

Operating instructions

Fuel consumption
measurement

ab SV3.40:
CAN-BUS &
Messturbinen



Performance optimization | Consumption optimization
Process optimization | Repair of control devices

ELECTRONICS
Ilgenfritz
efficiency in agriculture...

Operation

1. MAIN MENU 1

Fuel consumption:
0,0l/h

Here the current consumption in liter and per hour is shown.

Fuel consumption:
0,0l/h 0%

If the indicator for the engine load is set to "on", the engine load will be shown in percent. (only possible for CAN- BUS).



Menu back (memory contents)



Menu forward (consumption counter 1)

2.0 MAIN MENU 2

c1: 0,0g/h
Σ 0,0g

Consumption counter 1:

Here the consumption in liters since the last resetting (see right hand) and the average consumption of consumption counter 1 is shown. The corresponding measurement period will be displayed in the following menu.



Menu back (current consumption)



Menu forward (consumption counter 2)



Go to display measurement period 1



Save consumption 1 with time 1 and engine load 1 if it is switched on (see 2.3).

The consumption counter 2 has the same function as the consumption counter 1.

Both consumption counters are independently from each other and can be resetted separately.



Please read this installation manual attentively before the assembly and pay attention to all notes. Don't put the additional electronics from Ilgenfritz Electronics in operation before you read and understood the notes. The installation confirms that the buyer read, understood and accepted the notes.

2.1 SUBMENU MEASUREMENT PERIOD

Time 1:
0:10:10h

Indication of the measurement period of the consumption counter 1 in hours:minutes:seconds.



Menu back (current consumption)



Menu forward (consumption counter 2)



Go to display engine load 1



Go to display consumption counter 1

2.3 SUBMENU SAVE/RESET

Reset
Save

Here the contents of the corresponding counters can be resetted or saved.



Reset



Save



Quit menu without changes.

If you select "save", you will be transferred to the memory selection.

2.2 SUBMENU

Engine load 1:
0%

With the measurement option CAN-BUS and if the engine load is set to "on", the average engine load for the corresponding counters will be shown here.



Menu back (current consumption)



Menu forward (consumption counter 2)



Go to display measuring period 1

Memory 1:
0,0l

Here you can save the content of the counter in one of the five available memories.



The menu cannot be quitted without saving anymore. The originally registered data in the memory will be overwritten by the new data!



Memory back



Memory forward



Save in the selected memory

Operation

2.4 SUBMENU RESET CORRESPONDING COUNTER 2

Secure code:
0*** 0

With you personally four-digit securecode, which was supplied with your fuel consumption gauge can you reset the second consumption counter. The right number shows the abortive attempts since the last reset. The abortive attempts increase only if one or more digits are changed.

-  Decrease one number
-  Increase one number
-  Shift one digit right
-  Shift one digit left
-  Confirm secure code



Be careful with your secure code! If you lose your code a foreign person can manipulate you consumption counter!

3.0 MAIN MENU 3

S1: 0,0 g
0:00 h:mm 0%

Indication of the contents of the five available memories. Here the consumed liters, the measurement period in hours:minutes and the average engine load in % will be shown.

-  Menu back (consumption counter 2)
-  Menu forward (current consumption)
-  Go to display content of memory 2
-  Go to display content of memory 5

4.0 MAIN MENU 4 (ONLY WITH JOHN DEERE CAN-BUS)

0,000 mph
0,000 m

Indication of the current speed and covered distance.

-  Delete covered distance



The exact distance can only be calculated if the entered wheel circumference corresponds to the actual circumference of the wheel

5.0 SPECIAL MENU "SETTINGS"

-> Measure setup
multiplier

Here you can call on parameters and change settings for your consumption measurement.



Access setting menu



(first you must press "Menü", after press "OK")



Quit setting menu



The parameters will be saved when quitting the menu. If the ignition voltage will be interrupted, while being in the setting menu, the data will be lost.

The following parameters can be triggered, resp. adjusted:

- | Measurement settings
- | Multiplier
- | Display engine load
- | Measurement mode
- | Consumption 1
- | Consumption 2
- | Forerun
- | Runback
- | On-board train power-supply voltage
- | Serial Number
- | Version
- | Unlock
- | Language
- | Limitation
- | Adjust MT



Next menu up



Next menu down



Switch within selected menu



Back to main menu

5.1 MEASUREMENT SETTINGS

With the "release through an authorized distributor" you can switch between the measurement options CAN-BUS and measurement turbines.



Measurement turbines



CAN-BUS

5.2 MULTIPLIER

In case of deviation between the gas quantity you filled in and the quantity you measured, this can be adjusted by entering a factor.

Deplete your tank at least to the half of the volume and refill it completely afterwards.

Then calculate the factor according to the following formula:

$$\text{Multiplier} = \frac{\text{Displayed consumption}}{\text{Refilled quality}}$$

Example:

$$\text{Multiplier} = \frac{154,4\text{ l}}{167,8\text{ l}}$$

$$\text{Multiplier} = 0,92$$



Multiplier + 0,01



Multiplier - 0,01



The factor can only be determined by this formula, if it was set at 1.00 during the calculation. If you would like to recalculate the shown consumption to the factor 1.00 and then determine the new factor.

5.3 DISPLAY ENGINE LOAD

With the measurement option CAN-BUS the percentage engine load display can be switched on or off here.



Display engine load on



Display engine load off

5.4 MEASUREMENT MODE

Depending on the kind of injection pump, the measuring mode has to be adjusted here.



Change mode



Change mode

Mode 1 is used if the forerun measuring turbine is directly located in front of the injection pump and the other directly in the runback. For this mode, an electrical fuel feeding pump is necessary.

Mode 2 is used if the fuel injection pump is taking the diesel directly from the tank and if there is no electrical or mechanical pre-feeding pump available.

Mode 3 is used when a mechanical pre-feeding pump is available which is not included in the fuel injection pump.

5.5 Consumption 1: Displays value for consumption counter 1, specified in μ liter (helpful in case of error).

5.6 Consumption 2: Displays value for consumption counter 2, specified in μ liter (helpful in case of error).

5.7 Forerun: Shows forerun quantity in liters/hour for measuring turbine option.

5.8 Runback: Shows runback quantity in liters/hour for measuring turbine option.

5.9 On-board train power-supply voltage: Shows the current on-board train power-supply voltage of your vehicle.

5.10 Serial number: Displays the serial number of your consumption measurement.

5.11 Version: Shows the hardware and software version for your consumption measurement.

5.12 Unlock: Indication of the software release of the consumption measurement.

5.13 Language: Language display and change menu for your consumption measurement.



German



English

5.14 Limitation: Here you can switch on or off the limit of the shown consumption.



Yes



No

Operation

5.15 Measuring turbines setting: With this menu you can set the measuring turbines.



Before installing the measuring turbines set the factor to 1.00!

OK

Press OK to start the setting process...

OK

Run the engine at the idle speed mode and then press OK

The set-up process takes approximately 10 sec. and will be finished by a message on the display. This message confirms the correct set-up or requests to repeat the procedure in case of failure.

6.0 SPECIAL MENU "INDICATE DISPLAY"

Show display:
yes

If you keep pressing the buttons



(approx. 5 sec.) when hitting

the "ignition on" button, you can turn on or off the display.



Display indication off

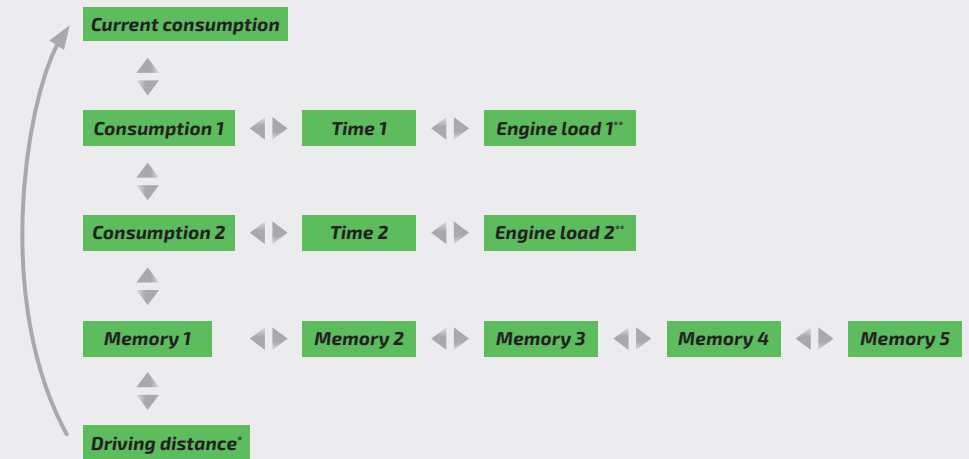


Display indication on

OK

Save and quit menu

6.1 OVERVIEW STRUCTURE MAIN MENU



* only with John Deere CAN-BUS

** only with CAN-BUS

Operation

6.2 OVERVIEW STRUCTURE SETTING MENU

Measurement settings	◀▶	Measuring turbines/CAN
Multiplier	◀▶	0,01 – 3,00
Display engine load	◀▶	on/off
Measurement mode	◀▶	Mode 1..4
Consumption 1	◀▶	μ liter
Consumption 2	◀▶	μ liter
Forerun	◀▶	L/h
Runback	◀▶	L/h
On-board train power-supply voltage	◀▶	0,00 V
Serial Number	◀▶	VMXXXXX
Version	◀▶	SV: X.X / HV: X.X
Unlock	◀▶	Brand/Dealer
Language	◀▶	German/English
Limitation	◀▶	on/off
Adjust MT	◀▶	Setting process

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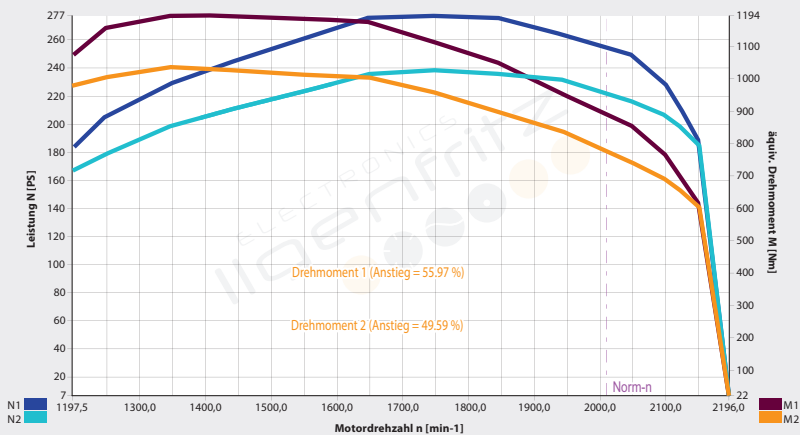


The intelligent performance principle

State-of-the-art performance optimizations are based on intelligence. This starts with the fact that fuel is not consumed continuously but it is only injected if it is actually needed.

The optimization interacts extremely accurately through continuously monitoring the injection parameters as well as the load and the rotational speed. Independent of whether you use auxiliary electronics or change the engine control unit software – **our optimization is provided by preserving the engine and it is lastingly effective!**

This characteristic curve was taken from a John Deere 8245R for which the fuel and the performance were optimized.



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