

System PETRO 3003

Aircraft Refuelling

Operating Instructions



BARTEC AIRCRAFT REFUELLING

Software version 1.23.x

BA 090323

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Table of Contents

1	About this manual	5
2	Safety precautions	6
3	Basics	7
3.1	Operating unit (HMI).....	7
3.1.1	Keypad.....	7
3.1.2	Display	7
3.2	Operating concept.....	8
3.2.1	The software user interface	8
3.2.2	Softkeys	9
3.2.3	Monitoring the connection.....	11
3.2.4	Info line	12
3.2.5	Event display.....	12
3.3	Operating the menus.....	13
3.3.1	Opening a menu	13
3.3.2	Editing parameters.....	14
4	Delivery mode	17
4.1	Starting a shift/tour	17
4.1.1	Shift dialog: Off	17
4.1.2	Shift dialog: manually.....	17
4.1.3	Shift dialog: TAG.....	18
4.2	Proceeding an order.....	20
4.2.1	Order details Window	20
4.2.2	“Tour” window	21
4.3	Edit order data.....	21
4.3.1	Delivery with additive blending	22
4.3.2	Preset quantity	23
4.3.3	Large Display	24
4.3.4	Aircraft registration.....	25
4.4	PIT entry.....	26
4.5	Meter selection.....	27
4.5.1	Manual meter selection.....	27
4.5.2	Selecting a meter according to transaction type.....	28
4.5.3	Selecting a meter according to input	29
4.6	Start fuel-filling	30
4.7	Rejecting refuelling.....	31
4.8	Performing the refuelling.....	32
4.8.1	Further information.....	32
4.8.2	Interrupting delivery	33
4.8.3	Confirm water test.....	33
4.8.4	Switching the temperature display.....	33
4.8.5	Displaying the current order data.....	34
4.8.6	Updating an order	34
4.8.7	Differential pressure.....	35
4.8.8	Water content.....	36
4.8.9	Tank content	37
4.9	Ending an order.....	38
5	Special functions.....	40
5.1	Unplanned Order.....	40
5.1.1	Process Ident	40
5.1.2	Park Position.....	42
5.1.3	Airline	42

5.1.4	Aircraft Registration	43
5.1.5	Aircraft Type.....	43
5.1.6	Flight Number	43
5.1.7	Minimum Fuel / Block Fuel/ No Fuel.....	44
5.1.8	Product.....	45
5.1.9	Arrival Time	45
5.1.10	Departure Time.....	46
5.1.11	Destination	46
5.1.12	Arrived from	46
5.1.13	Fuelling Company	47
5.1.14	ID.....	47
5.1.15	Pay Mode	47
5.1.16	Pit-Number	48
5.1.17	Date of Flight.....	49
5.1.18	Personal-ID	49
5.1.19	Preset Quantity	49
5.1.20	Tax number	50
5.2	Duplicate print out	50
5.3	Planned order request.....	50
5.4	Totalizer display	51
5.5	Additive totalizer display.....	51
5.6	Display dipstick values	52
5.7	Temperature/density request	52
5.8	Received messages.....	52
5.9	Request order list	53
5.10	Order return.....	54
5.11	Change language.....	54
5.12	Switch off controller system	55
5.13	Start flushing process.....	55
6	Main Menu.....	56
6.1	Entering the driver password	56
6.2	Setting time and language	57
6.3	Parameter Print Out	58
6.4	Journal Print Select Menu	59
6.4.1	Print Current Tour	59
6.4.2	Print not printed tours	60
6.4.3	Selection Tour Journals	60
6.4.4	Journal with errors	61
6.4.5	Show Bypasses	62
6.4.6	Print Tourinfo	62
6.5	Service Menu	62
6.5.1	Database browser.....	62
6.5.2	Logfile browser.....	63
6.6	Controller System Switch Off	64
6.7	Version state	65
6.8	Lock off dispensing barrier	65
7	Feature Enhancements.....	66
7.1	Sending specific messages	66
7.2	Check Interlock inputs.....	67
7.3	Vehicle-office connection test	67
7.4	Large leak detector	68
7.5	Vehicles with a dipstick	70

7.6	FTL/FTP data transfer.....	3
		70
8	System monitoring.....	71
8.1	Display of malfunctions	71
8.2	Diagnostics menu.....	73

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<i>EU-Declaration of conformity</i>	<p>We, BARTEC BENKE GmbH, Schulstraße 30, D-94239 Gotteszell, hereby declare, that this product is in compliance with the essential requirements of the relevant EU-Directives</p> <p>The EU-Declaration of conformity for this product can be obtained from BARTEC BENKE GmbH, Schulstraße 30, D-94239 Gotteszell, gotteszell@bartec.com</p>
<i>Waste disposal</i>	<p>Make sure that the product described here is disposed of in an environmentally sound manner.</p> <p>Observe the national and local safety regulations.</p>

1 About this manual

The operating instructions are part of the product and must be kept in the immediate vicinity of the device. The personnel for assembly, operation and maintenance must have access to it at all times.

The operating instructions contain important notes, safety instructions and test certificates that are necessary for the correct functioning of the device during operation. The operating instructions are intended for all persons involved in the assembly, installation, commissioning and maintenance of the product.

The illustrations in this manual are intended to illustrate the information and descriptions. They cannot always be transferred unchanged and may differ slightly from the actual design of the device.

BARTEC GmbH reserves the right to make technical changes at any time.

BARTEC GmbH is under no circumstances responsible or liable for any indirect or consequential damages resulting from the use, operation or application of this user manual.

Please read the Operating Instructions carefully before using the product.

This document must be kept by the user for the entire life of the product.

Signs and symbols

The following characters and symbols are used in this manual to highlight passages that need special attention.



Notes

This arrow indicates special features to be observed during operation.



Warning

This symbol draws your attention to passages that, if not followed or followed inaccurately, may result in damage to or destruction of parts of the system or loss of data.



Danger!

This symbol marks passages that, if not followed, endanger the health or life of humans.

General information within the text is marked with a frame.

2 Safety precautions

The operator of the system is responsible for observing all the regulations in force for the storage, transportation and loading/unloading of combustible liquids.

For safe installation and commissioning, the knowledge of the safety instructions and warnings in this service manual and their strict compliance are essential.

Careful handling and consistent adherence to instructions can help to prevent accidents, injuries and property damage.

Regulations and provisions lose none of their validity when the system is operated with PETRO 3003 units.

PETRO 3003 units are built with due consideration to the regulations currently in force and left the factory in perfect condition. Their installation and maintenance are to be entrusted to properly trained specialists only.

- Make sure that the data and operating conditions specified by BARTEC BENKE are observed.
- Follow the instructions for operating and servicing the units.
- If you discover any signs of damage or breakage on any parts of the system or if the system's safe operation cannot be guaranteed for any other reason, do not start the system or, if already in operation, shut down the system immediately. Notify your maintenance department.
- Get in touch with our service specialists if you discover any faults or defects during operation or if you have cause to doubt that the units are working properly.
- PETRO 3003 units are not a replacement for a tanker vehicle's safety equipment or for a user's own safety measures (e.g. overfill protection).

The measuring system may only be operated for applications that are subject to legal metrological control in the respective EU member state if the nominal operating conditions specified in the EU type examination certificate are met.

3 Basics

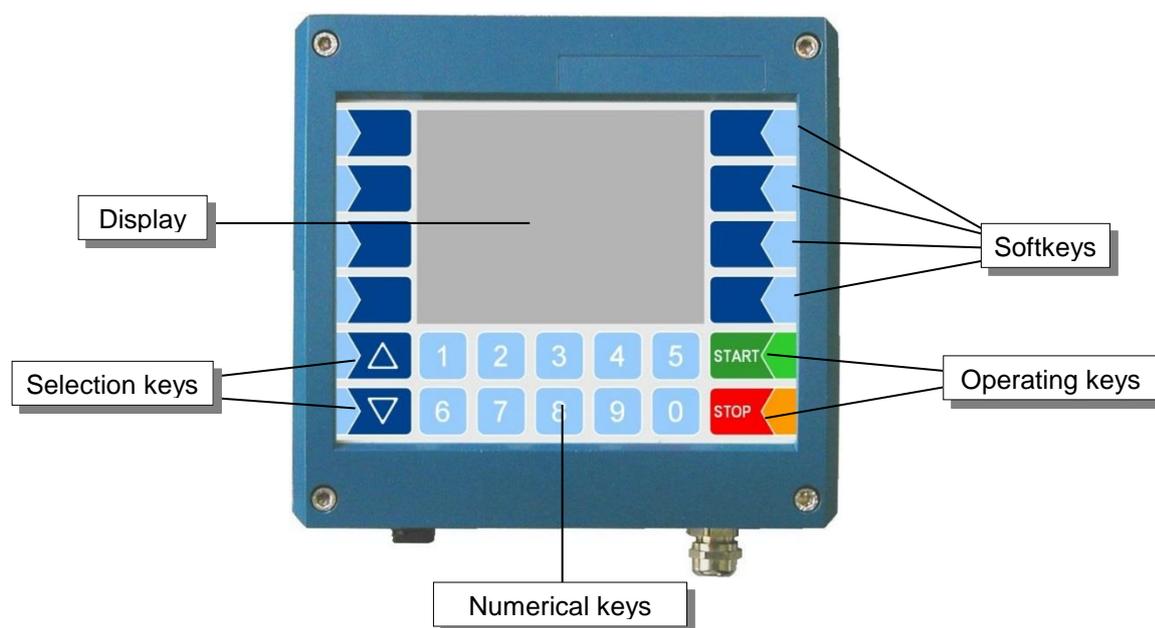
The PETRODAT 3003 system can be used to monitor, register and control all operations and operating processes for loading and unloading petroleum vehicles in hazard classes A1 and A3. Aircraft Refuelling Version 3003 is used to control aircraft fuelling and defuelling operations as well as to enter and transmit the required and registered data. It is operated using the operating unit (HMI).



How to start up the system and to operate the vehicle equipment depends on the vehicle type and the therefore valid operating instructions.

3.1 Operating unit (HMI)

The operating unit (HMI) acts as the central control and information unit for the entire system. Communication between the operating unit and other components within the system takes place via USB or, in the case of P-NET devices, via P-NET.



3.1.1 Keypad

The system can be operated using the touch-sensitive keys on the operating unit (touch screen with numerical keys, selection keys, softkeys and operating keys) as well as key functions that are shown on the display depending on the situation. The functions of the softkeys are controlled by the software according to the current operating status.

3.1.2 Display

A graphical screen designed as a touch screen is used to display all information. In addition to the touch-sensitive keyboard, various functions can also be operated directly using controls on the display surface.

3.2 Operating concept

3.2.1 The software user interface

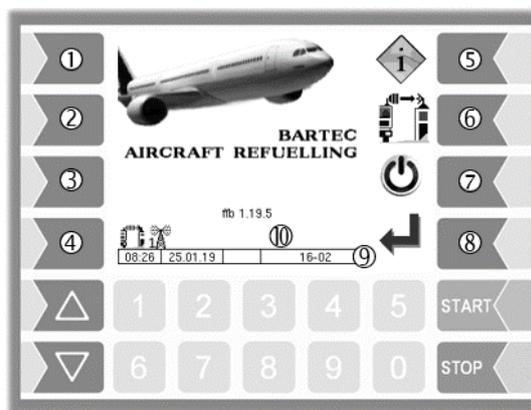


Due to differences between software releases and/or configurations, the displays illustrated in this document may differ slightly from the displays on your system.

When the system is started up, the main menu appears on the display.

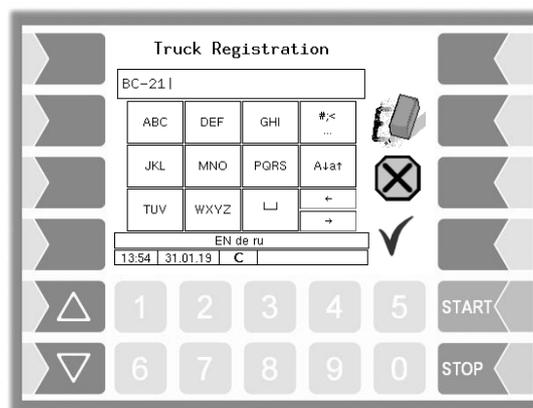
You can access the various displays or operating modes using the softkeys to the left and right of the display.

①	Open diagnostics menu
②	Open event display
③	Open menu selection
④	Open menu for specific messages
⑤	Depending on the configuration, this softkey has the following functions: <ul style="list-style-type: none"> • Call up interlock display • Print journal
⑥	Depending on the configuration, this softkey has the following functions: <ul style="list-style-type: none"> • Start TCP connection test • Start FTL/FTP data transfer
⑦	System switch off
⑧	Start delivery mode
⑨	Info line
⑩	State line



3.2.2 Softkeys

The softkeys can be assigned various functions, the current meaning of which is indicated by symbols. All keys are touch-sensitive, meaning that you don't need to press them but simply have to touch them.



Symbol	Meaning	Effect
	Confirm	A selected menu is opened. A selected parameter setting is confirmed.
	Close menu	The menu that is currently open is closed and the system switches to the next menu up in the hierarchy.
	Cancel	The menu that is currently open is closed and the system switches to the next menu up in the hierarchy. Any settings or entries that have been made are discarded.
	Edit	An entry or selection dialog is opened for the selected parameter.
	Correct	The character to the left of the cursor in an entry dialog is deleted.
	Accept, save	The menu that is currently open is closed. All settings/entries that have been made (including those in lower level menus) are accepted and saved. All changes are only saved if you exit the menu or entry dialog using this softkey!
	End order, save, print	The current delivery order is ended, the data of this order is saved and the delivery note is printed.
	End order, save	<i>If no printer is configured:</i> The current delivery order is ended, the data of this order is saved.
	Switch temperature	The delivery display switches from the average temperature (AVG) to the actual temperature (ACT) or vice versa.
	Special functions	The menu for selecting special functions is opened.
	Password input	The window for entering the password is opened (Driver-, User- or Service-Password).
	Change user password	The user password (configuration level 2) can be changed.

Symbol	Meaning	Effect
	Connection test	When TCP communication is activated, a test message (ping) is sent to the office.
	FTL/FTP-Data transfer	When the FTP communication is activated, the return run data are generated, the WLAN interface is switched on and FTL/FTP communication between the vehicle and the office is started. When all the files have been exchanged, the WLAN interface is switched off again.
	Start download	The software download from the BARTEC server (Service menu) is started.
	Cancel download	The software download from the BARTEC server (Service menu) is cancelled.
	Print copy	Prints a copy of the delivery note.
	Order complete	Finishes the current order and sends the message „Order complete“ to the office.
	Check Interlock inputs	The current states of the configured interlock inputs are displayed.
	System Switch off	The system is switched off properly, shutting down all modules.
	Water test	The message "Water test performed" is sent. (Available when the FOI interface is used and when the parameter „Fehler! Verweisquelle konnte nicht gefunden werden.“ in the menu Fehler! Verweisquelle konnte nicht gefunden werden. is activated.)
	send OK	Sends the message „OK“ (This softkey is available only with FOI-interface.)
	Dialog request	A dialog request is sent to the dispatcher. (The softkey is only available when the BARTEC interface is used.)
	Edit flight data	From the large display of the flight data out editing the flight data can be called.

3.2.3 Monitoring the connection

The connection between the vehicle, Internet and office is constantly monitored and its status is shown on the display. The following icons are used to display the current status of the connection. They appear in the display above the info line.

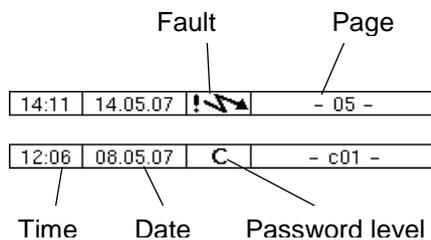
	Symbol	Meaning
Modem		Communication activated
		Modem is switched on, internet connection established.
Office/Remote TCP		Connection to the office present
		FOSI: Connection to server ok but no connection to dispatch
		Disconnected from the Office
Office/Remote FTP		Connection to the office/server interrupted
		Connection to the office/server is established.
		Tour data available and connection to the office/server interrupted
		Tour data available and connection to the office/server is established.
		Files to upload available and connection to the office/server interrupted.
		Files to upload available and connection to the office/server is established
		Data is send from the vehicle to the office/server.
		Data is send from the office/server to the vehicle
		Downloaded files available and connection is established
		Downloaded files available and connection is interrupted
WLAN		Connection to WLAN interrupted
		Connection ist established or interrupted.
		Connection to WLAN established.
Bluetooth		Bluetooth interface is active.
		Bluetooth connection is established
Connection to large leak detection	gle	Connection to GLE OK
	gle	Connection to GLE OK but data is not picked up
		No connection to GLE

	Symbol	Meaning
Counter		Meter 1 selected
		Meter 2 selected
		Meter unknown
Tank content		Quantity in the tank
Module basic		Connection to the base module is present
		Connection to the base module is interrupted
		Connection to the base module and print jobs is present
		Connection to the base module is interrupted and print jobs present

3.2.4 Info line

The info line shows the date and time, information about the operating status and the software page number.

Example:

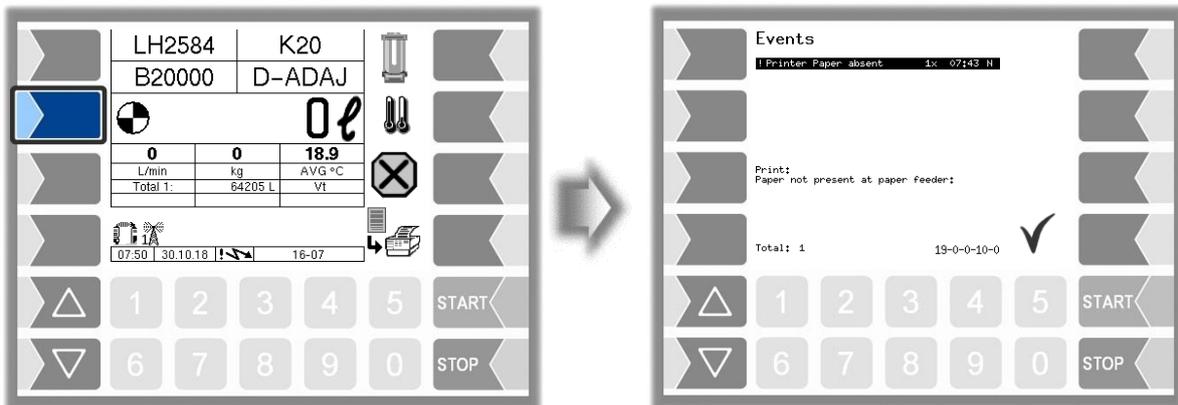


3.2.5 Event display

Important error- or fault messages are displayed directly on the display.

The second softkey down, to the left of the display, is used to open the event display, which shows all operating statuses and faults.

You use the softkey to acknowledge messages that are displayed. The window "Events" will be closed automatically after 20 seconds. Error messages are not deleted and the Fault-symbol is also displayed in the info-line, until the cause of the error has been removed



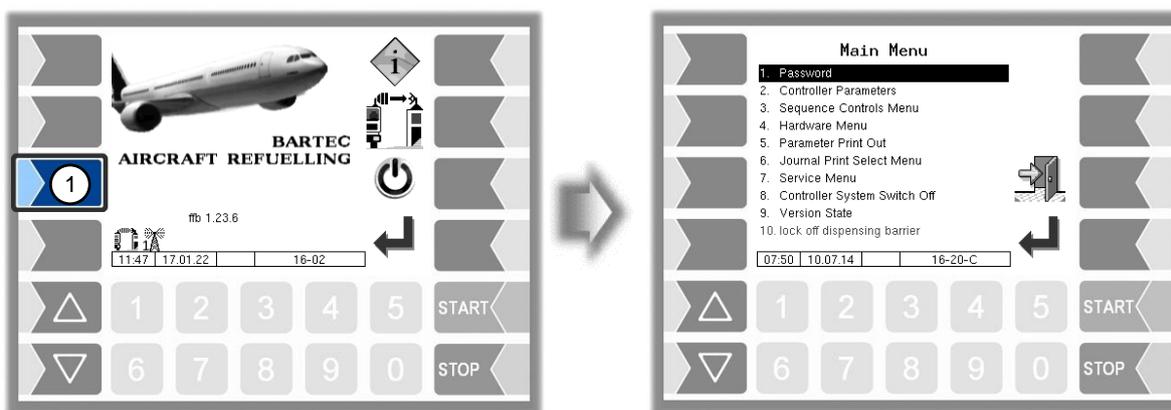


The Event Viewer may show several errors.
You can use the arrow keys to select the lines which show the errors.
More information and an error code are displayed for the error currently selected

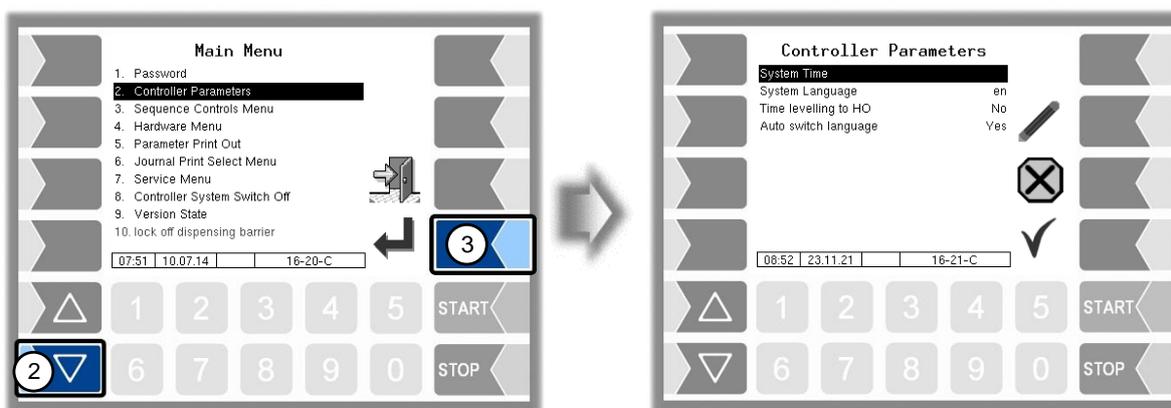
3.3 Operating the menus

3.3.1 Opening a menu

1. Touch the third softkey from top left of the display to open the main menu.



2. Use the selection keys  and  to select the menu you wish to open. The selected menu is highlighted with a black bar.
3. Touch the “Confirm” softkey to open the menu.



You can also open the desired menu directly using the corresponding numerical key.

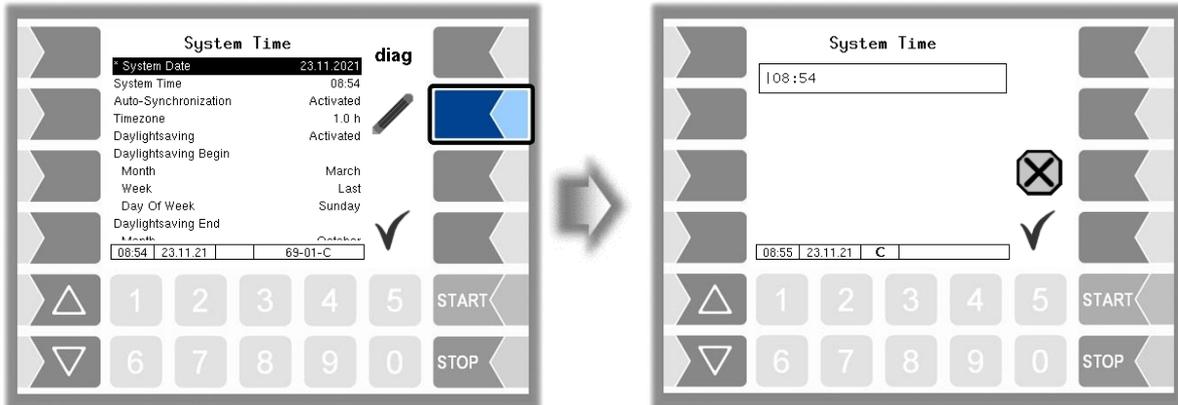
If the menu contains further submenus, you can open the required submenu in the same way.

3.3.2 Editing parameters

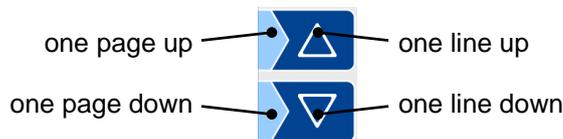
1. Use the selection keys  and  to select the parameters you wish to edit. The selected parameter is highlighted with a black bar.
2. Touch the “Edit” softkey to open the edit window (entry or selection dialog).



The “Edit” softkey is only available if you are authorised to edit the selected parameter in the current password-protected configuration level.



If not all entries in menus or lists can be displayed in the screen, you can use the selection keys to scroll lines or pages.



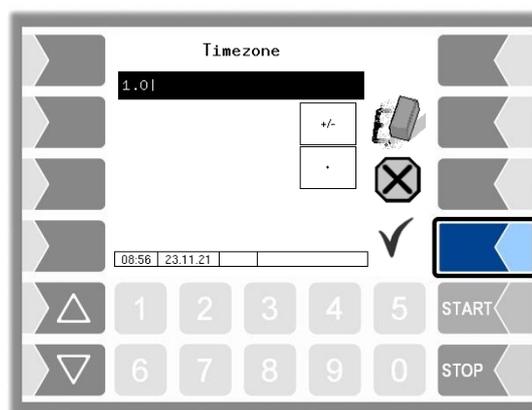
Numerical entries

Numerical entries are entered using the keys below the display.

If you need to make any corrections, you can use the softkey with the rubber symbol. When you touch this softkey, the character to the left of the cursor is deleted.

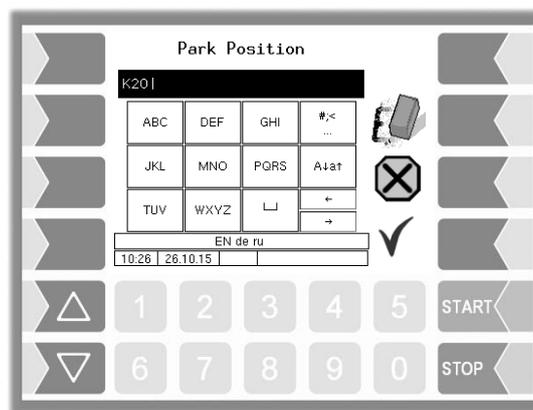
If a parameter must be entered with a positive or negative value or with decimal places, you can use the sign softkeys  or .

Confirm your entry using the “Confirm” softkey“.



Alphanumeric entries

Letters are entered using the keys that are shown on the display. To enter a letter, simply touch the corresponding key. The keys are assigned up to four characters. You determine which character appears in the input line by pressing the key the appropriate number of times in quick succession. You can enter a blank with the  key.



Shift key

You can use the  key to switch from upper case to lower case letters and vice versa.

Special characters

If special characters need to be entered, you can use the  key to switch the key assignment to the special character level. You can switch back to letters using the same key, which is now labelled .

Once you have finished making your entry, touch the “Confirm” softkey.

Selection lists

Selection lists are available for certain parameter settings.

Select the required setting using the selection keys  and .

The selected setting is highlighted with a black bar.

Confirm your selection using the “Confirm” softkey.

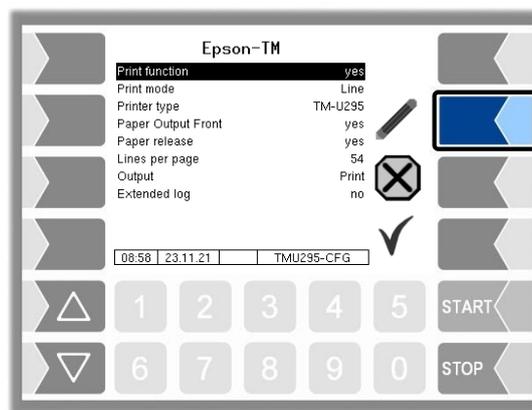


You can also select the desired setting directly using the corresponding numerical key.



Alternatives

In the case of parameters for which only two alternative settings are possible, e.g. yes/no or on/off, the settings are switched when you touch the “Edit” softkey or a numerical key **0** or **1**.



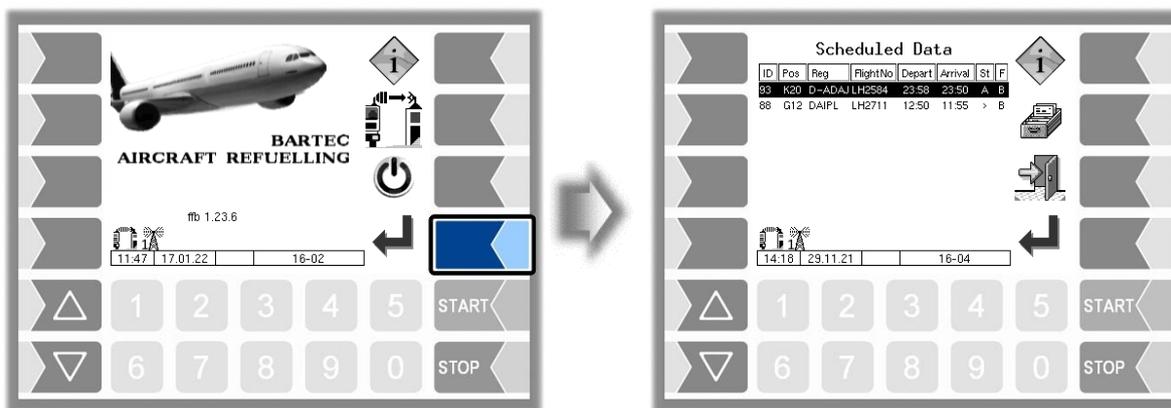
4 Delivery mode

4.1 Starting a shift/tour

The display and function for starting a shift or a tour depend on the configuration of the shift dialog box.

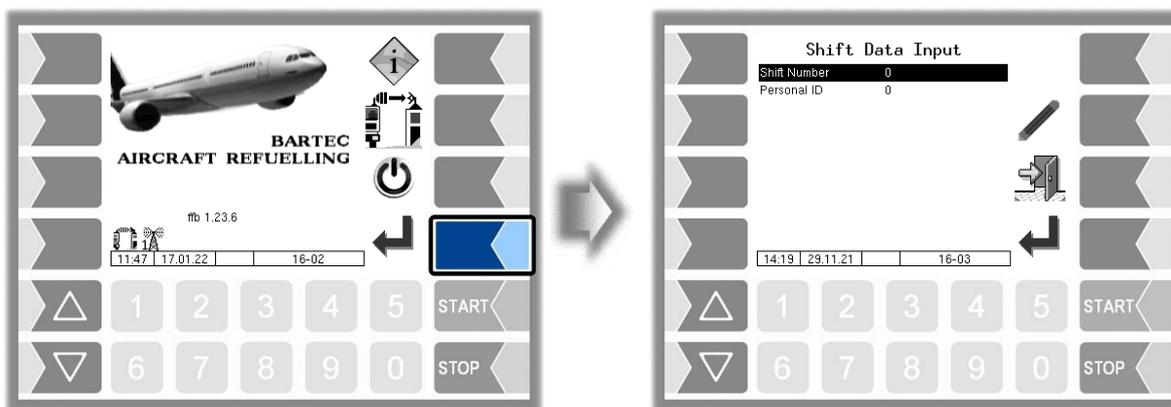
(Configuration: *Sequence Controls Menu/ Dialog Parameters/shift dialog*)

4.1.1 Shift dialog: Off

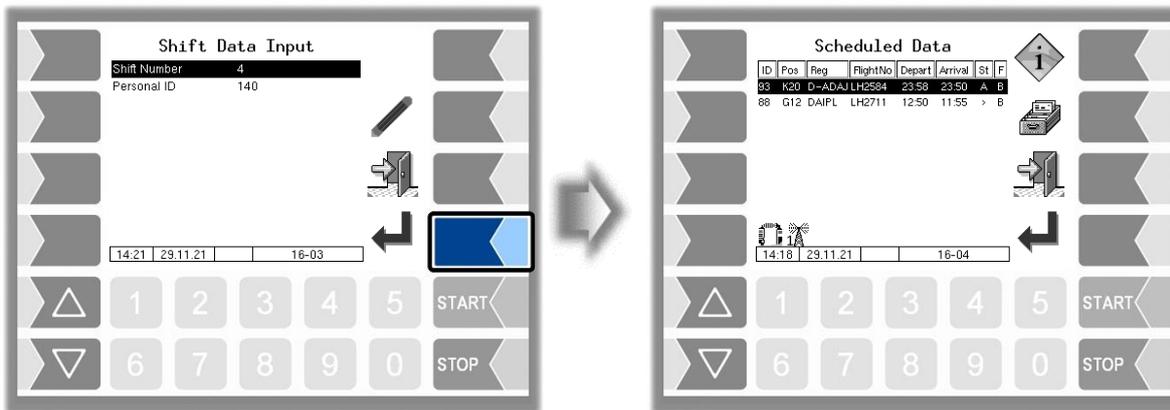


If the shift dialog box is deactivated, then the "Shift data input" window will be skipped.

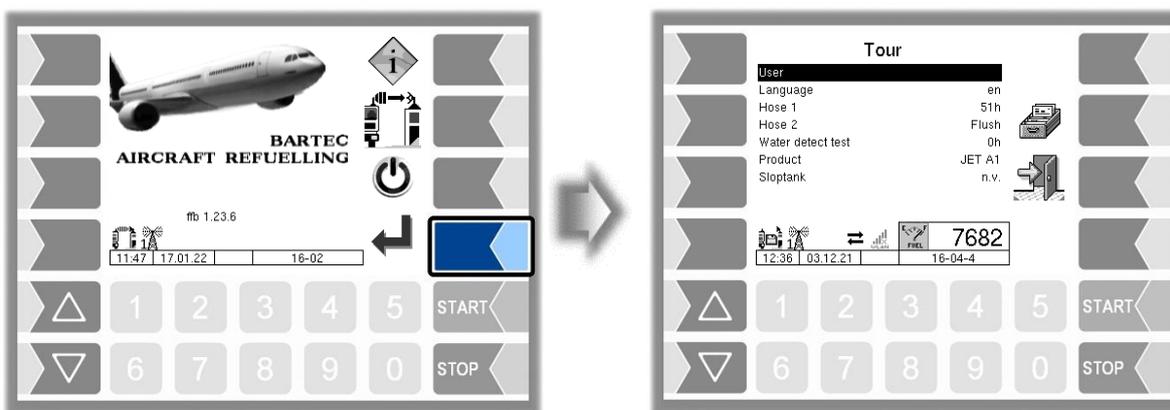
4.1.2 Shift dialog: manually



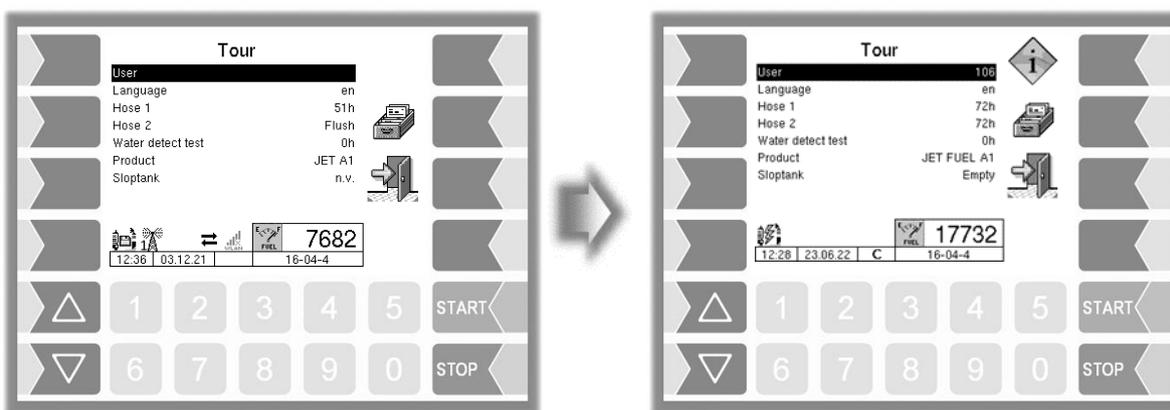
Enter the shift number and your personal ID. To do this, select the appropriate line and touch the "Edit" softkey to open the entry dialog. Confirm the entered shift data. The available order data is displayed.



4.1.3 Shift dialog: TAG

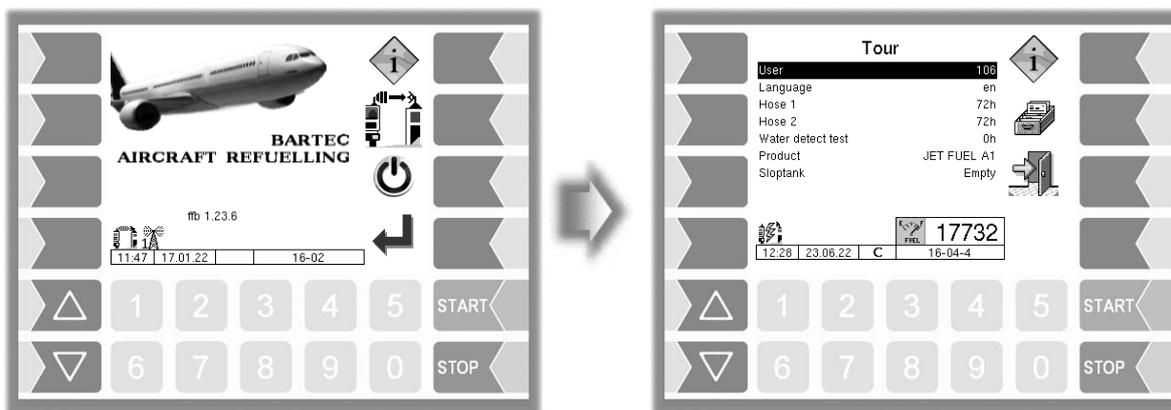


For the shift start or the driver registration the RFID TAG must be used. To do this, the operator/driver must hold the RFID TAG in front of the TAG reader. The system uses the pre-installed driver database to check the validity of the RFID TAG. If the login is successful, the ID of the operator (in the "Tour" window) and the "Confirmation" softkey will appear on the display.



A fuel-filling order can now be accepted and carried out or special functions can be implemented. Each order and call-up of the special function menu must be preceded by a registration.

If the operator is on the start screen while the driver is registered, then the software will automatically switch to the next window.



Successful registration also corresponds to the start of a tour. The driver-ID will be included in the tour journal. The tour will end when you switch to the "Start screen/main menu" window. If a change in driver is detected during a tour, the current tour will end and a new one will start. During a break, for example, you can also switch off the controller system via the "Special functions" window without leaving the tour.



The "Tour" window or the "Order details" window will appear, depending on the "Display default data" parameter. (See also Section 4.2).

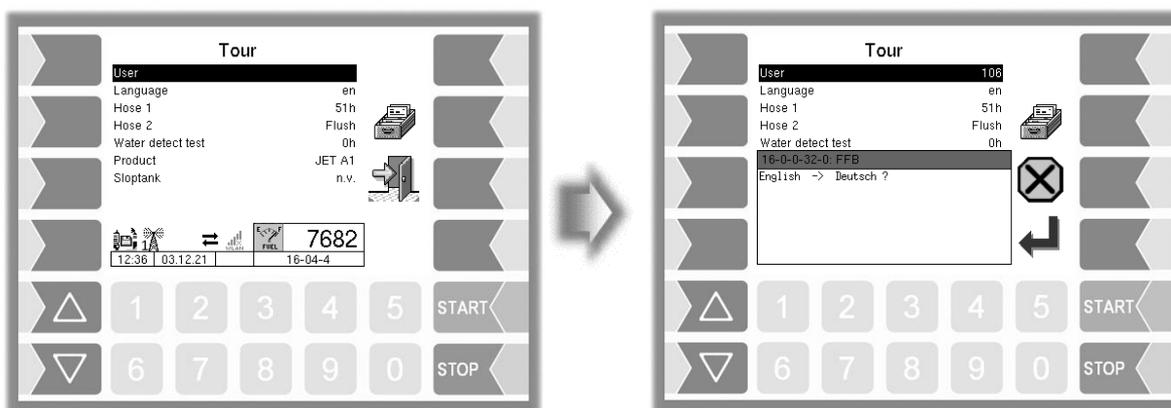


In the case of a double delivery from the master/slave, the tour/shift of the slave base module also ends when the master shift ends.

Automatic language change

When the automatic language change is activated and the device language differs from the driver's language determined during the registration, a language change will be suggested to the operator. If the language is changed, the system restarts automatically.

(Configuration: *Controller Parameters/Auto. switch language*)



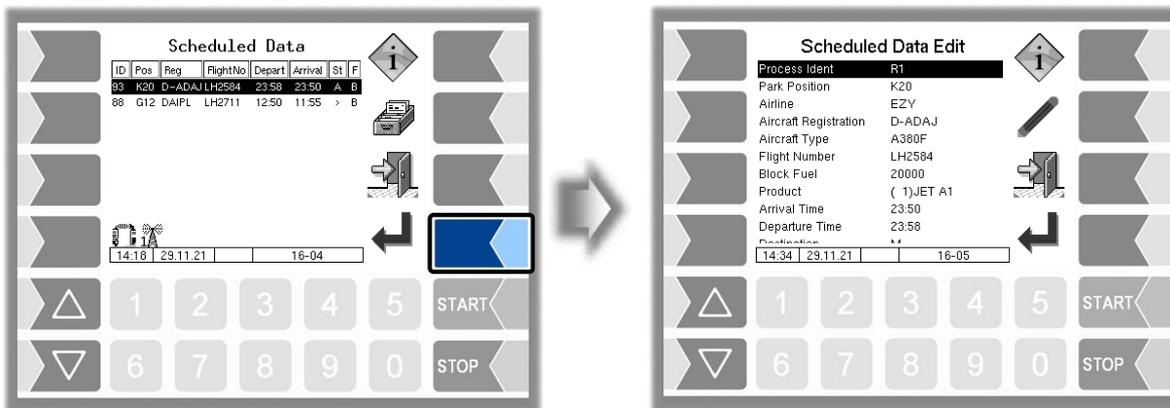
4.2 Proceeding an order

The "Tour" window or the "Order details" window will appear depending on the configuration. Different types of display are available for the "Order details" window.

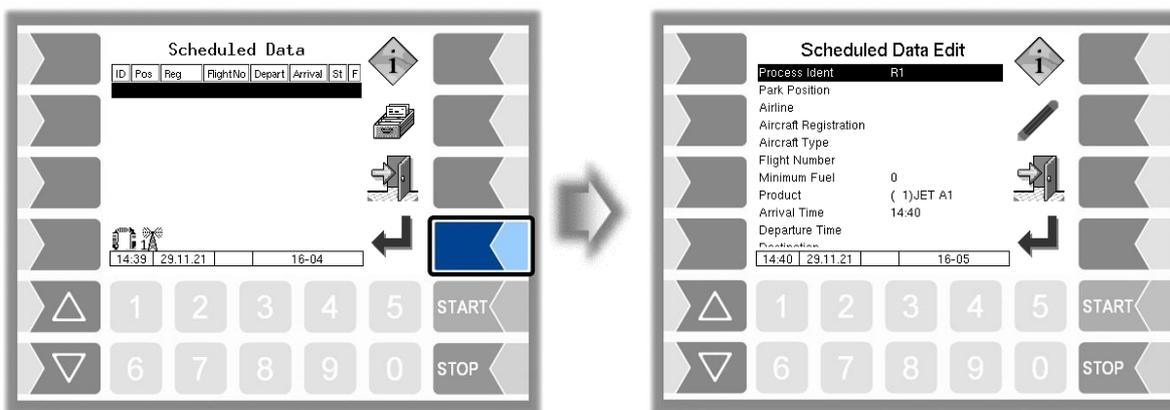
(Configuration: Sequence Controls Menu/ Dialog Parameters/View of scheduled data)

4.2.1 Order details Window

The orders planned by the office are displayed in the "Order details" window. Use the selection keys to select an order and start it with the "Confirmation" softkey. The order will then have the status "in progress" in the office.



If there are no orders, you can start an unscheduled order with the "Confirmation" softkey.



However, in this case, you must edit the order fields manually. To do this, you must select the order field using the selection keys and confirm it with the "Edit" softkey. To edit the order fields, see the chapter "Special functions – unscheduled order"



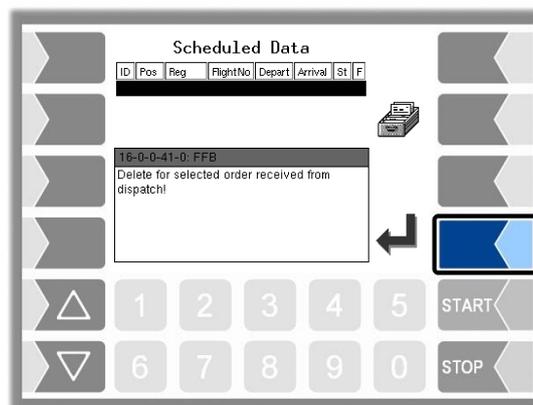
If there are scheduled orders, you can start an unscheduled order using the special functions.



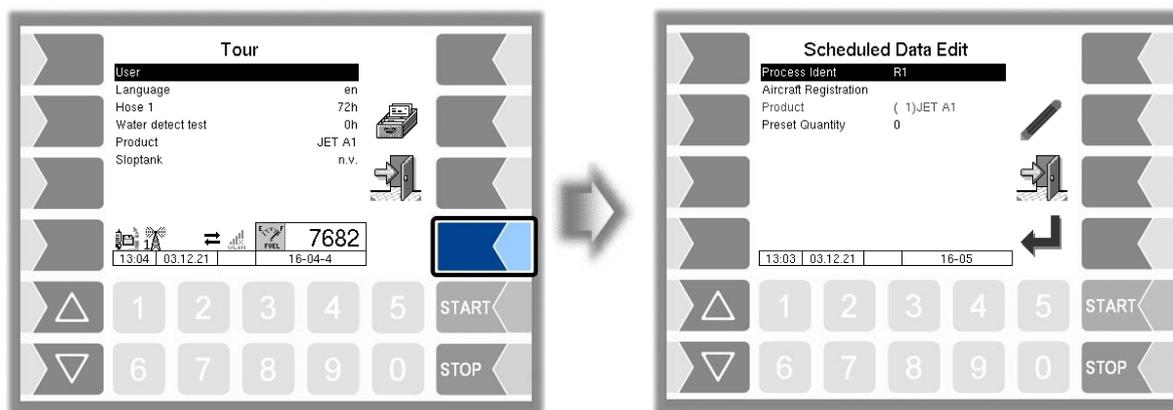
If no de-/refuelling has been started, the order can be deleted from the dispatch.

Order deleted

If the order is deleted by the dispatch system, a notice will be displayed, and the window “Scheduled Data” appears.



4.2.2 “Tour” window



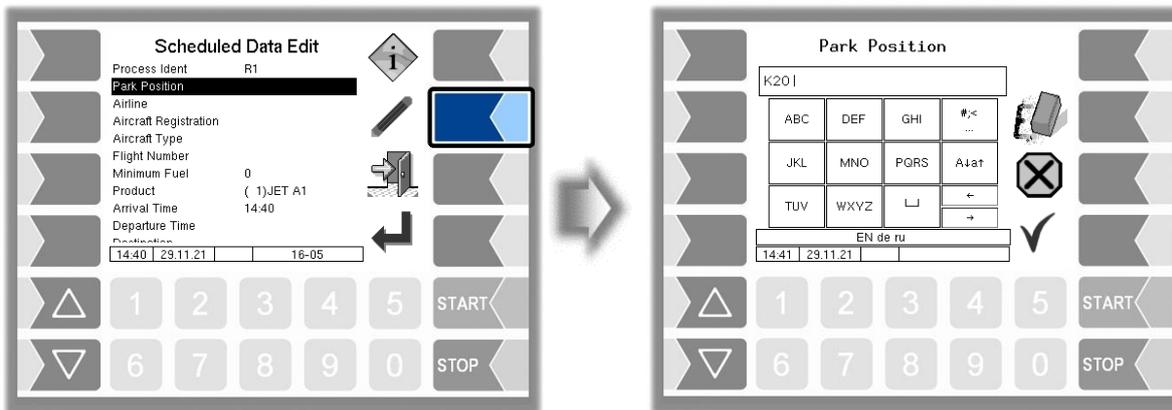
Only unplanned orders can be started in the “Tour” window.

4.3 Edit order data

You may be able to edit the order fields/default data of a scheduled order, depending on the configuration. You must select the order field using the selection keys and confirm it with the "Edit" softkey.

(Konfiguration: *Sequence Controls Menu/ Dialog Parameters/Change planned order data*)

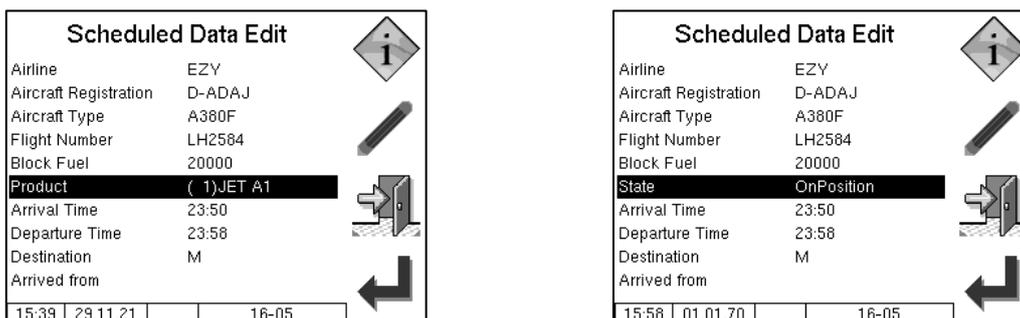
See the chapter "Special functions – unscheduled order" for detailed information on editing the order fields.



It may be necessary to edit order fields (e.g. parking position), depending on the configuration.

You can configure the appearance of the "Order" window so that the "State" line is displayed instead of the "Product" line for scheduled orders. The content of this line is transferred with the order details and cannot be edited.

(Configuration: Sequence Controls Menu/ Dialog Parameters/View of scheduled data)



The flight-ID cannot be changed in planned orders

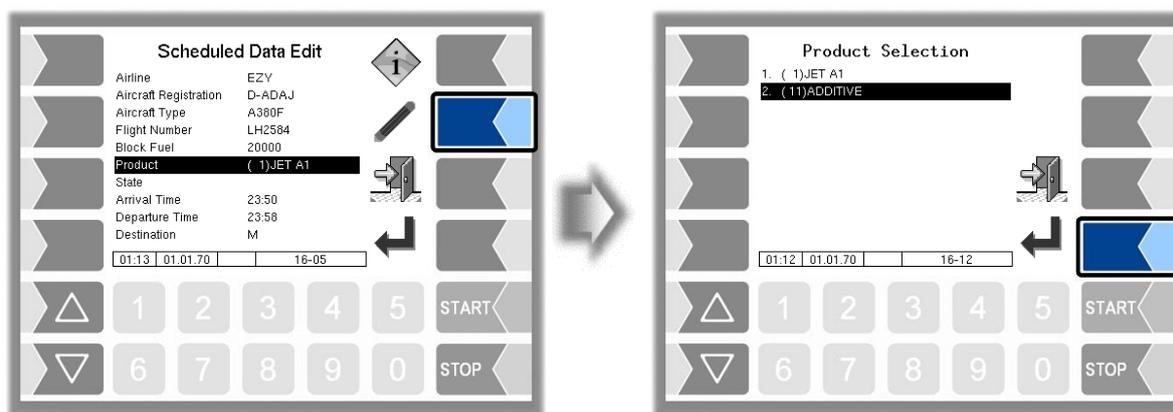
When there is a "master/slave" double delivery, and "AS" operator, only transaction types R1 and TU are permitted on the slave base module.

4.3.1 Delivery with additive blending

The additive product must have been configured. If the order involves the delivery of an additive product, confirm the scheduled data as usual.

(Configuration: Sequence Controls Menu/Additive Product Configuration)

To select the additive product manually, open the product selection window and confirm the product.



If an additive product was selected in the order function and a meter other than meter 1 was then selected in the “Select Meter” window, no delivery can be started; the “Start delivery” softkey is not displayed.

An error dialog appears allowing you to choose between cancelling the order and returning to the meter selection window.



If two meters have been activated for delivery using the numerical keys, it is not possible to select an additive product.

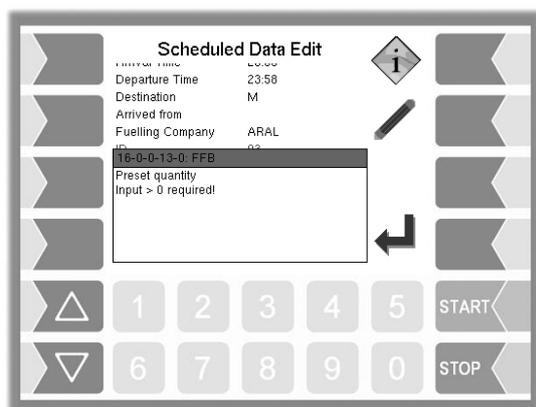


Additive products (products with additives) can only be submitted at Measuring point 1 if they are submitted individually.

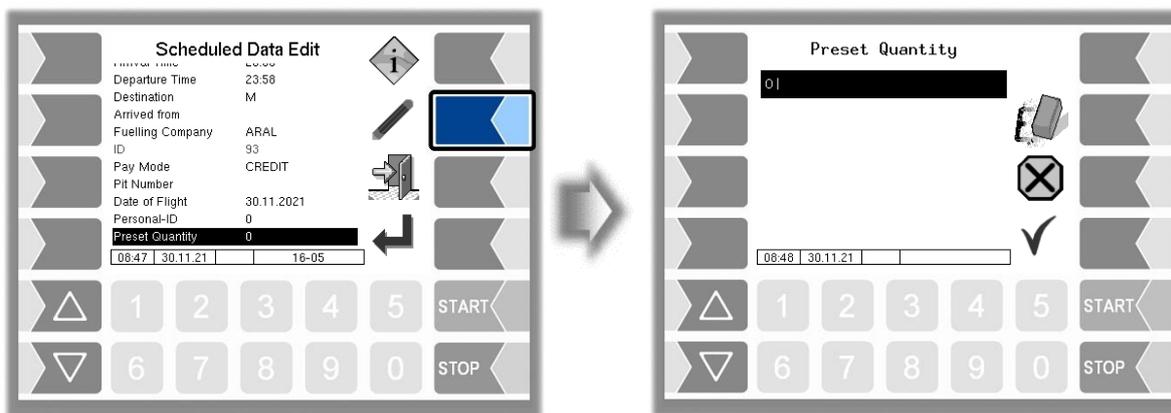
4.3.2 Preset quantity

Configuration-dependent may be entering of a preset quantity: -prohibited, -permitted or –required. When entering a preset quantity is required, but the order data contain no quantity, you must enter a quantity >0 to start a delivery.

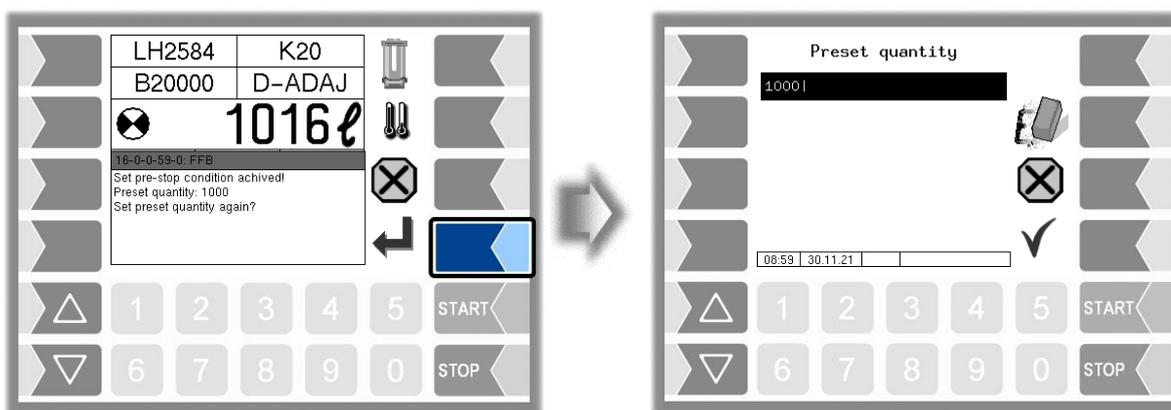
(Configuration: *Sequence Controls Menu /Meter Controls Parameters/Preset Enter at Order*)



Select the line „Preset Quantity“ and enter an appropriate quantity



Select the line „Preset Quantity“ and enter an appropriate quantity
 When the preset quantity has been reached during the refuelling, the pump will automatically stop.
 Configuration-dependent it may be allowed to continue refuelling after entering another preset quantity.
 Confirm the message, if you want to continue refuelling, and enter the new preset quantity.
 (Configuration: Sequence Controls Menu /Meter Controls Parameters/Preset Enter Retry)

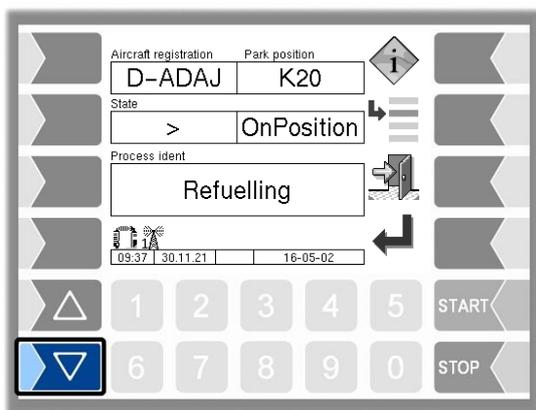


The new preset quantity is added to the current amount. Upon reaching this amount, the pump stops again automatically.

4.3.3 Large Display

After receiving the order, the order details will appear for review or modification. Alternatively, the parameters aircraft registration, parking position status and a freely selectable parameter (here transaction type) are now displayed in an enlarged view for better readability. The freely selectable parameter can be selected using the selection buttons. You can edit the flight data using the "Edit flight data" softkey, provided that a scheduled order can also be edited.

(Configuration: Sequence Controls Menu/Dialog Parameters/Enlarged display of flight)

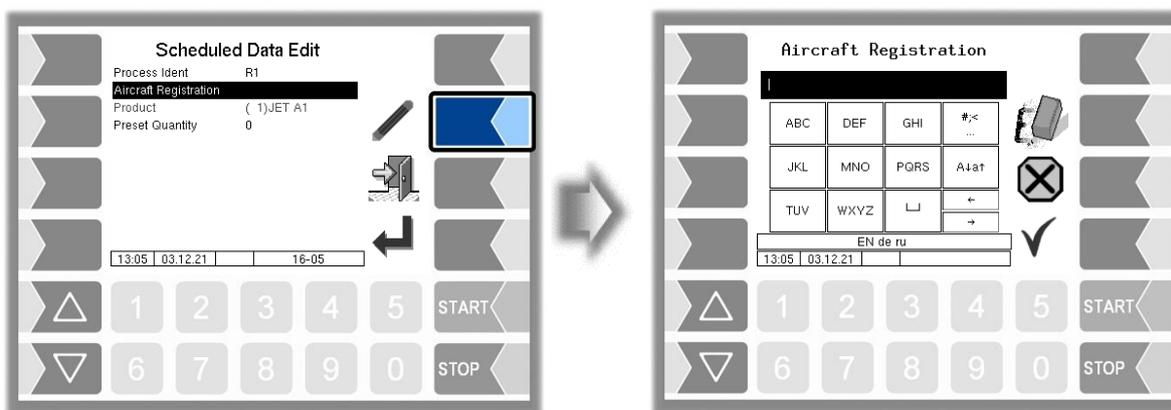


4.3.4 Aircraft registration

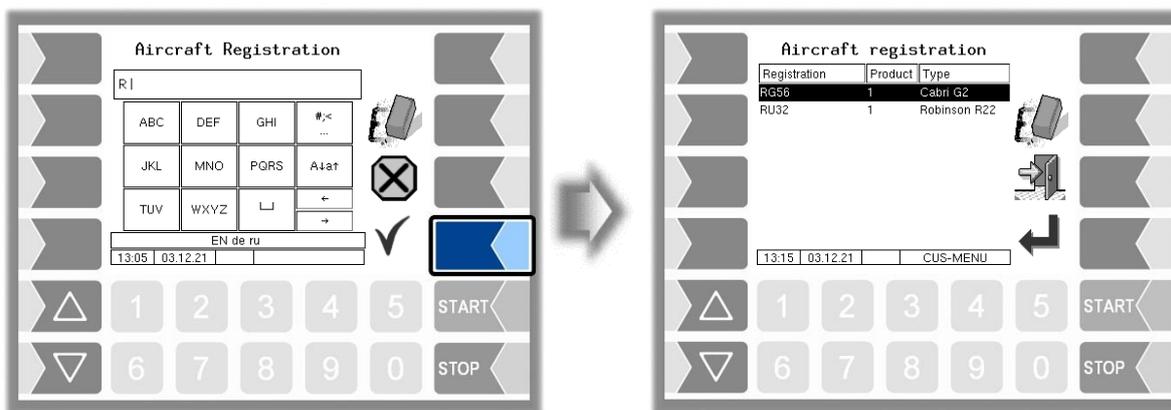
Depending on the configuration, the system supports a product check using the aircraft identifier. However, master data with aircraft identifiers and product types must be stored on the system. When the aircraft identifier has been entered, the system will compare it. If the identifier is found in the master data, the product loaded is compared with the product belonging to the identifier. If there is a difference, the operator will see a dialog box and it will not be possible to fill with fuel. On the other hand, if the aircraft identifier is not found in the master data, the operator will be informed of this by means of a dialog box. In this case, a product check will not be possible so this will have to be carried out manually by the operator.

(Configuration: Sequence Controls Menu/Truck Parameter/User => „AS“)

You enter the aircraft identifier via the "Aircraft Registration" order field.



When you enter the first digit of the aircraft identifier, a pick list appears.



You will need a text file to create the master data. The file name must start with CC and end with the extension SDC, e.g. CC_aircraftdata.SDC. The SDC file can be transferred to the system via the FTL-FTP office interface or packed in a b3i file using the service tool. The following is an example of a master file line entry.

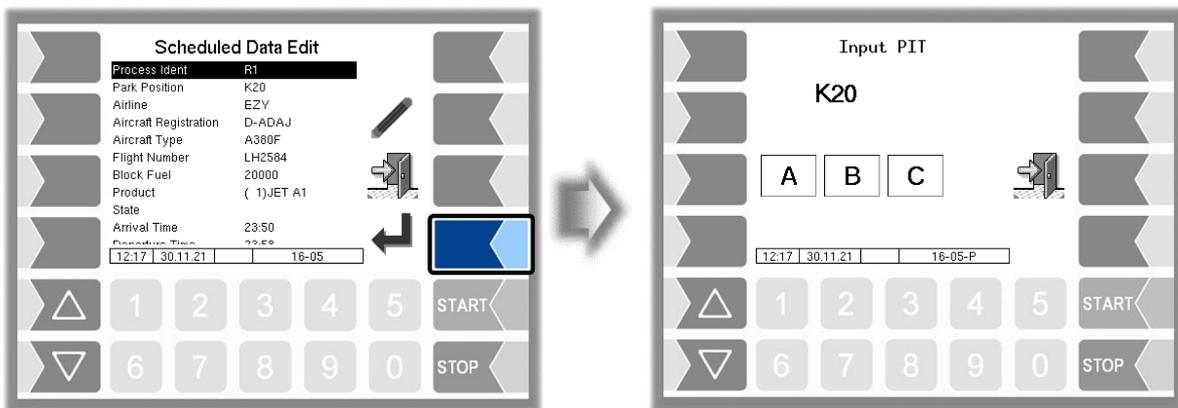
Example:

,AB12,Cabri G2,location,town,1,,,

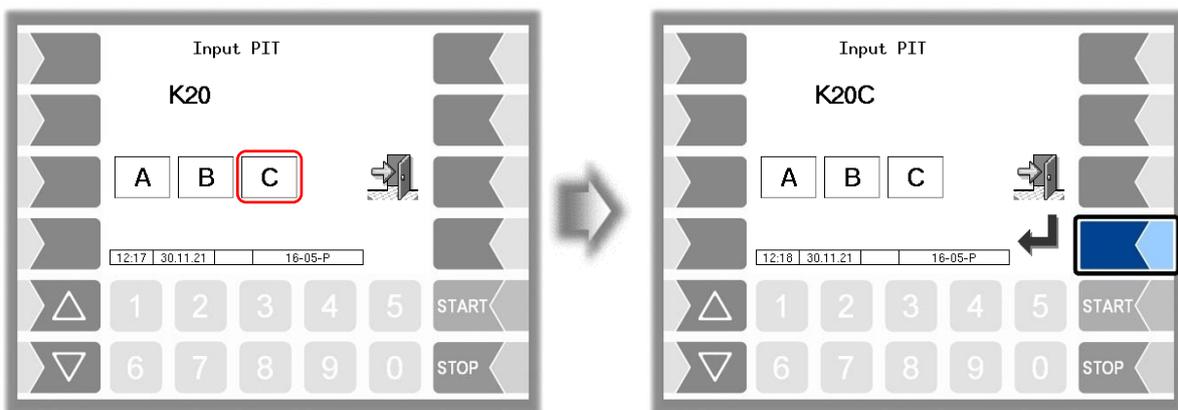
- Field 1: Not supported
- Field 2: Aircraft identifier/registration (alphanumeric)
- Field 3: Aircraft type (alphanumeric)
- Field 4: Address (alphanumeric)
- Field 5: Town (alphanumeric)
- Field 6: Product number configured on the vehicle. (numeric)
- Field 7: Not supported
- Field 8: Not supported

4.4 PIT entry

If there are several connection points at a parking position, the system offers a simple way of adding the PIT number to the information at the parking position. The PIT number corresponds to the associated connection point at the parking position. You specify the PIT number designation via the configuration. *(Configuration: Sequence Controls Menu/Dialog Parameters/Input PIT)*



Enter the PIT number directly to select the connection point. The PIT number designation is then added to the parking position. You can only switch to the next window after you have selected the connection point.

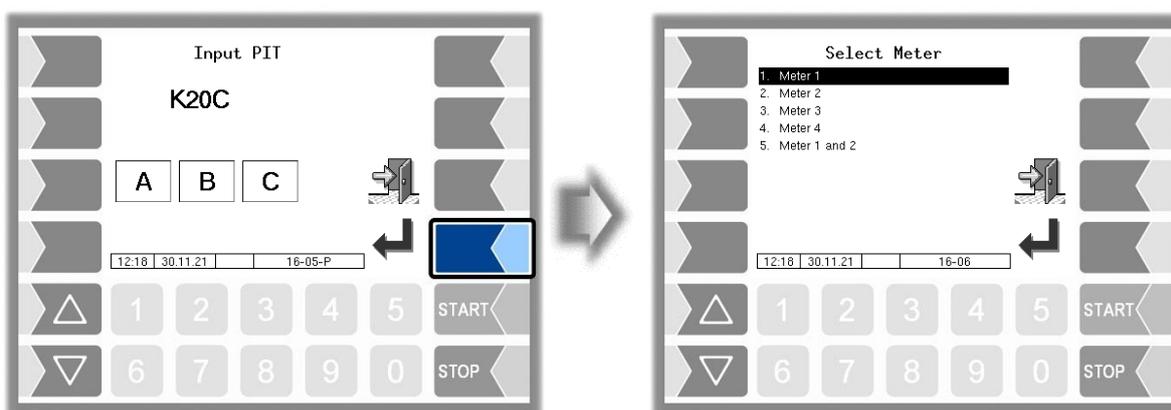




Display or use of the "Input PIT" window depends on the configuration.

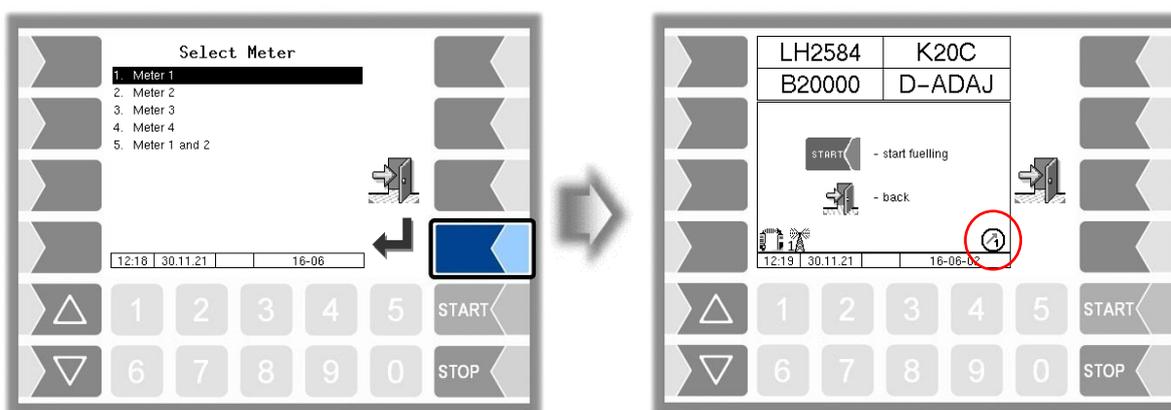
4.5 Meter selection

If several meters have been configured, the operator must select the appropriate meter for fuel-filling. The "Select meter" window will appear for this purpose. If only one meter has been configured, this will be selected automatically.



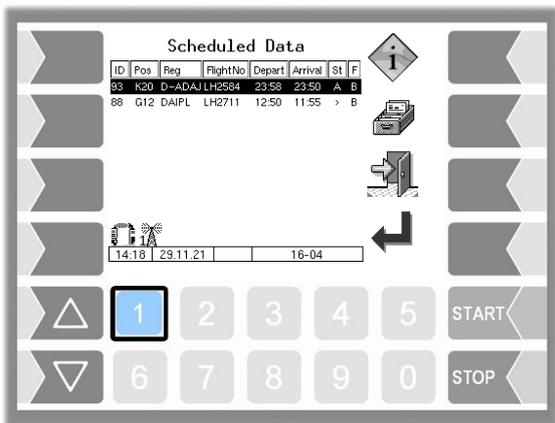
4.5.1 Manual meter selection

You can select the meter you want with the selection keys and the "Confirm" softkey or directly by using the number keys. You must select both meters 1 and 2 for a double delivery.



Preselecting a meter

You can preselect a meter in the "Order data" window. Use the number keys to preselect the meter which is to be started when fuel-filling starts. In this case, the "Select meter" window will disappear.

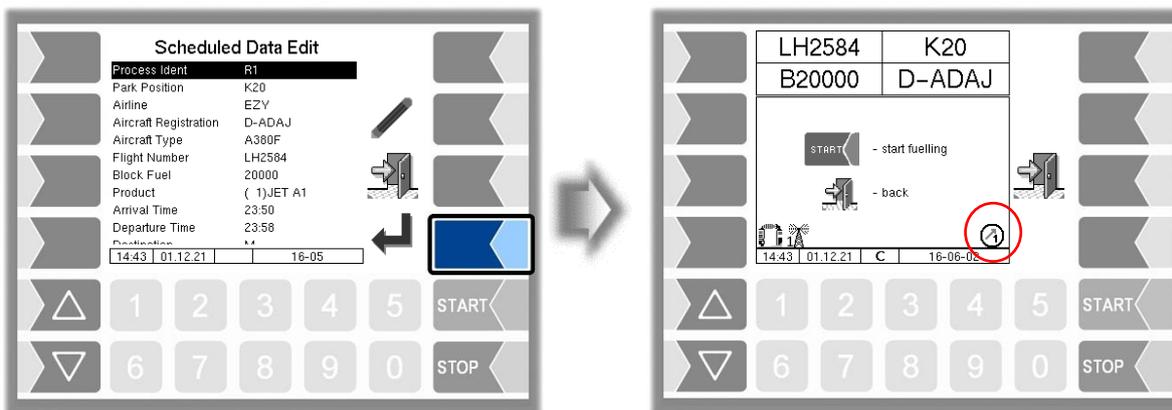


Keypad	Selection
1	Meter 1
2	Meter 2
3	Meter 3
4	Meter 4
5	Meter 1 and 2 for double delivery

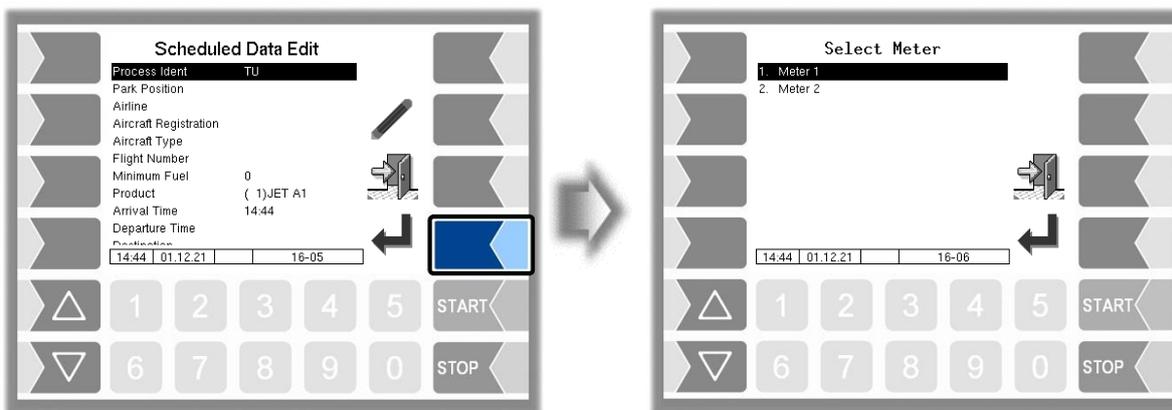
4.5.2 Selecting a meter according to transaction type

A main-process type (delivery/filling with fuel) can be assigned to each meter. The meter is then selected automatically according to the transaction type specified or selected. The meter status symbol shows which meter is currently in use.

(Configuration: Hardware Menu/Metering System Interface/Operation mode)



If a transaction type is selected which has no meter assigned to it, e.g. TU or RB, then you must select the meter manually.

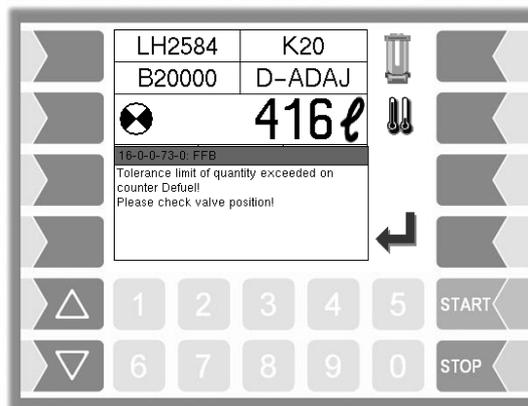


Monitoring the non active counter

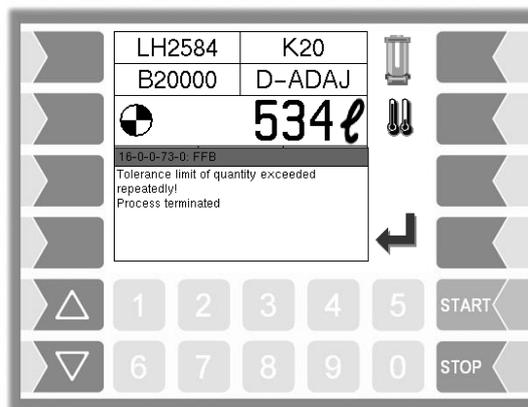
In the case of a counter configuration which is separate according to the type of operation, the non-active counter is checked for an impermissible product flow during refuelling or defuelling. The maximum permissible quantity is specified in the menu. The check is performed for both transaction types.

(Configuration: Sequence Controls Menu/Meter Controls Parameters/tolerance quantity)

If a quantity above the tolerance quantity (for example, 5 liters) is measured at the counter which is not active, a message appears on the display to check the valve positions.



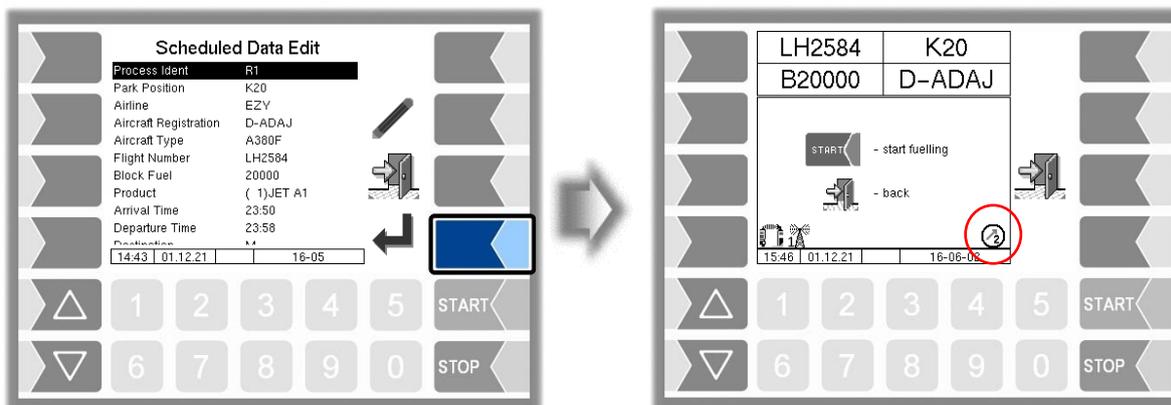
If the tolerance quantity is exceeded repeatedly, the process is stopped. Finish the order.



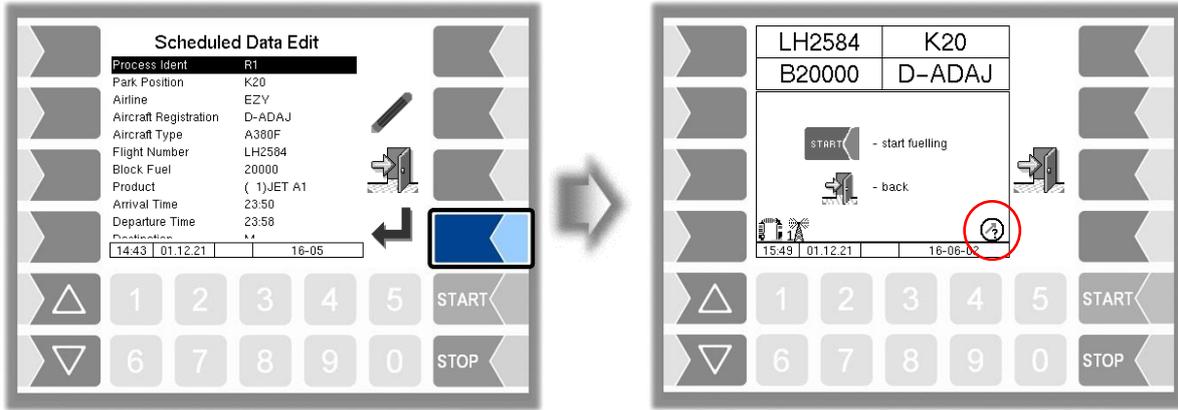
The refuelling of the aircraft is not completed! Full refuelling in accordance with the order must be carried out after removal of the fault or by another tanker.

4.5.3 Selecting a meter according to input

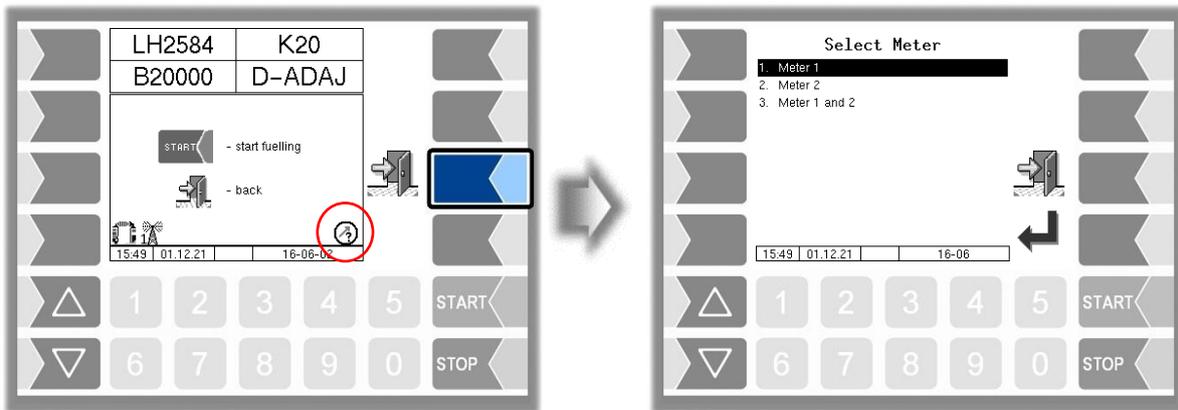
If the logical inputs are configured for the measuring point selected or the inputs for the lower wing/upper wing interlock function, the "Select meter" window will not appear. Instead, the system will check the inputs of the measuring point selected in the "Start delivery" window. If an input is active, the corresponding meter will be selected and displayed with the "Meter" status symbol.



If no inputs or both inputs are active, the software will wait for a single input to be activated.



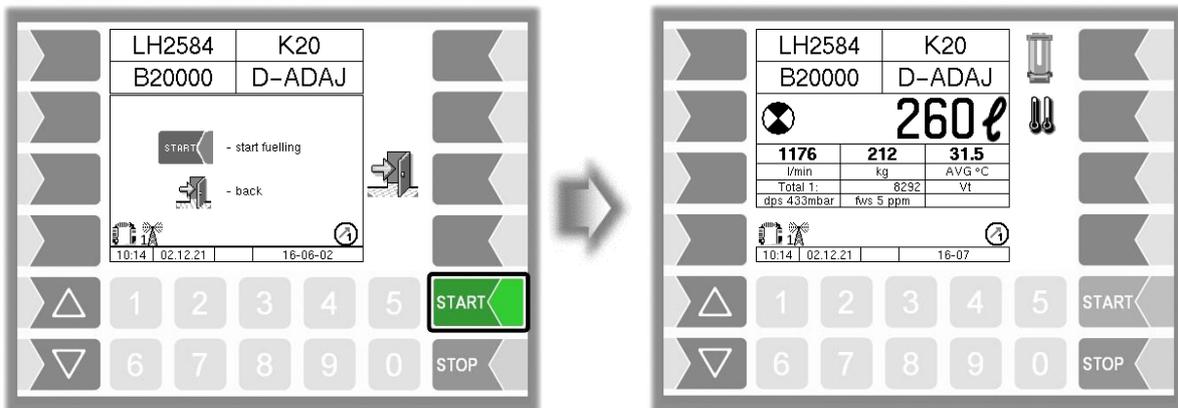
Automatic meter selection is deactivated by jumping back and the operator can select the meter manually.



Selecting a meter according to input for the lower wing/upper wing interlock function is only available with an "AS" operator.

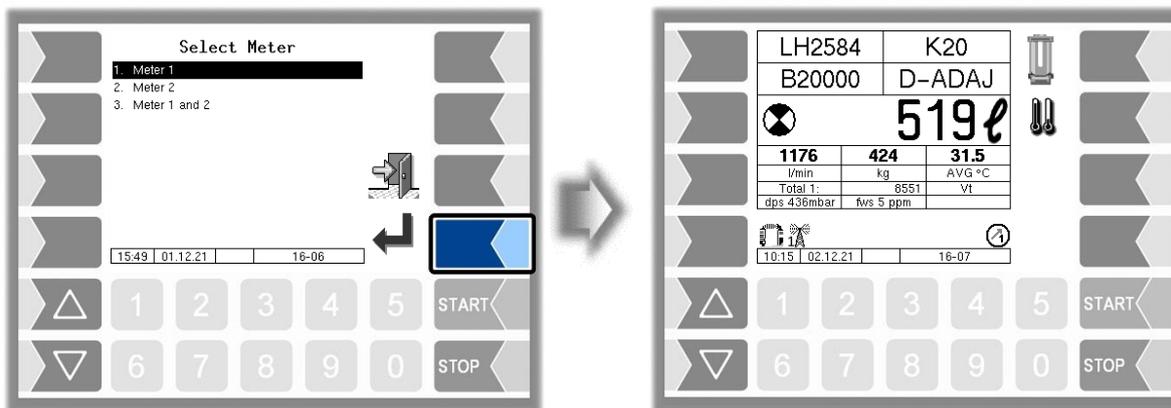
4.6 Start fuel-filling

In the "Start delivery" window, the operator must start fuel-filling with the "Start" button. The status in the office remains at "I'm in position" until fuel-filling has started.



Enable automatic pump

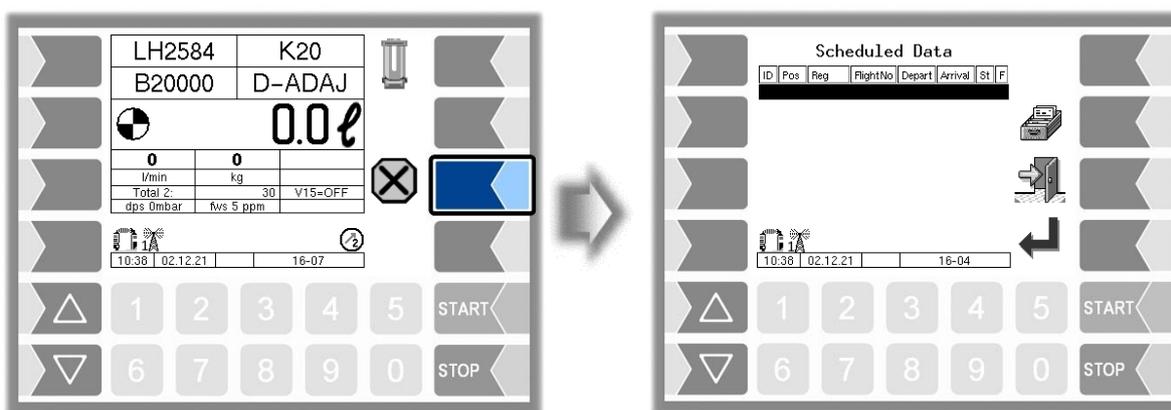
If Enable automatic pump is active, fuel-filling starts immediately after the meter has been selected.
(Configuration: Sequence Controls Menu/Meter Controls Parameters/Fuelling autostart)



4.7 Rejecting refuelling

The operator may be allowed to reject fuel-filling, depending on the configuration. This is assuming that no fuel has passed through the meter yet. You reject fuel-filling by pressing the "Cancel" softkey. As soon as the flow of fuel has been detected, this softkey disappears.

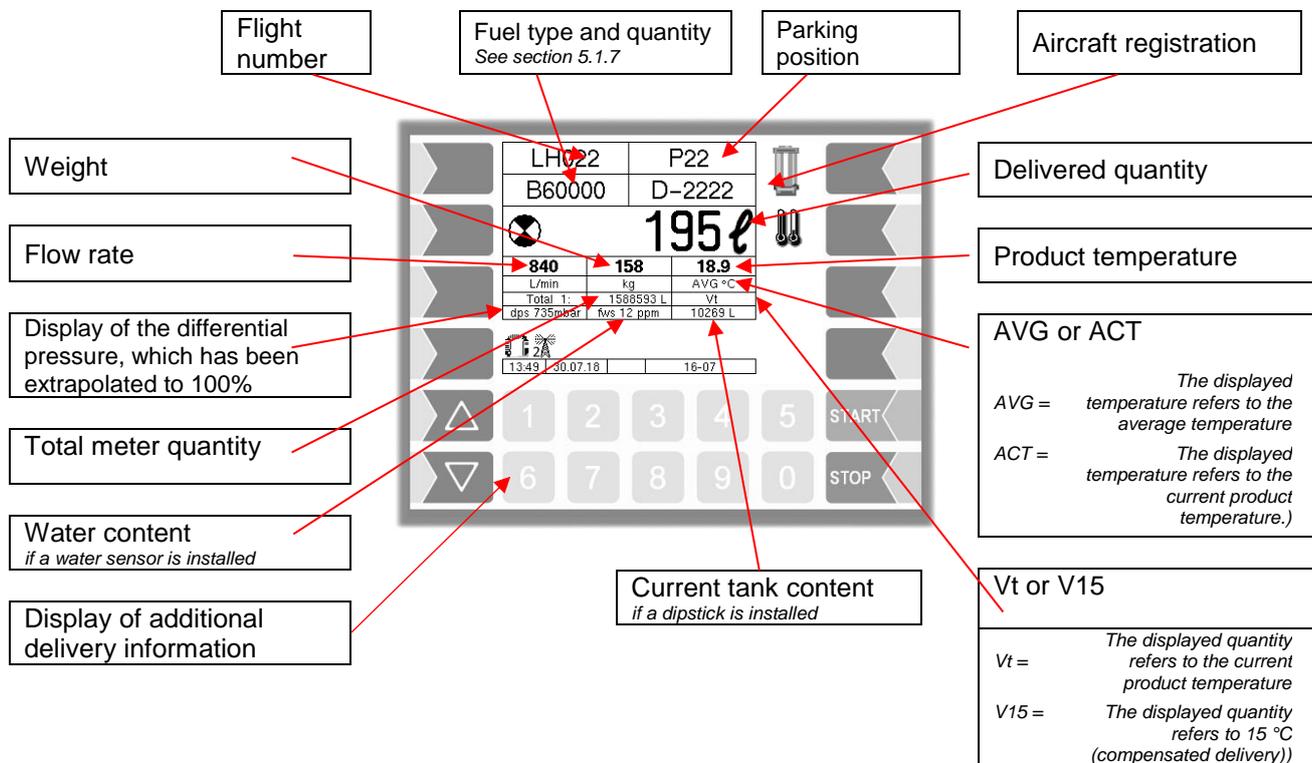
(Configuration: Sequence Controls Menu/Dialog Parameters/No Fuel-Function)



Rejecting the refuelling causes costs because the ride by the tanker is provided airline invoiced

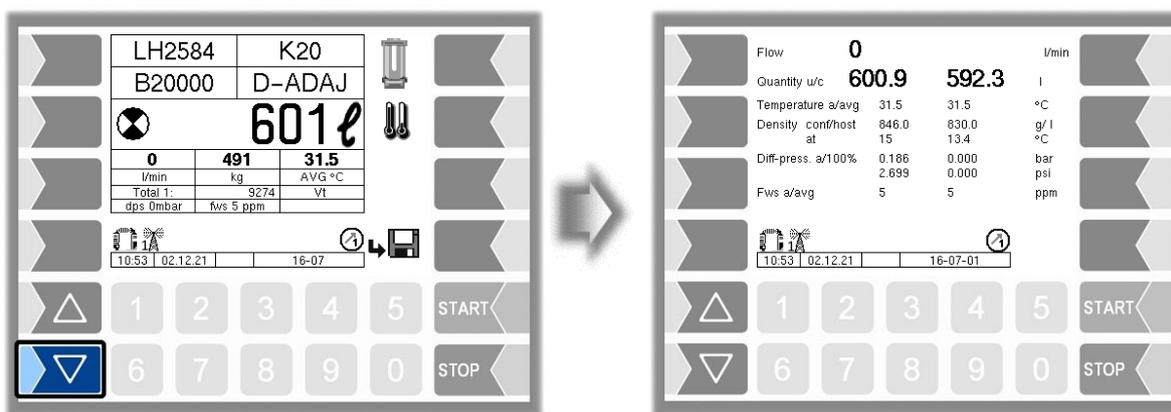
4.8 Performing the refuelling

Refuel the aircraft in accordance with the regulations in force. During delivery, the following data is shown on the display:



4.8.1 Further information

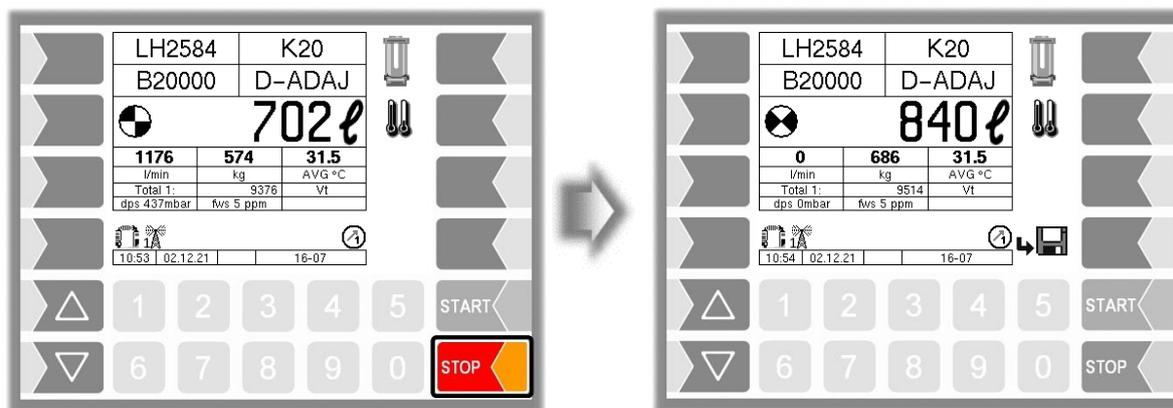
Use the selection buttons to call up more detailed information.



Designation	Description
Quantity u/k	Quantity, uncompensated and compensated
Temperature a/m	Temperature, current and averaged
Density conf./office	Density and temperature is configured on the vehicle and has been received by the office
Diff. pressure a/100%	Differential pressure, current and extrapolated to 100% flow
FWS a/m	Water content, current and averaged
Dipstick	Tank content

4.8.2 Interrupting delivery

Press the "Stop" button to stop all the current delivery processes. Press the "Start" button to restart the delivery processes.

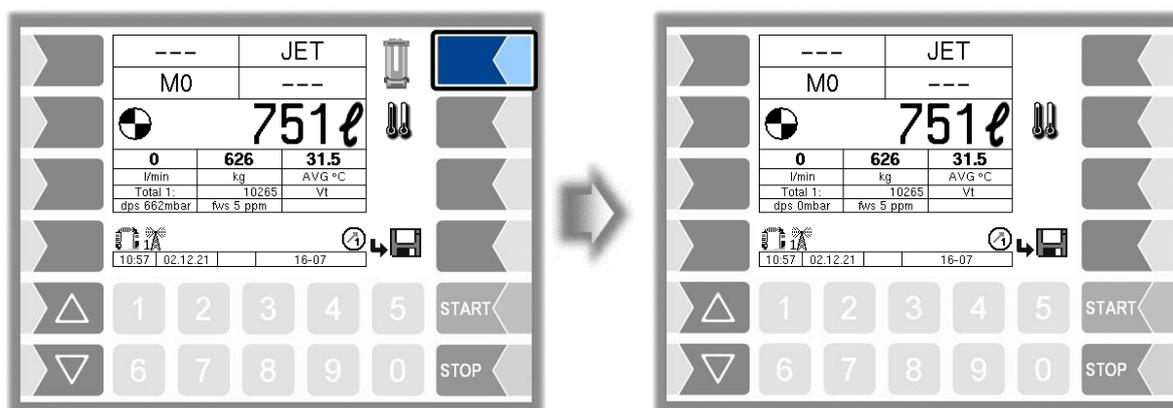


With an "MIF" double delivery, you can stop and restart the corresponding deliveries by using the number keys. The numbers correspond to the meter number concerned.

4.8.3 Confirm water test

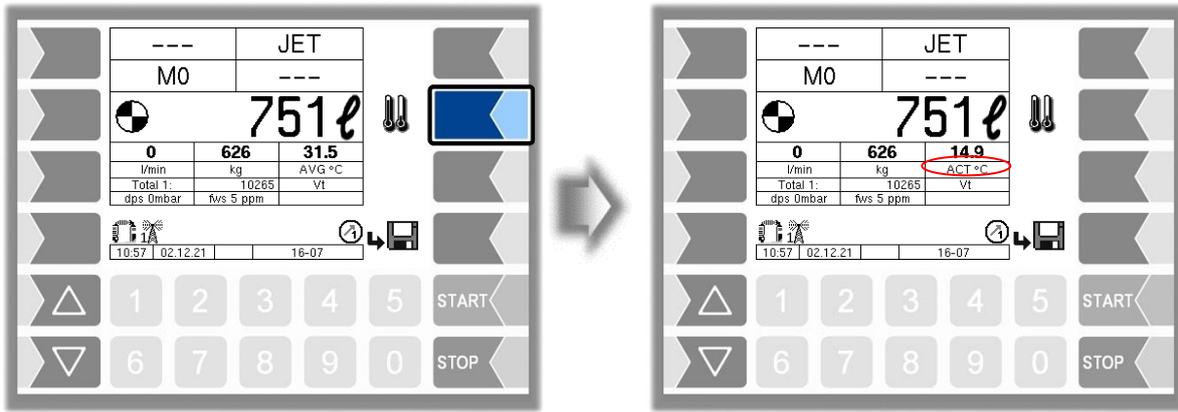
According to the applicable operating instructions, fuel intended for aircraft must be checked during fuel-filling to make sure that it does not contain water. The "Water test" softkey will be displayed on the delivery window depending on the configuration. The operator can use this softkey to confirm that the water test has been carried out. The message "Water test done" is sent to the dispatcher. The softkey will be displayed until you have confirmed the water test.

(Configuration: Sequence Controls Menu/ Dialog Parameters/Detector test)



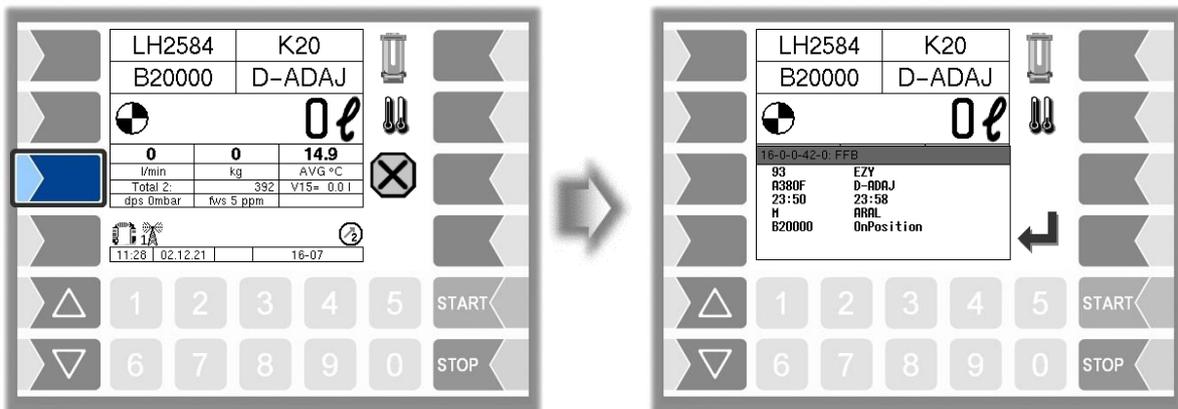
4.8.4 Switching the temperature display

You can use this softkey to switch the display from the average temperature (AVG) to the current temperature (ACT) or vice versa



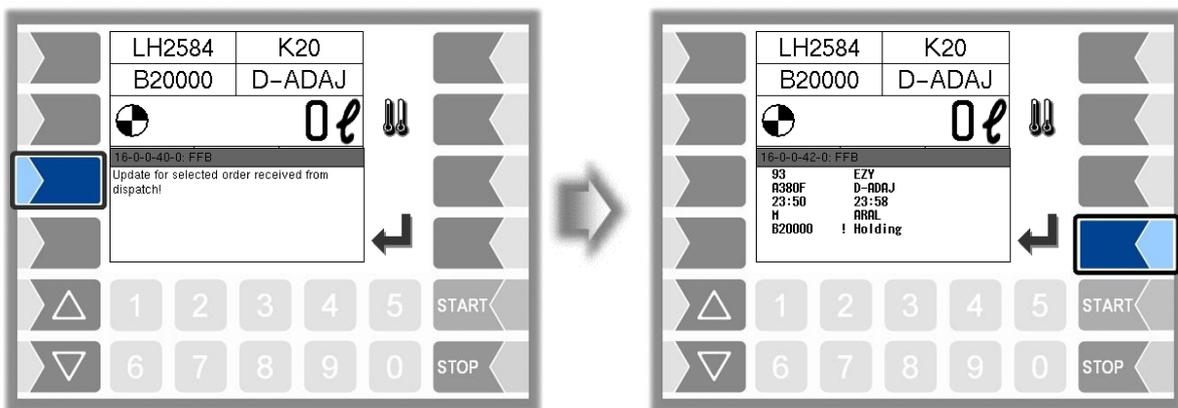
4.8.5 Displaying the current order data

You can use the third softkey down on the left-hand side to display information about the current order



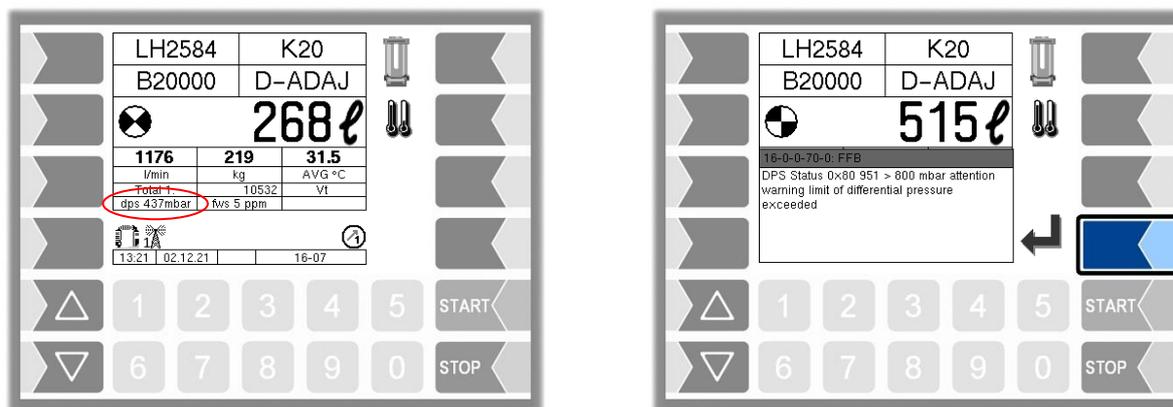
4.8.6 Updating an order

If the dispatcher has updated the data for a selected order, or if the order has been deleted, a message is output on the display. The logical output 20 is set. A connected signalling device can be tripped in this way. After the dialog message has been confirmed, logical output 20 will also reset.



4.8.7 Differential pressure

If the fuel-filling vehicle has been fitted with a differential pressure sensor, the differential pressure in the filter will be monitored during fuel-filling. System 3003 monitors both the current differential pressure (dP) and the differential pressure extrapolated to 100% flow (dps). The “dps” is shown on the display. If the differential pressure deviates from the parameters stored in the configuration, a corresponding dialog message will be output and fuel-filling will be interrupted or blocked, depending on the configuration. The dialog message must be confirmed by the operator. For detailed information, see also the chapter "Differential pressure sensor - functional description" in the service instructions.



Examples of dialog messages

Example:	Description
1	Differential pressure sensor: Caution, warning limit for differential pressure exceeded. (dP, status bits)
2	Differential pressure sensor: Max. differential pressure exceeded. If necessary, replace the filter elements. (dP, status bits)
3	Differential pressure sensor: Max. differential pressure drop exceeded. If necessary, replace the filter elements. (dP, status bits)
4	Differential pressure sensor: Absolute differential pressure has exceeded JIG limit. (value, status bits)
5	Differential pressure sensor: Error, sensor defective (value, status bits).
6	Differential pressure sensor: Max. flow exceeded (value, status bits)

Status bits

Bit in Hex	Description
0x0000	Sensor Ok
0x0001	Difference between the currently extrapolated differential pressure and the value measured last via the maximum deviation
0x0002	Currently extrapolated differential pressure exceeds max. differential pressure
0x0004	No sensor connected
0x0008	Sensor defective
0x0010	Check configuration
0x0020	Max. flow exceeded
0x0040	Min. flow has not been reached
0x0080	Pressure warning has been output
0x0100	Fuel-filling lock has been triggered
0x0200	Error message has been simulated

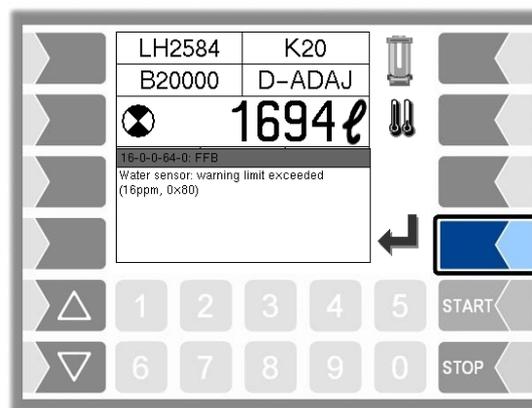
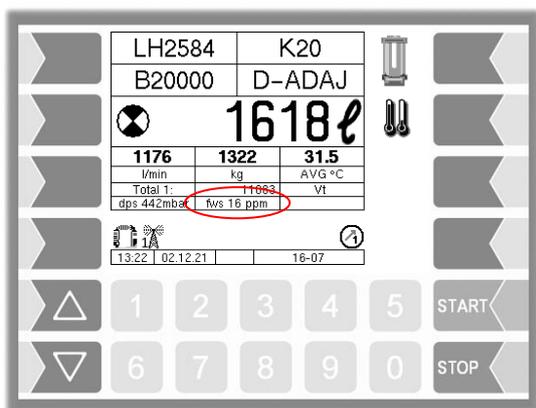


If the differential pressure deviation is not permissible, System 3003 only activates one logical output. The setup person must ensure that the output is used correctly. See also the service and configuration instructions.

4.8.8 Water content

If the system has been fitted with a differential pressure sensor, the water content in the product will be monitored during fuel-filling. Either the measured ppm value or the ppm value averaged over the duration of fuel filling can be used to monitor the warning and alarm limits. Monitoring and averaging only take place when a minimum flow rate and a minimum volume have been exceeded. The proportion of water used for monitoring is shown on the display.

If the differential pressure deviates from the parameters stored in the configuration, a corresponding dialog message will appear and fuel-filling will be interrupted or blocked, depending on the configuration. The dialog message must be confirmed by the operator. The system also has an output for triggering a warning light. For detailed information, see also the chapter "FAUDI Aviation Sensor AFGUARD water sensor - functional description" in the service instructions.



Error events

Event	Level	Description
1	Warning	15 ppm** <= ppm value* <30 ppm** within a period of 10 s**
2	Alarm	ppm value* >= 30 ppm** within a period of 10 s**
3	Alarm	ppm measurement value >=50 ppm within a period of 5 s**
4	Alarm	Sensor value _{absolute} < 3.8 mA

* the ppm value will correspond to the measured ppm value or the ppm value averaged over the duration of fuel-filling, depending on the configuration.

** Value can be configured.

In the event of a warning, refuelling is stopped depending on the "Stop at warning" parameter, but may be restarted after a successful CWD test, depending on the configuration
(Configuration: *Hardware Menu/iBoxmA-Interface/Stop at warning*)

When there is an alarm, fuel-filling must be stopped and further operation is prevented by activating the fuel-filling lock.

Dialog messages

Event	Description
1	Water sensor: Warning value exceeded (20 ppm, 0x01)
2	Water sensor: Max. water content exceeded (35 ppm, 0x02)
3	Water sensor: Sensor value 50 ppm exceeded (51 ppm, 0x04)
4	Water sensor: Sensor in air or water (21 mA)
5	Water sensor: Error, sensor defective (3 mA)

Status bits

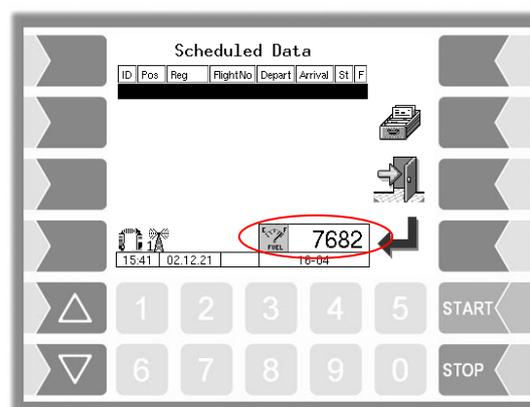
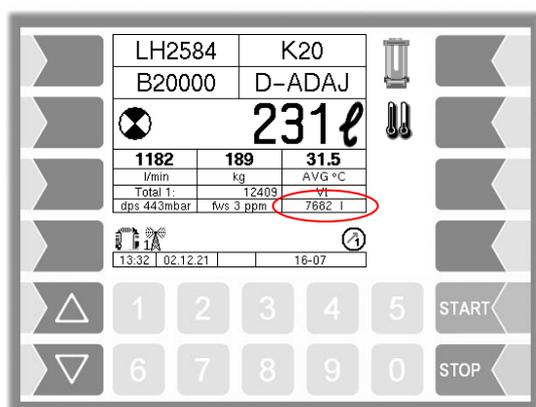
Bit in Hex	Description
0x0000	Sensor Ok
0x0001	Water hammer or sensor in air
0x0002	Water content too high
0x0004	No sensor connected
0x0008	Sensor defective
0x0010	Check configuration
0x0020	---
0x0040	---
0x0080	Water warning has been output
0x0100	Fuel-filling lock has been triggered
0x0200	Error message has been simulated
0x0400	50 ppm value exceeded



If the water sensor deviation is not permissible, System 3003 only activates one logical output. The setup person must ensure that the output is used correctly. See also the service and configuration instructions.

4.8.9 Tank content

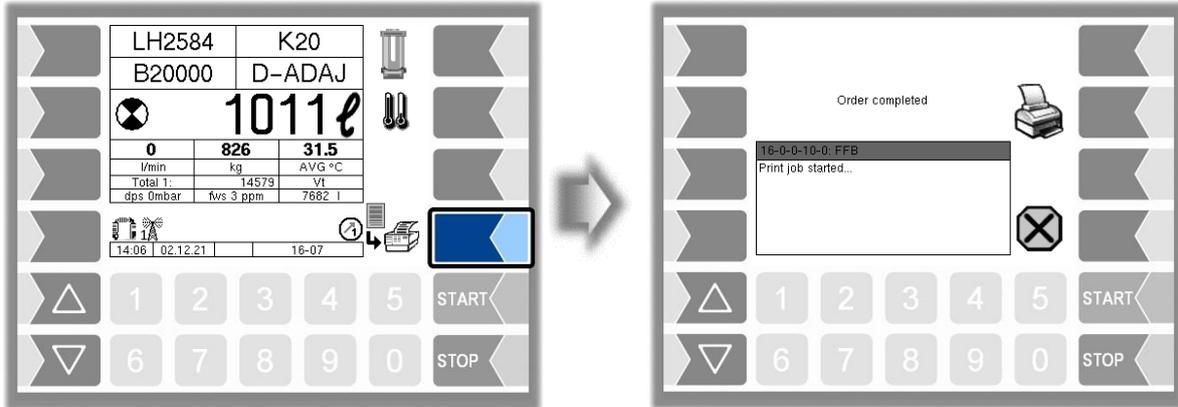
On vehicles fitted with the Ex analogue dipstick, the current tank content is displayed during fuel-filling.



This value is not relevant to calibration.

4.9 Ending an order

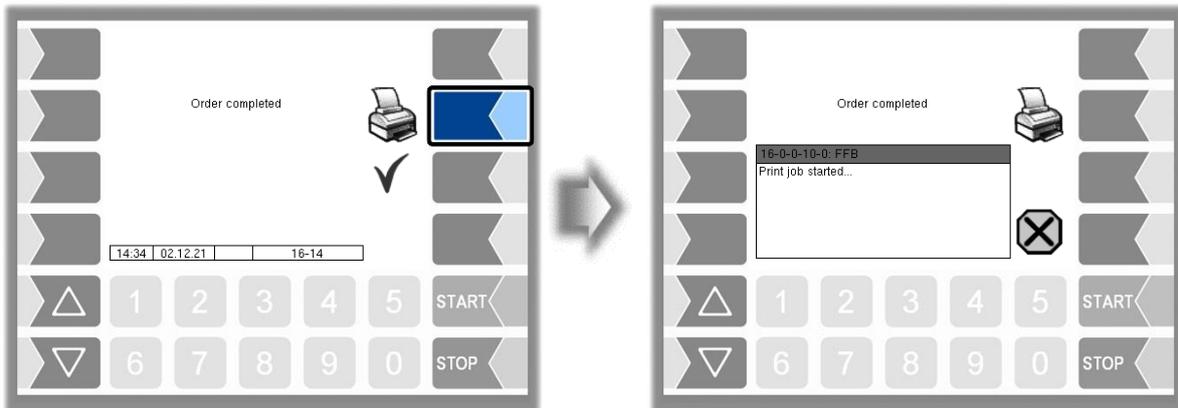
Either the "End order, save" softkey or the "End order, save, print" softkey will appear, depending on whether a printer is configured. Press this softkey to save the order and, if necessary, print out a receipt.
 (configuration: Sequence Controls Menu/Ticket Layout Configuration/Auto print of delivery note)



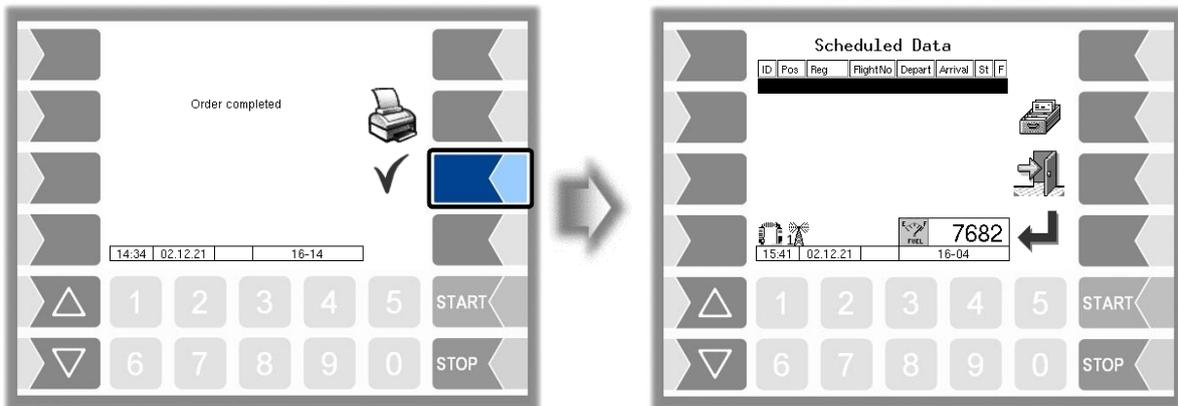
Order Complete Dialog

The "Order complete" window will appear, depending on the configuration. You can print out the receipt here again if required.

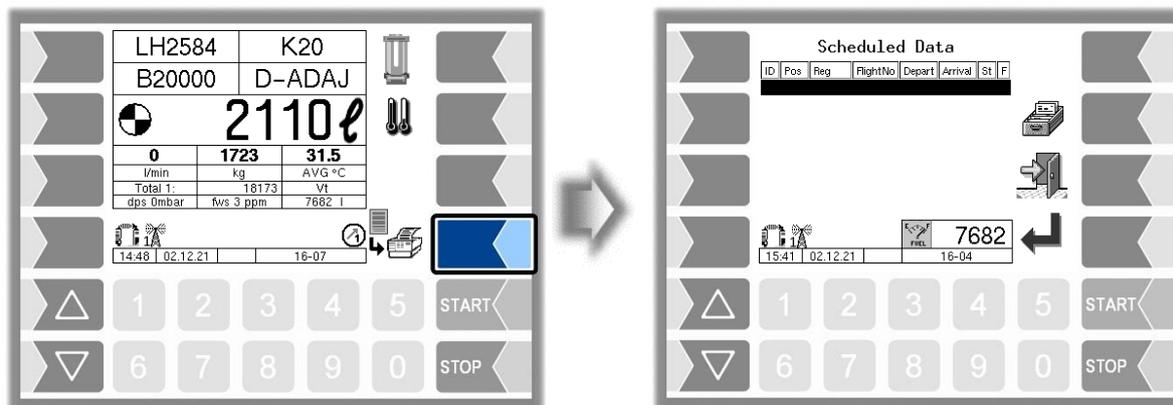
(Konfiguration: Sequence Controls Menu/ Dialog Parameters/Order Complete Dialog)



You can complete the order by pressing the "Accept, Save" softkey. The order details and the message "Order complete" are sent to the office

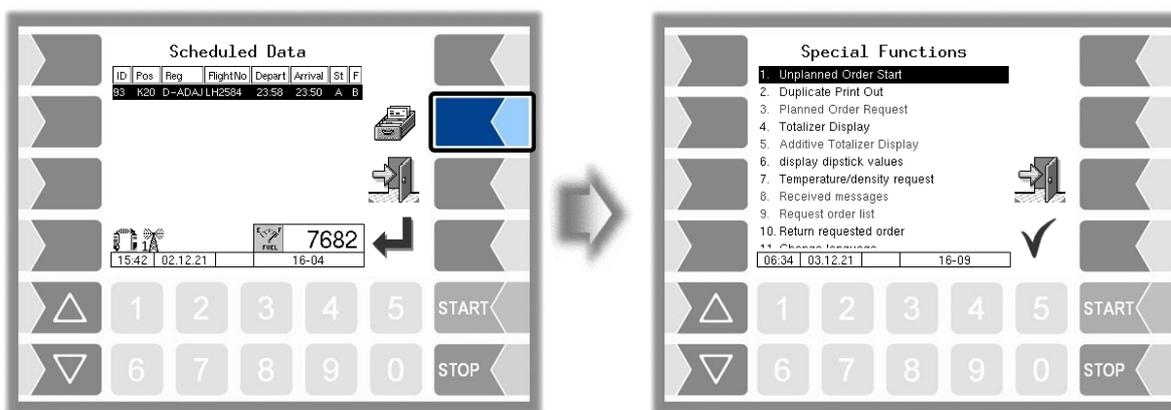


If the "Cancel the order" option is deactivated, the "Order details" window immediately appears and a new order can be accepted. On leaving the order, the order details and the message "Order complete" are immediately sent to the office.



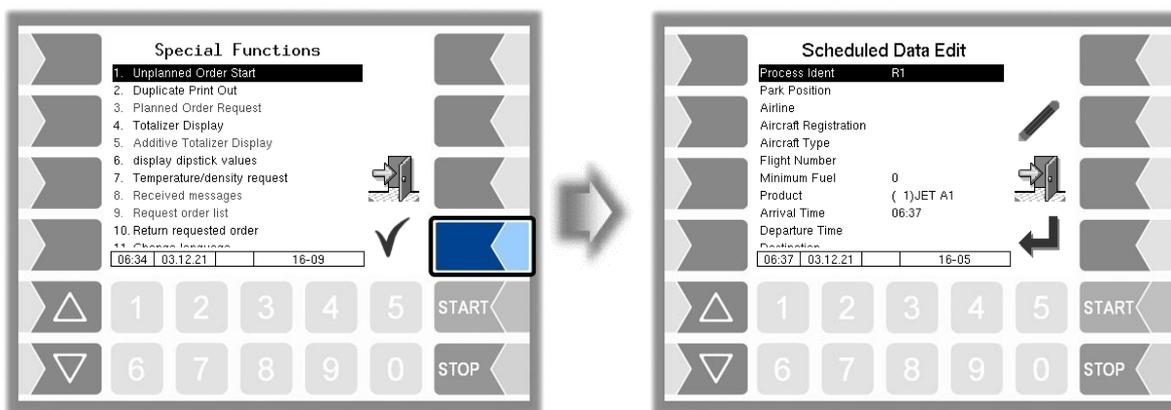
5 Special functions

Once a shift has been started, you can call various special functions.

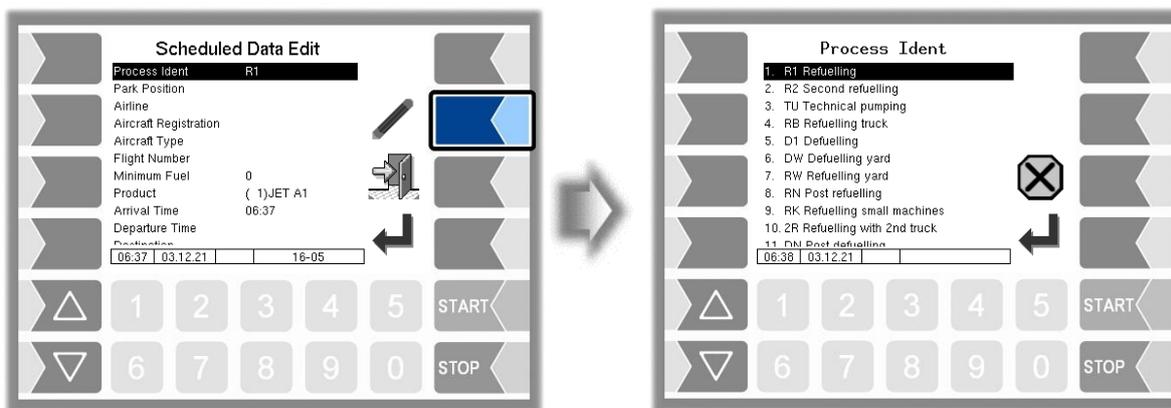


5.1 Unplanned Order

If no order data is available and you wish to start an unplanned order, you must enter the order data manually.



5.1.1 Process Ident



Different types of processes are available, depending on the vehicle configuration. The number of selectable process IDs is also different for Refuel- and dispenser vehicles
(Configuration: Sequence Controls Menu/ Truck Parameters/Users)

Users	Identifier	Description	Dispenser	Refueller
AS	R1	Refuelling		●
	TU	Technical pumping		●
	RB	Refuelling of another truck		●
	FB	External filling		●
BARTEC	See table below Comm.-protocol			



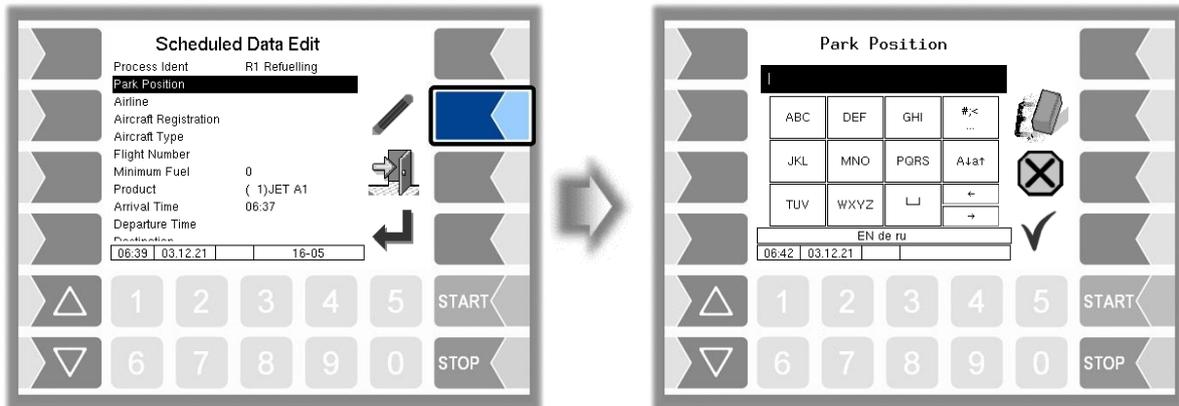
When there is a "master/slave" double delivery, and "AS" operator, only transaction types R1 and TU are permitted on the slave base module.

(Configuration: Sequence Controls Menu/"Office/Remote"/TCP Communication/ Transmission Parameters/Comm. Protocol)

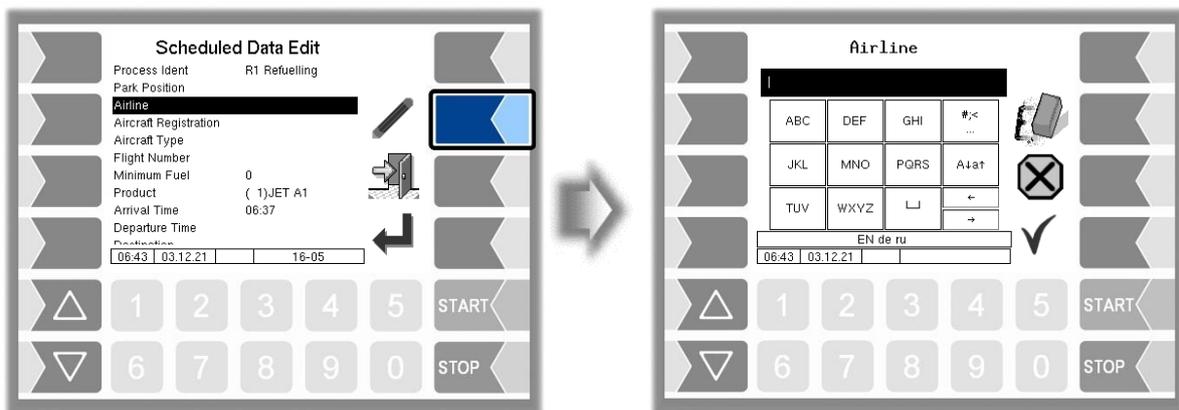
Comm.-protocol	Identifier	Description	Dispenser	Refueller
BARTEC	R1	Fuel-filling	●	●
	R2	Fuel-filling with 2 vehicles	●	●
	TU	Transfer pumping	●	●
	RB	Filling a tanker		●
	D1	Defuelling		●
	DW	Defuelling in the shipyard		●
	RW	Fuel filling in the shipyard	●	●
	RN	Refuelling	●	●
	RK	Small equipment fuel-filling		●
	2R	Second fuel-filling		●
	DN	Post-defuelling		●
	CO	Correction (chargeback)	●	●
FOI	IP	Into plane (fuel-filling)	●	●
	RD	Redelivery		●
	DF	Defuel		●
FOSI	LR	Refueller fuel-filling		●
	RD	Fuel-filling dispenser	●	●
	RT	Fuel-filling TKW		●
	RM	Fuel-filling TKW military		●
	DR	Pumping back after prefueling		●
	DW	Pumping back without prefueling		●
	LD	Fuel-filling		●
TU	Transfer pumping	●	●	

5.1.2 Park Position

Enter the park position of the airplane to be refuelled.



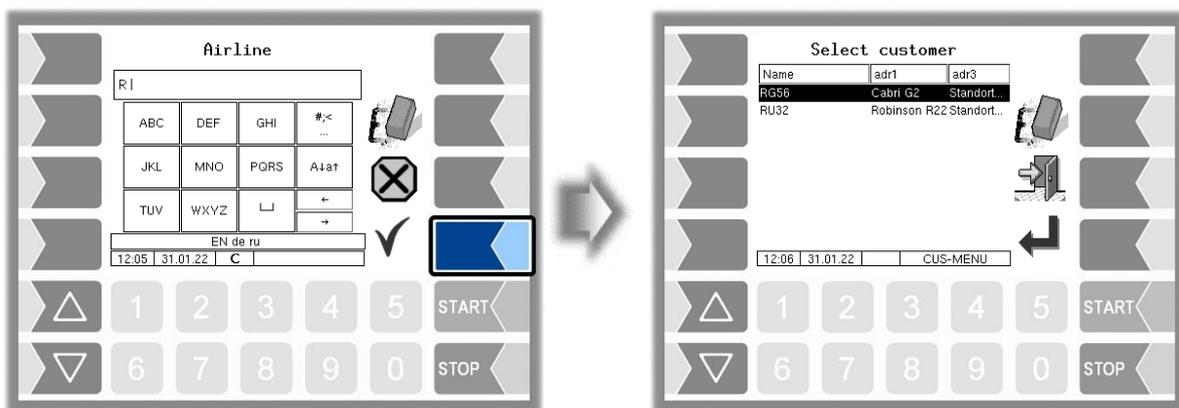
5.1.3 Airline



To enter the name of airlines you can use the internal database as input help.

When you enter an asterisk or two spaces, the "Select customer" window appears. Here all airlines are displayed, where previously a planned delivery has taken place.

If you enter a character or a string, only airlines beginning with the entered string are displayed.



5.1.4 Aircraft Registration

Enter the aircraft registration here.

Scheduled Data Edit

Process Ident R1 Refuelling
 Park Position
 Airline
 Aircraft Registration
 Aircraft Type
 Flight Number
 Minimum Fuel 0
 Product (1)JET A1
 Arrival Time 06:37
 Departure Time
 Destination 06:55 | 03.12.21 | 16-05

1 2 3 4 5 START
 6 7 8 9 0 STOP

Aircraft Registration

ABC	DEF	GHI	#< ...
JKL	MNO	PQRS	A at
TUV	WXYZ	⏪	⏩

EN de ru
 06:55 | 03.12.21 |

1 2 3 4 5 START
 6 7 8 9 0 STOP

5.1.5 Aircraft Type

Enter the type of the aircraft here.

Scheduled Data Edit

Process Ident R1 Refuelling
 Park Position
 Airline
 Aircraft Registration
 Aircraft Type
 Flight Number
 Minimum Fuel 0
 Product (1)JET A1
 Arrival Time 06:37
 Departure Time
 Destination 07:09 | 03.12.21 | 16-05

1 2 3 4 5 START
 6 7 8 9 0 STOP

Aircraft Type

ABC	DEF	GHI	#< ...
JKL	MNO	PQRS	A at
TUV	WXYZ	⏪	⏩

EN de ru
 07:09 | 03.12.21 |

1 2 3 4 5 START
 6 7 8 9 0 STOP

5.1.6 Flight Number

Enter the flight number here.

Scheduled Data Edit

Process Ident R1 Refuelling
 Park Position
 Airline
 Aircraft Registration
 Aircraft Type
 Flight Number
 Minimum Fuel 0
 Product (1)JET A1
 Arrival Time 06:37
 Departure Time
 Destination 07:10 | 03.12.21 | 16-05

1 2 3 4 5 START
 6 7 8 9 0 STOP

Flight Number

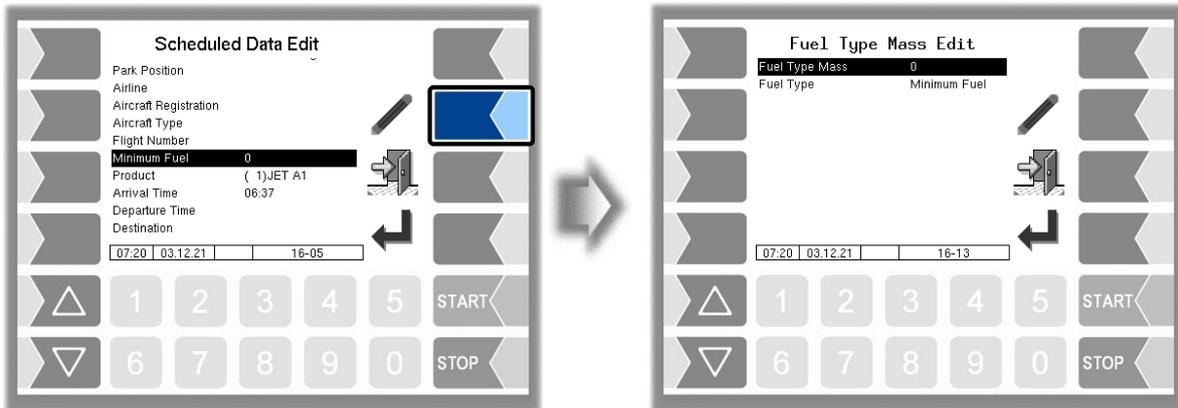
ABC	DEF	GHI	#< ...
JKL	MNO	PQRS	A at
TUV	WXYZ	⏪	⏩

EN de ru
 07:10 | 03.12.21 |

1 2 3 4 5 START
 6 7 8 9 0 STOP

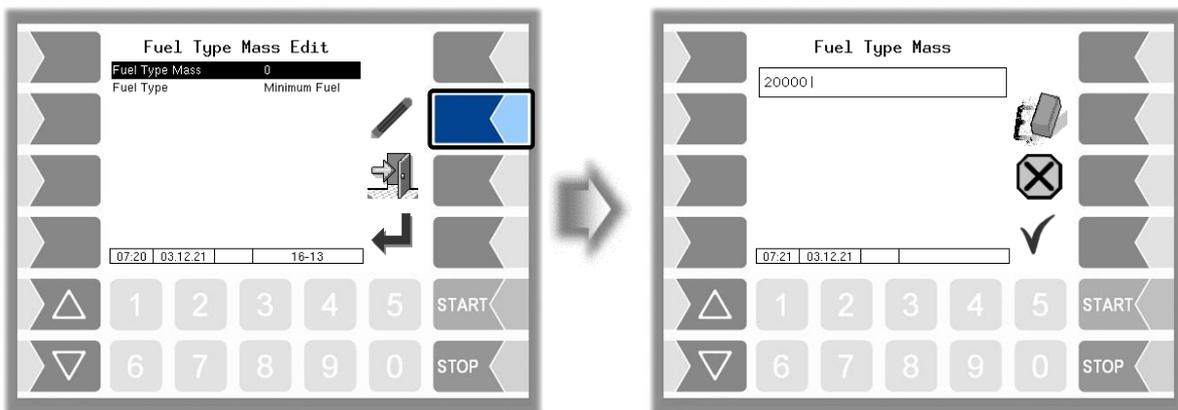
5.1.7 Minimum Fuel / Block Fuel/ No Fuel

The content of this order field is automatically transferred from the refuelling information system to the vehicle. For unplanned orders is no editing required.



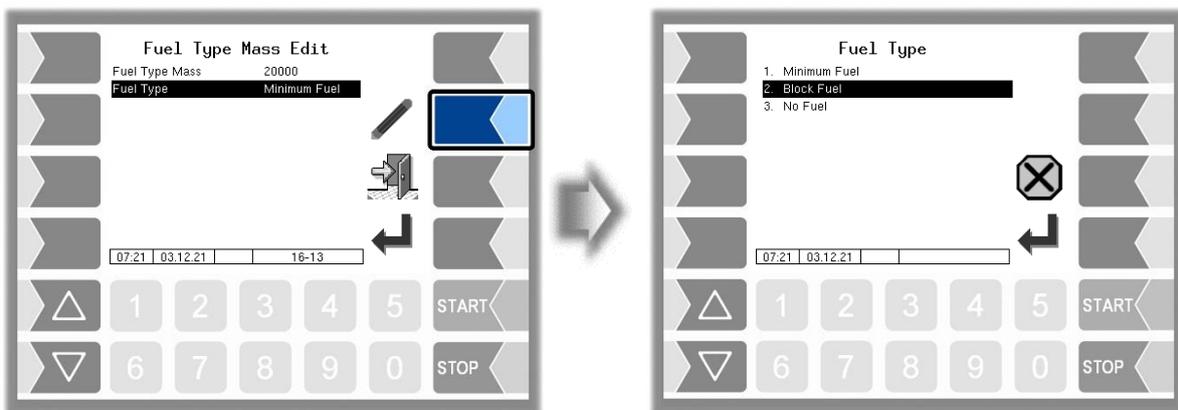
Fuel Type Masse

Under "Fuel Type mass" is that quantity of fuel displayed that was transferred for the respective fuel type (minimum or Fuel block fuel).



Fuel Type

"Fuel Type" indicates the calculation definition which is given for refuelling.



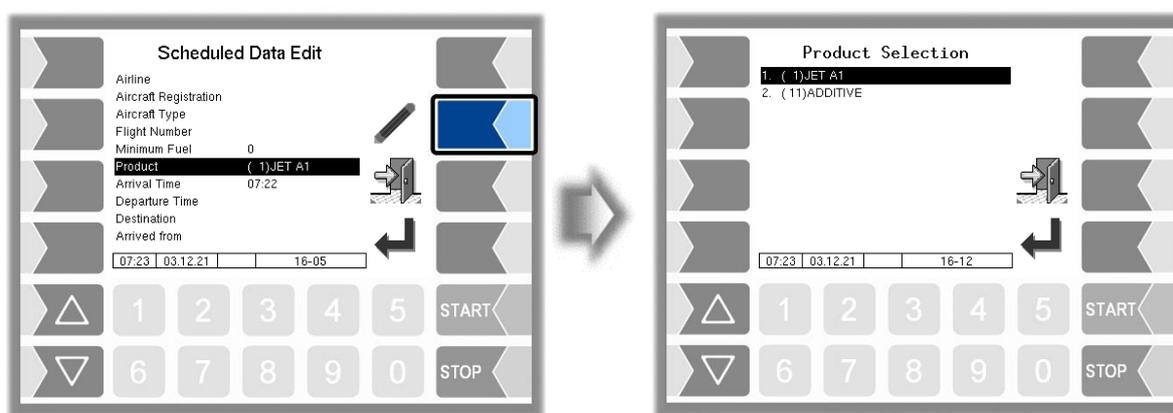
Minimum Fuel	Preliminary transmitted refuelling quantity
Block Fuel	For the flight calculated refuelling quantity (incl. fuel for starting the engines, taxiways and reserve)
No Fuel	The airplane does not require refuelling and will not be approached



“Fuel Type” and the corresponding quantity is displayed on the top line of the delivery window (e.g. B20000 for „Block Fuel“, M18000 for „Minimum Fuel“, N for „No Fuel“).

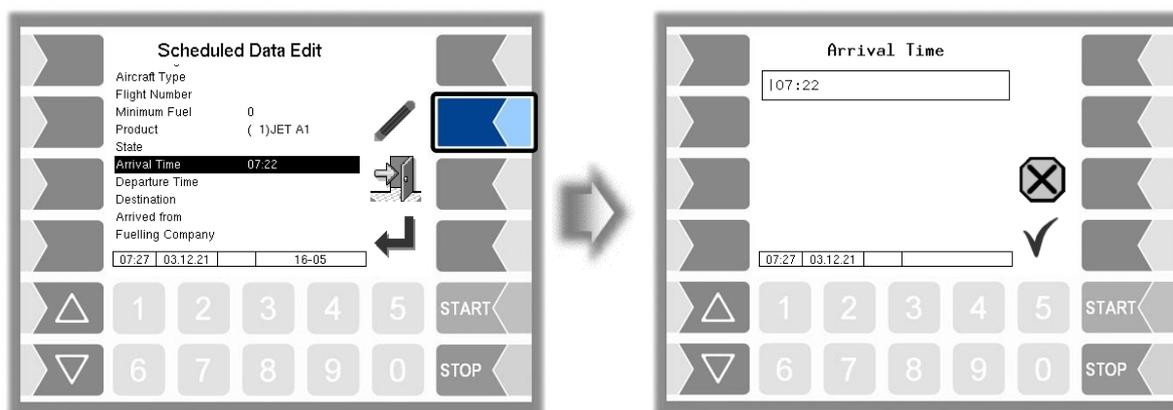
5.1.8 Product

Here you can select the product if several products are configured.



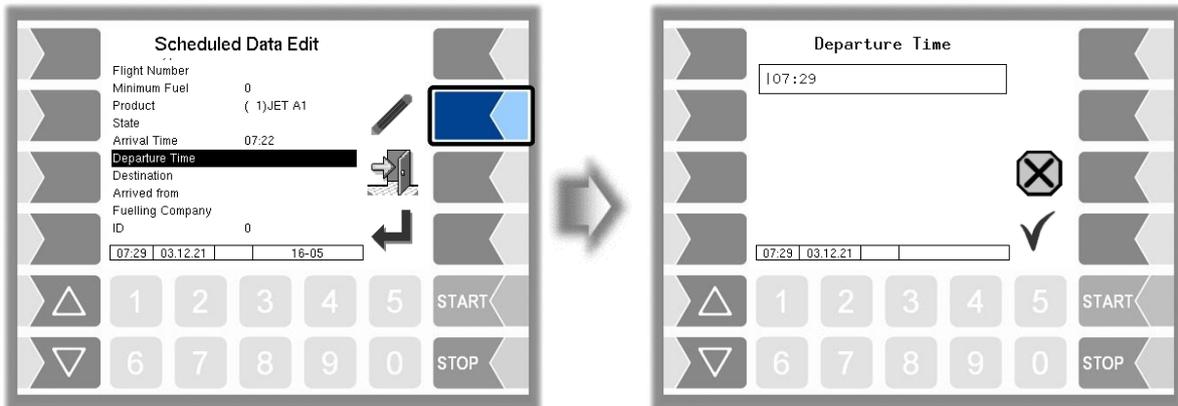
5.1.9 Arrival Time

Enter the arrival time of the aircraft to be refuelled here.



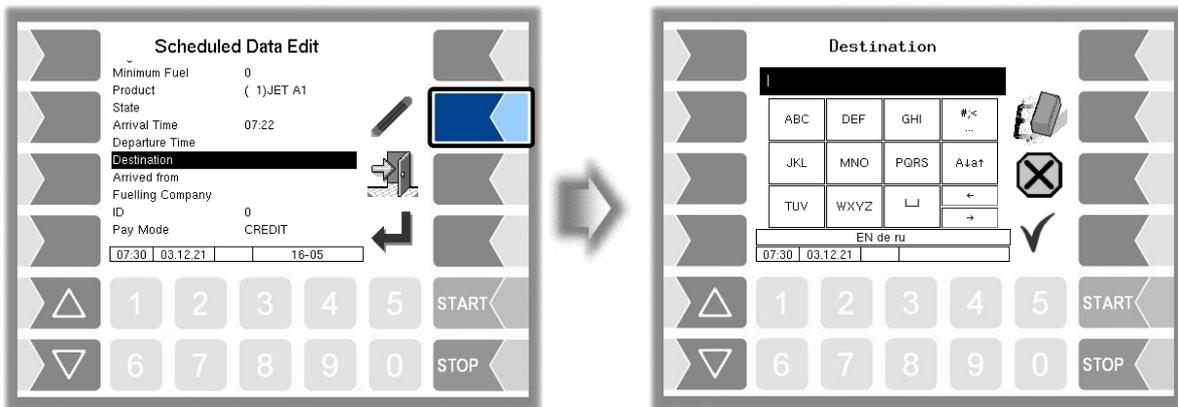
5.1.10 Departure Time

Enter the scheduled departure time of the aircraft to be refuelled here



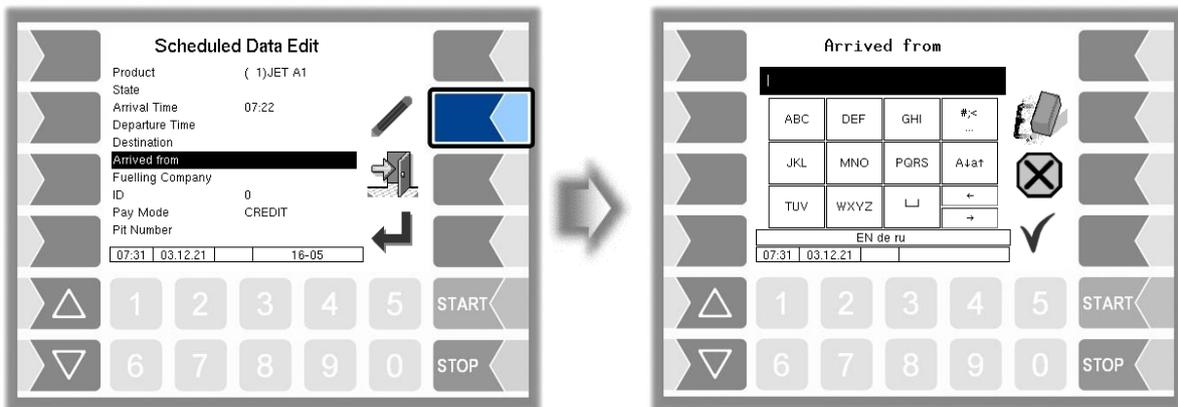
5.1.11 Destination

Enter the destination airport here.



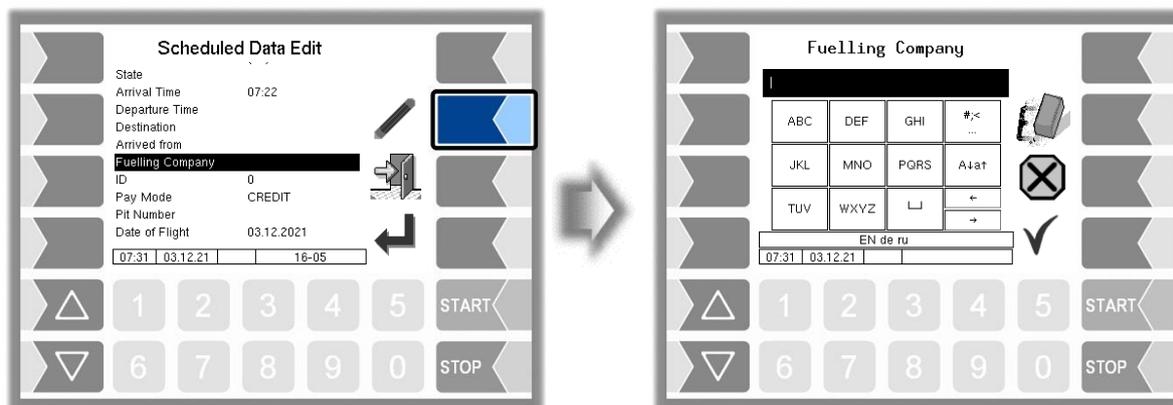
5.1.12 Arrived from

Enter the departure airport here.



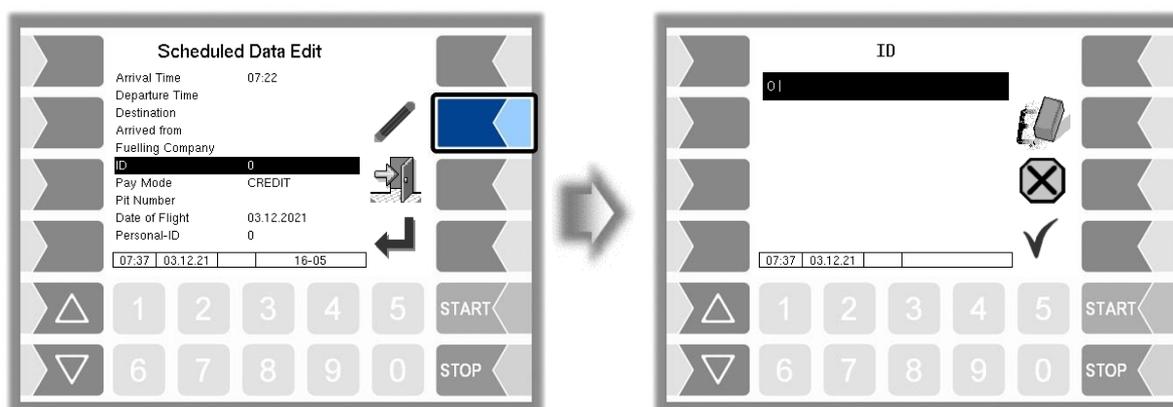
5.1.13 Fuelling Company

Enter the name of the tank company here, which carries out the refuelling.



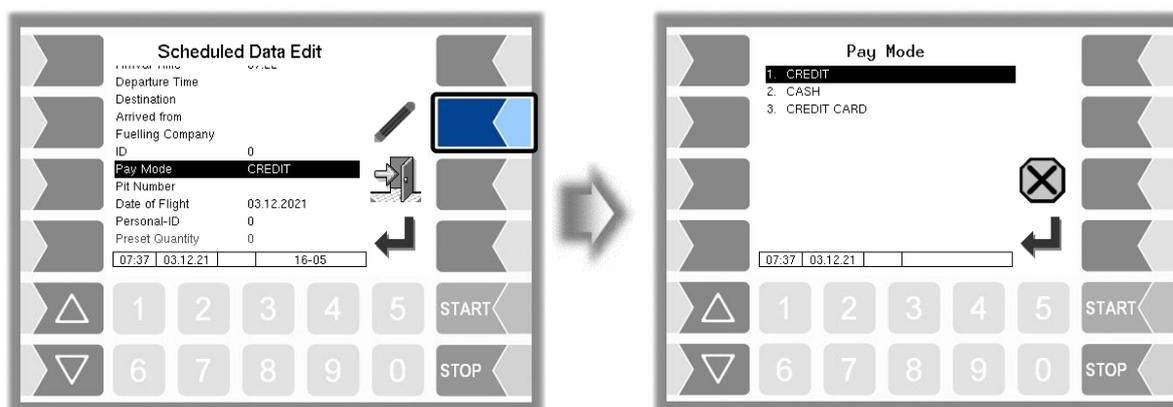
5.1.14 ID

The ID for the order is transferred from the office for planned orders and cannot be edited. In unplanned orders, the ID is set by default to 0. If necessary, you can enter a different ID according to otherwise provisions.



5.1.15 Pay Mode

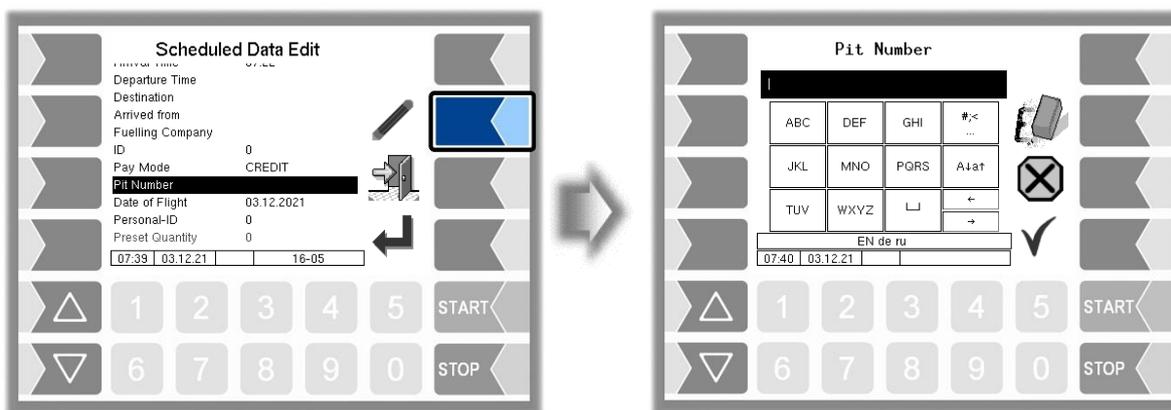
Here you can select the applicable payment option.



CREDIT	Payment is made on invoice. Price calculation and payment processing are made on the basis of current tax rates by the Office. The crew receives a delivery note with quantity and price..
CASH	Payment is in cash.
CREDIT CARD	Payment is made by credit card.

5.1.16 Pit-Number

The Pit number denotes the position, where the refuelling takes place.



If several fuelling stations are available in a parking position, it may be necessary to supplement the information on the parking position.

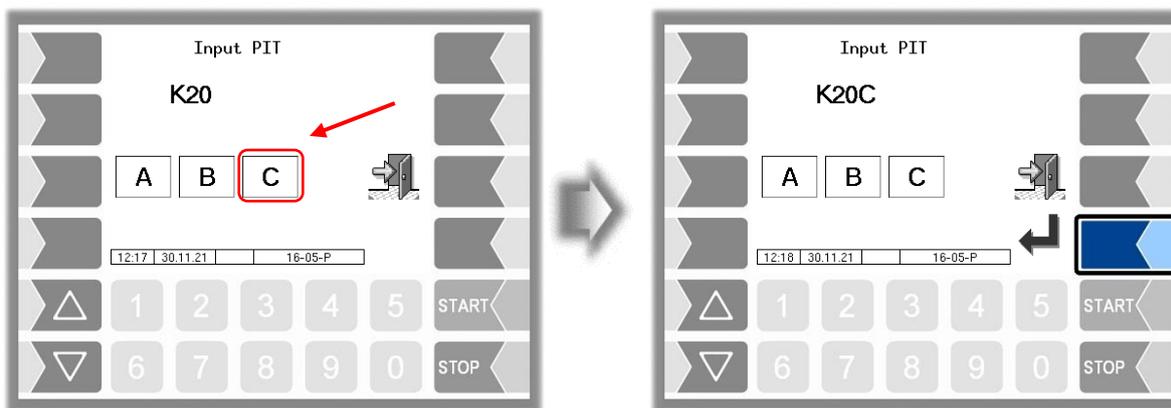
Corresponding specifications can be configured, which are displayed here for selection.

Example:

In the following example, the park position K20 is intended for the order.

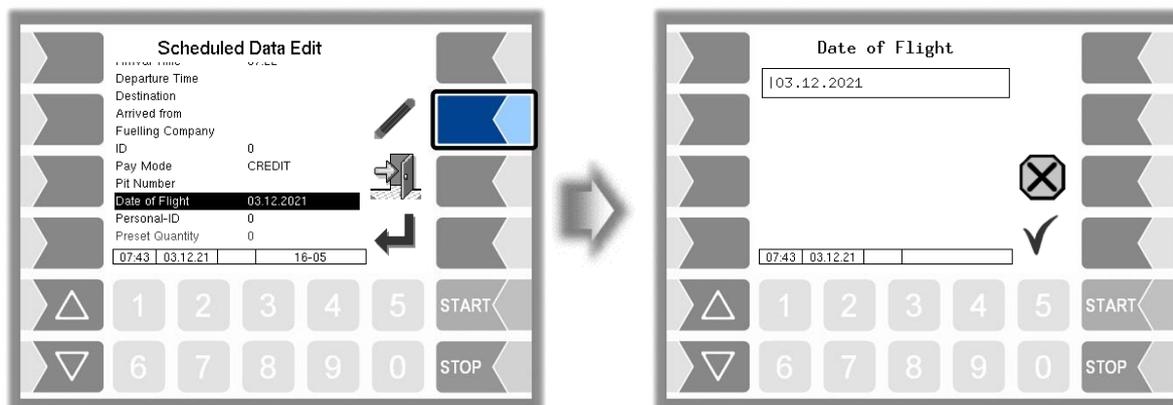
At this position, there are the refuelling stations A, B and C.

Here the refuelling station C is selected.



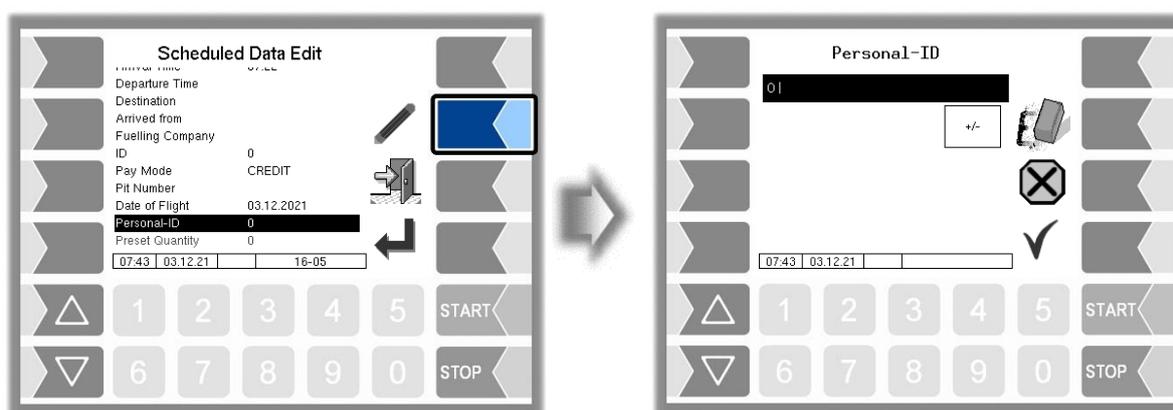
5.1.17 Date of Flight

Enter the flight date here.



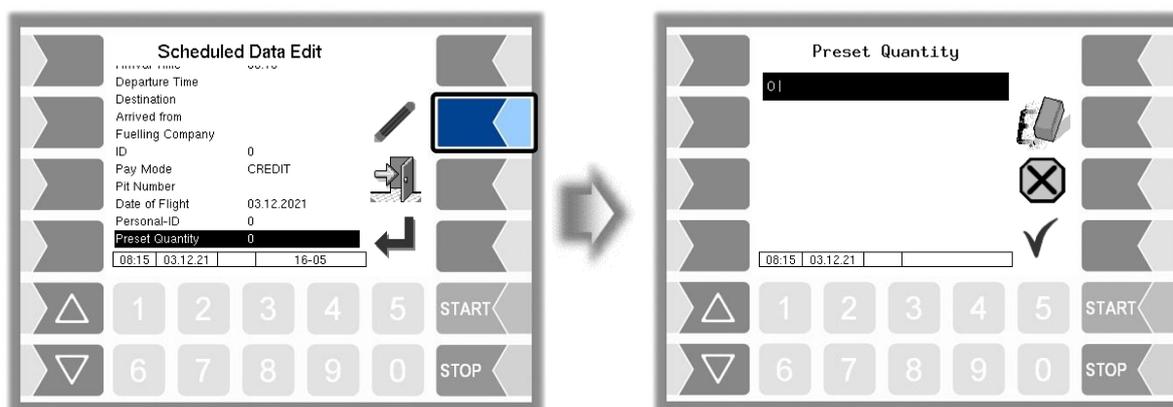
5.1.18 Personal-ID

Here enter the personal ID of the person which performs the refuelling.



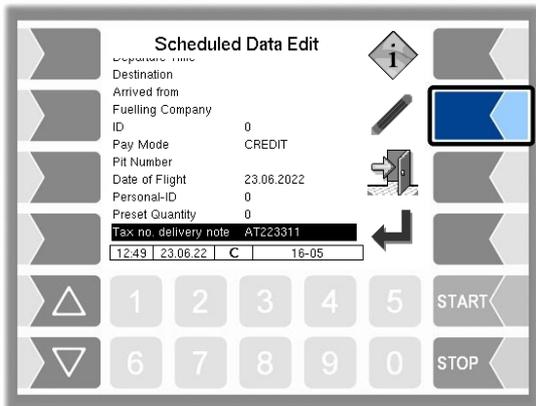
5.1.19 Preset Quantity

Configuration-dependent may be entering of a preset quantity: -prohibited, -permitted or –required. If entering of a preset quantity is permitted or required you can enter here the scheduled quantity (see also section 4.3.2).

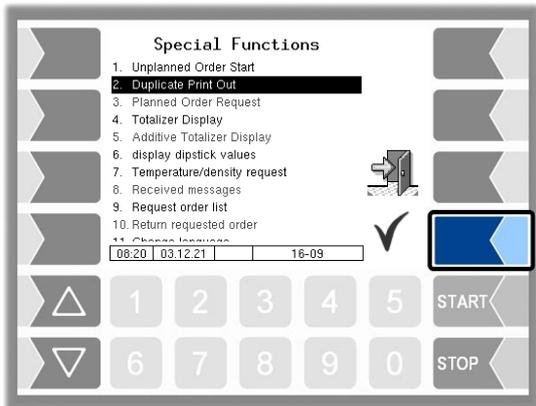


5.1.20 Tax number

The tax number printed on the delivery note can be changed.



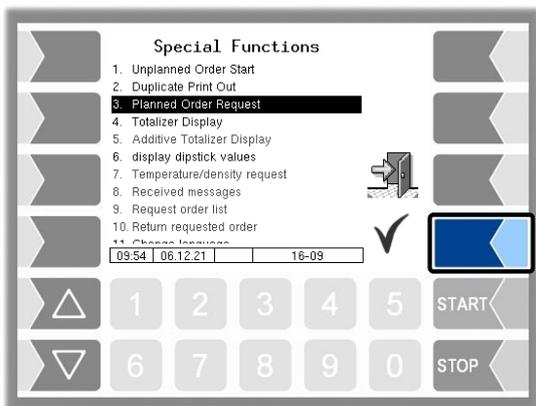
5.2 Duplicate print out



As long as no new order has been started, you can print as many duplicates of the delivery note as you like for the last order

5.3 Planned order request

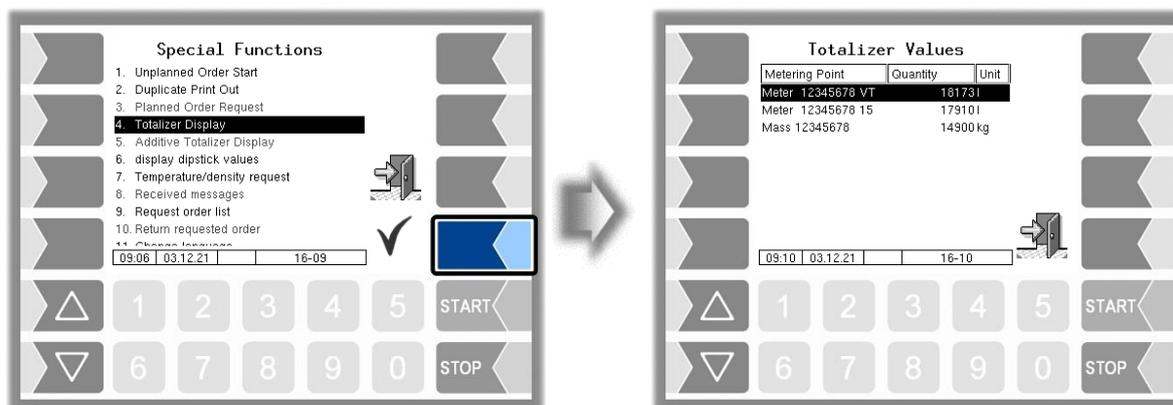
If a planned order cannot be executed at present, this function is used to request new order data.





Available only when BARTEC is enabled.

5.4 Totalizer display

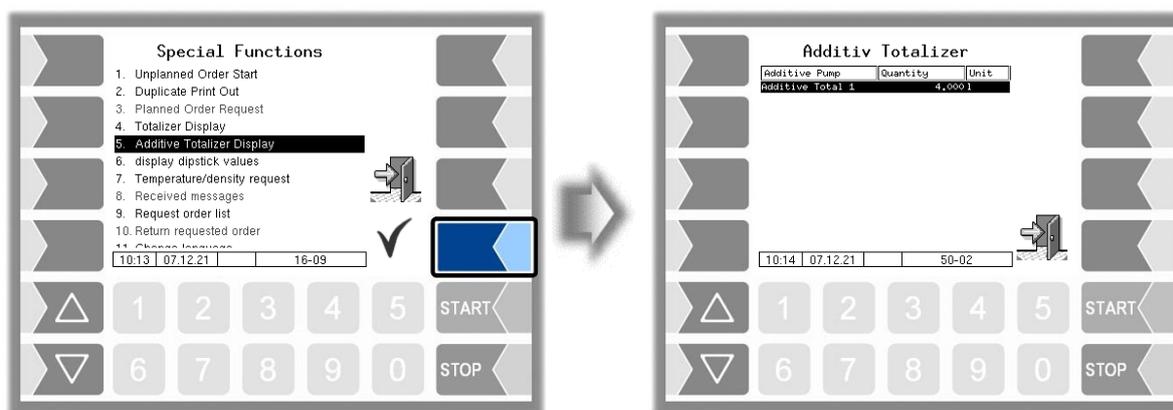


The totalizer counts of all configured meters are displayed:

Line 1: Actual volume delivered (VT),
 Line 2: Volume converted to 15°C (15),
 Line 3: Mass calculated from volume and density.

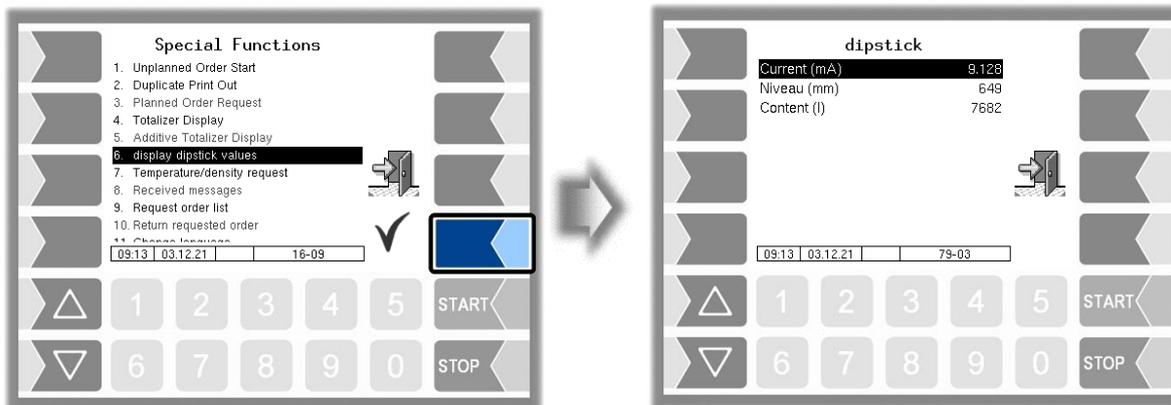
5.5 Additive totalizer display

The totalizer for additives is displayed.



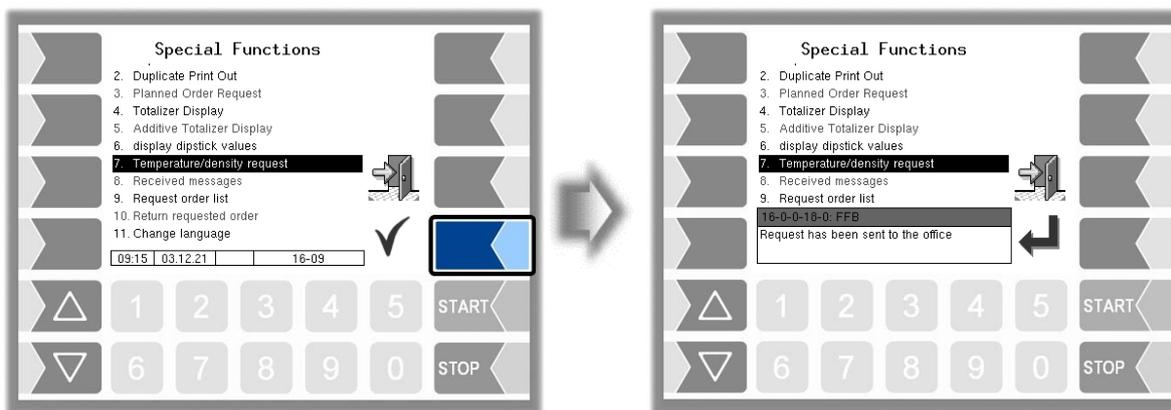
5.6 Display dipstick values

The current dipstick values are displayed.



5.7 Temperature/density request

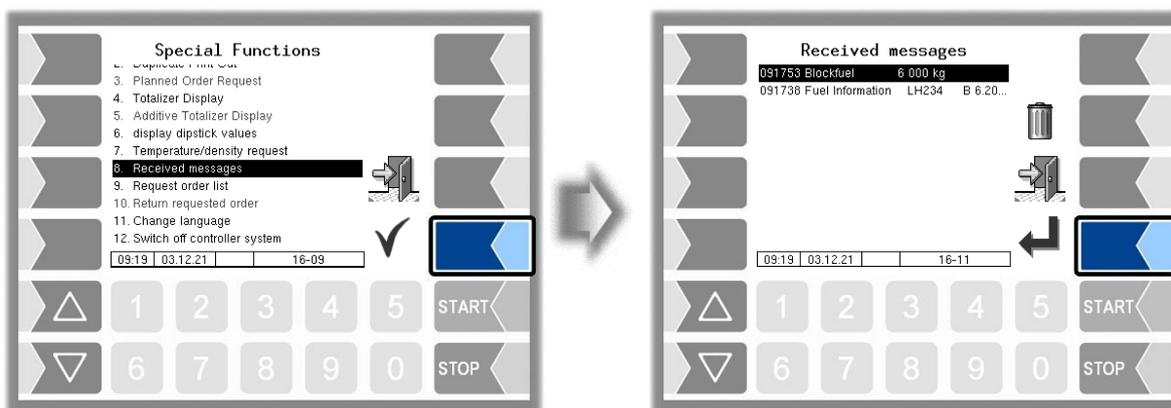
The current temperature and density values are requested from the office.



Available only when the FOI interface is enabled.

5.8 Received messages

Display of all messages with time stamp. To be able to read a message that has been truncated, select it with the arrow keys and confirm with ENTER.





Available only when the FOI interface is enabled.

5.9 Request order list

Under Special functions (order data) the menu item "Request order list" is displayed. This allows orders already requested in the office for selection on the vehicle to be requested. For this, the vehicle sends the message 9.29 to the office, whereupon Msg20 transmits the current configuration and then with Msg 26 a job list to the vehicle. From this list, the driver can then select an order and then gets from the office the complete order record of the selected order. Alternatively, he can delete the complete list with the soft key Recycle Bin.

(Configuration: Sequence Controls Menu/"Office/Remote"/TCP Communication /Transmission Parameters/"Order request/return" => On)

The sequence of screenshots illustrates the process of requesting an order list:

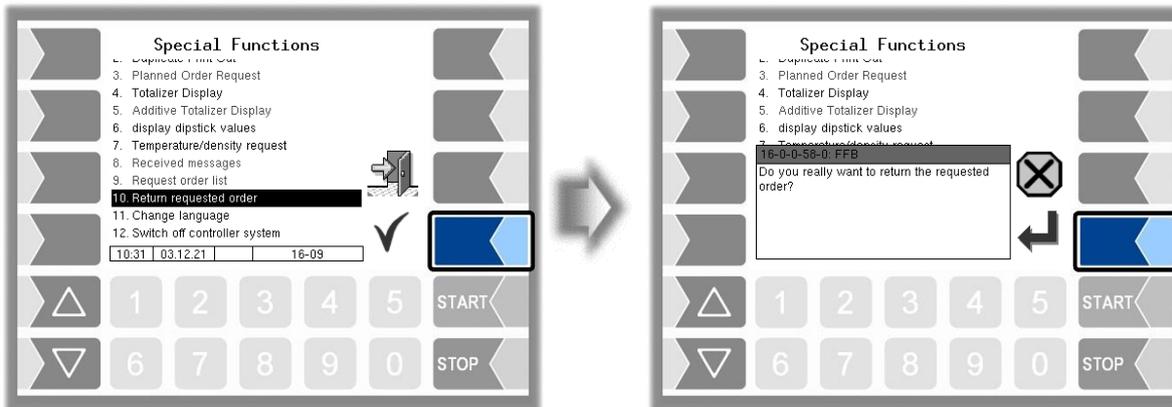
- Special Functions Menu:** A list of functions is shown, with "9. Request order list" highlighted. A blue arrow points to the right.
- Proposes of order:** A table of proposed orders is displayed. Below it, a job list for "7682" is shown with details: 10.03 | 03.12.21 | 16-04-SRO. A blue arrow points to the right.
- Proposes of order (with Recycle Bin):** The same table is shown, but with a trash can icon (Recycle Bin) next to it. A blue arrow points to the right.
- Scheduled Data:** A table of scheduled data is displayed. Below it, a job list for "7682" is shown with details: 10.19 | 03.12.21 | 16-04. A blue arrow points to the right.



Available only when the FOI interface is enabled.

5.10 Order return

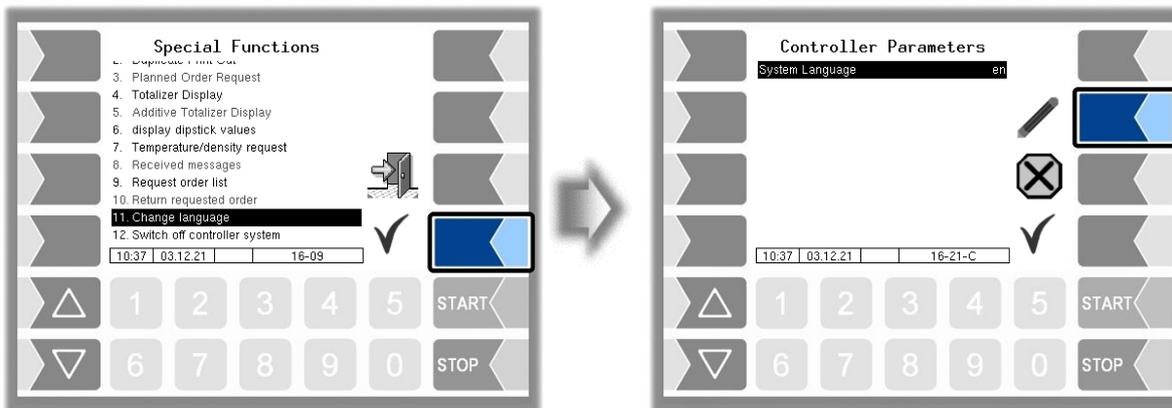
An order selected and received via the order request (menu item 9) can be returned with this menu item.



This function is only supported in FOI protocol.

5.11 Change language

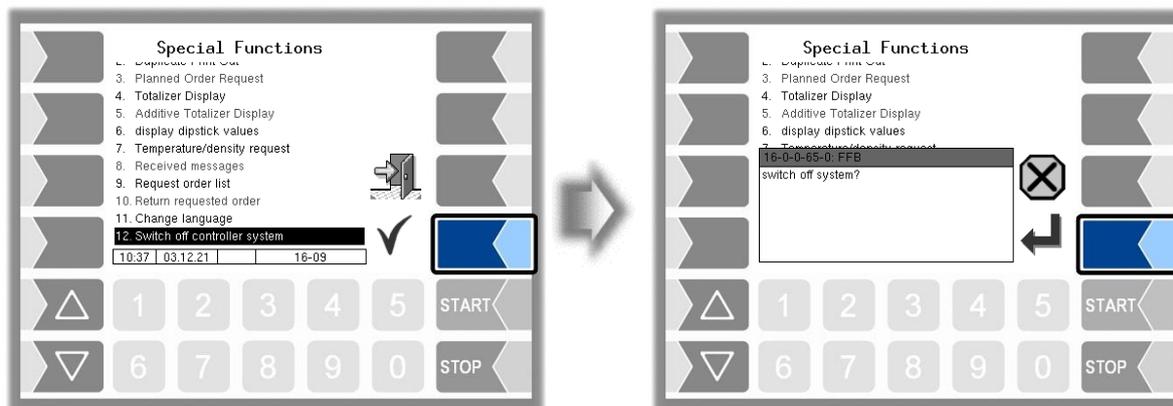
The language can be changed in the main menu under the controller parameters, but also via the “Special Functions” menu.



If you change the language setting, will the system automatic be rebooted.

5.12 Switch off controller system

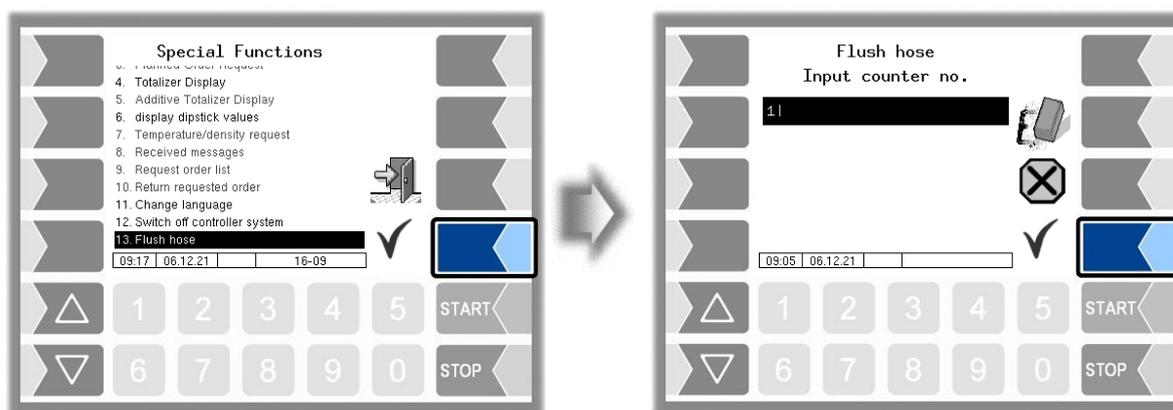
The system can also be switched off in the „Special Functions“ menu.



If the system is switched off via the "Special functions" window, the tour/shift will not be ended.

5.13 Start flushing process

Depending on the configuration, the system will monitor the flushing interval of the hoses/meters and blocks order processing after a certain length of time. Order processing will only be enabled again once the corresponding hose/measuring point has been flushed. The flushing order is preassigned the process type TU and a default quantity. The order fields cannot be changed. The configured flushing volume of the hose is used as the default volume. The flushing order is stored in the tour journal.

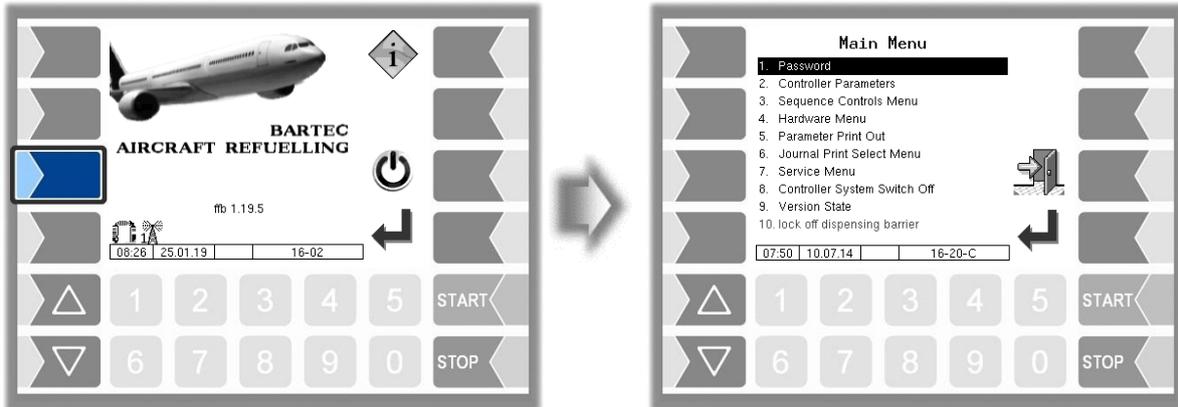


If one hose must be flushed, fuel-filling with the second hose is not permitted.



Hose flushing is dependent on the two configuration settings in the sequence control menu "Dialog parameters/Display of default data/ => "TOUR" and "Flushing the hoses/flush function => ON".

6 Main Menu

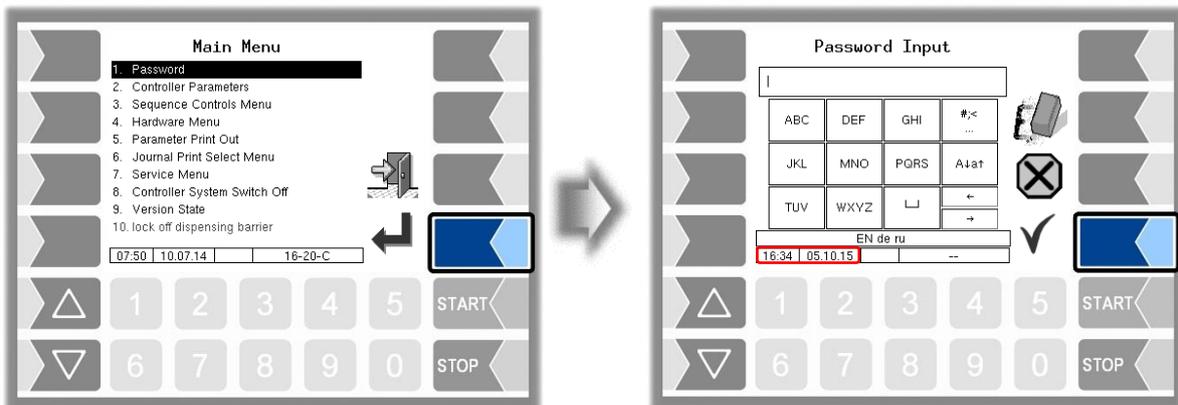


With a master/slave double delivery, the main menu on the master base module must not be called up while fuel-filling on the slave base module is in progress.

6.1 Entering the driver password

The software configuration is protected by passwords which allow access to various configuration options. The password level which is currently accessible is indicated by a flashing letter in the info line on the display. Each password level includes all the lower password levels. Only the menus and functions to which you have access without entering a password or after entering the driver password are described here. After entering the driver's password, you can change the "System time" and "Device language" entries on the "Controller parameters" menu, for example.

Password level	Indicator	Access
0 :No password		Read only
1 :Driver password	D	time, language
2 :User password	U	Operating parameters
3 :Service password	S	Software parameters subject to statutory calibration
4 :Open seal switch	C	All parameters



The driver password can be entered using the alphanumeric input field. The driver password is the sum of the day, month and hour (as shown on the display)

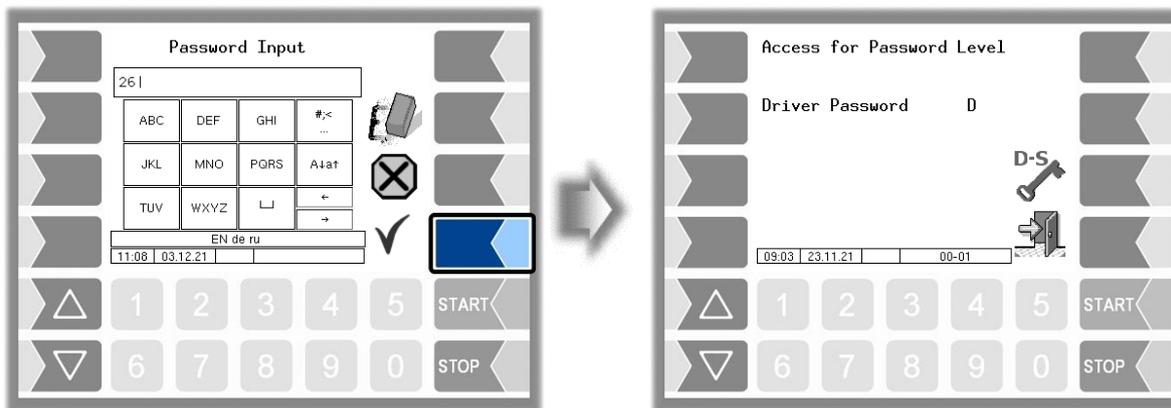
Driver password = day + month + hour

Example:

Date: 21. 03. 2017, 07:28 h

Driver password = 21 + 3 + 7 = 31

After confirming the password, you will see the password levels which can be accessed.

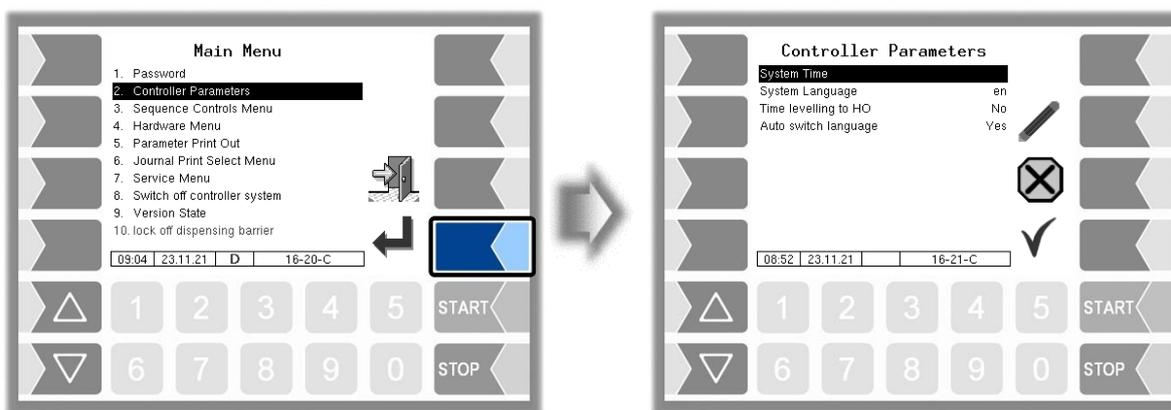


You can use the softkey to reopen the window to enter the password (driver, user or service password). Leave the password entry using the "Accept and save" softkey. After leaving the main menu, you must enter the password again.

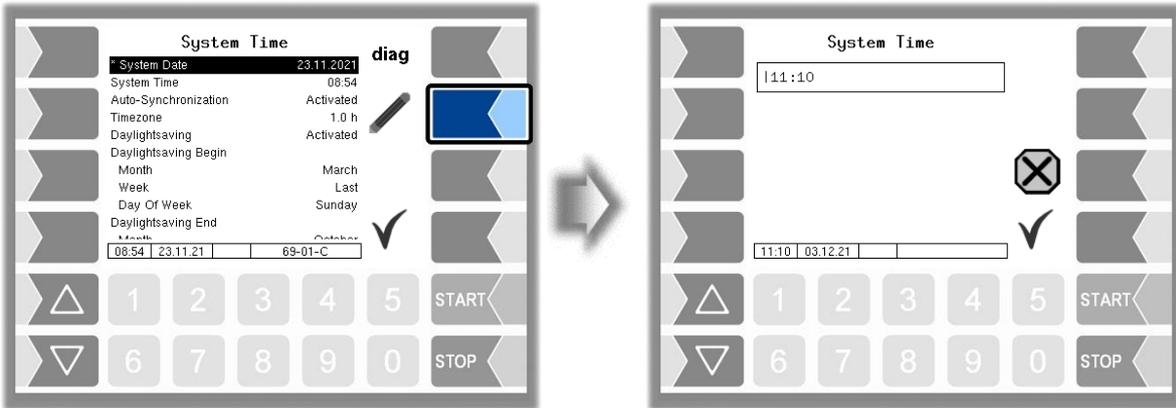


You can open all the other submenus on the "Main menu" without entering a password, but you cannot make any changes.

6.2 Setting time and language

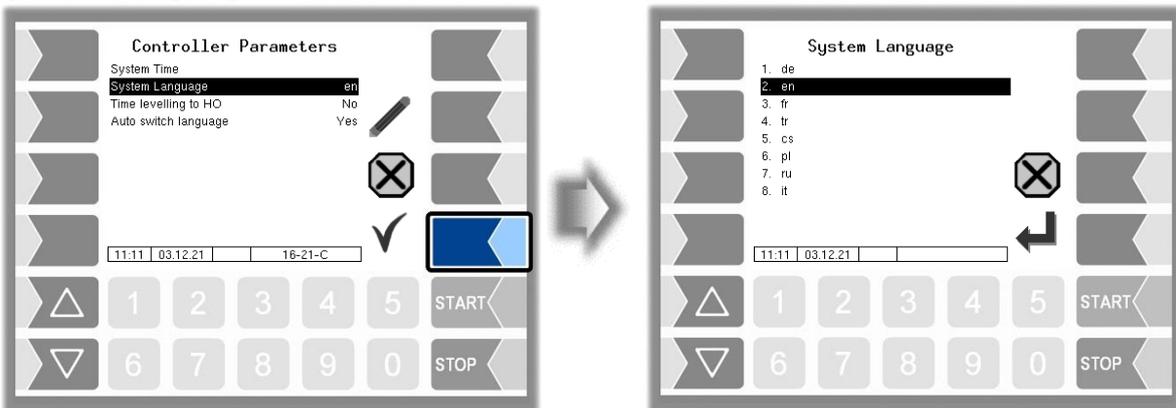


System time



If you change the date or time setting, will the system automatic be rebooted.

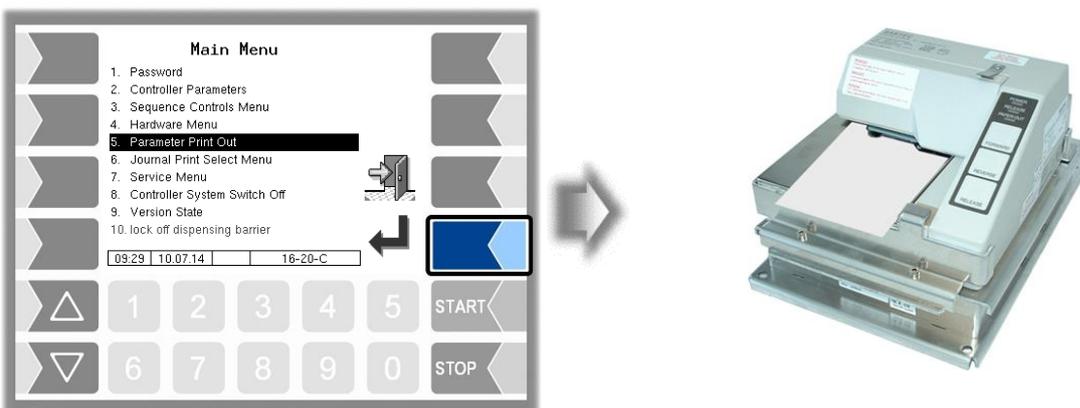
System Language



If you change the language setting, will the system automatic be rebooted.

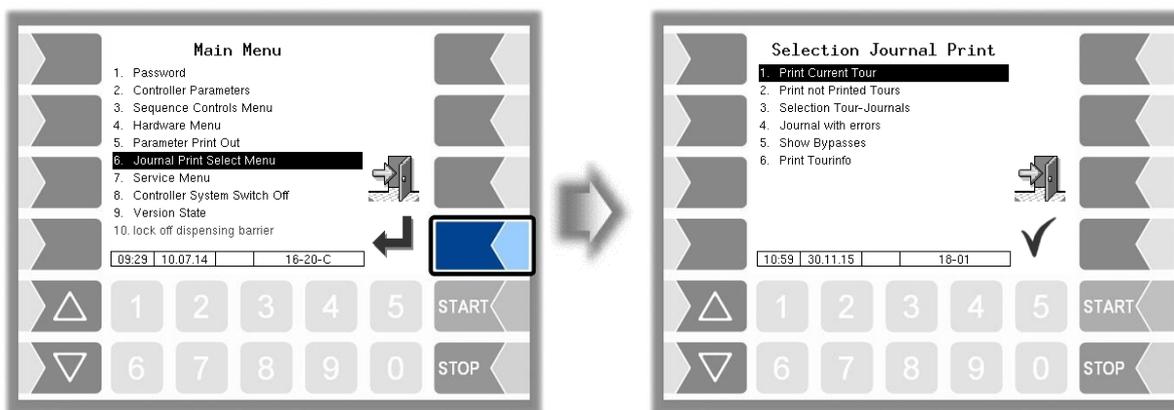
6.3 Parameter Print Out

Select the “Parameter Print Out” menu from the main menu. The current parameter settings are output on the printer.

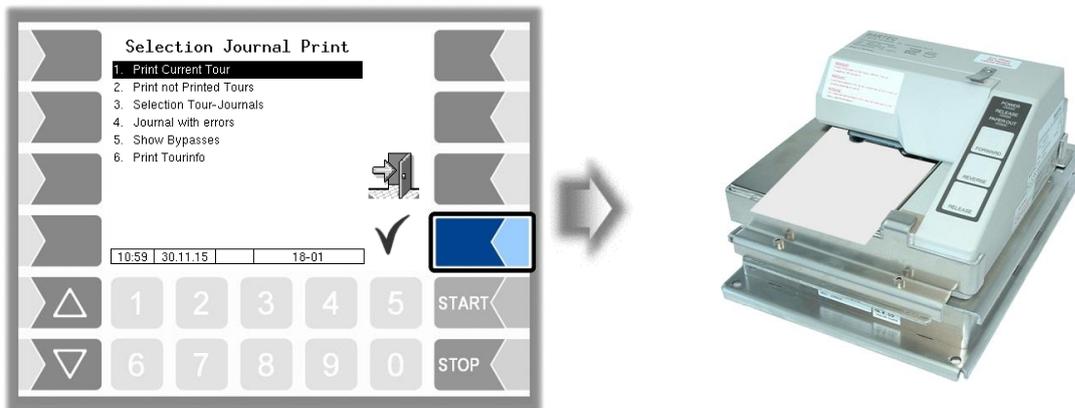


6.4 Journal Print Select Menu

The journal print function allows you to print out the stored tour data. Further selections are possible in the journal print submenu.

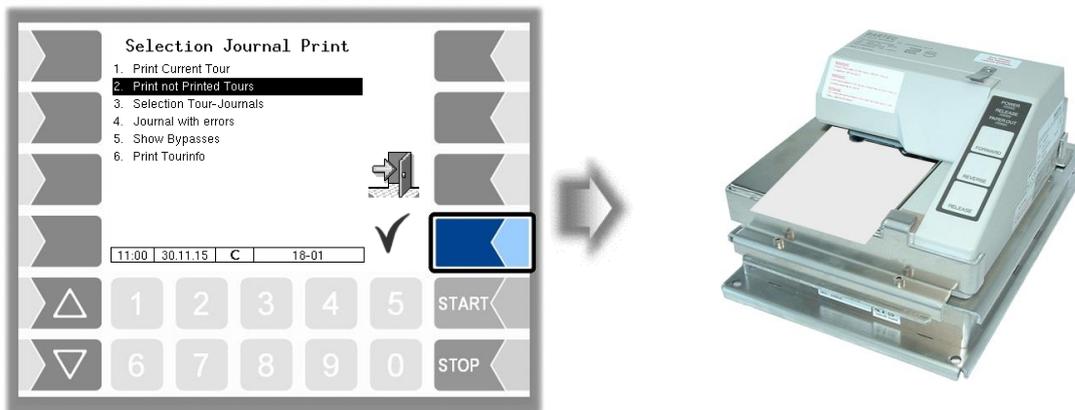


6.4.1 Print Current Tour



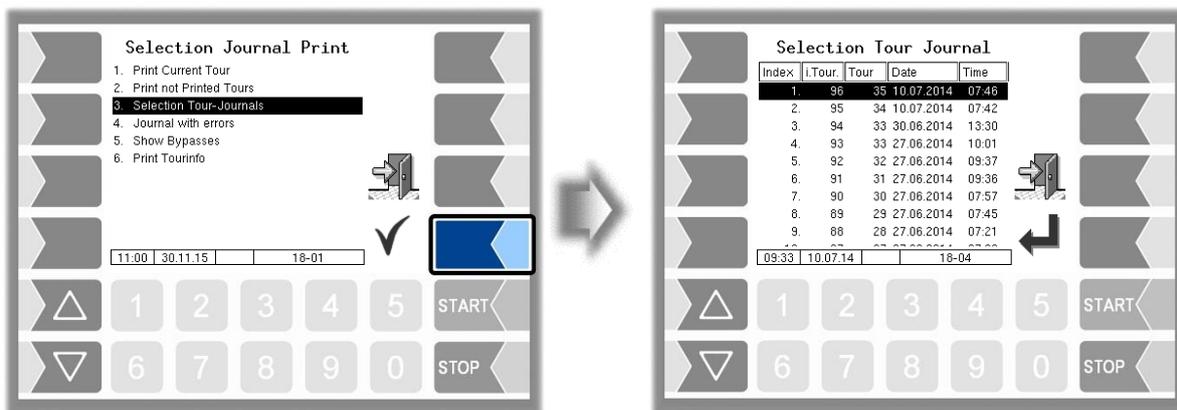
The data for the current (last) tour is printed.

6.4.2 Print not printed tours

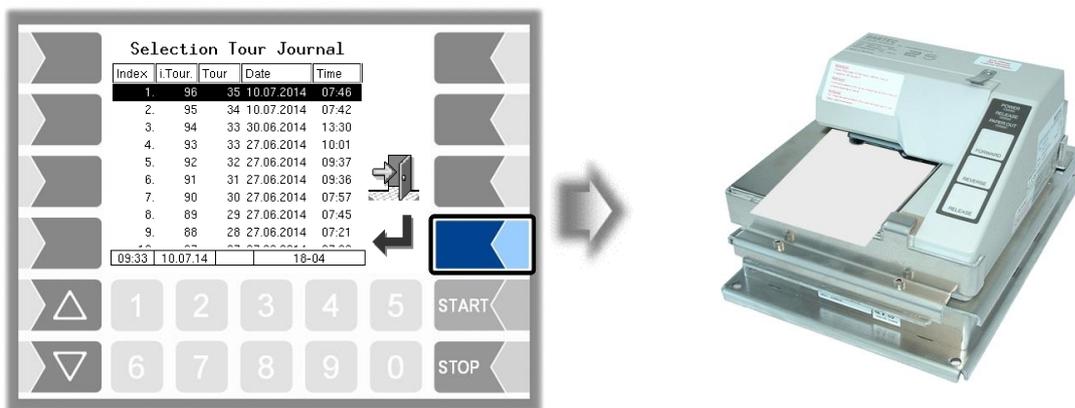


The data for all stored tours that have not yet been printed is printed.

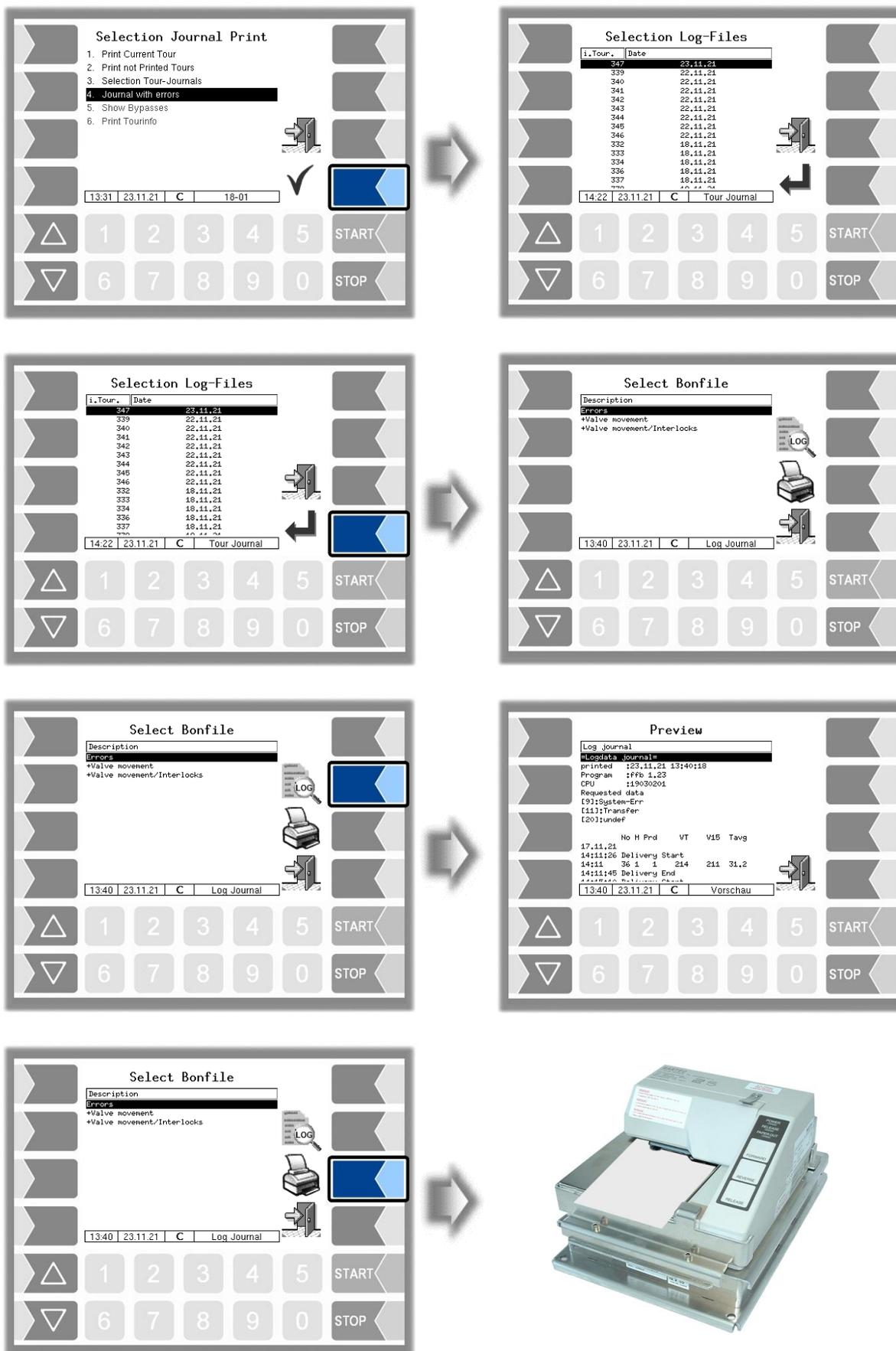
6.4.3 Selection Tour Journals



If you opt for manual selection, you can use the date and the tour start time to select the tour for which you want to print data.



6.4.4 Journal with errors



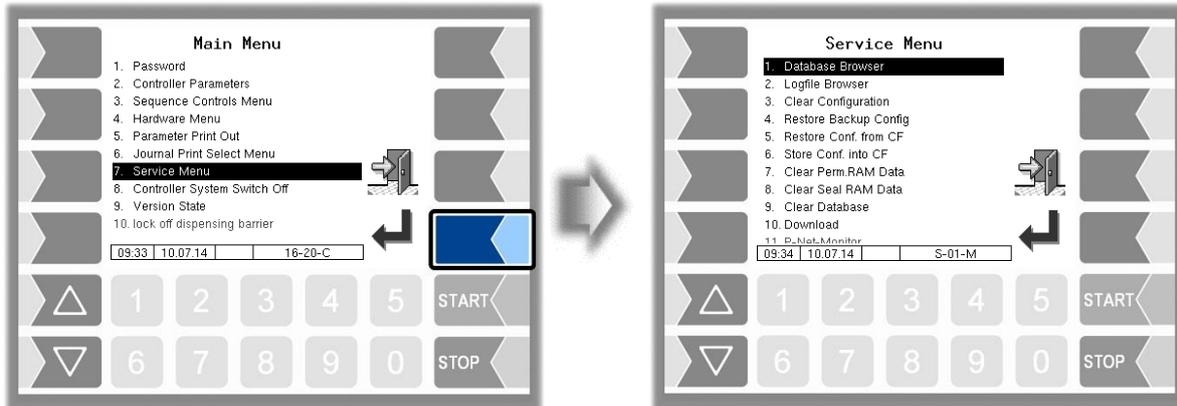
6.4.5 Show Bypasses

This menu has no function in software version 1.23.x.

6.4.6 Print Tourinfo

This menu has no function in software version 1.23.x.

6.5 Service Menu

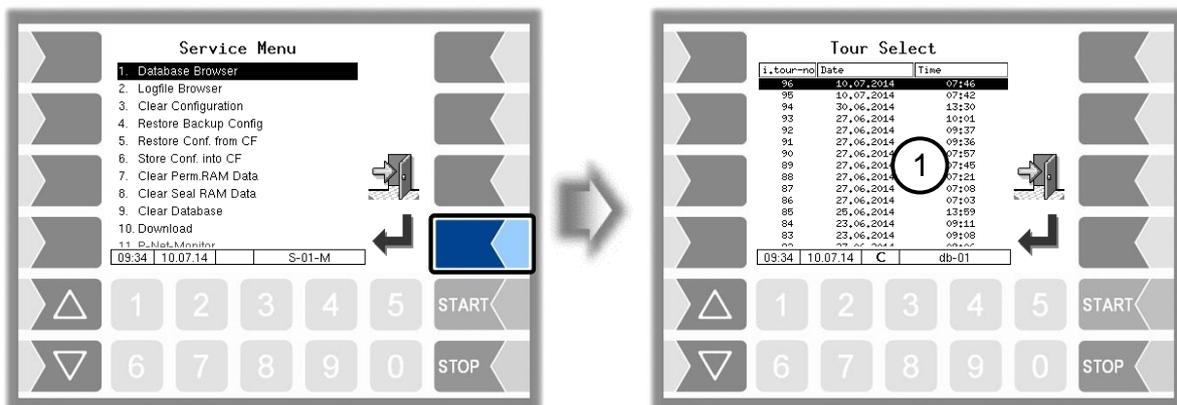


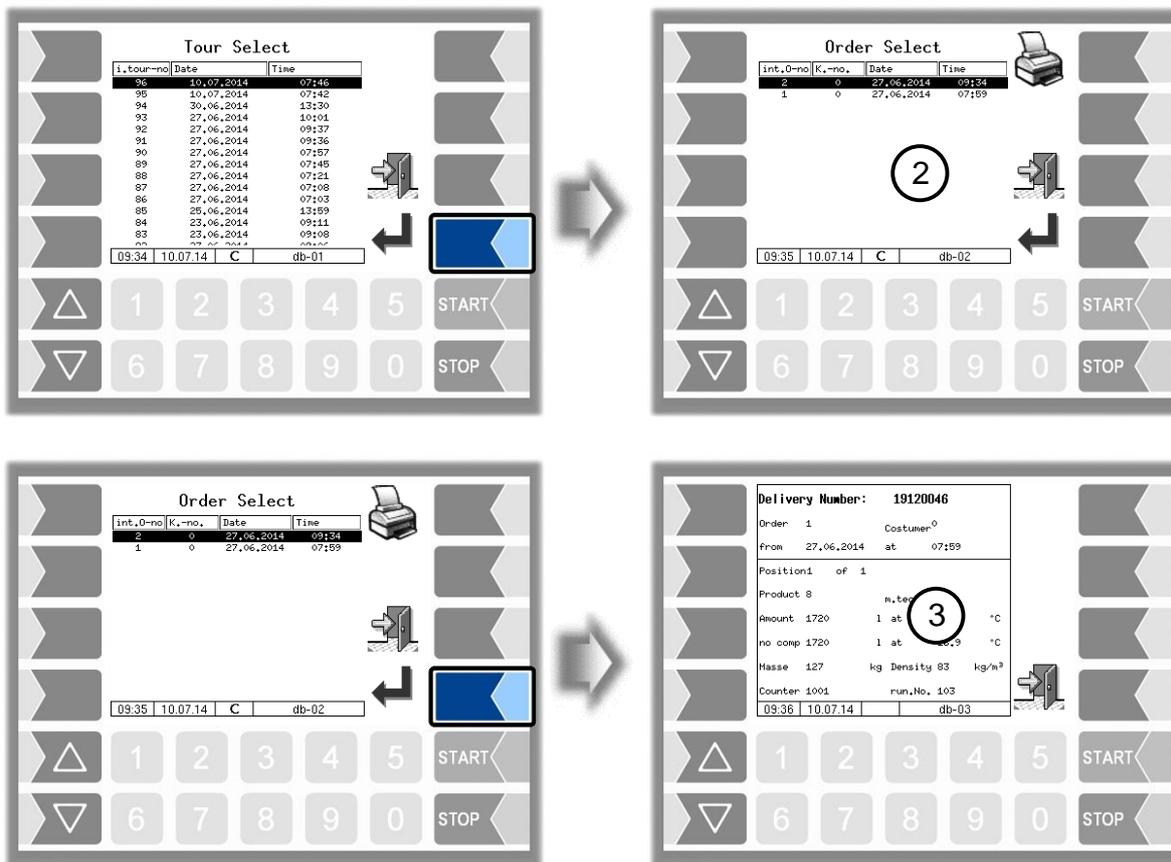
Access to the functions in the service menu is password-protected. Without entering a password you can only open the database browser and the logfile browser.

6.5.1 Database browser

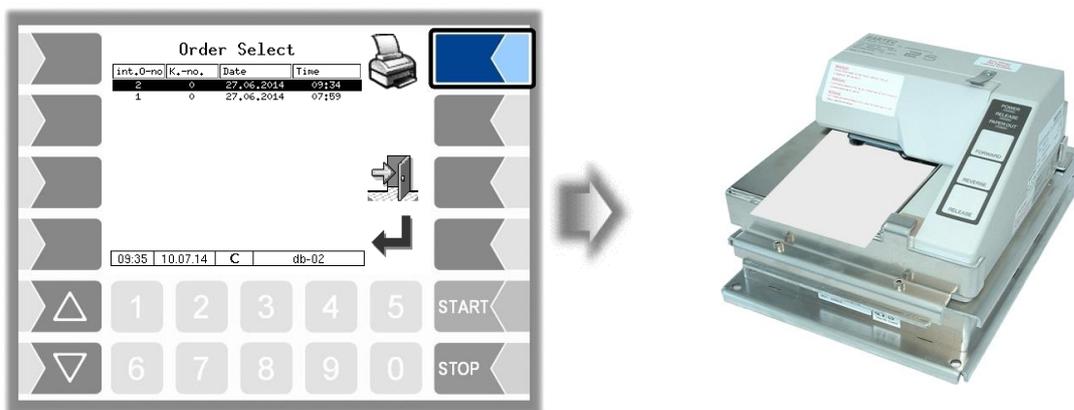
The database browser allows you to view stored tour data.

- ① • When you open the database browser, the “Tour Select” window is displayed. All tours that have already been stored are listed here. The “i tour-no.” is the internal tour number within the software. It is not identical to the tour number that is displayed for the driver.
- ② • In the „Tour Select“ window, use the selection keys  and  to select a tour. The “Order Select” window is displayed. This window contains a list of orders belonging to the selected tour. The softkey with the printer symbol prints a copy of the delivery note for the selected order.
- ③ • Select an order belonging to this tour in the “Order Select” window. The system displays an overview of the items of the selected order and the associated content.





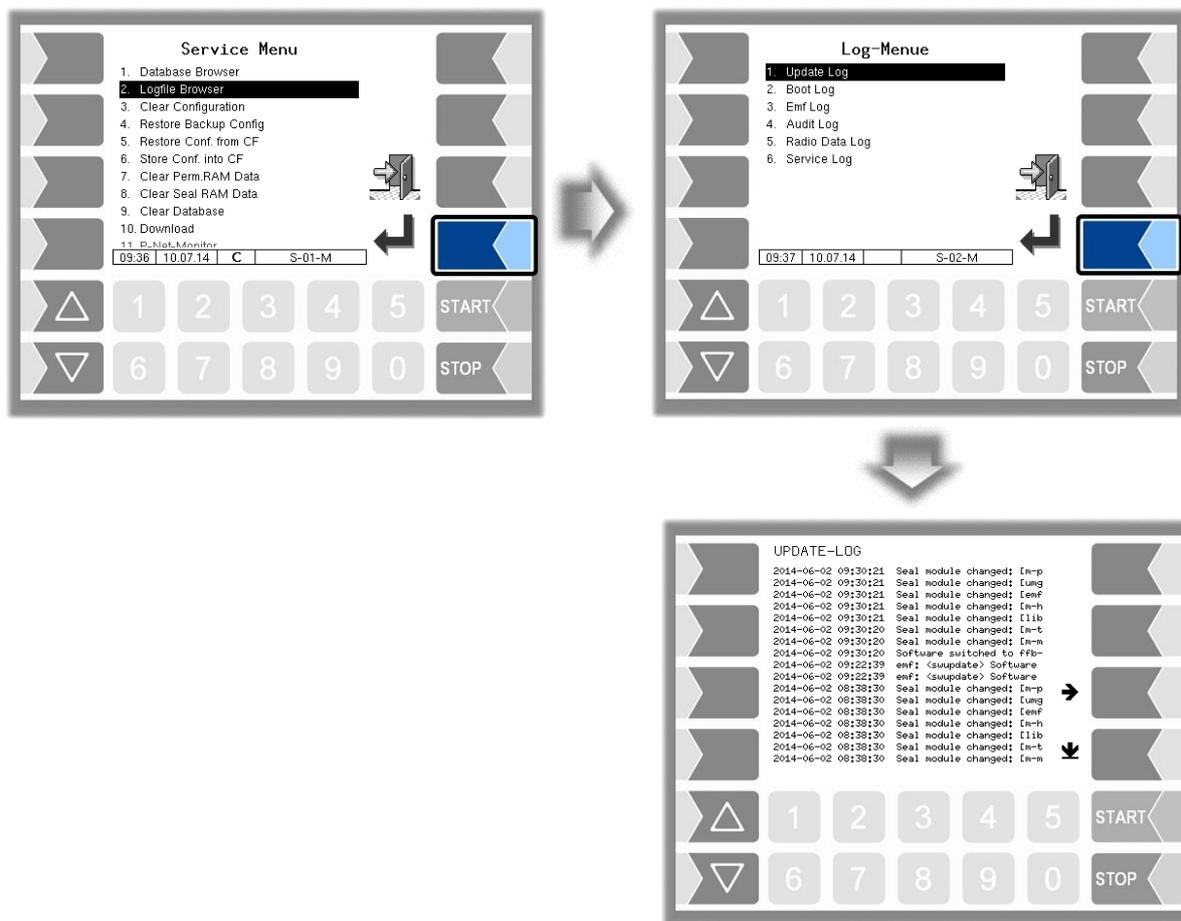
A duplicate of the delivery note of the selected order is printed



6.5.2 Logfile browser

The logfile browser allows you to view all saved log entries. The information about the various operations is displayed in text format and can be read directly on the screen.

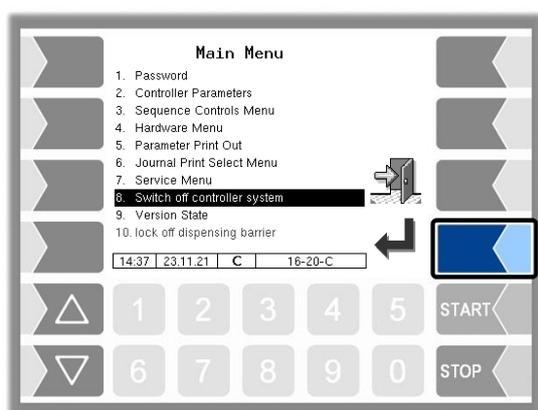
Update Log:	Log entries about updates and update attempts
Boot Log:	Boot messages, boot scripts
Emf Log:	Log output from the various applications
Audit Log:	Log entries about all parameter changes
Radio Data Log:	Log-entries about radio data
Service Log:	Log entries for analysis by service personnel



Within the log window, you can move the displayed content to the left, right, up or down using the arrow softkeys.

You close the log window with the **STOP** key.

6.6 Controller System Switch Off



You can switch off the system properly via the main menu, the start screen and the special functions in the tour.

6.7 Version state

The data is relevant for calibration is displayed:

- Software version
- Serial no. of the CPU, application type, kernel no.
- Version comparison of the software modules subject to calibration.

Software version

A no. CPU

Module name	Version read	no.	Module signature	Version saved	no.	Comparison result
m-mif	1.0.6		e42a9e	1.0.6		=
m-tmup	1.0.7		0de79b	1.0.7		=
lib3003db	1.1.0		aab9e7	1.1.0		=
m-hmi	1.1.3		1521a1	1.1.3		=
emfx	1.0.13		37d2c2	0.14		≠
umg	1.1.2		b0a3d0	1.1.2		=
m-print	1.1.1		f97cd	1.1.1		=

The current version of all modules must be identical to the calibration version.. Otherwise no product delivery is possible. Every time the system is started, all software modules are checked. If any incorrect versions are found, an error message is displayed. If necessary, you are prompted to recalibrate. However, product delivery is still possible unless the changes are extensive. In this case, recalibration is required first.. If you close the Seal Versions Check while the seal switch is open, will the saved version numbers be updated and the corresponding message is deleted.

6.8 Lock off dispensing barrier

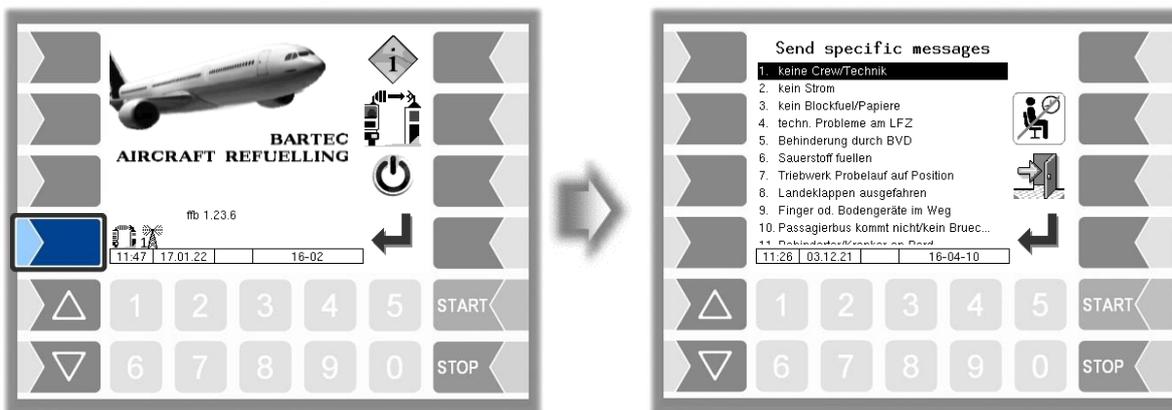
When exceeding the maximum differential pressure limit or exceeding the maximum deviation from the configured differential pressure a dispensing barrier is activated. The current refuelling can be completed; however, it can no further refuelling be started. This fuel-filling lock can be cancelled again after you have entered the user password in the main menu.

7 Feature Enhancements

7.1 Sending specific messages

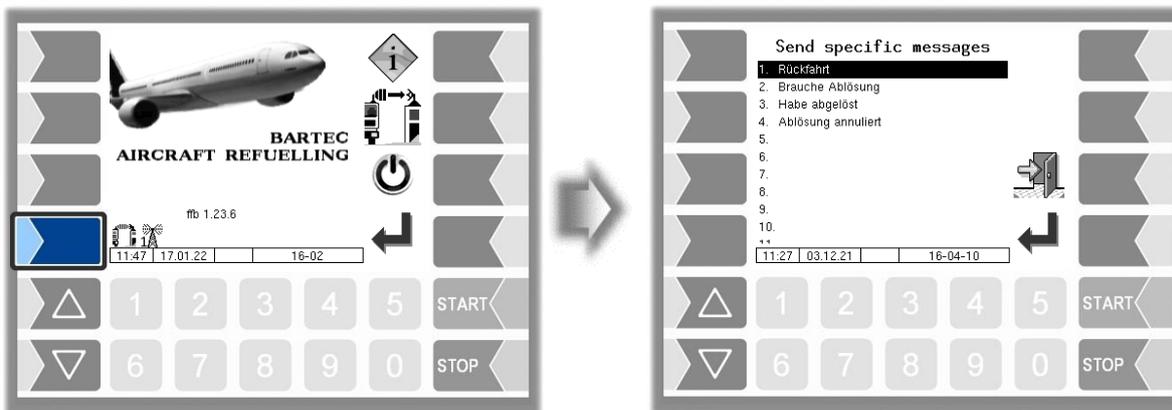
While working with the measuring system, it is possible to send stored message texts. You can send these messages in any working situation. Different presentations are available depending on the interface used. A message is sent to the office as soon as it is confirmed with the "Confirmation" softkey or has been selected with the number keys.

FOI-Interface

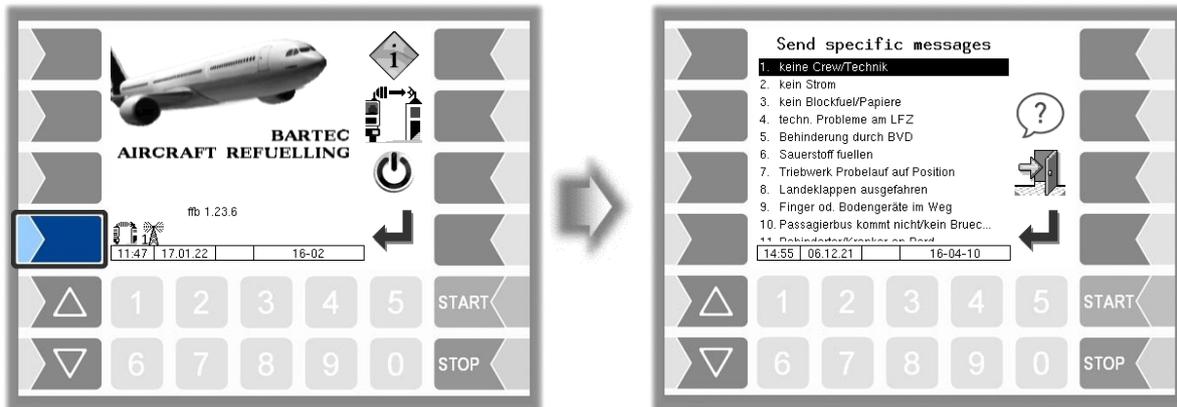


This softkey sends an "OK" to the dispatcher or shift manager. For example, you can confirm the presence of the operator at the vehicle here.

FOSI- Interface



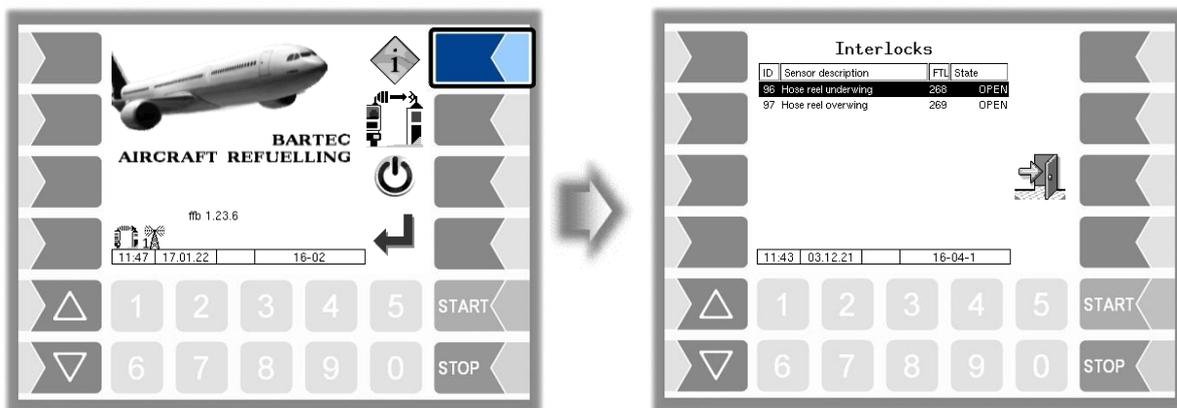
BARTEC- Interface



	<p>Dialog request This function sends a dialog request to the dispatcher.</p>
--	--

7.2 Check Interlock inputs

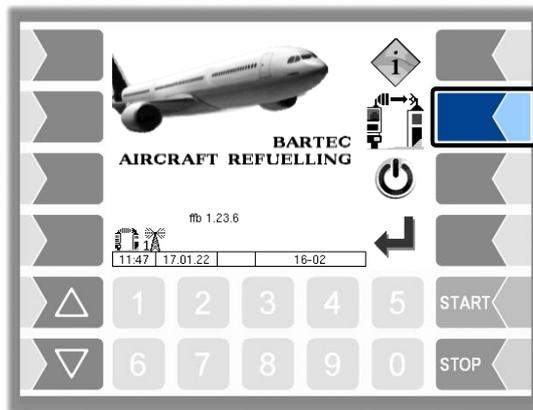
The states of the interlock sensors installed on the vehicle appear in the "Interlocks" window. However, only activated/open and faulty interlock sensors are shown. If the window is empty, no interlock has been activated. The log ID is the logical number of the configured input. The FTL ID is only used by the office to identify the interlocks.



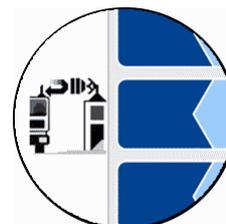
When an interlock sensor is active or faulty, the vehicle must not be moved. In this case, System 3003 only controls one logical output. The setup person must ensure that the output is used correctly. See also the service and configuration instructions.

7.3 Vehicle-office connection test

If TCP communication has been configured as the office connection and the vehicle is connected to the Internet, then the connection to the office can be tested. To do this, touch the "Connection test" softkey (configurable). A test message is then sent to the office.



As soon as the answer is received, the symbol opposite appears for the softkey for 5 seconds in place of the previous symbol:



If no answer has been received after the time configured for the radio timeout, the symbol opposite appears for the softkey for 5 seconds in place of the previous symbol:



7.4 Large leak detector

The dynamic large leak detector is specially designed to detect leaks in the hydrant system of an airport. The fuel-filling vehicles are connected to the GLE system via a WLAN network. The data are exchanged between the fuel-filling vehicles and the GLE system via an OPC server (OPC DA Version 2.0).

The delivery data are transmitted every second. When the office software detects a leak from the data, it triggers an alarm.

Error messages

If the connection from the TCP/IP to the GLE control computer is interrupted, this is indicated by the error symbol on the status line. The following entry is stored in the events window.

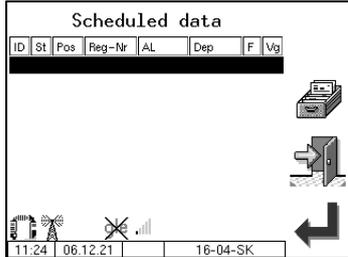
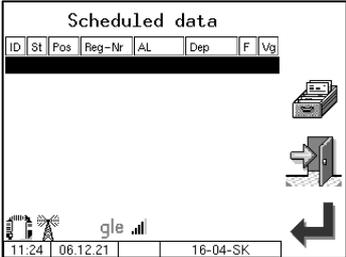
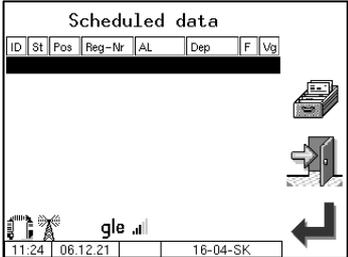
WinPC connection: TCP connection to WinPC interrupted.

Status symbols

The GLE status and the WLAN signal strength are displayed so that the operator is always aware of the current connection status to the GLE server.

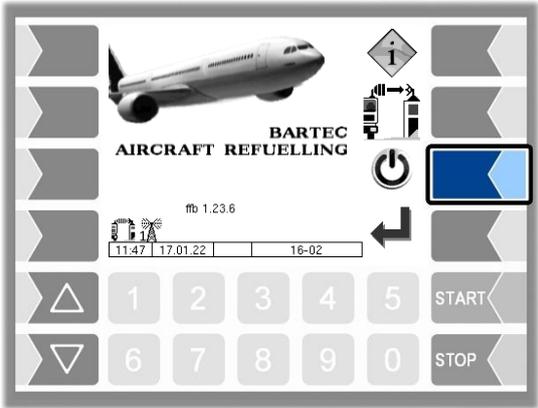
	No read confirmation received from the GLE system.
	Communication between the vehicle and the GLE system is OK.
	Communication between the vehicle and the GLE system has been interrupted. Possible reasons are, for example: <ul style="list-style-type: none"> - Access to the GLE/OPC server is faulty. - WLAN connection lost (see WLAN signal strength symbol). - TCP/IP connection to the GLE control computer aborted (see error messages).

	Information about the WLAN signal strength. The number of black bars represents the signal quality of the WLAN connection.	
	No bars	There is no connection to the WLAN network
	1 bar	Very weak signal
	2 bars	Weak signal. The GLE WLAN adaptor is attempting to find a better access point.
	3 bars	Signal
	4 bars	Good signal
	5 bars	Very good signal



Switching off the system

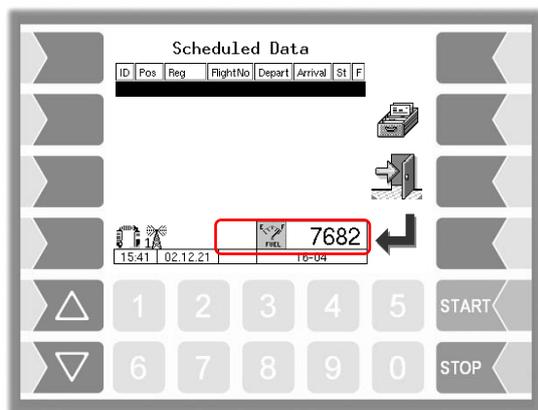
You must always use the "Switch off system" softkey on the start screen to shut the system down. The GLE control computer is shut down first and then the FFB System 3003 is switched off properly. An information window appears while the GLE control computer is shutting down.



You must always use the "Switch off system" softkey on the start screen to shut the system down.

7.5 Vehicles with a dipstick

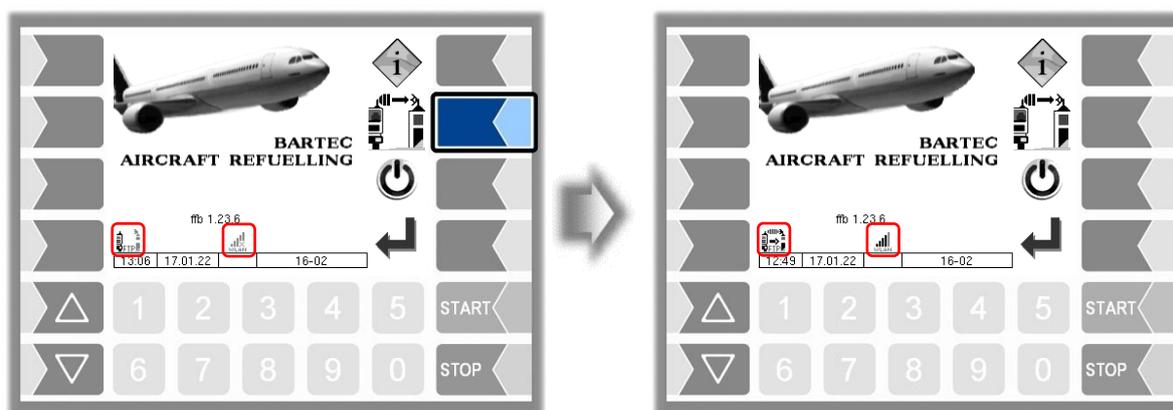
On vehicles which are fitted with an electronic dipstick, the current tank content which is measured by the dipstick is displayed in the order window. This may also appear on the large display, depending on the configuration.



7.6 FTL/FTP data transfer

In addition to TCP communication, System 3003 also provides FTP communication. The specification and return run data are transmitted between the office (host) and vehicle (client) via an FTP server. When return run data are available, they can be created and transferred using the "FTL/FTP data transfer" softkey. The WLAN interface can be switched on and off here, depending on the configuration. The status of the FTP communication and the WLAN interface will appear on the status line.

(Configuration: Sequence Controls Menu/Truck Parameters/User => „AS“)



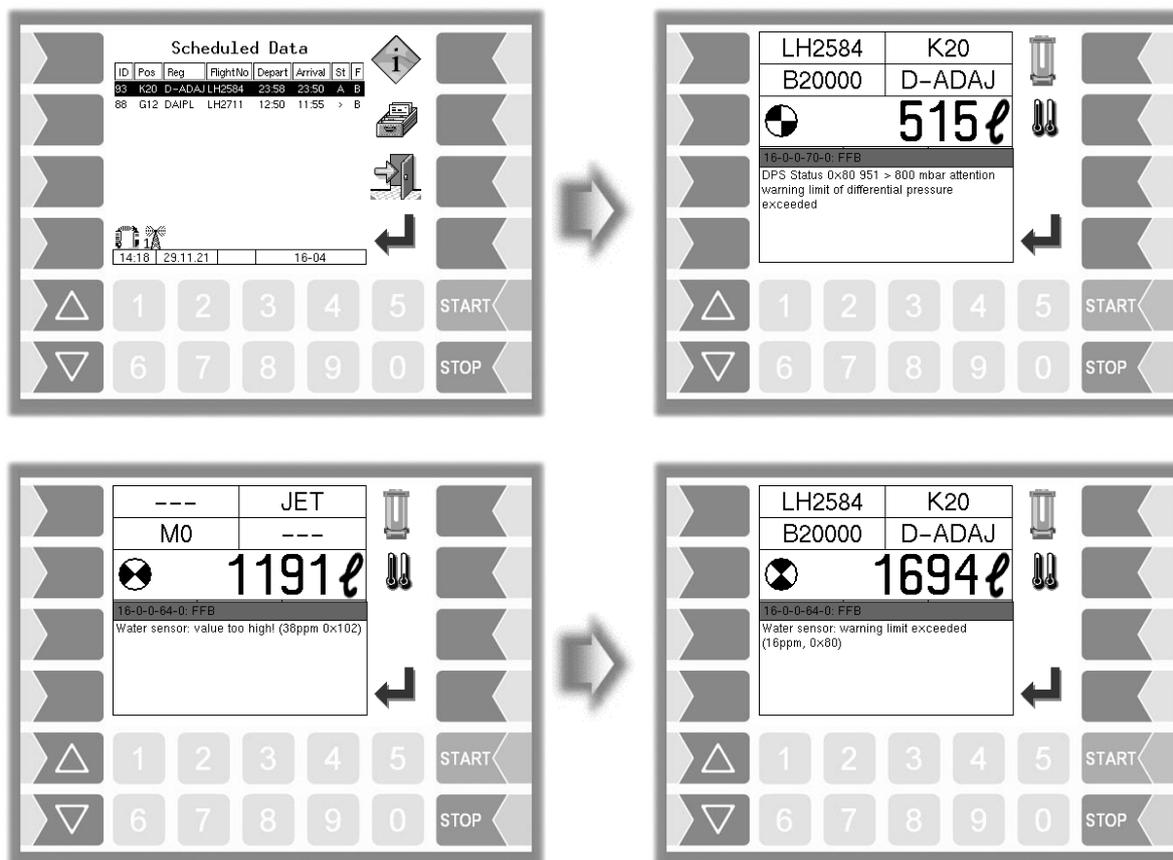
8 System monitoring

8.1 Display of malfunctions

The measuring system is constantly monitored for reliability and fulfilment of the quality criteria.

All operating statuses and results that are connected to safety and product quality are shown on the display in plain text and must be acknowledged by the operator.

Example:



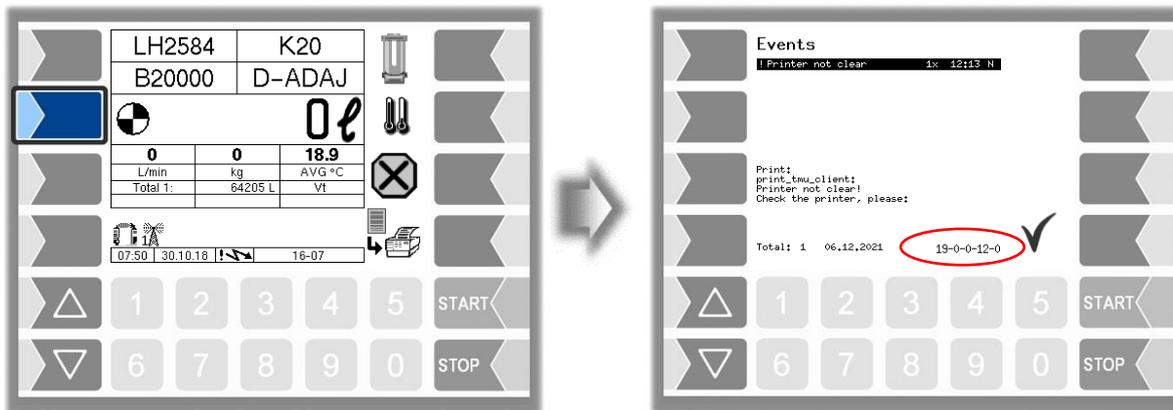
If an error occurs during an active delivery, causing this delivery to be interrupted, the event display window containing the relevant error message appears for 20 seconds.

You use the softkey  to acknowledge messages that are displayed in this window. The "Events" window is automatically closed after 20 seconds.

The error symbol is then displayed in the information line as long as the error is still present.

For more information on an error displayed in the information line, you can open the event display manually (see also section 3.2.5).

Error messages are not cleared until the cause of the error has been removed.



If you request help with an error from your service centre, you must enter the five numbers that are displayed at the bottom right of the Events window. These help the service centre to pinpoint the error.

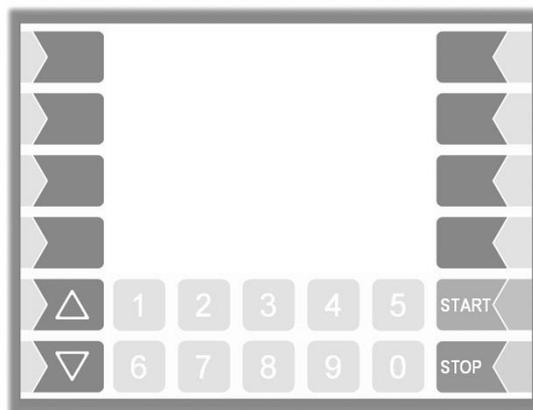
Maybe in the event display more than one error are displayed. Use the arrow-keys to select the individual messages. So you can note all corresponding error codes.

If the seal switch is open, the event display does not appear for 20 seconds if an error occurs. In this case, you must open the event display manually.

If an error occurs which prohibits a calibrated or compensated measurement, the delivery can only take place as an uncalibrated or uncompensated delivery.



If an error occurs which prohibits a measured delivery, the pump will be disabled. The delivery must be finished.



8.2 Diagnostics menu

You can use the upper left softkey to open a diagnostics menu. This service function allows the service professionals to perform a specific diagnosis on individual system components.

You can open the diagnostic menu either outside of a tour, within a tour or within an order.



Use the functions of the Diagnostics menu except on instructions and in cooperation with service specialists of BARTEC BENKE.

