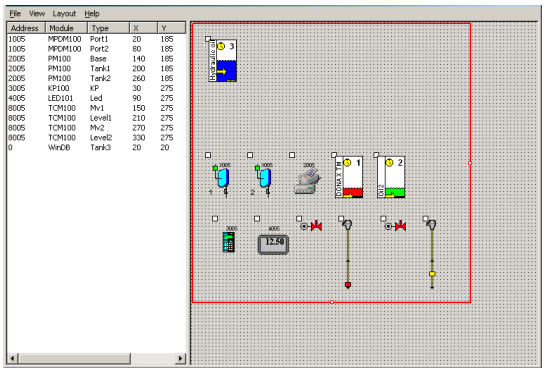
Move a selected control- Place the cursor above the control handle. Press and hold down the left mouse button. Drag the control to the desired position and then release the mouse button.
Or use the PC keyboard arrow buttons.
Or type in coordinates in the table view (X/Y).

Move a selected group of controls- Place the cursor above one the control handles. Press and hold down the PC keyboard Ctrl-button then press and hold down the left mouse button. Drag

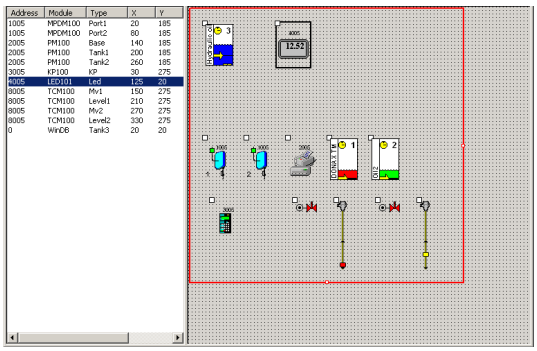
the group of controls to the desired position and release mouse and keyboard buttons.
Or use the PC keyboard arrow buttons.

How to unselect controls- Left-Click somewhere on the layout graphic background.

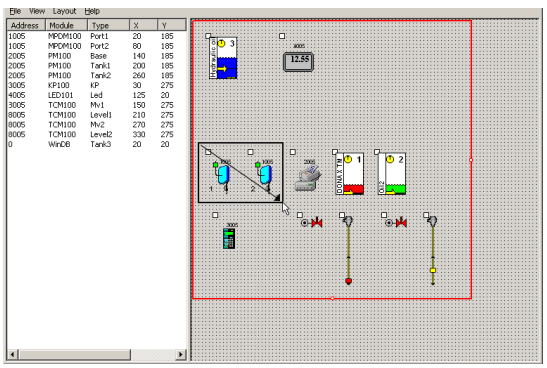
Worshop.oll opened in edit mode.



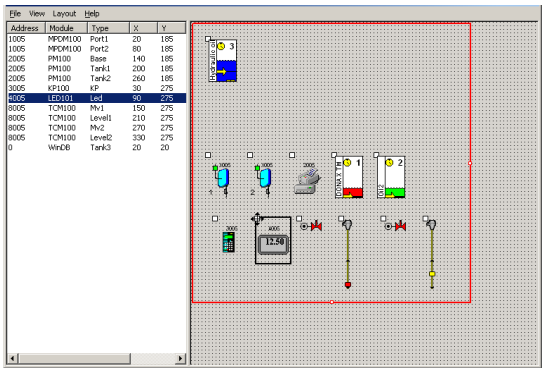
Drag the control to the desired spot and release the left mouse button.



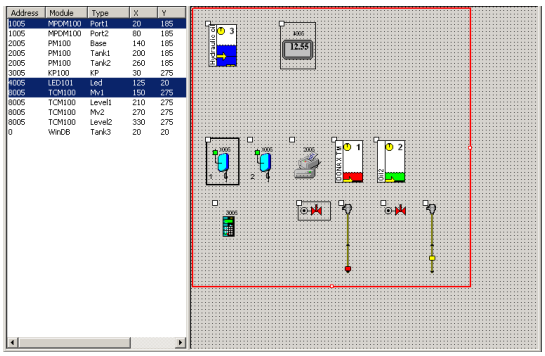
Now do a multiple group select, here the two reels.



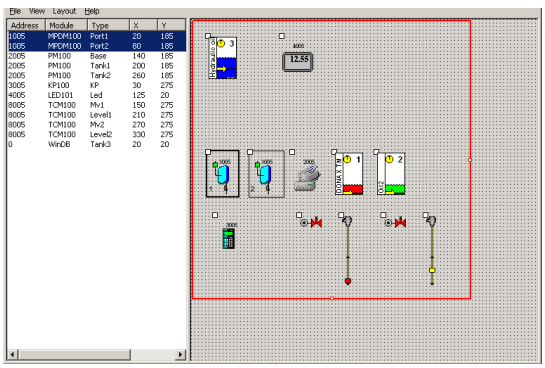
First move the LED control. Select it by Left-Click on the handle. Move it by Left-Click and hold on the handle.



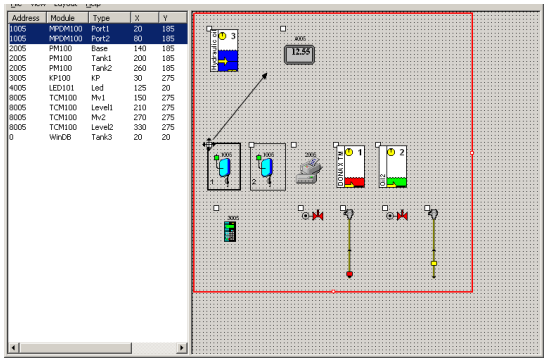
Now try a multiple spread select example.



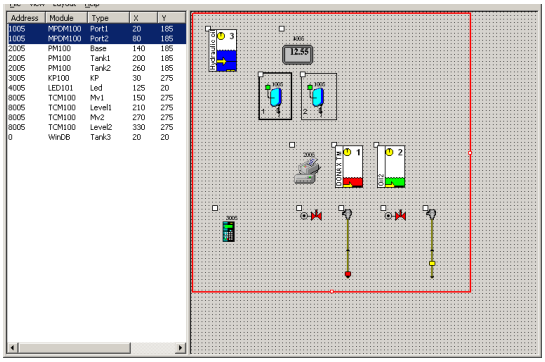
This is the result. The left reel with a thicker border is the primary select.



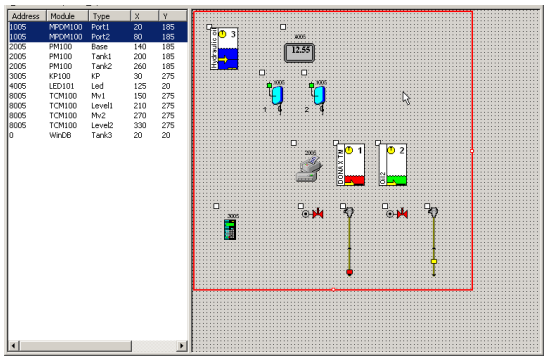
Now move the group. Move it by first press and hold PC keyboard Ctrl-button then left-click and hold on the primary select handle. Drag the group to the desired position



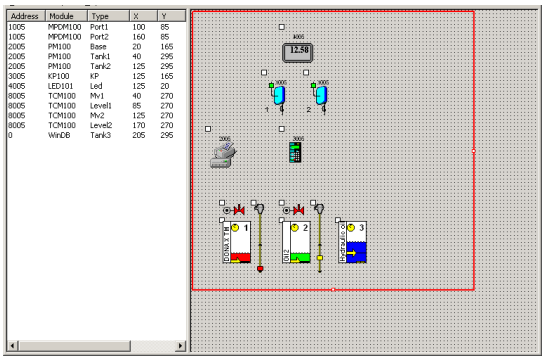
Release mouse button and the Ctrl-Button.



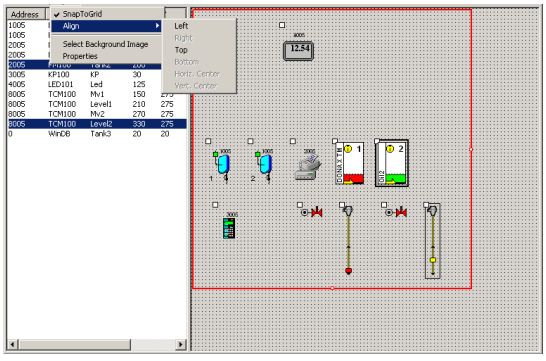
Then left-click somewhere on the background to unselect the controls.

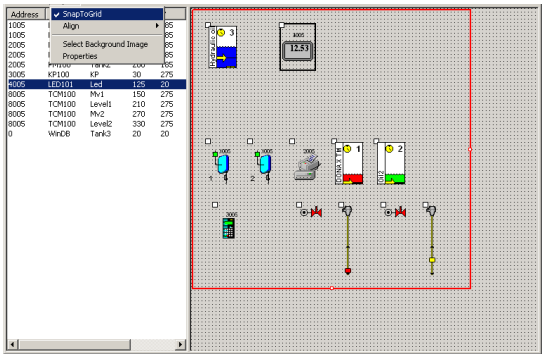


Now do the same for the remaining controls. The result could be something like this.



To your help there are also advanced alignment tools and a possibility to use a grid.





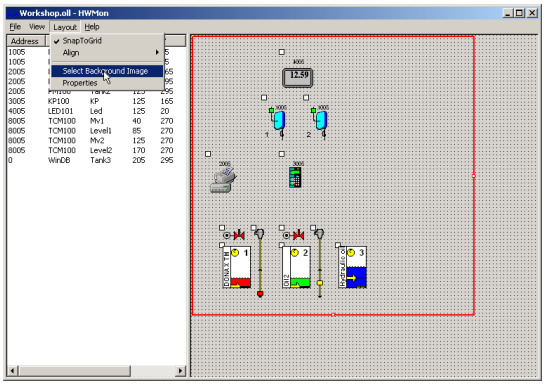
11.5.3. Modifying the layout background

By modifying the background of a layout it can be personalized to meet users, workshop, oil company… etc. demands.

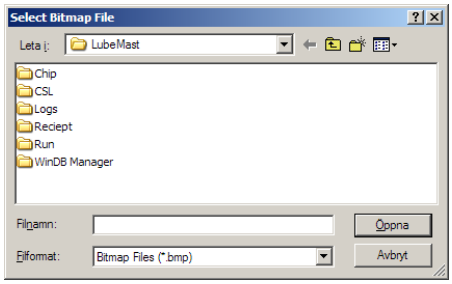
Almost any bitmap file can be used. It can be a nice picture, a company log, a graphic schematic of pipe works, .etc.

First create the bitmap with any .BMP software. For example MSPaint that comes with Windows. Here SampleLogo.bmp

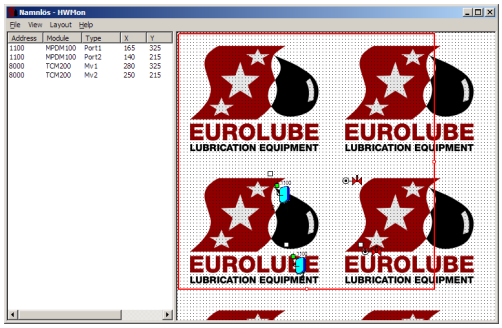
Then open the layout menu and click on Select Background Image.



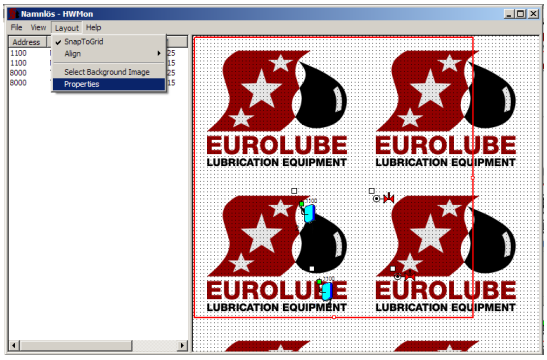
Select the file SampleLogo.bmp and click on Open.



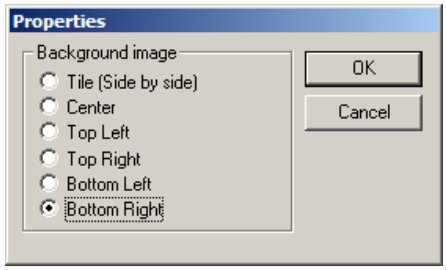
The default result will be.



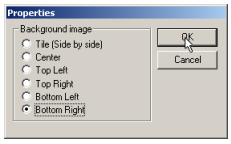
To make it look good use the layout menu item Properties.



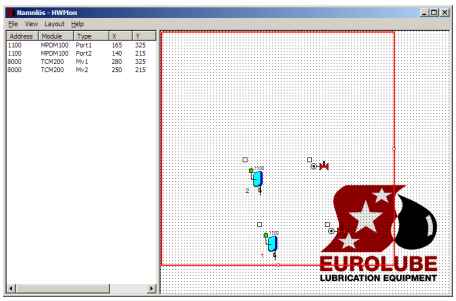
Here you can select how the background image should be placed.



Choose bottom Right and click OK.



This will be the result.



Now save the layout and close the layout edit mode.

11.5.4. Open a custom layout file

When a custom layout is created and looks like it should it can be started in normal running mode in several ways.

In Windows explorer by double click on the file.

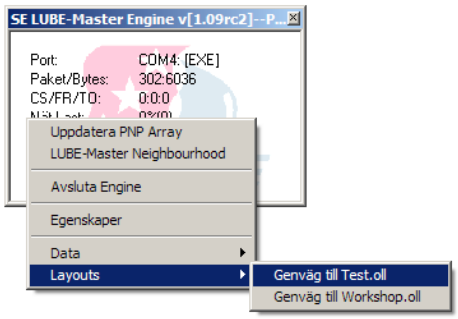
Double click on a created Short Cut.

Single click on a created Short Cut in the Windows fast menu.

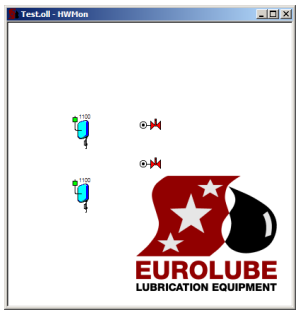
Select it from the LUBE-Master engine control menu. See chapter “Creating submenus in the engine control menu”

This is shown here.

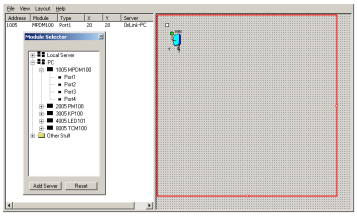
Right-click on the engine window background.



The normal running mode will open. Observe that the bottom right placement setting is done against the normal running mode.



11.5.5. Creating a Client layout file.



LUBE-Master WinTools has full support for a “Client-Server” scenario. If this is the case the best thing to do when creating a layout file is to do it on the LUBE-Master Server. The LUBE-Master server is the PC that is running the engine and has all the LUBE-Master hardware connected.

If the server is set-up for remote access the Module selector will have two, or more, servers to select graphic controls from. In the above we have used the “Local Server” but if we want to use the created layout file on client PC’s in the network we must select the graphic controls from the public server instead. The public server is the one with the same name as the LUBE-Master Server PC.

In this example the name of the PC running engine.exe is “PC.”

If you drag the separator between the table view and the graphic view to the right you will se an extra column named Server. In this column you will se the name of the server that has the physical hardware that you have selected to be in the layout.

A layout can have controls from multiple servers. See also the chapter “LUBE-Master Server-Client Set-up.”

11.6. Oil Common Platform (OCP)

The Oil Common Platform is a platform developed for interconnections between different LUBE-Master monitoring system and customer DMS systems. DMS stands for Data Management Systems.

11.6.1. What can be done with a connection to a DMS?

With a connection between a monitoring system and a DMS system it is possible to,

Verify that a work order/job/serial/part number typed in on a keypad by a user really exists and is valid for dispensing. This is called job number validation.

Transfer information of a made dispenses to the DMS system. This can be used to put the dispensed oil on an invoice or for historical traceability within a quality system.

Different DMS system can do one of them or both.

LUBE-Master can do both

11.6.2. Different ways of connections

There are a lot of different ways to make a connection for example,

ASCII text files (or other formats)

This is based on one valid job number file and one made transactions file.

The DMS system updates the job number file so it only contains valid job numbers, one on each row of the file. It also reads made transactions from the transaction file, one transaction on each row in the file. When a transaction is read it is also removed from the file to eliminate the risk of double read.

LUBE-Master validates the typed job number against the job number file and put new transactions in the transaction file.

The information and format of it and the names of the files can be set through an ini file.

ODBC

This is based on the same technique that LUBE-Master uses for the internal database handling.

Valid job numbers and transactions can be inserted or extracted through an ODBC key either by the LUBE-Master to the DMS system or by the DMS system to the LUBE-Master database.

Real-Time Client-Sever

This is based on that the LUBE-Master system acts as a client to the DMS system and when the user types in a job number he logs in to the DMS system and asks if it is valid or not.

When a transaction is made the LUBE-Master system logs on to the DMS system and sends the transaction.

The LUBE-Master system can use almost any kind of connection.

11.6.3. How does it work

There are two things that is needed to make a connection,

The DMS system must have a way to communicate this type of information.

There must be an OCP-driver that supports this way.

Most DMS systems of today have a way to do this and we develop the OCP-driver.

11.6.4. Existing OCP-drivers (090330)

We are continuously developing new drivers and the ones we have today are,

1C, A3BCM, Acosy, ACP_Gene, AlnaOil, AntHar, AutoDias, AutoMaster, Automat, AutoMate, AutoVision, Axapta, Bits, Car and You, Cars, CDP, Concorde XAL, Connex, COSWare, DEAS-1, DEAS-2, Didrik, Dracar, EDS, GDS, GenericExcel, GenericODBC, GenericTEXT, GenericXML, Helios, Ibcos, IMPHDL, InfoFlex, InfoLog, Kerridge, Kobra2, KomMa, Mapics, MIF, Movex, Navision, Optima, PonAlm, Rowil, Skaita, SMC, Tacdis, TVH, VBIB, WinAssist, WongHonda, Generic Text, Generic ODBC (former name Generic SQL), TACDIS 5/6, GDS 2.1, KOBRA 2, DRACAR+, WinAssist, ROWIL, Connex, SMC, Automaster, Acosy, Kerridge,

If your DMS system is not in the list and cannot use one of the generic ones contact us because there are more in the pipeline.

11.6.5. How to install an OCP-driver

The driver comes on a CD or as a zipped file package by e-mail. It is installed by running a .BAT file called INSTALL.BAT/SETUP.BAT if LUBE-Master is installed in the default folder *C:\LUBEMAST*, If not the files has to be copied manually.

The OCP-driver is license protected through the License.dat file for LUBE-Master. If no License.dat exists in the LUBE-Master folder run the software Licenser.exe. See chapter "Convert BASIC version to Professional version".

If a License.dat exists we probably have in our database tell us to update it to enable the desired OCP-driver.

Open the INI file of the driver with notepad and adjust the settings. The manual for this is inside the INI file.

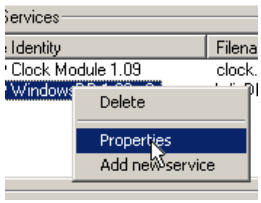
11.6.6. How to load an OCP-driver

An OCP-driver is loaded either from the LUBE-Master engine window or by editing the WinDB.ini file in the LUBE-Master folder *C:\LUBEMAST*.

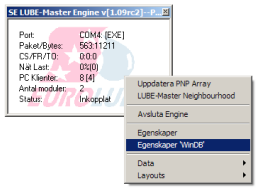
Open the engine window.

Right-click it and select properties.

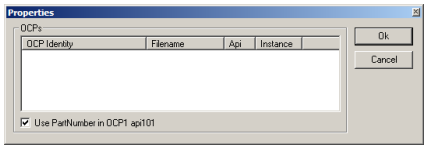
Right-click on LUBE-Master WindowsDB… and select properties.



Or, right click the Engine and select WinDB Properties.



The WinDB service properties window opens.
By checking the "Use PartNumber in OCP1" checkbox the fluid part number will be transferred instead of the fluid name. ***This feature only exists in WinDB Service 108RC2 or higher.***



Right-click Loaded OCP's window and select Add New OCP. Select the desired OCP driver and click Open. If there are problems with this it is probably because the License.dat is missing or not valid for the selected OCP-driver.

This can be checked by opening the (DriverName).log file in the LUBE-Master folder.

This can also be done by editing the WinDB.ini file in the LUBE-Master folder.

WinDB.ini (example)

[Log]
FileName=windb.log
MaxLines=200

[OCP]
OCP=

Edit the line OCP= to,

OCP=(DriverName).dll

and save it.

This will give the same result as above.

Always restart the LUBE-Master engine when changes have been made to its properties.

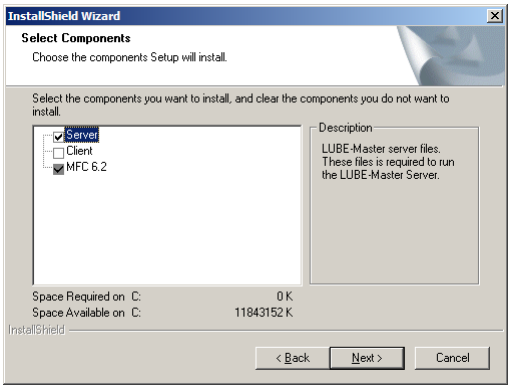
11.7. LUBE-Master Server-Client Set-up.

If an LUBE-Master system is connected to a PC (LUBE-Master Server) that is connected to a network and this PC has the LUBE-Master software installed it is possible to control and view the LUBE-Master system from another PC (LUBE-Master Client) in this network.

This document shows how this is accomplished.

11.7.1. Install the software on Server

On the server it is recommended to install both the server and the client software, see chapter "Installation", but not necessary.



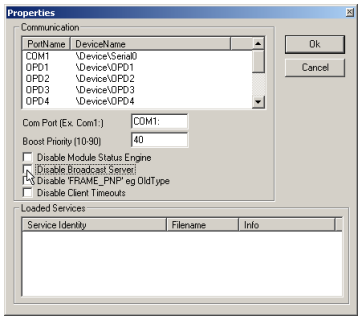
You can choose to only install server software. If you want to only install server software uncheck the client line before clicking the Next-button.

If only the server software is installed you will not be able to create layouts on the server.

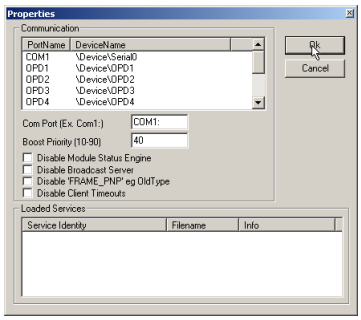
Typical situations were you might want to only install the server software is if the server does not have a display or keyboard.

Start the LUBE-Master Engine. Right click on the engine window and select properties.

Uncheck the item "Disable Broadcast Server"



Left-click the OK-button.



Shut down the engine.

11.7.2. LUBE-Master Server set-up (Windows98SE)

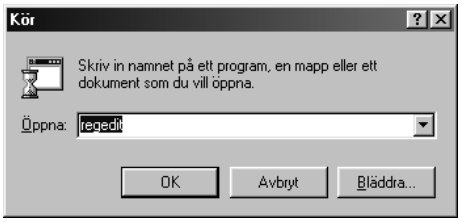
Install the LUBE-Master WinTools software.

Start regedit

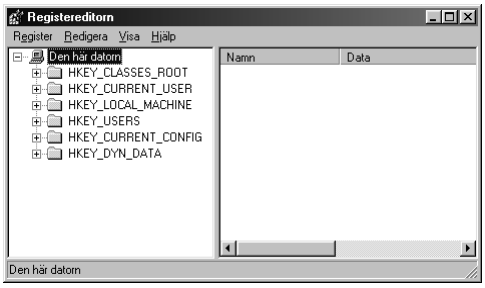
NOTE! Altering this setting will have a great impact on security issues, and should not be done without discussion with a network/computer technician!

NOTE! It is very important that nothing else is changed; it could give the result that WINDOWS stops working!

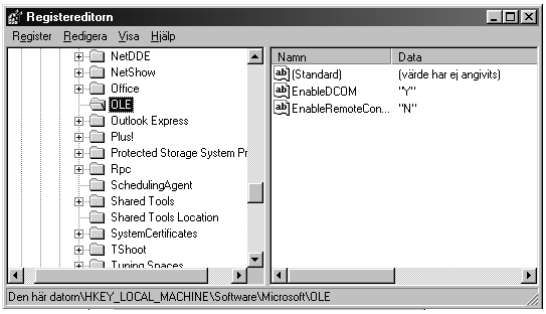
Select Run from the start menu.



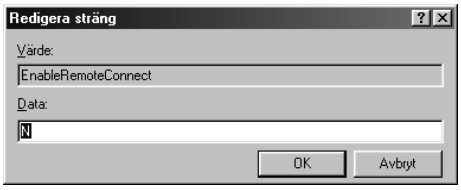
Regedit started



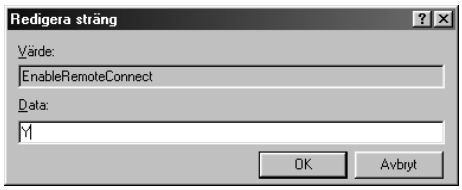
Go to \HKEY_LOCAL_MACHINE\Software\ Microsoft\OLE. Double click on "EnableRemoteConnect".



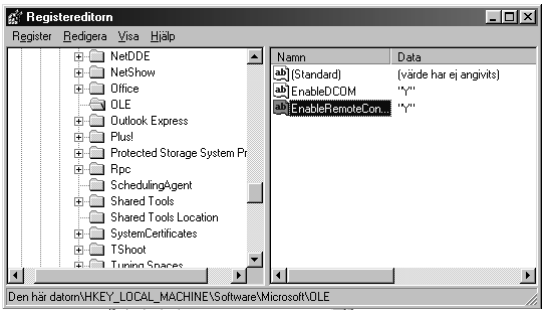
Change the "N" to "Y".



Then left-click the OK-button.



It should now look like this.



Close REGEDIT.

Restart computer!

11.7.3. LUBE-Master Server set-up (Windows NT/2000/XP SP1)

For Windows NT/2000/XP the same thing can be done by a skilled computer administrator. To make it easier for these operating systems we have created a small registration file,

Register Engine NT4-2000-XP.reg

placed on the LUBE-Master WinTools R8 CD in the folder,

?:\EXTRAS\Remote Access.

Copy this file to a temporary folder and double click it. You will be prompted to agree and then there will be a message of success.

Restart the computer.

11.7.4. LUBE-Master Server set-up (Windows XP SP2)

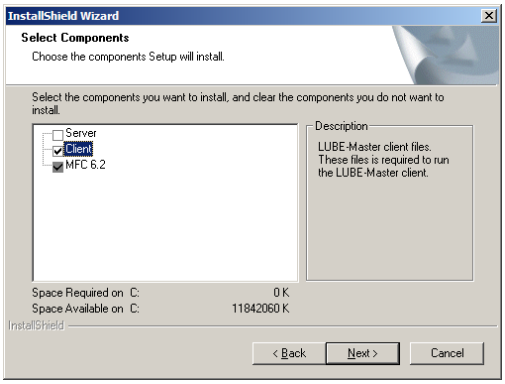
In Windows XP service pack 2 the security has been increased and because of this first 11.7.3 has to be done.

Then the procedure described in the document “Setup an ‘LUBE-Master Server' for remote Engine access on Windows XP SP2.pdf” must be done. This document is placed on the LUBE-Master WinTools R8 CD in the folder,

?:\EXTRAS\Remote Access.

After it is done restart the computer.

11.7.5. LUBE-Master Client Set-up



Install only the LUBE-Master WinTools client software on the client PC. Uncheck the Server line before left-click on the Next-button.

The same rules of BASIC / Professional version as for the normal installation apply to a client installation.

11.7.6. Start Up.

Start LUBE-Master engine on the LUBE-Master Server.

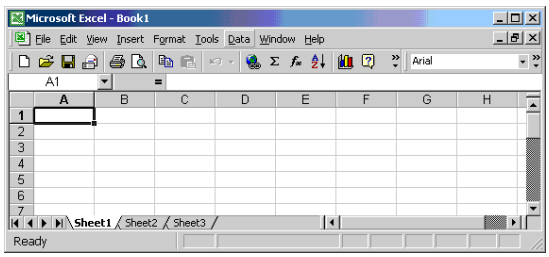
Start the software HWMon.exe on the LUBE-Master Client PC and select the proper server from the list and click on the Save-button. This will open a remote LUBE-Master neighbourhood session.

If you have made a custom layout as described in chapter “Creating a Client layout file”, you can put this layout file in the C:\LUBEMAST folder of the client PC and double click on the file. This will start a client session of this layout.

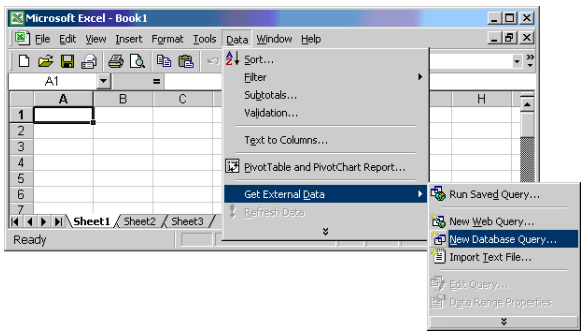
11.8. Importing data to Microsoft EXCEL

Importing data from the LUBE-Master PC database to Microsoft EXCEL is very simple. Using the query wizard in MS EXCEL and the LubeMasterDB ODBC key, see chapter 7.2, does this.

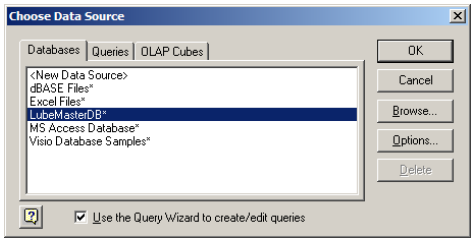
Start MS Excel and open a new spreadsheet.



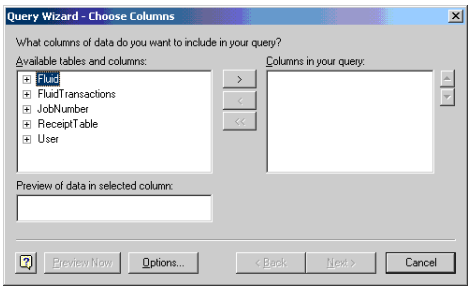
Choose "Data" menu and choose "New query".



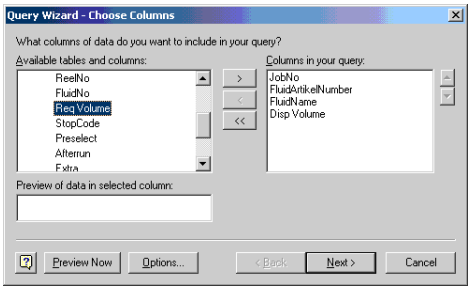
Choose LubeMasterDB and click OK



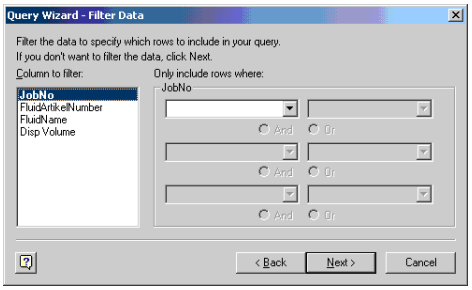
Choose the tables you need and open it by clicking on the "+" sign



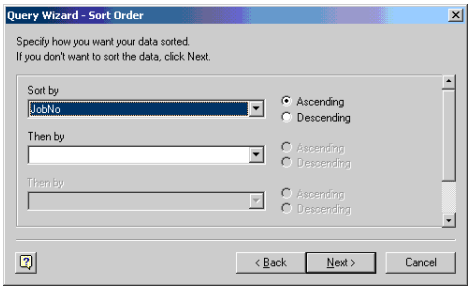
Select the desired fields by marking them and then click on >. When all desired fields are selected click on <NEXT> button.



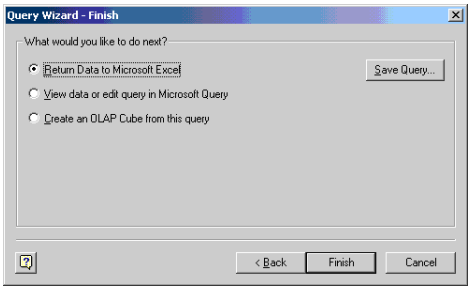
Here you can filter the data and then click Next.



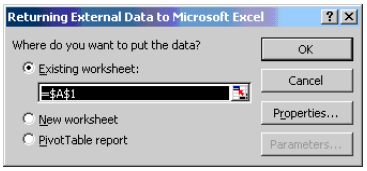
Here you can sort your data and then click Next.



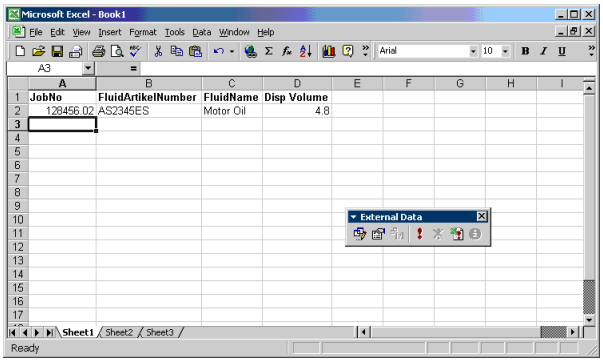
Here you can choose where you want to do with the data and if you want to save the query, then click Finnish.



If you choose to return the data to MSExcel you must decide where it should be placed. “Left-Click” a cell in the spreadsheet and the “Left-Click” OK.



Now you can design you report with MSExcel.

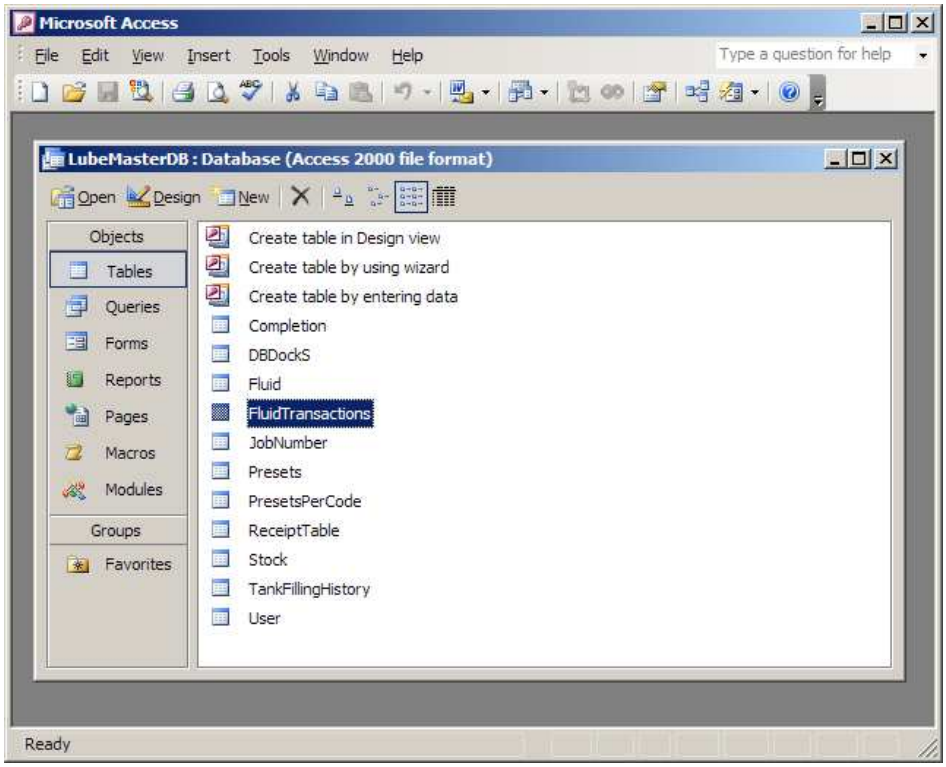


Finished.

11.9. Using MS Access

Basic knowledge of MS Access is necessary.

To manage the database, double-click on C:\LUBEMAST\LubeMasterDB.mdb and MS Access starts. This can be done with the LUBE-Master engine running.



Now it is possible to check the different tables, add/remove/edit users, Jobs, Tanks and so on. It is also easy to create nice looking reports.

11.10. Script service, script.dll (Professional only)

Sometimes there are a need for customized dispensing such as mixing fluids, fill several fluids with different volumes at the same time (recipe), input customized information together with the dispense, simple stock handling of other things than fluids, time scheduled dispenses and similar things.

LUBE-Master is tailor made for this and uses a service called Script Service. The script service (script.dll) is loaded from the LUBE-Master engine properties window exactly as any other service.

The LUBE-Master WinTools R7 or later installs everything needed for the basic Script Service and with a script set that enables the use of pre-set dispensing. The pre-sets are configured through the LUBE-Master WinDB Manager and are stored in the LUBE-Master PC database.

The use of the service is license protected through the License.dat file for LUBE-Master. If no License.dat exists in the LUBE-Master folder run the software Licenser.exe. See chapter “Convert BASIC version to Professional version”. If a License.dat exists we probably have in our database tell us to update it to enable the Script service.

11.10.1. How does it work?

When you type a reel number on a keypad the keypad searches the LUBE-Master network for something that matches the request. If it cannot find a reel with this number it then searches the services and OCP-drivers loaded.

If it finds a script that matches this request it starts talking directly with the script. When the script has received answers to all its questions the script does the opening of reels etc.

Other possibilities are,

Scripts that runs when they are double clicked

Time scheduled Scripts.

Automatic Scripts.

Scripts can be started with dynamic input parameters. This type can be used both locally and remote. Through for example a .bat file, a short-cut or from an external application.

11.10.2. What kind of script language is used

The LUBE-Master script service uses a script language called CSL. It is an Open License script language and is used by a large number of users over the world. This means that the script interpreter are free to use for anyone and that all fixes of it must be reported to other users. It also means that information about how to write CSL scripts can be found for free on the Internet.

The License protection for the LUBE-Master script service is not for the CSL interpreter it is for the connection between the LUBE-Master system and the interpreter.

11.10.3. How to write scripts

Scripts are written using a simple text file editor such as notepad. See LUBE-Master separate Script manual for details.

12. Using the MPDM as a PLC (Programmable Logic Controller)

If the MPDM is equipped with a FLASH chip and the software version is 1.00.09 or later PLC code can be used to customize the functionality. To be able to input PLC code LUBE-Master WinTools R8 or later is needed. There are no needs for a PC to use the MPDM as a PLC only to program it. The PLC code is built on “ladder” code/diagram.

Because of that this is a new feature added there are some limitations at this point

Only a smaller amount of code can be used, about 240 byte.

Note ! ~~**The PLC code is currently loaded in the module RAM and is because of this erased at RE-Boot!**~~ **The latest Chip software fixes this.**

12.1. Possible Inputs / Outputs

Device	Direction	Type	Physical location	PCB
p1o-p4o	Output	Control max 1.25 [A]	5-pole port connector	
p1a-p4a	Input	Signal	5-pole port connector	
p1b-p4b	Input	Signal	5-pole port connector	
p1s-p4s	Input (Read)	Detect status	Internal	
rc0-rc2	Input	Signal	Optional 6-pole connector	2030262D
re0-re2	Output	Signal	Optional 6-pole connector	2030262D
r1-r9	Input/Output	Virtual relays	Internal	
r1tSS-R9tSS	Input/Output	Virtual timer relays	Internal	
init		Start bit	Internal	
sopen	Input	Detect status	Key switch	

12.2. Supported operations

LD [NOT] i	Loads the C register with value of device “i”.
AND [NOT] i	Logic AND of C and the value of device “i”, the result is stored in C
OR [NOT] i	Logic OR of C and the value of device “i”, the result is stored in C
XOR [NOT] i	Logic XOR of C and the value of device “i”, the result is stored in C
OUT [NOT] o	Loads device “o” with the data in the register C

12.3. Sample PLC coded functions

To make it easier to start up the use of the PLC feature this chapter gives some examples of the use of it.

12.3.1. Activate p4o with p4a for 60 s use r1

LD p4a OUT r1t60

LD r1 OUT p4o

12.3.2. Activate p4o with p4a for 10 s, if p4b is OFF Use r1 and deactivate p4o

LD p4a OUT r1t10

LD r1 AND NOT p4b OUT p4o

12.3.3. Flipp-flopp for p3o

LD p3a OR p3o AND NOT p3b OUT p3o

12.3.4. Timed cascade coupling of Port1.

Description

(P2=ON) when P1 is ON plus 5 s (Prolonged Solenoid1 pulse)
(P3=ON) when P2 goes OFF plus 5 s (Pulse after prolonged SolenoidMV1 pulse)
(P4=ON) when P3 goes OFF plus 5 s

Code

```
LD p1o OUT r1t5
LD r1 OUT r2t5
LD r2 OUT r3t5
LD r3 OUT r4t5
LD r1 OUT p2o
LD r2 AND NOT r1 OUT p3o
LD r3 AND NOT r2 OUT p4o
```

12.3.5. Start a pump p4o if the system is opened and activate p3o if it is closed

```
LD sopen
OUT p4o
OUT NOT p3o
```

12.3.6. Start control for a system with two pumps

Description

Start the pump p3o if the system is online.
Start the pump p4o if the system is online and the safety switch rc0 is ON

Code

```
LD sopen
OUT p3o
AND rc0
OUT p4o
```

13. Updating the PC computer

The LUBE-Master WinTools software is based on standard Microsoft® software components such as DCOM, MFC6.2, MDAC and MSJET. This is done to simplify integration between LUBE-Master and other Windows® software. It also reduces the dedicated program code for LUBE-Master which reduces possible software errors.

It is recommended to update the OS to the latest level. Dependant of which OS and other software and how they are installed some standard components may be missing or incomplete.

By updating (patching) the Operating system, the OS, of the PC the risk of having error in these and other components is minimised.

13.1. Patch the OS to the latest version

The OS of the PC can be updated in several different ways. The easiest way is through the Internet. If the PC is not connected to the Internet it can be done through a CD.

It is not possible for us, Eurolube Equipment AB, to have the updates on the LUBE-Master WinTools CD because the updates are from Microsoft® and language specific.

All Windows® OS can be updated with the correct version automatically through the website “windowsupdate.microsoft.com”. Windows 98 and later has a shortcut to this web site with a name like “Windows Update” in the Start-menu.

Windows® 2000 /XP can be set-up for automatic updating.

The updates can also be downloaded from the web and put on a CD for use on computers without Internet connection. This can be done from http://www.microsoft.com/technet/treeview/default.asp

13.2. Install / Update MDAC

The MDAC (Microsoft Data Access Component) is a standard software package for database access that many different database software’s uses. For example it is normally installed when installing Microsoft Office and in many cases together with the OS. Version 2.8 English and Swedish versions can be found on the CD

13.3. Install / Update MSJET

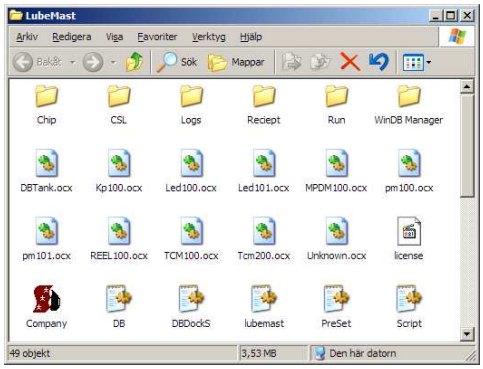
The MSJET (Microsoft JET) is a software package with ODBC drivers for several different databases such as SQL, ACCESS, PARADOX, FOXBORO, etc. It is normally installed when installing Microsoft Office and in many cases together with the OS. Version 4.0SP8 English and Swedish version can be found on the CD

13.4. Show hidden files and extensions

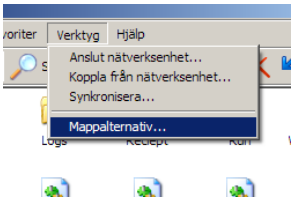
When you want to work with files from the Windows Explorer sometimes the file extensions (.XXX) are hidden. This is due to the fact that file extensions for registered file types are hidden as default in Windows.

Changing folder options can change this. Folder options are changed a little different depending on the Windows version (9X/NT/2K/XP). Below is a description of how to do this in Windows XP.

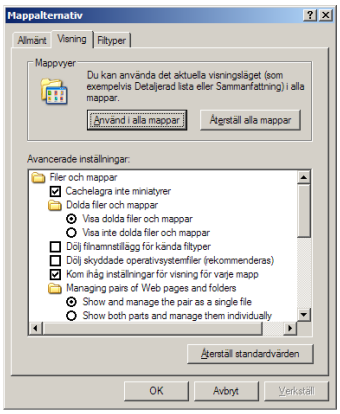
First open Windows Explorer and browse to *C:\LUBEMAST*.



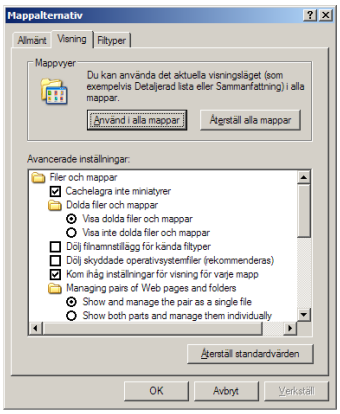
Then select Tools -> Folder Options.



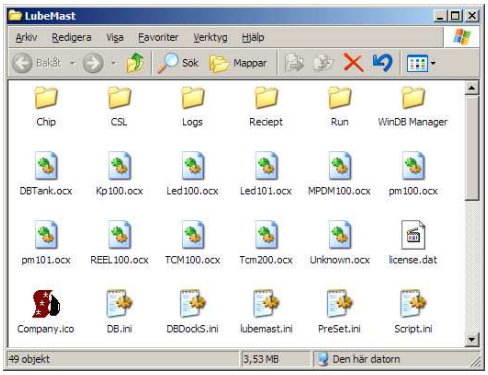
The default looks like this.



Check “Display the full path in the titlebar” and “Show hidden files and folders”. Uncheck “Hide extensions for known file types”. Like this,



Click on OK-button.



Now you can see all files and file extensions.

When you are finished with the files you can do the same thing backwards to restore it as it was before.