USER MANUAL

MU 7093 EN B

DUAL TRONIQUE

Issue	Date	Nature of modifications	Written by	Approved by
B	2021/05/05	Redesign of printings, complete or partial printing of parameters. Manifold filling timing. Two distribution ways with DUAL. Operation with empty hose	DSM	FDS
A	2021/02/15	Creation *[PJV179]*	DSM	FDS

CONTENTS

1 GENERAL PRESENTATION AND DESCRIPTION

The DUAL TRONIQUE is a system that can manage one or two measuring systems based on a single calculator-indicator MICROCOMPT+.

These measuring systems are fitted on a road tanker. It measures liquids other than water.

When the system manages a single measuring system, it is called EMA.

When the system manages two measuring systems, they are called EMA and EMB.

The measuring systems are:

⇨ Certified type (see the relevant EC-type or EU-type examination certificate)

⇨ Of same model or of different models

The DUAL TRONIQUE comprises at least:

⇨ Presentation of the MICROCOMPT+ mono or dual:

⇨ One or two measuring systems

⇨ *A set of delivery hose(s) that depends on the measuring system*

It performs the following functions:

⇨ Measure products when they are delivered to the station, with or without volume preset

⇨ Monitor the reception of products (lorry/wagon)

⇨ Split compartments

⇨ Measure product returns.

Depending on the hydraulic configuration, the system can manage one or two distribution ways according to the table below:

	DUAL→OFF	**DUAL→ON**
EMA PUMPED	One full hose distribution way Or One empty hose distribution way Or Two distribution ways: hose 1 and 2	One distribution way: full hose or empty hose Or Two distribution ways: hose 1 and 2
EMB PUMPED		One distribution way: full hose or empty hose

It controls up to nine compartments (according to hardware configuration). You can configure 16 different products.

It can be connected to DSPGI anti-contamination systems. DSPGI devices provide product identification for each compartment and update the MICROCOMPT+. This eliminates any mixture of product. Each compartment is equipped with a DSPGI.

The system can control one or two additive injection devices. This injection has to occur upstream the meter.

In option, the system controls the product temperature.

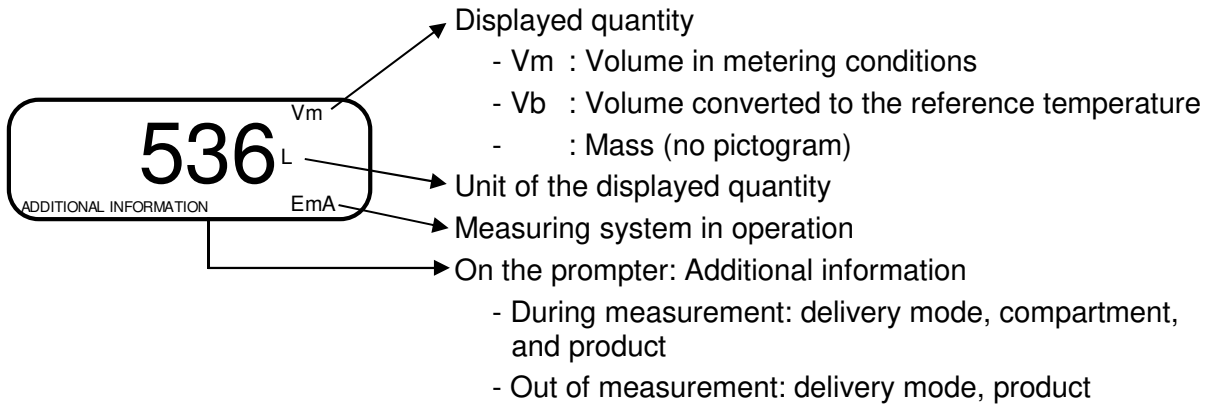
In addition, it may be connected to a printer for delivery tickets, internal totalisers, parameters or diary printings.

NOTE: The information printed by the printer has no metrological value. Only the indications displayed by the indicator shall be considered legally valid.

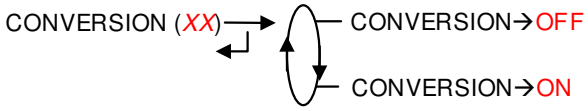
The MICROCOMPT+ has one display:

The displayed quantity depends on the system configuration. The user is informed by a pictogram at the top-right of the display according to the conventions below:

- ⇨ Volume in metering conditions: pictogram Vm
- ⇨ Volume converted to the reference temperature: pictogram Vb
- ⇨ Mass: no pictogram



Configured data are pre-visualized thanks to menus. In the example above, XX corresponds to the value given to the conversion, either OFF or ON.



The MICROCOMPT+ has three pushbuttons:

	Increment a blinking figure or letter Come back to the previous step Stop the measurement Specific case: automatic scheduling (see §4.2)
	Select a figure, a letter or a menu Specific case: automatic scheduling (see §4.2)
	Validate the data Specific case: automatic scheduling (see §4.2)

Use the RFID keys:

	Blue key: Level-User This key is associated to a single MICROCOMPT+. It is used to switch into SUPERVISOR mode
	Green key: Level-Manager Many of these keys can be associated to a single MICROCOMPT+. Likewise, a single key can be associated to one or many MICROCOMPT+. RFID key is used to switch into SUPERVISOR mode. Specific menus are available that allow the manager to configure the MICROCOMPT+ for its communication with the external environment. The specific menus are indicated by green boxes within the ANNEX 1.
	Red key: Level-Maintenance This key doesn't need to be associated to the MICROCOMPT+. It is used to switch into SUPERVISOR mode. Specific menus are available that allow the maintenance operator to change parameters. Those menus are indicated in red boxes

2 CONNECTED FEATURES

The wireless connection enables the MICROCOMPT+ to communicate with an embedded computer or with a PC/tablet/portable device, in hazardous area (ATEX).

The connected functions of the MICROCOMPT+ are the following:

- ⇨ Incoming data flow processing
- ⇨ Management of the communication modules below
- ⇨ Updating of the app, tickets and language catalogues as far as the MICROCOMPT+ has been switched into METROLOGICAL mode.

Communication modules are listed below:

- ⇨ Wi-Fi (IEEE 802.11 b/g/n (2.4GHz) **OR** Bluetooth Low Energy 4.1
- ⇨ GSM (2G, 3G, 4G) / GPS
- ⇨ RFID NFC allowing the reading of an RFID key to switch in SUPERVISOR mode
- ⇨ Ethernet Base 10/100

The GSM module associated to the GPS navigation system allows the device tracking. Two antennas are located outside the MICROCOMPT box.

Three tricolor LED on the MICROCOMPT+ front face are showing the wireless connection status as described in the table below:

	Left-hand LED: Bluetooth or Wi-Fi		Middle LED: GSM / GPS		Right-hand LED: NFC (RFID)	
Steady light	Bluetooth Wi-Fi	Connection OK		Waiting for internet connection		
				Internet connection OK		
		Waiting for initialization		Waiting for initialization		
Flashing light	Bluetooth Wi-Fi	Slow flashing: Waiting for connection	every 2 seconds	GPS OK		Authentication of the RFID key OK
	Bluetooth Wi-Fi	Rapid flashing: Communication in progress		Transfer in progress		RFID key not accepted, but authentication is ok
			every 2 seconds	Coordinates not found		
		Initialization error		Initialization error		Authentication error of the RFID key

3 CONFIGURATION, SETTINGS, CALIBRATION

CONFIGURATION: METROLOGICAL mode	SETTINGS: SUPERVISOR mode	SETTINGS, CALIBRATION: SUPERVISOR mode
§ CONFIGURE THE DUAL TRONIQUE: METROLOGICAL MODE	§ SET THE DUAL TRONIQUE: SUPERVISOR MODE §ANNEX 1	§ SET THE DUAL TRONIQUE: SUPERVISOR MODE §ANNEX 1
You must configure the DUAL TRONIQUE during commissioning and sometimes during metrological controls.	You must set the DUAL TRONIQUE before any operation and sometimes during metrological controls (specific menus)	You must set the DUAL TRONIQUE before any operation. You must control the accuracy of the DUAL TRONIQUE cyclically
NOTE: Only approved persons are permitted to remove the seal	**NOTE**: Only approved persons are permitted to change parameters of the specific menus	**NOTE:** Only approved persons are permitted to change parameters or to make calibration.
- Unseal the cup - Remove the seal	- Put the RFID key at the right side of the display 	- Put the RFID key at the right side of the display 
		

4 SPECIFIC FEATURES

4.1 Use with DSPGI device

If compartments are equipped with DSPGI devices, the DSPGI code associated to the product quality must be set (menu SUPERVISOR>PRODUCT SETTINGS>DSPGI CODE).

The name of the product that is supposed to be in the hose, is displayed in brackets at the right hand of DELIVERY, for example: DELIVERY (GO+). The product's name given by the DSPGI device is also displayed at the compartment selection (origin or return) or in case of contamination.

In case of communication failure with the DSPGI device, you can switch in manual mode without DSPGI by pressing the red CLEAR BUTTON.

The product's name is replaced by warning messages in the following cases:

- DSPGI DEFAULT: The DSPGI is ON and there is a communication problem
- ?????: The DSPGI is ON and its drum is located between two positions
- DSPGI MISMATCH: Inconsistent data in loading plan and DSPGI (product or compartment)

The messages below are printed in the event log:

- DSPGI ERROR: A DSPGI default has been recorded
- DSPGI HOSE CONTAM. or DSPGI RET. CONTAM.: A forcing was performed

To start the measuring system with the option DSPGI→ON>DSPGI BLOCKING, it may be required to make a purge in an empty compartment to define the contents of the hose.

According to the metrological configuration there are two different ways for operation: With SUPERVISOR>DSPGI→ON>DSPGI BLOCKING: a delivery, occurring after a hose purge (product movement), should start on condition that the purge has been completed.

With SUPERVISOR>DSPGI→ON>DSPGI BLOCKING OFF: a delivery, occurring after a hose purge (product movement), should start regardless of whether the purge is completed or not. In that case, the MICROCOMPT+ will display the message 'PURGE NOT FINISHED' and will give the user the possibility to end the purge or to start a new delivery by pressing the red pushbutton.

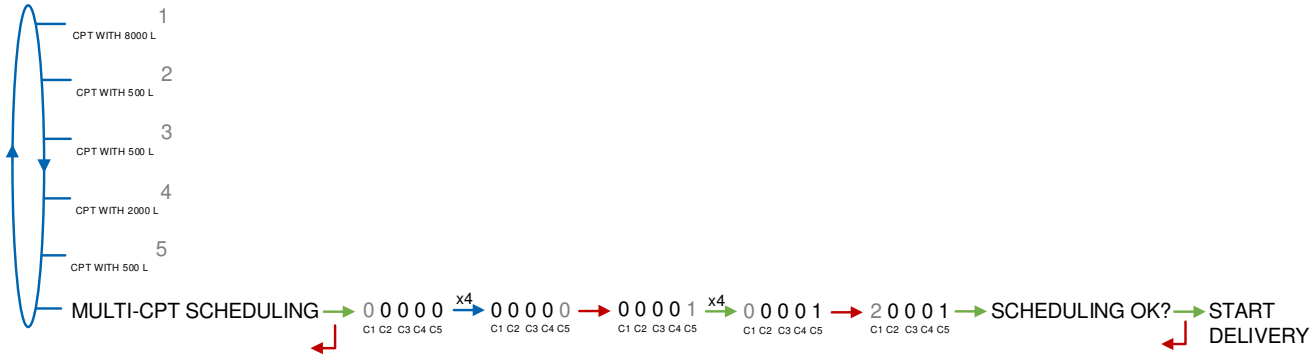
4.2 Scheduling of the delivery

If the scheduling of the delivery is activated in SUPERVISOR MODE (CONFIGURATION>SCHEDULING→ON), you can use several compartments to make the delivery. These compartments are filled with the same product.

The compartments are used in the definite sequence. When the compartment is empty before the end of measurement, the MICROCOMPT+ waits for 5 seconds and then orders to close the flap. It waits 5 seconds more and then orders to open the flap of the next compartment according to the definite sequence. Delivery starts again when the product height is enough, and so on until the measurement end.

The user can choose which compartment will be used for the delivery and in which order. If the option DSPGI or loading plan are ON, the compartments proposed for scheduling are those containing the selected product.

E.g.: Delivery of 800 liters of FOD+. Compartment 5: 500 liters of FOD+ and compartment 1: 8000. Sequence: compartment 5 then compartment 1. The scheduling menu is as follows:



Loading plan

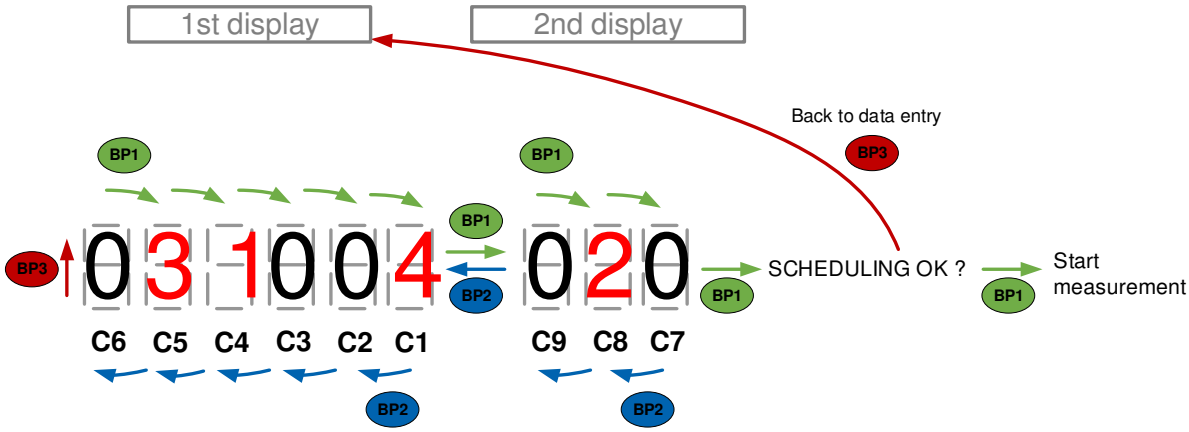
```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 16:26

********** LOADING PLAN **********

CPT      PROD.      QUANTITY (L)
1        FOD+        8000
2        GO          8000
3        GO          5000
4        GO          1000
5        FOD+         500
```

Cargo after delivery of FOD+

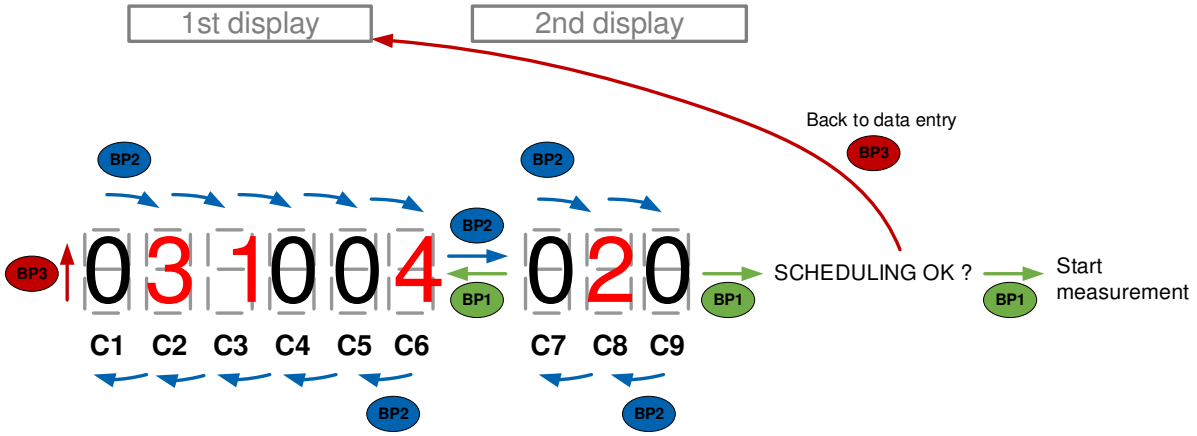
```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 16:50

********** CARGO PLAN **********

CPT N°   PROD.      QUANTITY (L)
1        FOD+        7700
2        GO          8000
3        GO          5000
4        GO          1000
5        FOD+           0
```

The ergonomics of the scheduling menu is as follows. It changes according to the array set in menu SUPERVISOR>CONFIGURATION>SCHEDULING→ON>ARRAY: compartments displayed from right to left or from left to right (menu).

<u>Left to right sequence number:</u>



Right to left sequence number:



To include a compartment into the delivery, move on to the digit related to the compartment with BP1 (to the right) or BP2 (to the left), then validate with BP3. When you validate, the value 0 becomes the order number. When you validate again with BP3, the compartment is removed from the delivery, then the order numbers of the previous compartments are all decremented by one.

Select the right-hand digit and use BP1 to:

- Access the scheduling validation menu if there's no other compartment

- Access the second display. This display is used to include the other compartments into the delivery Select the left-hand digit and use BP2 to reach the first display. When the last compartment digit is selected, use BP1 to access the scheduling validation menu.

When you see the scheduling validation message SCHEDULING OK?, use BP3 to return to the first display.

4.3 Contamination control on both full hoses

The DUAL TRONIQUE memorizes permanently the quality in hose 1, hose 2 and the common pipe. It always displays the product contained in the common pipe and in the selected hose. When the quality is not defined, in case of mixture for example, it displays the most downgraded quality.

The DUAL TRONIQUE declares if a risk of contamination can occur. There's a mismatch between the selected product and the quality contained in the common pipe and hose selected for delivery. This alert does not prevent the product selection.

4.4 Distribution mode PRESET+PURGE

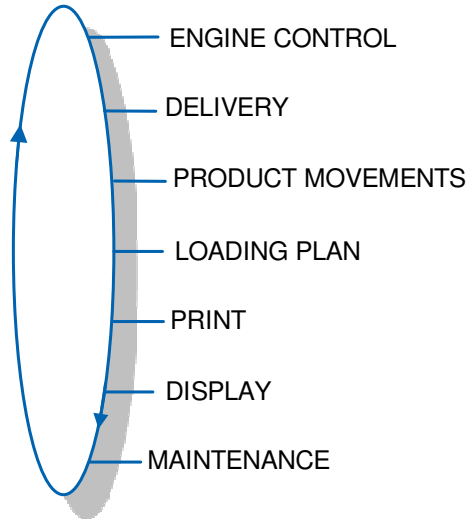
The distribution mode PRESET+PURGE includes a step that forces to select the hose for the next delivery. It is used to determine the volume of purge.

If the delivery has not been completed and if the purge has begun, you must complete the purge before starting the next delivery (menu PRODUCT MOVEMENTS>HOSE PURGE).

The delivery mode PRESET + PURGE is not available:

- If the DUAL TRONIQUE doesn't control the compartment flap
- In pumped not counted distribution mode
- In case of hose contamination

5 USE THE DUAL TRONIQUE: USER MODE



The use of the DUAL TRONIQUE depends on the hardware configuration of the truck, the features and the configuration of the equipment carried out during commissioning.

Therefore, the user menu depends on several items:

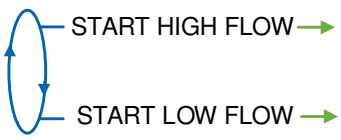
- ⇨ The number of measuring systems (one or two)
- ⇨ The number of distribution ways (one or two)
- ⇨ The remote control
- ⇨ The number of compartments
- ⇨ The control of the compartments flaps
- ⇨ The control of the return product system (SRP)
- ⇨ The distribution mode (pumped counted, pumped not counted)
- ⇨ The temperature control (conversion of the volume).

In USER mode, the MICROCOMPT+ displays a blinking volume which is the latest delivered volume and the name of the latest product, in brackets.

There are several delivery modes:

- ⇨ PRESET of the volume
- ⇨ PRESET of the volume + hose PURGE.
- ⇨ FREE mode (in low or high flow rate)

Delivery can be performed in high or low flow. This choice is made for pumped deliveries at the display of the message START HIGH FLOW. The blue MENU BUTTON switches on the display START LOW FLOW.

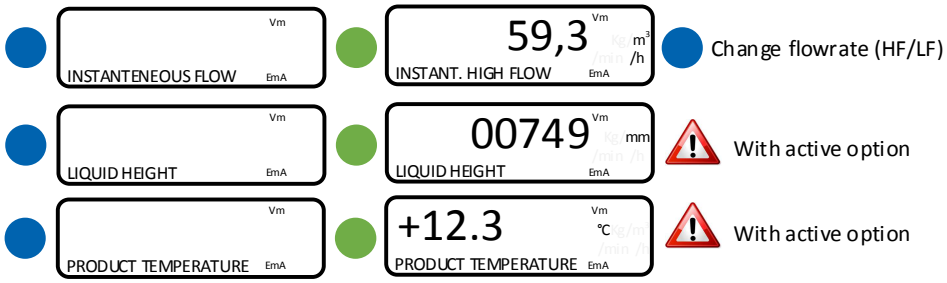


The choice is made by pressing the green OK BUTTON. Switching is possible during the delivery by pressing the blue MENU BUTTON.

During measurement, the following information may be displayed:

- ⇨ The instantaneous high or low flow rate. The unit depends on settings
- ⇨ The level of liquid in the compartment is use
- ⇨ The temperature (°C) if it is taken into account.

Simply follow the indications below:



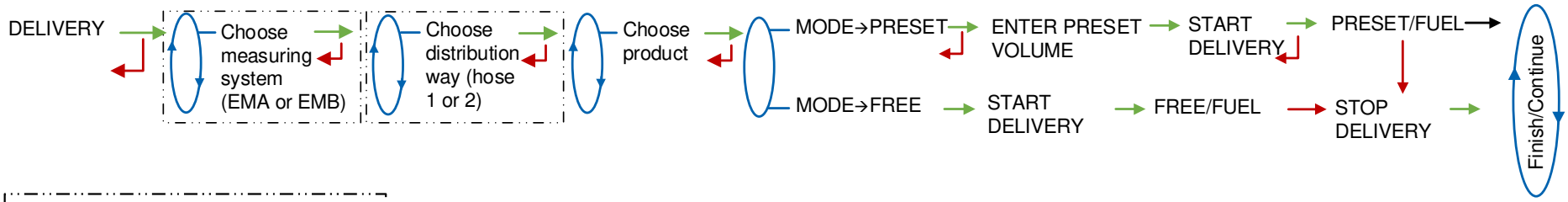
Back to normal display is automatic: DO NOT PRESS RED CLEAR BUTTON TO KEEP FROM INTERRUPTING DELIVERY.

5.1 Menu DELIVERY

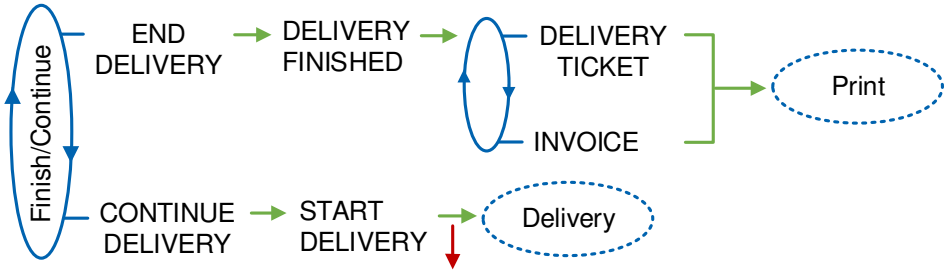
Configuration	Paragraph
One or two distribution ways	5.1.1
One or two distribution ways +compartment selection	5.1.2
One or two distribution ways + engine control	5.1.3
One or two distribution ways + compartment selection + engine control	5.1.4
Pumped counted/not counted rule	5.1.5
Pumped counted/not counted rule + compartment selection	5.1.6
Pumped counted/not counted rule + engine control	5.1.7
Pumped counted/not counted rule + compartment selection + engine control	5.1.8

5.1.1 One or two distribution ways

5.1.1.1 Delivery



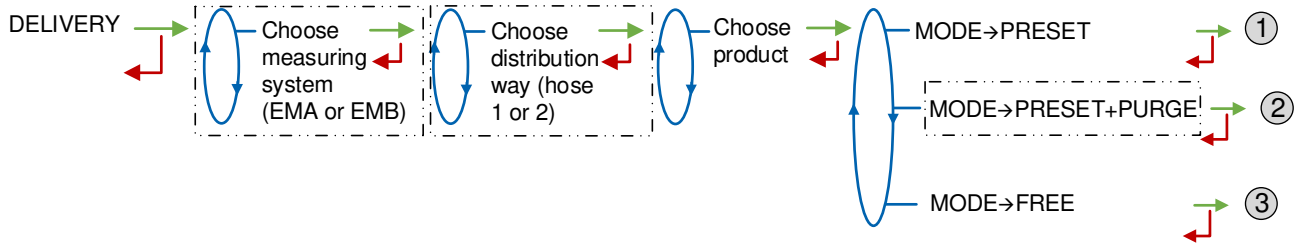
5.1.1.2 Finish/Continue



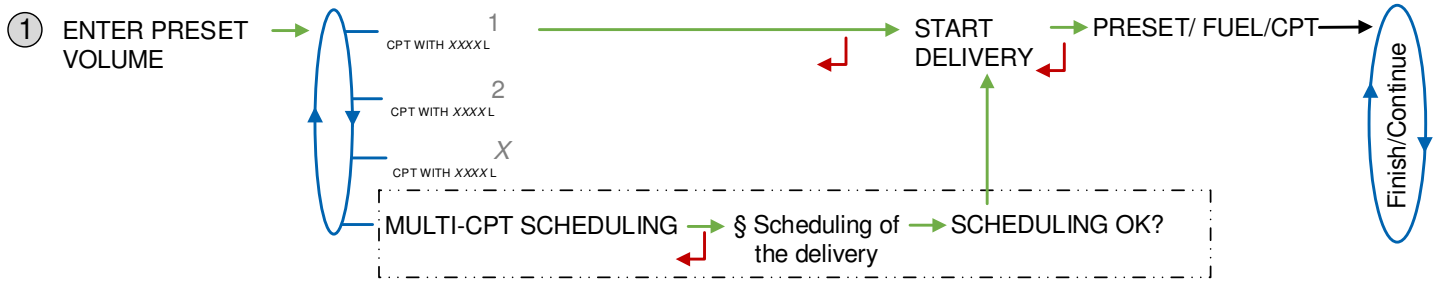
***You can change the criteria**: press the red pushbutton when START DELIVERY is displayed with the volume already discharged.*

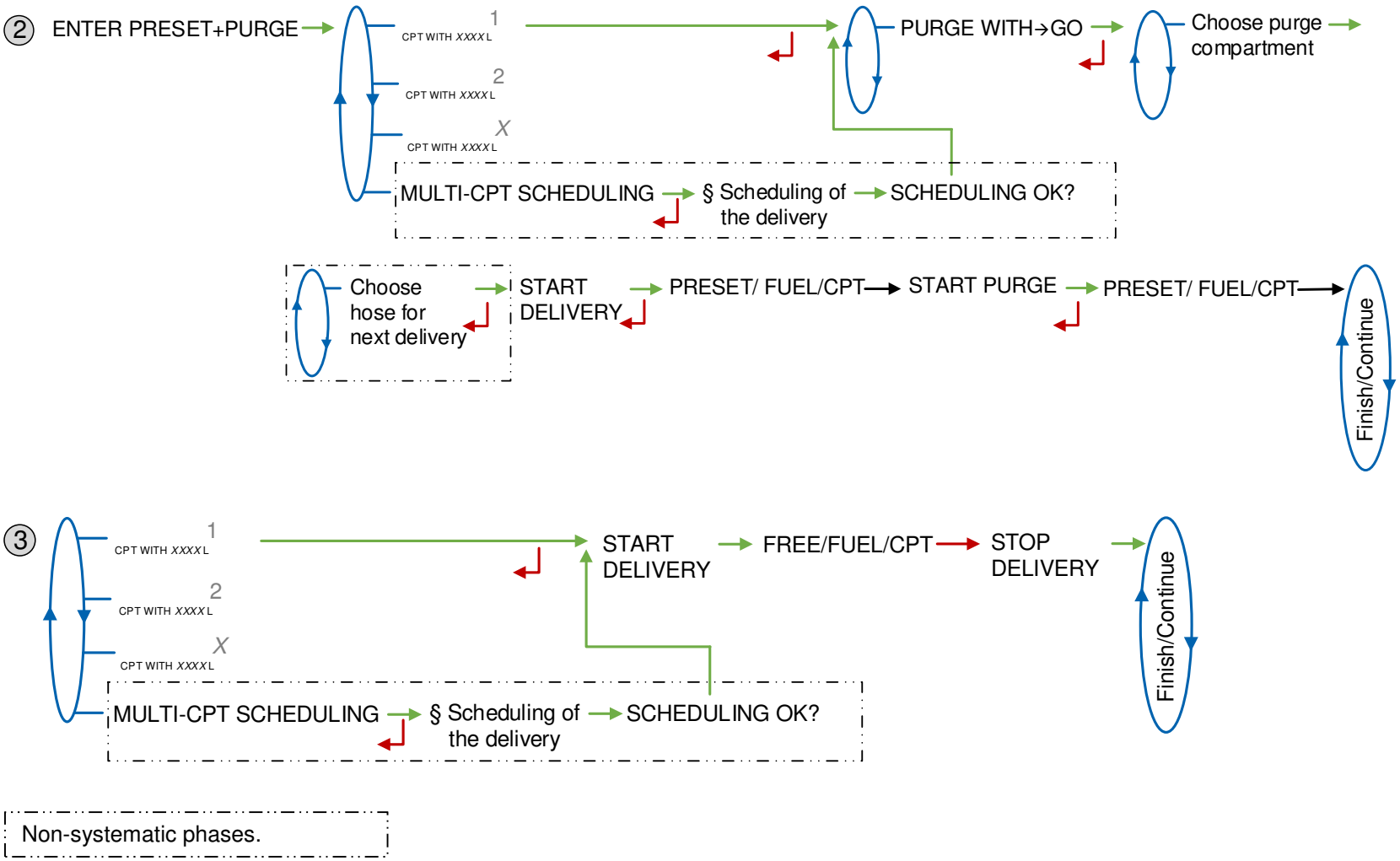
5.1.2 One or two distribution ways + compartment selection

5.1.2.1 Delivery

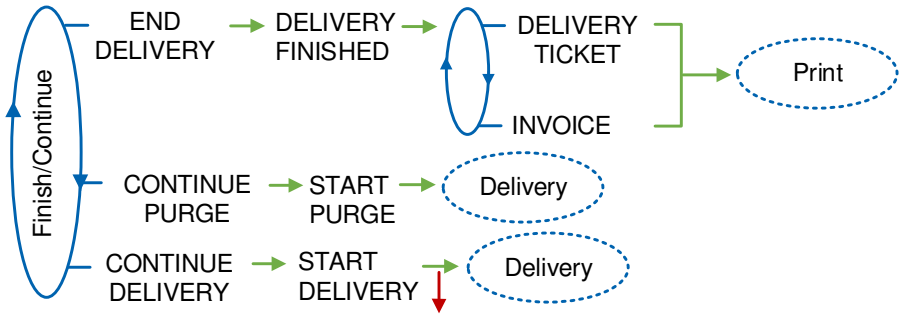


Non-systematic phases.




2
ENTER PRESET+PURGE
1
CPT WITH XXXX L
2
CPT WITH XXXX L
X
CPT WITH XXXX L
PURGE WITH→GO
Choose purge compartment
MULTI-CPT SCHEDULING
§ Scheduling of the delivery
SCHEDULING OK?
Choose hose for next delivery
START DELIVERY
PRESET/ FUEL/CPT
START PURGE
PRESET/ FUEL/CPT
Finish/Continue
3
1
CPT WITH XXXX L
2
CPT WITH XXXX L
X
CPT WITH XXXX L
START DELIVERY
FREE/FUEL/CPT
STOP DELIVERY
Finish/Continue
MULTI-CPT SCHEDULING
§ Scheduling of the delivery
SCHEDULING OK?
Non-systematic phases.

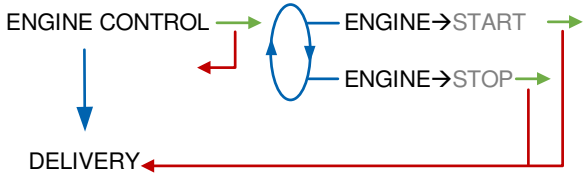
5.1.2.2 Finish/Continue



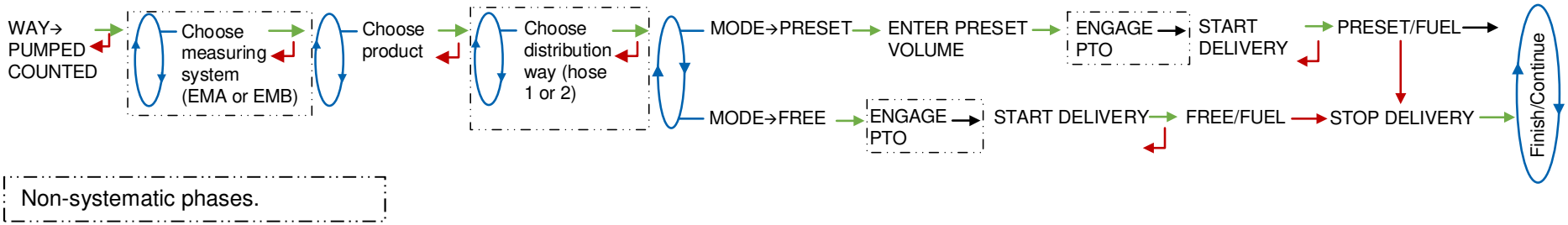
***You can change the criteria**: press the red pushbutton when START DELIVERY is displayed with the volume already discharged.*

5.1.3 One or two distribution ways + engine control

The commands for the pump clutching/declutching and for the power take-off control are realized by the measuring system at the beginning and at the end of distribution.

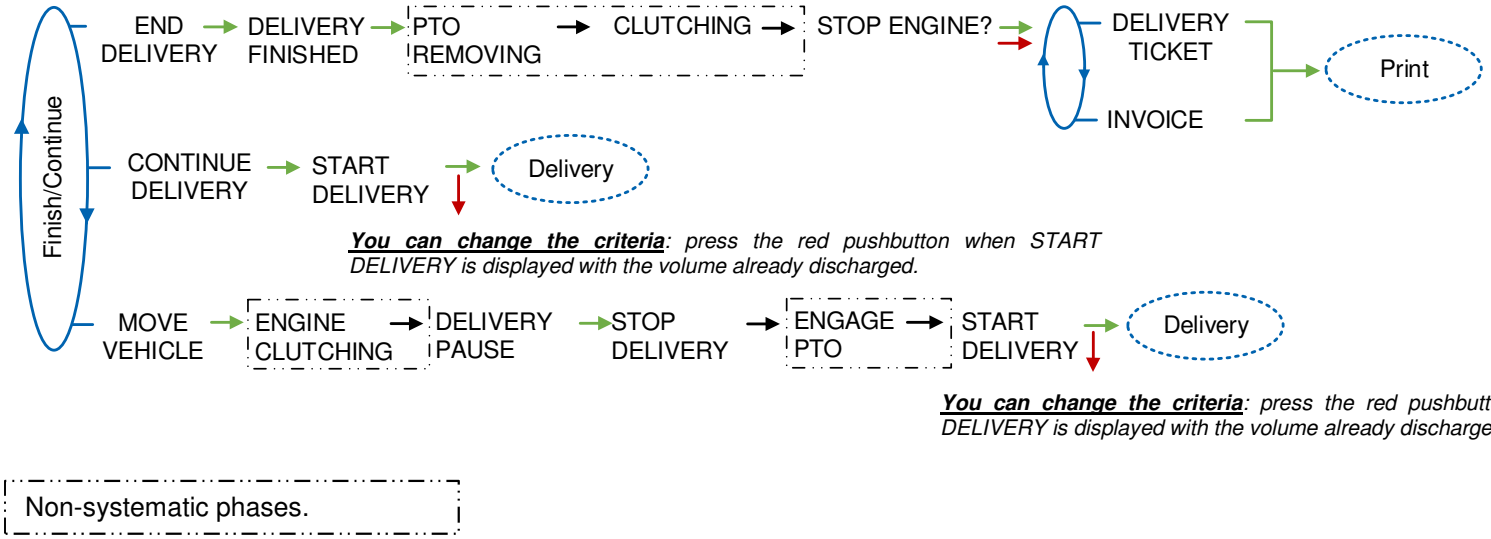


5.1.3.1 Pumped mode counted



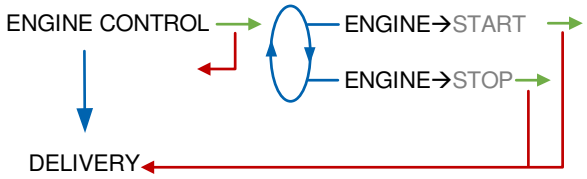
5.1.3.2 Finish/Continue

If it's necessary to move the vehicle, the distribution has to be stopped for a moment, then choose the MOVE VEHICLE item. The DUAL TRONIQUE switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.

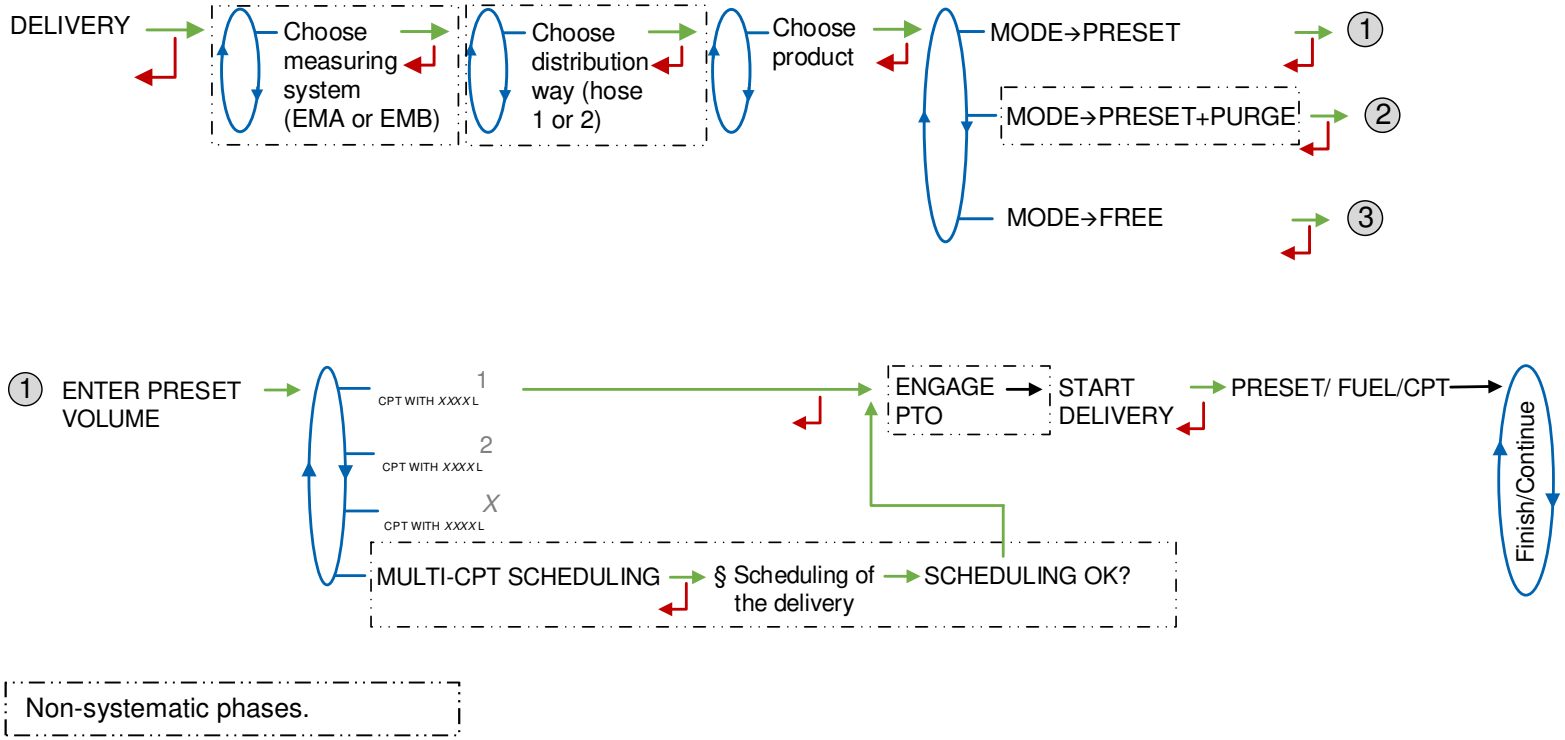


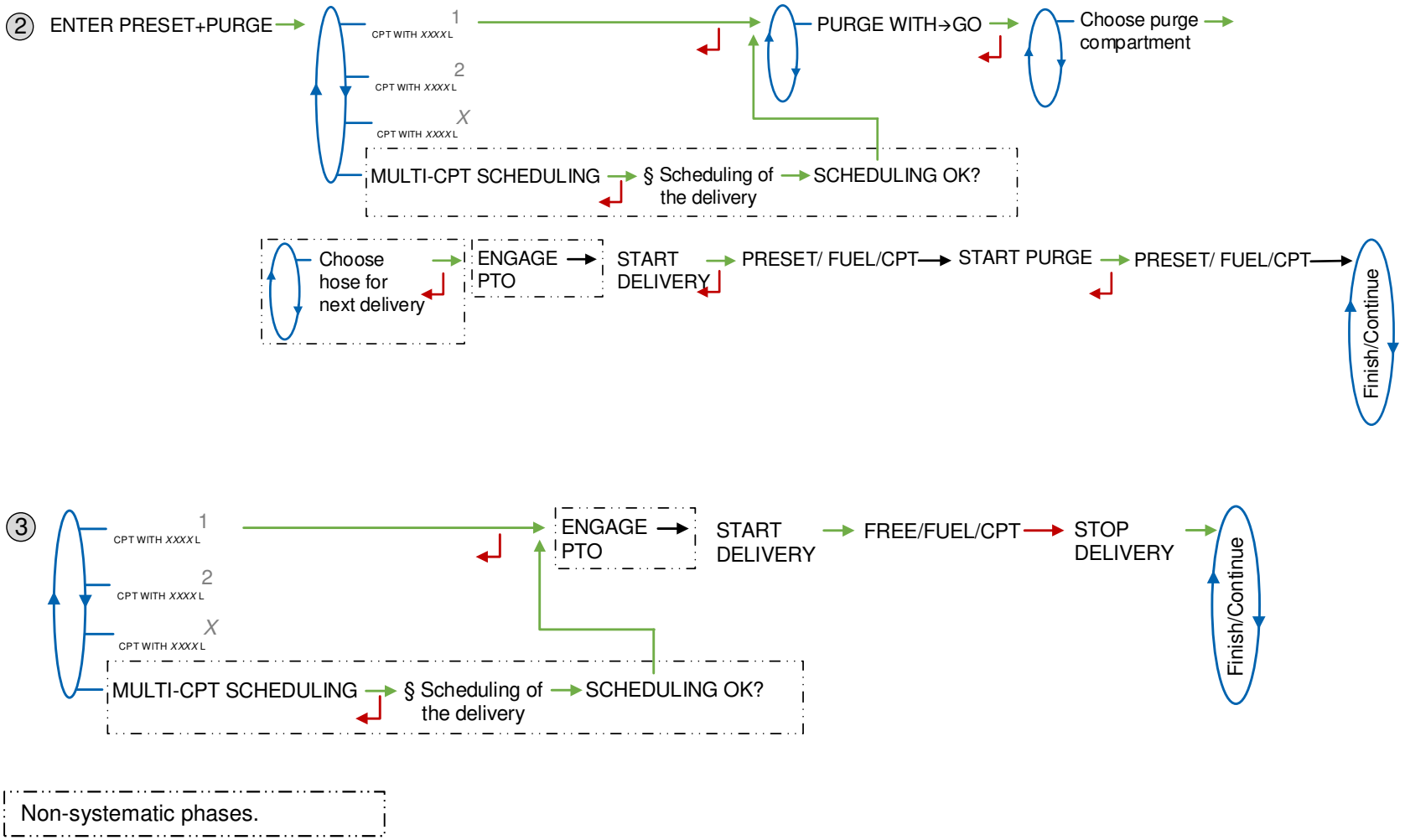
5.1.4 One or two distribution ways + compartment selection + engine control

The commands for the pump clutching/declutching and for the power take-off control are realized by the DUAL TRONIQUE at the beginning and at the end of distribution.



5.1.4.1 Pumped mode counted

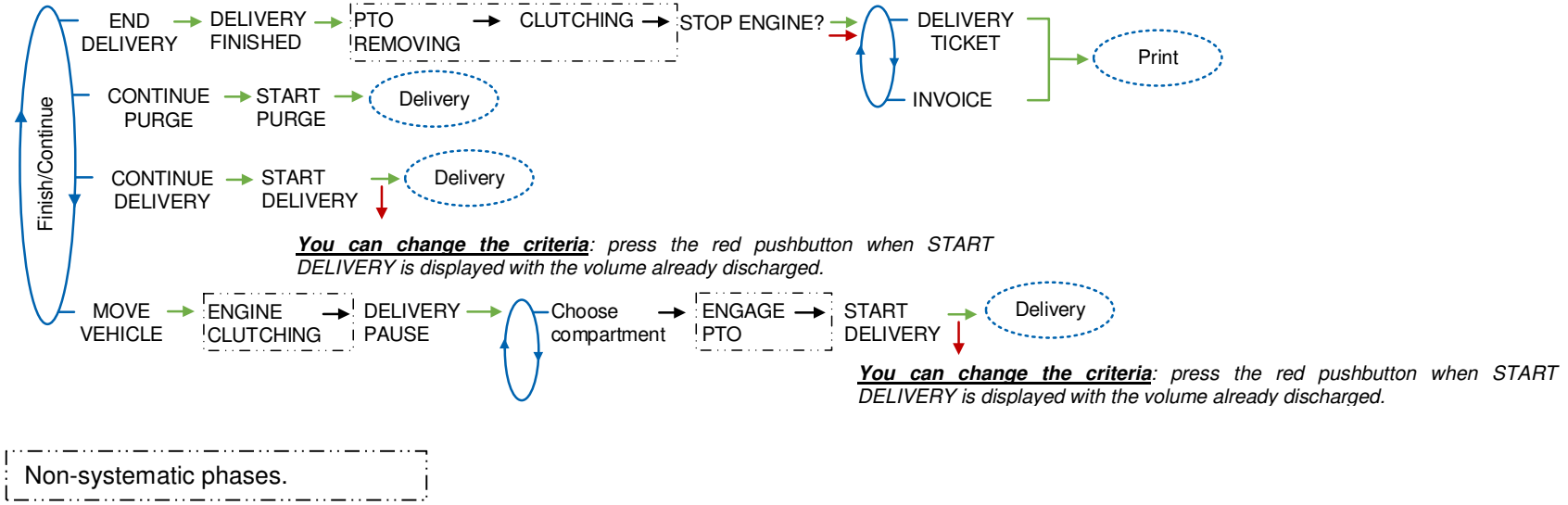




Non-systematic phases.

5.1.4.2 Finish/Continue

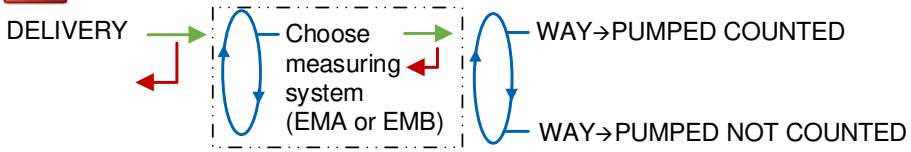
If it's necessary to move the vehicle, the distribution has to be stopped for a moment, then choose the MOVE VEHICLE item. The DUAL TRONIQUE switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.



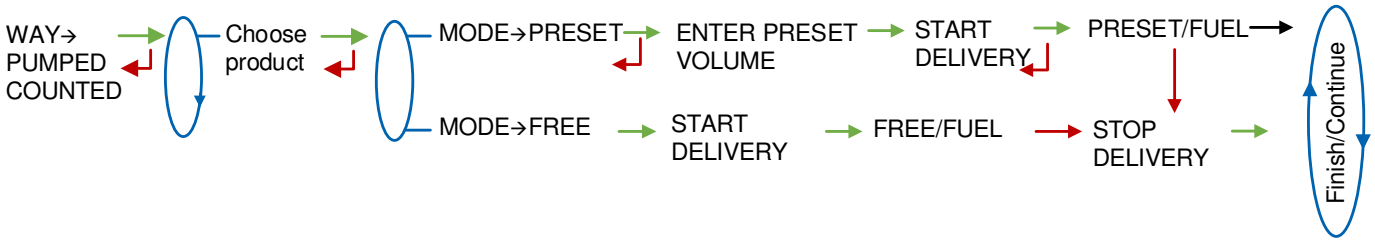
5.1.5 Pumped counted/not counted rule

This delivery mode is used with two distribution outlets: upstream and downstream the meter. In METROLOGICAL mode, choose CONFIGURATION>TRUCK INSTRUM>PUMPED NOT COUNTED.

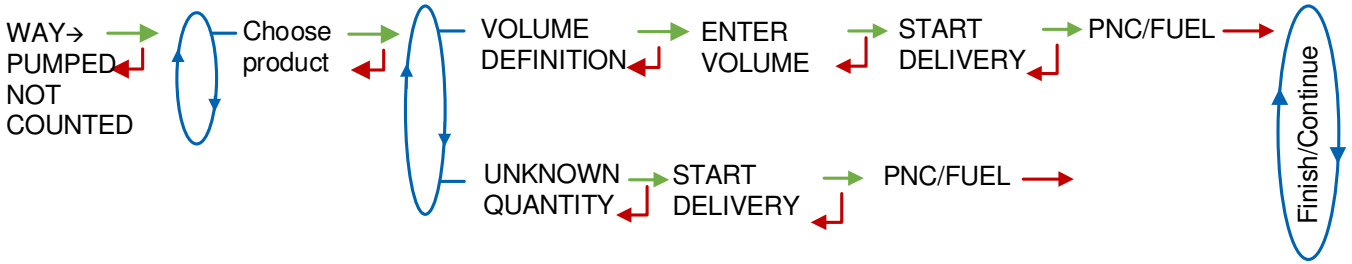
Delivery in uncounted pumped mode is not permitted in case of hose contamination.



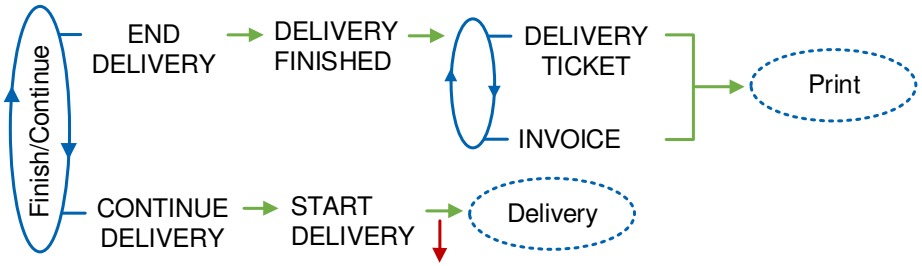
5.1.5.1 Pumped counted



5.1.5.2 Pumped not counted



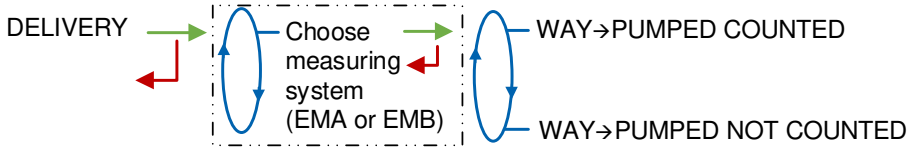
5.1.5.3 Finish/Continue



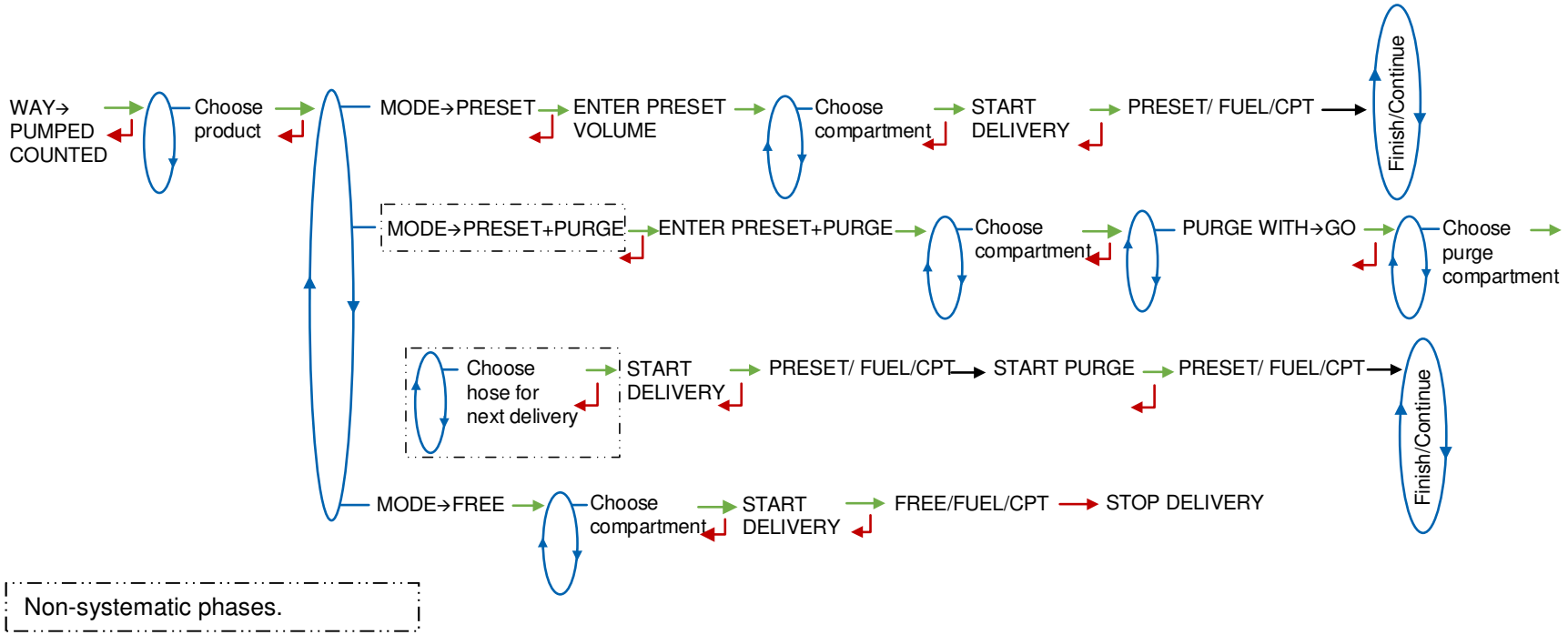
***You can change the criteria**: press the red pushbutton when START DELIVERY is displayed with the volume already discharged.*

5.1.6 Pumped counted/not counted rule + compartment selection

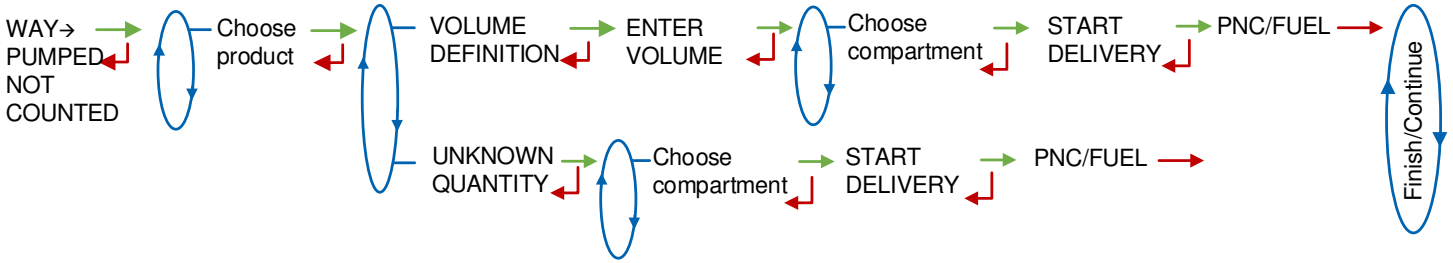
This delivery mode is used with two distribution outlets: upstream and downstream the meter. In METROLOGICAL mode, choose CONFIGURATION>TRUCK INSTRUM>PUMPED NOT COUNTED.



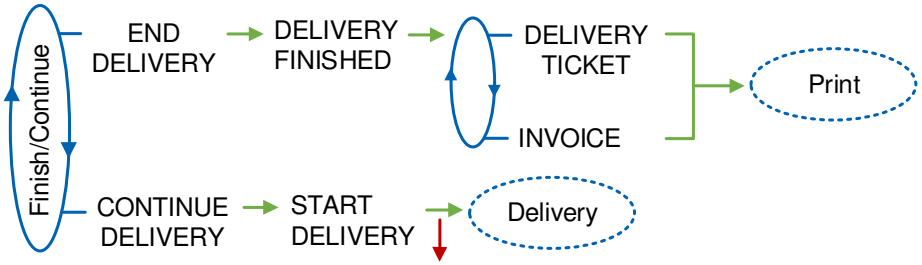
5.1.6.1 Pumped counted



5.1.6.2 Pumped not counted



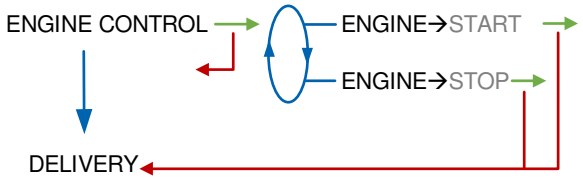
5.1.6.3 Finish/Continue

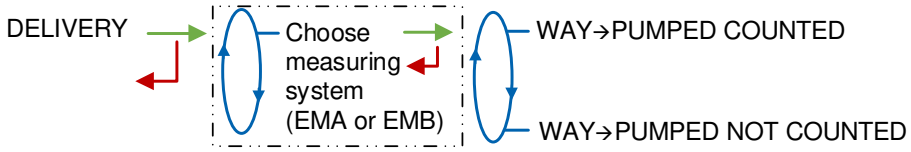


***You can change the criteria**: press the red pushbutton when START DELIVERY is displayed with the volume already discharged.*

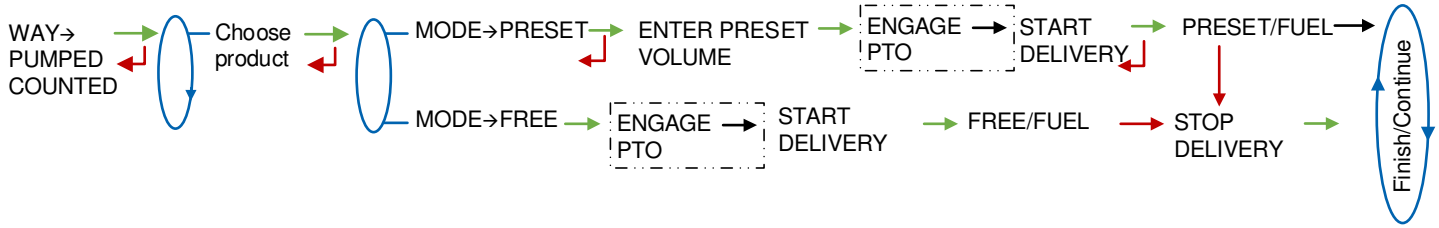
5.1.7 Pumped counted/not counted rule + engine control

This delivery mode is used with two distribution outlets: upstream and downstream the meter. In METROLOGICAL mode, choose CONFIGURATION>TRUCK INSTRUM>PUMPED NOT COUNTED. The measuring system switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.



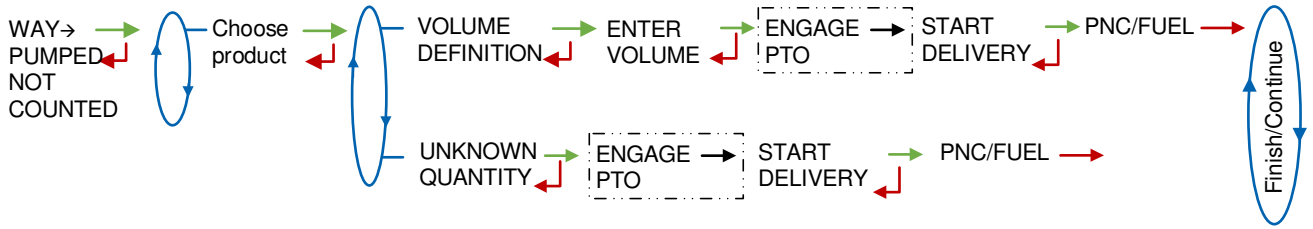


5.1.7.1 Pumped counted



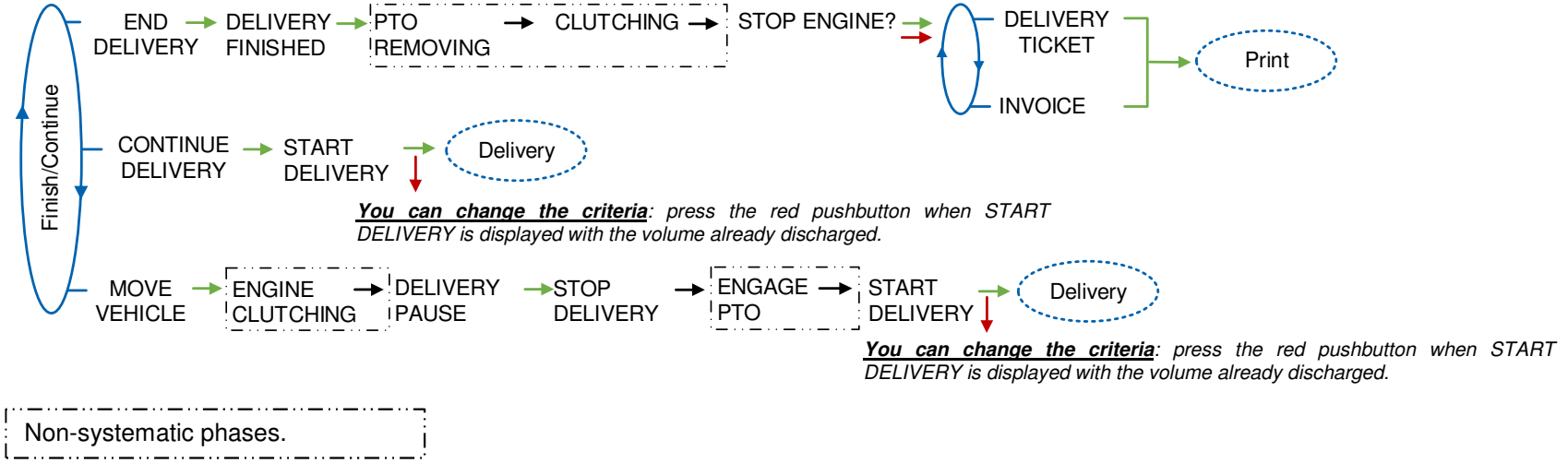
Non-systematic phases.

5.1.7.2 Pumped not counted



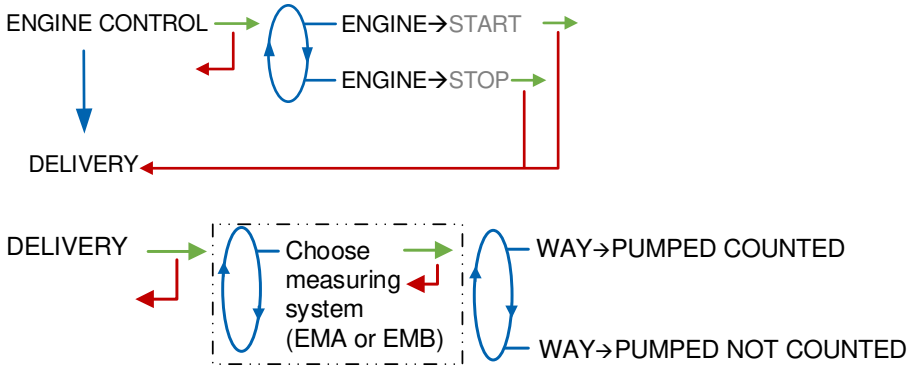
5.1.7.3 Finish/Continue

If it's necessary to move the vehicle, the distribution has to be stopped for a moment, then choose the MOVE VEHICLE item. The DUAL TRONIQUE switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.

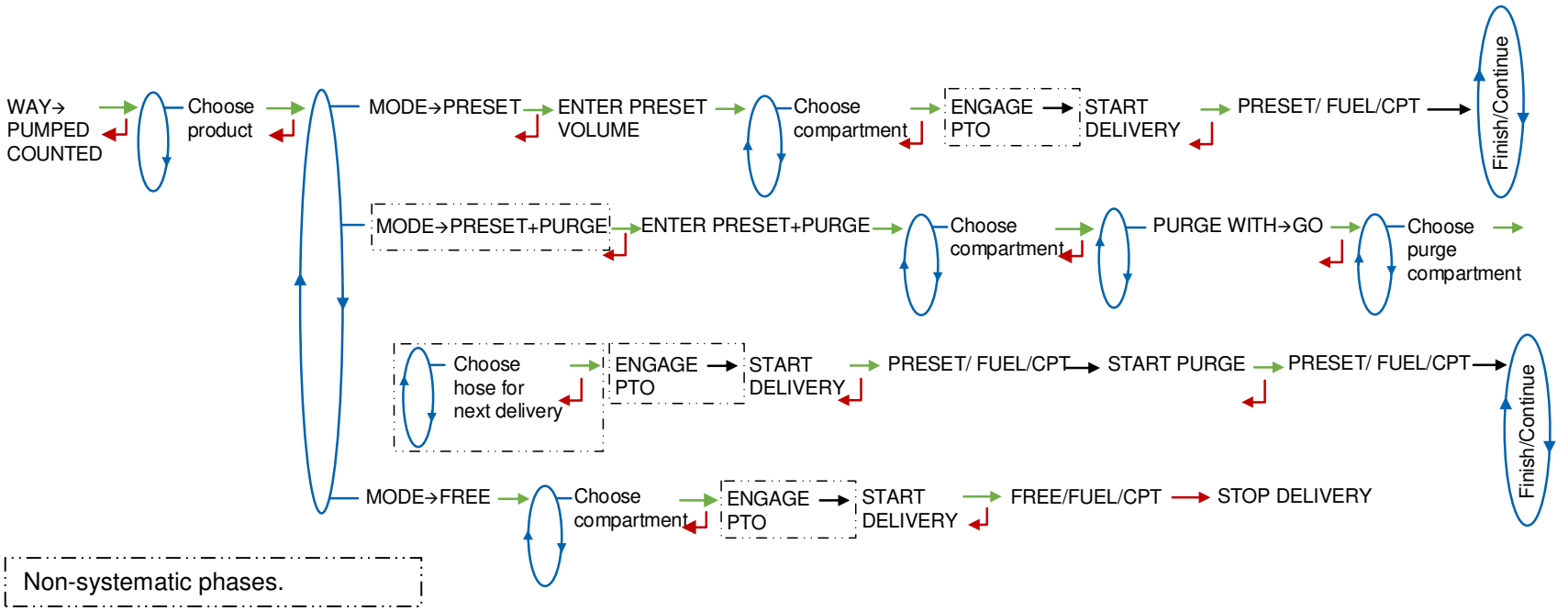


5.1.8 Pumped counted/not counted rule + compartment selection + engine control

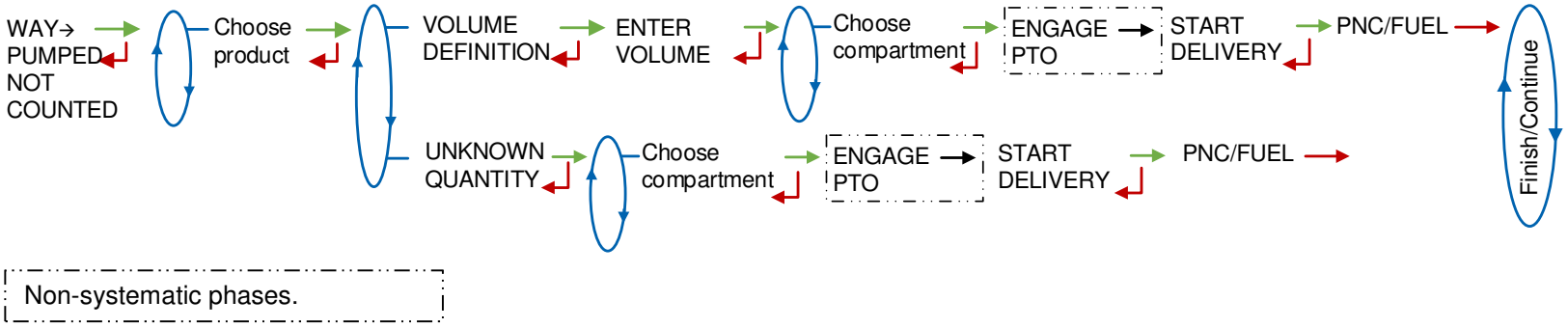
This delivery mode is used with two distribution outlets: upstream and downstream the meter. In METROLOGICAL mode, choose CONFIGURATION>TRUCK INSTRUM>PUMPED NOT COUNTED. The measuring system switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.



5.1.8.1 Pumped counted

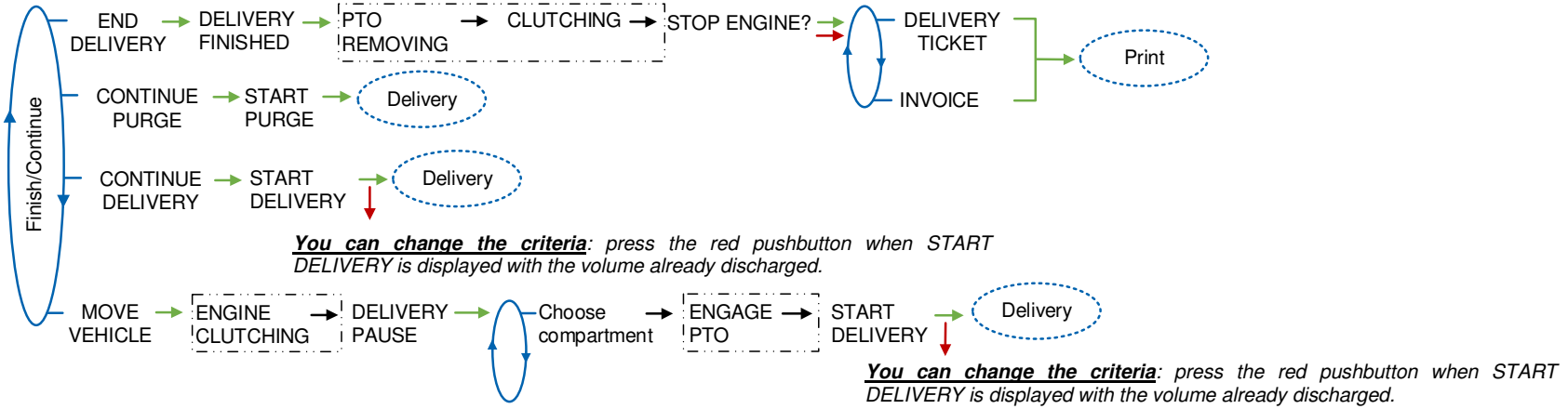


5.1.8.2 Pumped not counted



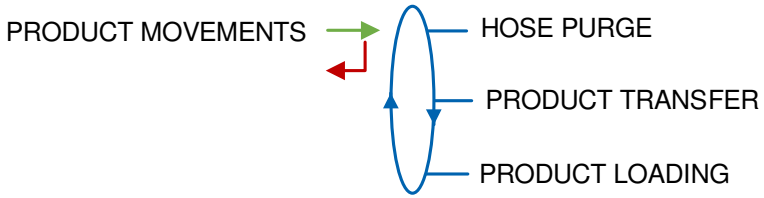
5.1.8.3 Finish/Continue

If it's necessary to move the vehicle, the distribution has to be stopped for a moment, then choose the MOVE VEHICLE item. The DUAL TRONIQUE switches off the power take-off, clutches the engine and freezes the display on DELIVERY PAUSE. Press green OK BUTTON to continue distribution.



5.2 Menu PRODUCT MOVEMENTS

Product movements HOSE PURGE, PRODUCT TRANSFER and PRODUCT LOADING are performed in low flow rate.

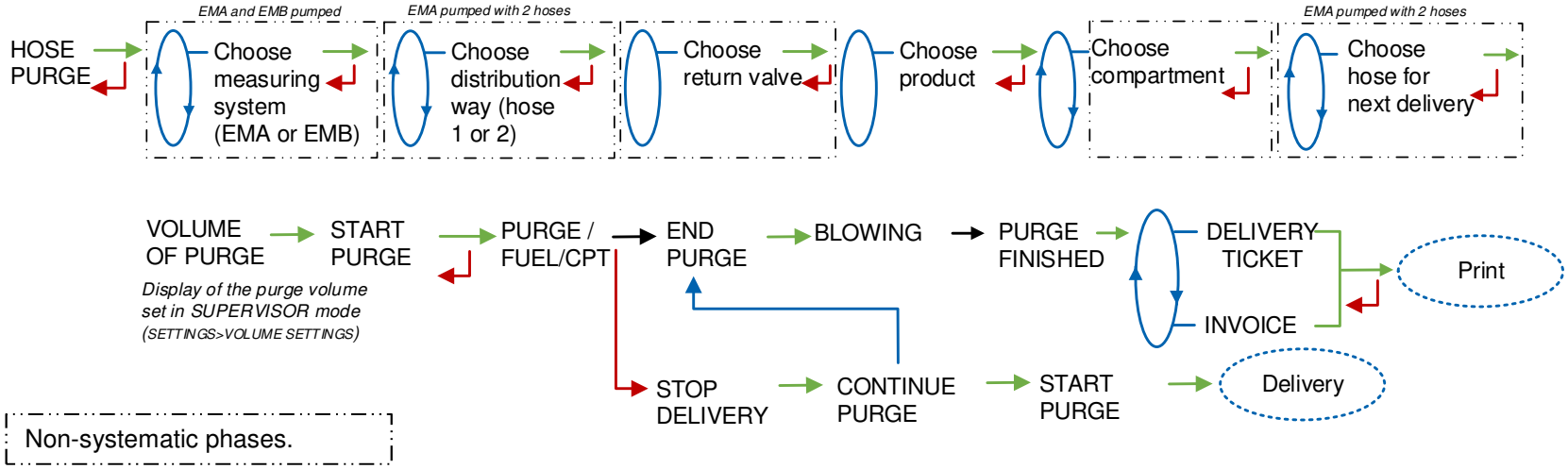


5.2.1 Sub-menu HOSE PURGE

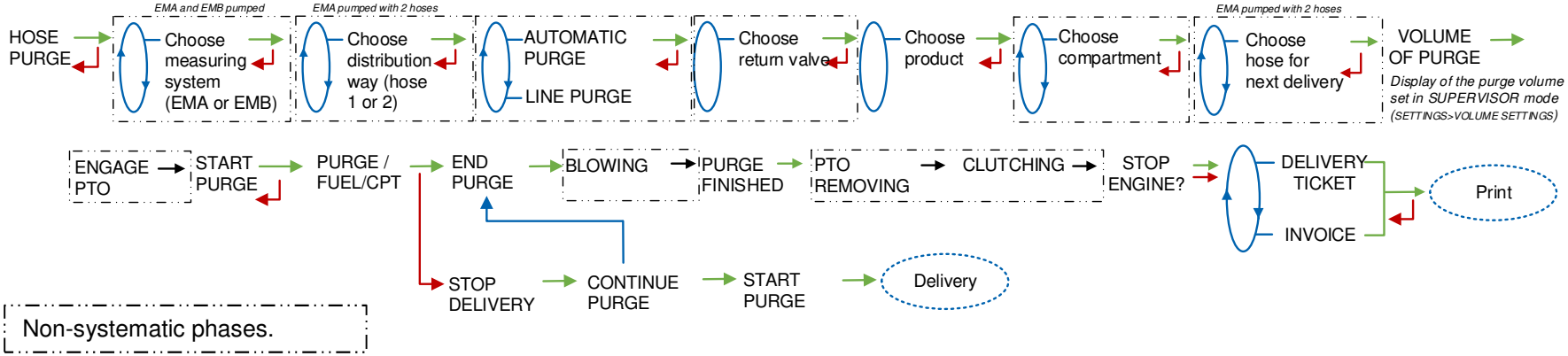
This menu allows purging the hose in order to change the quality of the product. This operation is permitted with pumped measuring systems only.

Operating with blocking DSPGI (configuration SUPERVISOR>DSPGI→ON>DSPGI BLOCKING→ON), the hose purge must have been completed before starting a new delivery.

5.2.1.1 Without engine control

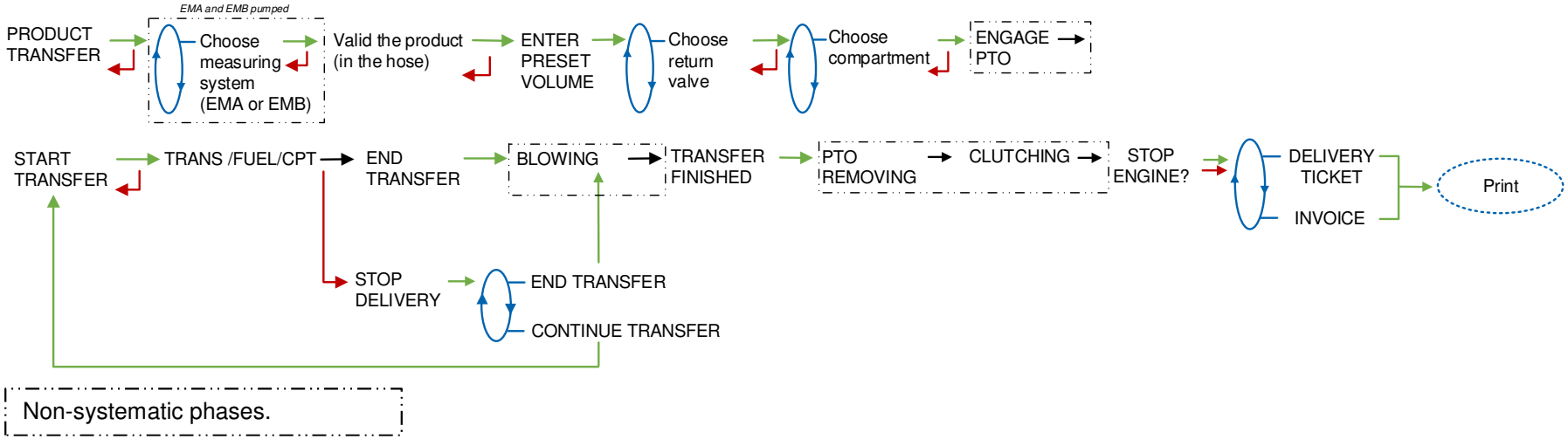


5.2.1.2 With engine motor



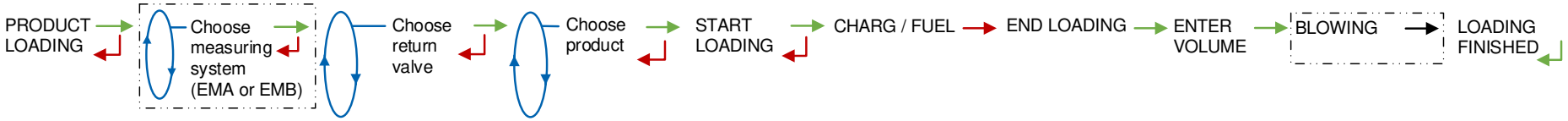
5.2.2 Sub-menu PRODUCT TRANSFER

This menu allows unloading the product from one compartment either to another compartment or to a compartment of another truck or to a loading terminal; transfer is performed in low flow rate. This operation is permitted with pumped measuring systems only. It is available when at least one pumped line is set with full hose, product return and overfill probe.



5.2.3 Sub-menu PRODUCT LOADING

This menu allows shifting product from one truck to another truck. It is available when at least one pumped line is set with full hose, product return and overfill probe.



5.3 Menu LOADING PLAN

Depends on METROLOGICAL configuration. Not used if the function has not been activated.

The LOADING PLAN menu is used to display the quality and the quantity of the products available in each compartment according to the information received from the embedded computing or entered manually. The volumes per compartment will be updated as the deliveries and product movements continue. They will be displayed at the compartment selection.

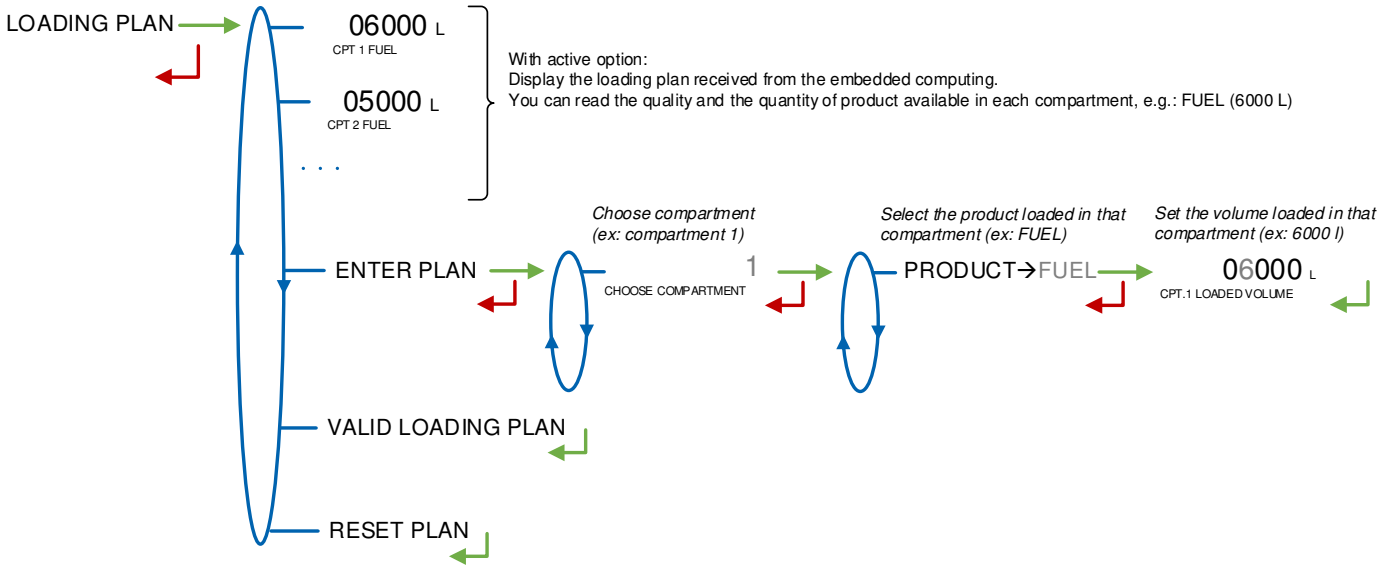
In case of a blocking function, an empty compartment won't be available for a delivery until you enter a new product quality via this menu. A compartment is considered as empty if the end height is reached and if CPT X EMPTY is displayed during the delivery.

The loading plan can be entered manually:

ENTER PLAN: For each compartment, select the product name and set the loaded volume. With DSPGI, the product name is blank. Then you must validate the loaded plan

VALID LOADING PLAN: This step validates the manually entered loading plan.

RESET PLAN: The loading plan can be cancelled by this menu.



5.4 Menu PRINT

Printings depend on the system configuration.

According to the needs, the PARAMETERS menu prints all or part of the parameters. Choose the menu:

COMPLETE: The general parameters are printed first, then remove the sheet and add another one to print the parameters of the measuring system (EM), and do the same to print the product and additive parameters. An example is attached.

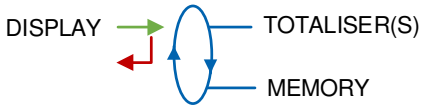
GENERAL+EM: The general parameters are printed first, then remove the sheet and add another one to print the parameters of the measuring system (EM).

PRODUCTS+ADDITIVES: Printing of the product and additive parameters


PRINT
Delivery ticket of the last delivery.
DELIVERY TICKET
>ADD PAPER
PRINTING
PRINTING FINISHED
Invoice and cheque of the last delivery.
INVOICE
UNIT PRICE→TAX IN.
UNIT PRICE→TAX EX.
PRICE IN→EURO/M3
PRICE IN→EURO/L
0000.00
UNIT PRICE
>ADD PAPER
PRINTING
PRINTING FINISHED
PAYMENT
CHEQUE
>ADD PAPER
PRINTING
PRINTING FINISHED
Summary of the deliveries for the selected day.
SUMMARY
19.10
DATE (DD.MM)
>ADD PAPER
PRINTING
PRINTING FINISHED
Totalisers.
TOTALISERS
>ADD PAPER
PRINTING
PRINTING FINISHED
Metrological and setting parameters stored by the MICROCOMPT+.
PARAMETERS
COMPLETE
GENERAL+EM
PRODUCTS+ADDITIVES
>ADD PAPER
PRINTING
PRINTING FINISHED
Loading plan set at the beginning
LOADING PLAN
>ADD PAPER
PRINTING
PRINTING FINISHED
Cargo plan: volumes available in compartments
CARGO PLAN
>ADD PAPER
PRINTING
PRINTING FINISHED
EVENTS RECORDED
23.03.21
DATE (DD.MM.YY)
>ADD PAPER
PRINTING
PRINTING FINISHED

5.5 Menu DISPLAY

This menu is available in stand-by mode or during an intermediate stop. It allows the proofreading of totalisers and measurement results.



5.5.1 Sub-menu TOTALISER(S)

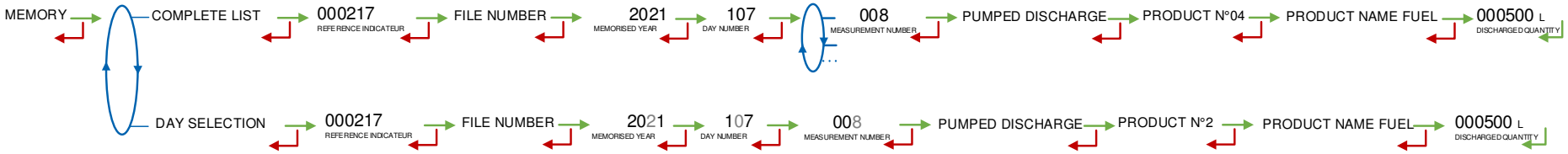
5.5.2 Sub-menu MEMORY

You can read all the measurement results stored by the DUAL TRONIQUE. That can be done in two ways:

COMPLETE LIST: Display all the measurement details recorded, from the newest to the oldest, sorted by day then by measurement number.

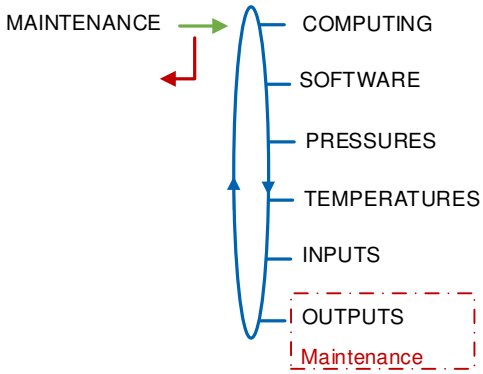
DAY SELECTION: Display a specific measurement by selecting the day number.

For each measurement, are displayed: the product number, the name of the product, the measured quantity.



5.6 Menu MAINTENANCE

This menu depends on the configuration of the measuring system

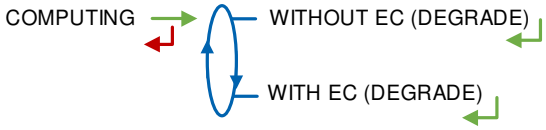


The access to the red boxes menus is restricted to the Maintenance with a red key.

5.6.1 Sub-menu COMPUTING

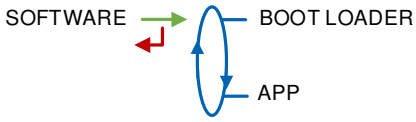
With active option: SUPERVISOR>COMPUTING→ON

In case of embedded computing failure, choose COMPUTING>WITHOUT EC (DEGRADE) to operate without embedded computing



5.6.2 Sub-menu SOFTWARE

Display the software version of the boot loader and the app.

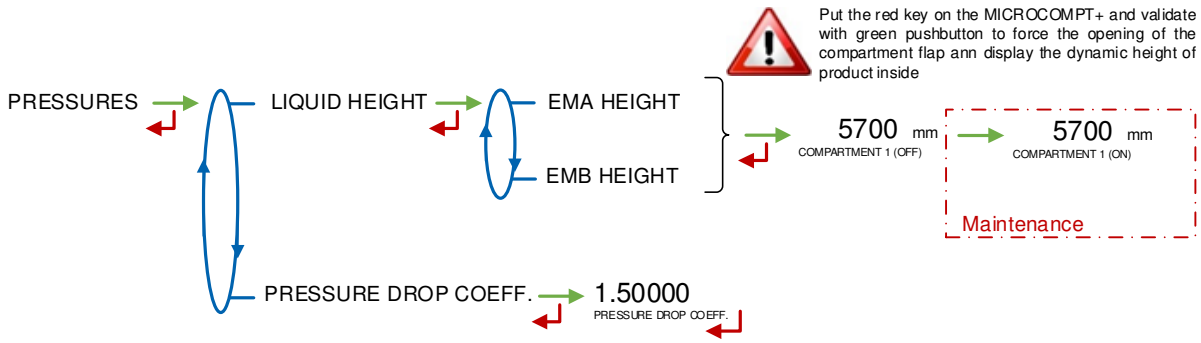


5.6.3 Sub-menu PRESSURES

For CMA only.

LIQUID HEIGHT – *Access restricted to the Maintenance*: Gives the height of the product in each compartment with instrumented flaps. Use the red key to force the opening of the compartment flap. Press the green pushbutton to display the dynamic height of product

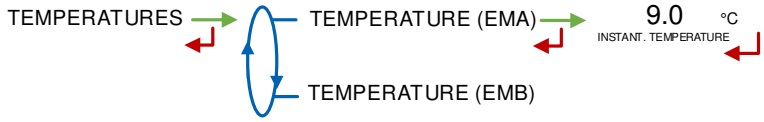
PRESSURE DROP COEFF: Gives the pressure drop coefficient for each measuring system using the relevant pictogram



5.6.4 Sub-menu TEMPERATURES

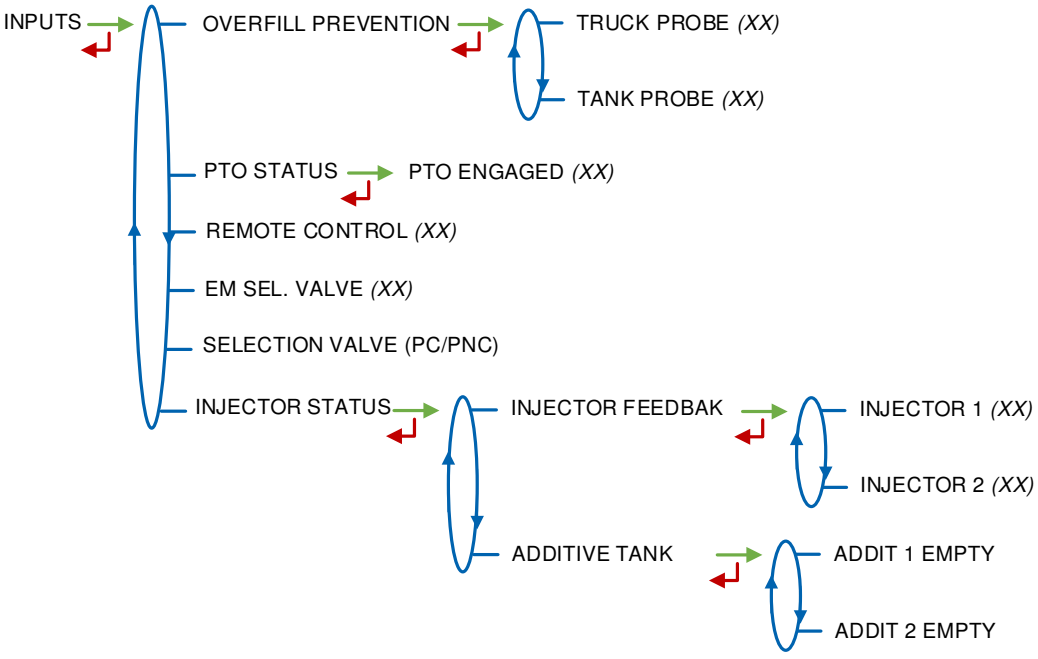
With active option: METROLOGICAL>EMX>TEMPERATURE→ON

Gives the product instantaneous temperature for EMA or for EMA and EMB.



5.6.5 Sub-menu INPUTS

Display the status of the inputs to ease maintenance.



OVERFILL PREVENTION:

- **TRUCK PROBE**: Status of the truck overfill probe. With the METROLOGICAL mode option: CONFIGURATION>TRUCK INSTRUM>OVERFILL PREVENTION>TRUCK PROBE>CONTROL→LOCAL
- **CUSTOMER TANK**: Status of the customer overfill probe. With the METROLOGICAL mode option: CONFIGURATION>TRUCK INSTRUM>OVERFILL PREVENTION>CUSTOMER TANK→ON

PTO STATUS: Status of the power take-off. With the METROLOGICAL option: CONFIGURATION>TRUCK INSTRUM>PTO

REMOTE CONTROL: Status of the remote control. STANDBY, ES: Emergency stop, LF-HF: low flow-high flow or R-S: run-stop

EM SEL VALVE: For DUAL only and PTO→EMA+EMB. Position of the measuring system selection valve EMA/EMB

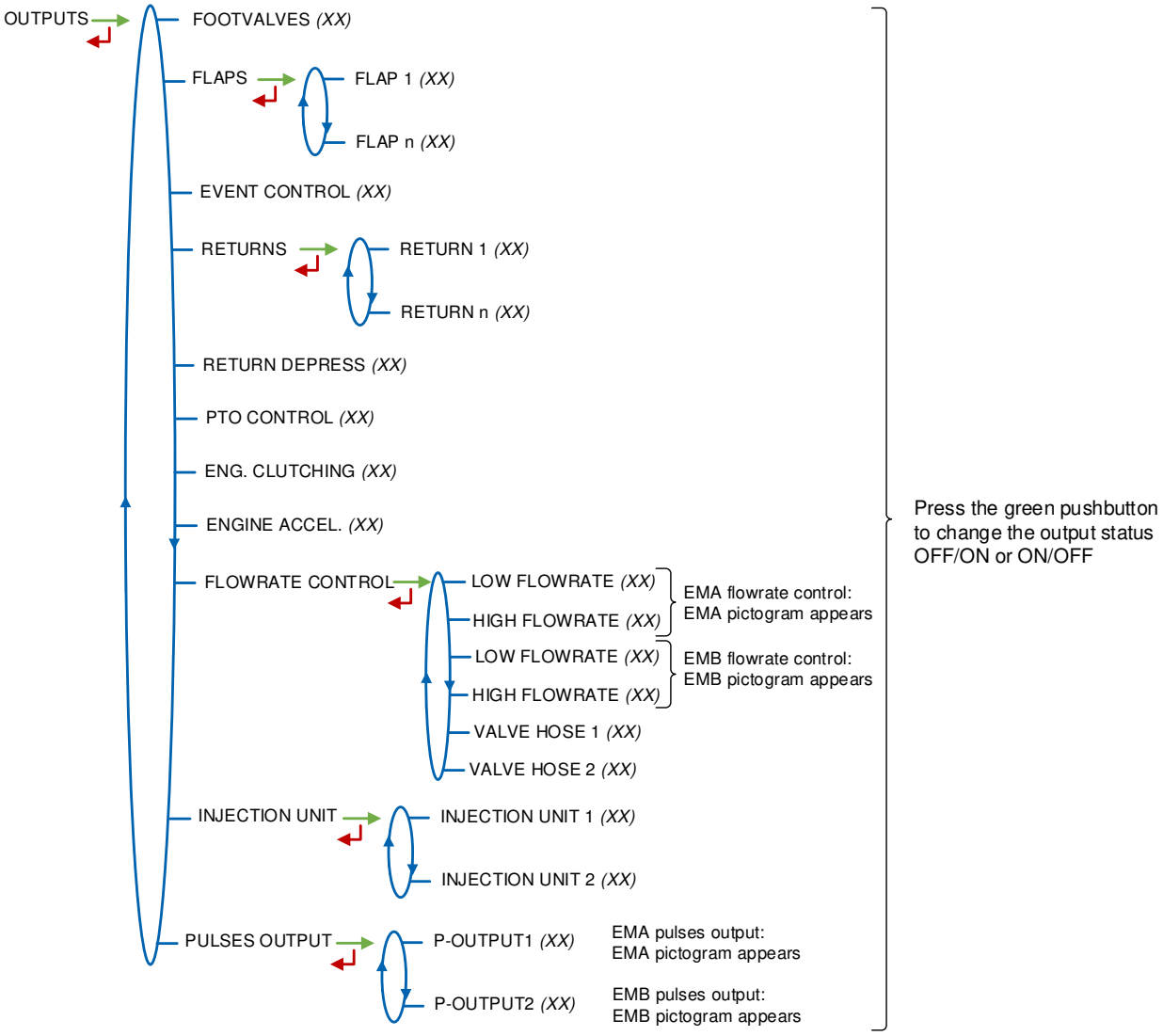
SELECTION VALVE (PC/PNC): Only with the pumped counted/pumped mode activated on a measuring system. Position of the selection valve pumped counted/pumped not counted

INJECTOR STATUS:

- **INJECTOR FEEDBACK**: Status of the injectors feedback: OFF/ON
- **ADDITIVE TANK**: Empty additive tanks: OFF/ON.

5.6.6 Sub-menu OUTPUTS

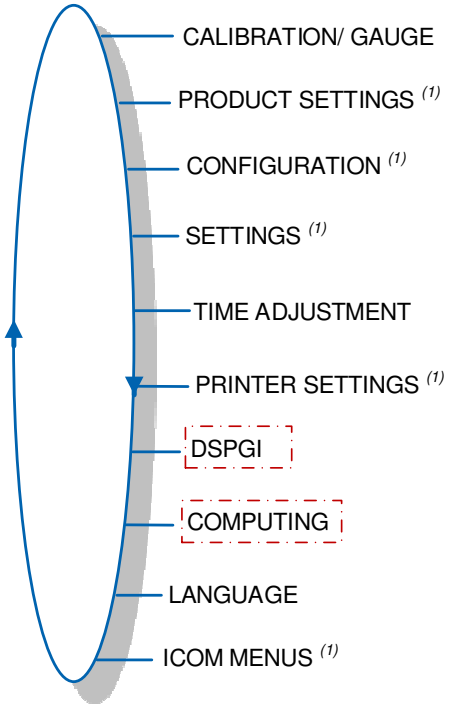
Access restricted to the Maintenance: Display and driving of the outputs listed below. Press the green pushbutton to change the output status OFF/ON.



5.7 List of alarms

		DISPLAY	MEANING	ACTION
USER	COMMON	DELIVERY STOP	Intentional interruption of the discharge	Continue, stop or finish delivery or product return
		EMERGENCY SHUTDOWN	Emergency stop triggered by remote control	Continue, stop or finish delivery or product return
		EC COMM.DEFAULT	Communication problem with the embedded computing	Try again and switch to degraded mode if the problem persists. COMPUTING→WITHOUT EC (DEGRADE)
		PRINTER DEFAULT	Communication with the printer lost	Make sure the connections are ok: cable, on-off switch and fuse
		The ticket is jammed	Jammed paper in the printer	Use the RELEASE button to eject the paper
		POWER SUPPLY PROBLEM	Power outage during operation	Check the cause / Restore power supply
		PTO DEFAULT	Inconsistency PTO return / run command	Check the power take-off status in the driver's cab
		DSPGI DEFAULT	Communication problem with the DSPGI	Make sure the DSPGI device is in operation
	COMMON PUMPED	INCOHERENCE WAY A/B	Inconsistent choice for EMA/EMB circuit	Make sure the manual selection valves are well-positioned
		INCOHERENCE WAY C/NC	Inconsistent choice for Pumped Counted/Pumped Not Counted circuit	Make sure the manual selection valves are well-positioned
		OVERFILL DEFAULT	Overfill detected on a compartment	Transfer the product in another compartment
		PURGE NOT FINISHED	The purge sequence is not finished	Finish the purge of the manifold (and/or hose)
		FLOW PUMP DEFAULT	No flow after switching on the pump	If necessary, adjust the timer parameter
		ADDITIVATION FAULT	Problem with the additive system (cannot be managed properly)	Check the additive system
		ADDITIVE Y LOW LEVEL	(Y=1 or 2) Low level of the additive tank	Fill the additive tank
		ADDITIVE Y CONTROL	(Y=1 or 2) Non-guaranteed injection of the additive rate	Check the hydraulic system
		OVERFILL CLIENT DEF.	Overfill detected on the customer tank	End delivery
REPARATOR	EMX (X=A or B)	EMX LOW FLOW DEFAULT	Flow<Qmin consecutively during 0,2*MMQ	Check the parameters and the hydraulic system (valve, strainer, nozzle…)
		EMX HIGH FLOW DEFAULT	Flow>Qmax consecutively during 3 sec	Check the parameters / Reduce flowrate
		EMX METERING PROBLEM	Inconsistency of metering channels	Make sure the pulse emitter indicators are blinking and the wiring is well done / Change the pulse emitter if required
		EMX PULSES PROBLEM	Problem with the metering pulses	Make sure the pulse emitter indicators are blinking and the wiring is well done / Change the pulse emitter if required
		EMX TEMPER. DEFAULT	Temperature determination failure T<Tmin or T>Tmax	If steady alarm, see a reparator for trouble shooting
		EMX K-FACTOR DEFAULT	Deviation between coefficients K1 and K2 greater than 0.5%	Change the low-flow coefficient (K1)
		EMX TOTALISER LOST	Totalisers integrity problem	Substitution of the backup battery
		EMX PRESSURE DEFAULT	Pressure sensor out of range 4/20 mA	If steady alarm, see a reparator for trouble shooting
		EMX CONVER. DEFAULT	Problem during volume conversion	Make sure the set density is consistent
	COMMON	LEAK DETECTED	Metering detection without measurement	Make sure the check valve is tight
		DISPLAY DEFAULT	Integrity problem between the display and the display RAM proofreading	If steady alarm, substitution of the display card
		WATCHDOG DEFAULT	Triggering the watchdog function	Switch on-off the MICROCOMPT+ If steady alarm, substitution of the faulty card If steady alarm, substitution of the faulty card
		DATE AND TIME LOST	Problem with the clock	Set date and time
		DIARY DEFAULT	The events diary is lost	Acknowledge the alarm, make sure the date is ok If steady alarm, substitution of the backup battery
		MEMORY LOST	The measurements diary is lost	Acknowledge the alarm (enter then exit the metrological mode) If steady alarm, substitution of the backup battery Acknowledge the alarm (enter then exit the metrological mode) If steady alarm, substitution of the backup battery
		MEMORY OVER LOADED	Measurement storage area saturated (too many registrations over 90 days)	Acknowledge the alarm (enter then exit the metrological mode) If steady alarm, substitution of the backup battery
		BOOT LOADER DEFAULT	Inconsistency between the app and the version of the boot loader	Match the application software with the boot loader
		PARAMETER LOST	Loss of supervisor parameters	Acknowledge the alarm If steady alarm, substitution of the backup battery
		EEPROM MEMORY FAIL	Loss of metrological parameters	Substitution of the AFSEC+ electronic card
		SAVE MEMORY DEFAULT	Integrity problem with memorized data	Substitution of the AFSEC+ electronic card
		FRAME WORK DEFAULT	Integrity problem with software	Substitution of the AFSEC+ electronic card

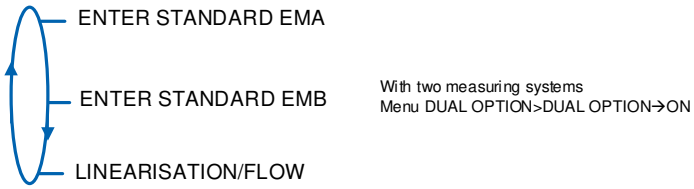
6 SET THE DUAL TRONIQUE: SUPERVISOR MODE



The access to the red boxes menus is restricted to the Maintenance with a red key.

(1): The sub-menus are different according to the level of access: Level-User, Level-Manager and Level-Maintenance.

6.1 Menu CALIBRATION/ GAUGE



6.1.1 Sub-menu ENTER STANDARD EM

This menu allows you to check the accuracy of the measuring system by calculating the measuring device error, the new corrected coefficient and the average flow.

If the system manages two measuring systems, choose the relevant one: EMA or EMB.

First, make a discharge (USER mode) in high or low flow with predetermination of the volume to fill a tank prover or through a master meter.

Switch to SUPERVISOR mode, select CALIBRATION/GAUGE>ENTER STANDARD EM and validate.

Enter the reference volume (read on the gauge and corrected), then validate. The MICROCOMPT+ displays the information that follows:

- The signed error in %
- The coefficient revised as a function of the error

- The average flow of the delivery.

6.1.2 Sub-menu LINEARISATION/FLOW

This menu is used to make a flow-correction for two measuring points (at low and high flowrate). The MICROCOMPT+ stores flowrate and coefficient calibrated values in order to define both correction points: at low and high flowrate.

When you validate the menu, the calibrated values are displayed; you need to unseal the MICROCOMPT+ to switch in METROLOGICAL mode and enter the values via the EM>METER COEFFICIENT menu.

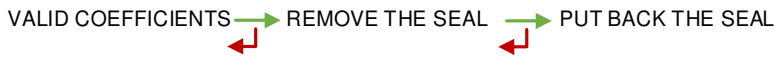
To linearize the curve, two tests are necessary:

- Fill the gauge in high flow [flowminx3]≤high flow<[flowmax], and enter the volume read on the gauge (or use a master meter) in the menu CALIBRATION/GAUGE>ENTER STANDARD EM as described above
- Fill the gauge in low flow [flowmin]≤flow<[flowminx1.5], and enter the volume read on the gauge in the menu CALIBRATION/GAUGE>ENTER STANDARD EM
- Select CALIBRATION/GAUGE>LINEARISATION/FLOW and validate. It is then possible to see the coefficients and the flow rates data for the two tests carried out.

If the procedure failed, the MICROCOMPT+ can display the information that follows:

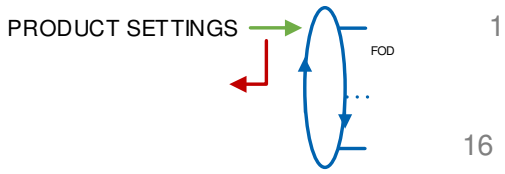
- LARGE GAP K1/K2: Correction between both measuring points >0.5%
- FLOWS TOO CLOSE: High flowrate value is out of range. It needs to be [flowminx3]≤high flow<[flowmax].
- LO-FLOW OUT OF RANGE: Low flowrate value is out of range. It needs to be [flowmin]≤low flow≤[flowminx1.5]
- ONLY ONE STANDARD: One of the tests has not been done (at low or high flowrate)
- NO VALID STANDARD: Both tests have not been done (at low and high flowrate).

When the procedure is completed, the MICROCOMPT+ displays the sequence that follows:



The new coefficient and flow rates values are taken into account.

6.2 Menu PRODUCT SETTINGS



You can configure 16 different products. Default names of the first six products: FOD, FOD+, GO, GO+, GNR, GNR+

EM: For DUAL only. Assign the product to one or both measuring systems (EMA, EMB or EMA+EMB)

NAME: Record or enter the name of the product

DENSITY AT XX: XX is the reference temperature set in menu METROLOGICAL>CONFIGURATION>CONVERSION>DENSITY TEMP. (REF). Set the density in Kg/m^3

PRODUCT TYPE: Select the product quality

UNIT PRICE/DEFAULT: Enter the numeric value of the default unit price

UNIT PRICE: Select if the price includes taxes or not

PRICE IN: Select the unit of the price. This menu depends on the currency set in menu CONFIGURATION>CURRENCY

VAT RATE: Record the tax rate (in %).

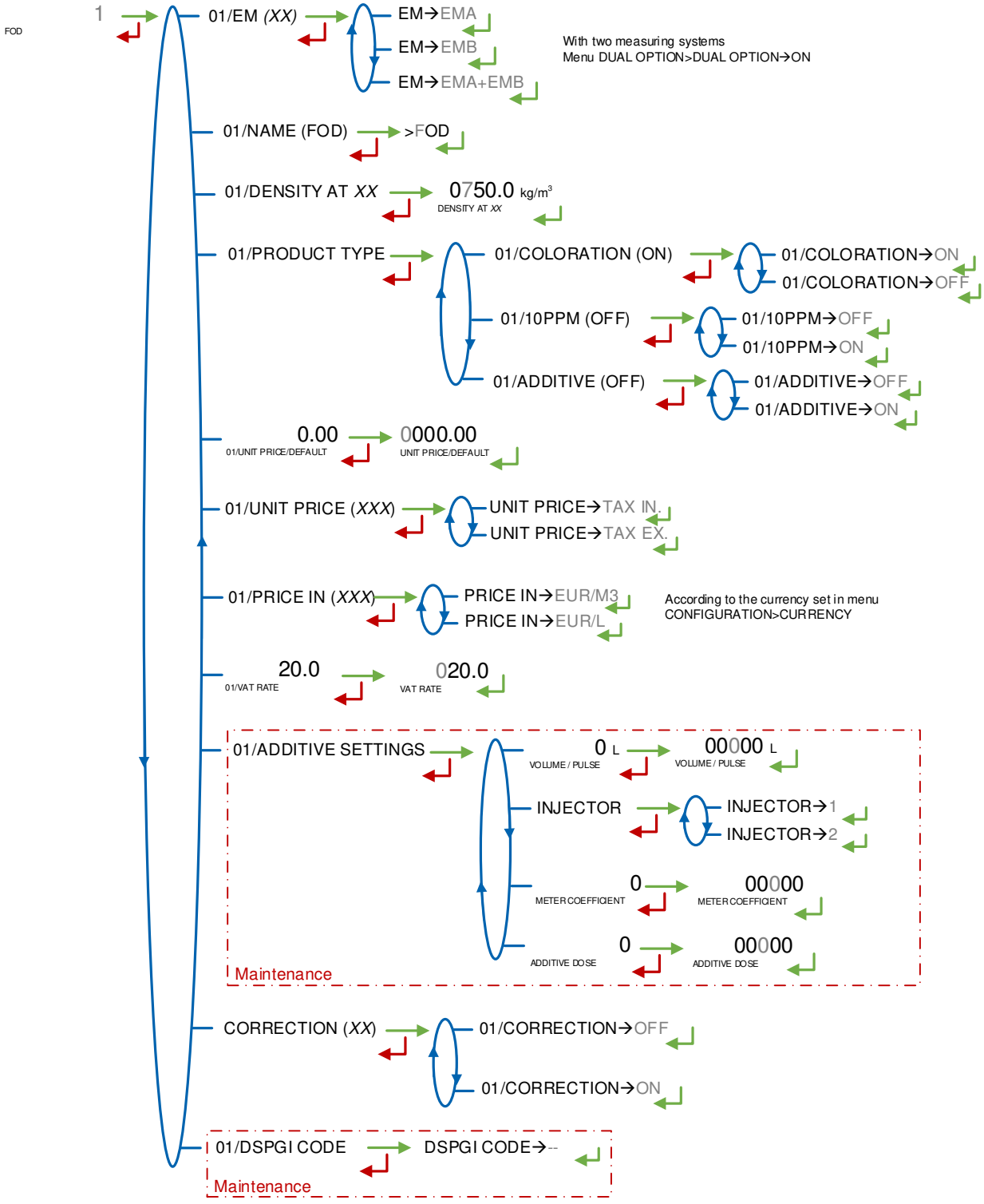
ADDITIVE SETTINGS – *Access restricted to the Maintenance*: If the DUAL TRONIQUE controls an additive injection device, you must configure the parameters that follow:

- **VOLUME/PULSE**: Record the volume of primary product. For example “00200”: the DUAL TRONIQUE puts a dose of additive every 200 liters of primary product (minimum value: 10L).
- **INJECTOR**: Choose the injector. The presence of a second injector is possible only if the number of flaps and returns allows it. See the table in ANNEX 3.
- **METER COEFFICIENT**: Record the coefficient of the additive injection device.
- **ADDITIVE DOSE**: Record the volume of the additive dose in liter.

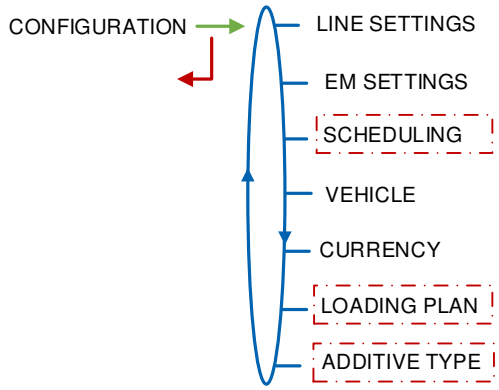
CORRECTION: Select if the correction is “ON” or “OFF” for the product (see METROLOGICAL>EMA>CORRECTION).

DSPGI CODE – *Access restricted to the Maintenance*: Assign the DSPGI code to each product quality (with active option: SUPERVISOR>DSPGI→ON).

Example for product 1 (FOD):

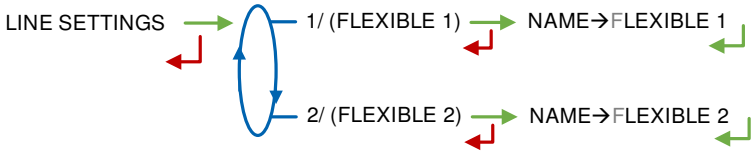


6.3 Menu CONFIGURATION



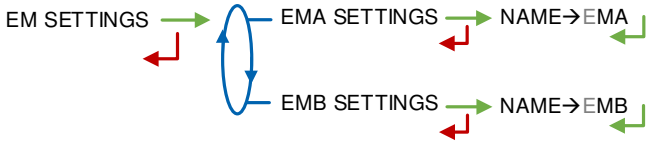
6.3.1 Sub-Menu LINE SETTINGS

This menu is available when the system manages a single pumped measuring system with two hoses (METROLOGICAL mode menu CONFIGURATION>DUAL OPTION→OFF>EMA→PUMPED>2 HOSES). Validate or enter the name of the line. Maximum number of characters: 10.



6.3.2 Sub-menu EM SETTINGS

When the system manages two measuring systems. Validate or enter the name of the measuring system. Maximum number of characters: 11. This name is displayed in the user menus.



6.3.3 Sub-menu SCHEDULING

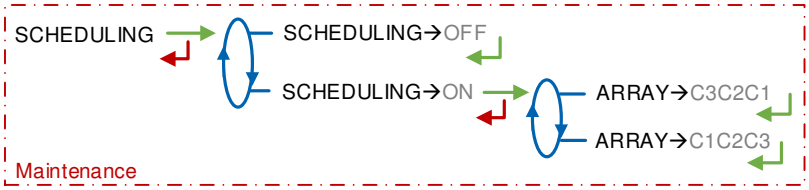
Access restricted to the Maintenance

This menu is used to make the automatic scheduling of multi-compartment delivery. It is available if the DUAL TRONIQUE controls at least two compartment flaps.

If scheduling is ON, select the array that will be proposed to the user:

ARRAY→C1C2C3: The compartments are displayed from left to right.

ARRAY→C3C2C1: The compartments are displayed from right to left.

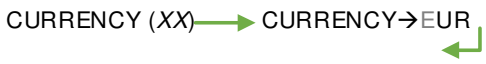


6.3.4 Sub-menu VEHICLE

Enter vehicle identification: set the vehicle registry number on which the measuring system is installed. This number is printed on delivery tickets…

6.3.5 Sub-menu CURRENCY

Record the currency of the price. Set the three-character currency used to edit invoices (according to ISO 4217)



6.3.6 Sub-menu LOADING PLAN

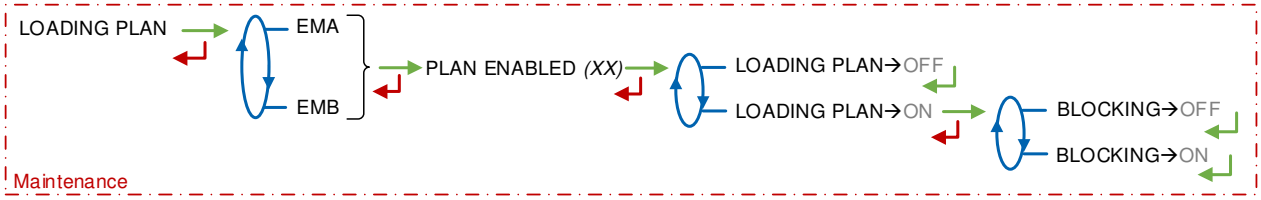
Access restricted to the Maintenance

The CMA TRONIQUE can operate with loading plan or without loading plan.

EMA/EMB: When the system manages two measuring systems, choose the measuring system (CONFIGURATION>DUAL OPTION→ON)

LOADING PLAN→ON: When the function is active, a specific menu allows the user to determine the product quality and quantity for each compartment.

When a compartment is empty, it won't be available for a delivery until the user enters a new product quality via the menu LOADING PLAN of the USER mode.



6.3.7 Sub-menu ADDITIVE TYPE

Access restricted to the Maintenance

INJECTOR NB: The injector(s) can be assigned to one or both measuring systems. The presence of a second injector is possible only if the number of flaps and returns allows it. See the table in ANNEX 3.

Then, for each injector, set the parameters that follow:

EMA/EMB: When the system manages two measuring systems, choose the measuring system (CONFIGURATION>DUAL OPTION), select the measuring system for additive injection

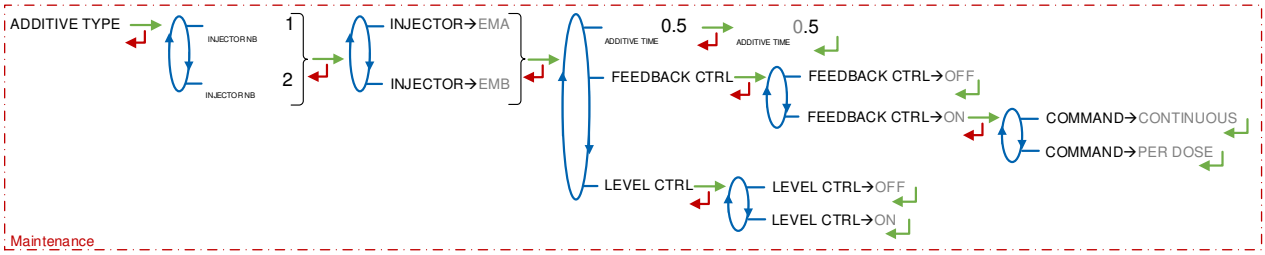
Then configure the additive injection with the menus below:

ADDITIVE TIME: Set the duration of the additive control before allowing a new order (in tenth of a second). It corresponds to the control of the actuator to which is added a relaxation of the same duration

FEEDBACK CTRL: If this function is ON, the measuring system makes sure that the injector piston moves.

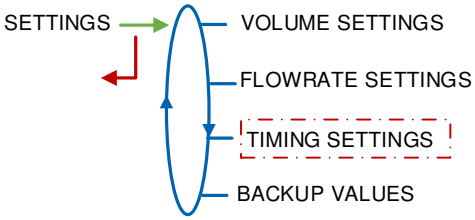
- **COMMAND→CONTINUOUS**: The control is done throughout the measurement
- **COMMAND→PER DOSE**: The control is done each time a dose is injected

LEVEL CTRL: If this function is ON, the measuring system controls the additive level in the tank. Low level triggers an alarm.

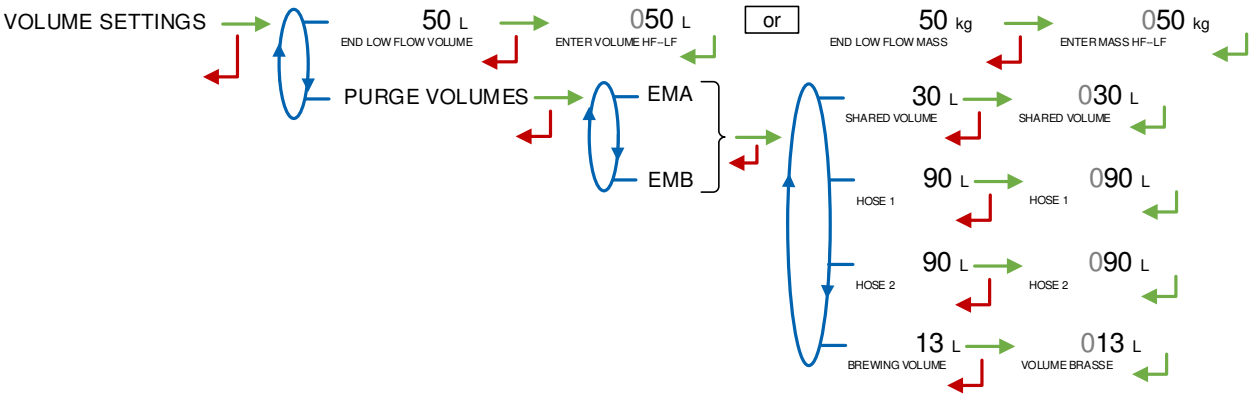


6.4 Menu SETTINGS

The accuracy and the unit of the displayed values are specific to the measurement system and depend on the choices made during the metrological configuration EM>UNIT menu.



6.4.1 Sub-menu VOLUME SETTINGS



END LOW FLOW VOLUME or END LOW FLOW MASS: Volume or mass delivered in low flowrate to finish the delivery

PURGE VOLUMES: For volume measurement only (CONFIGURATION>UNIT>QUANTITY>QUANTITY→L). The purge volumes depend on the truck hydraulic configuration (manifold, hose...), they are set at commissioning, and they prevent from product contamination.

For each measuring system, set the parameters below:

- **SHARED VOLUME**: V_C. When several hoses are set or only one empty hose. Quantity of product contained in the part of the piping located between the manifold and the hose attachment point. The common volume includes the brewing volume. $V_C \geq 1.5 \times V_B$

- **HOSE 1**: V_F. Quantity of product contained between the manifold and the outlet of the full hose. The hose volume includes the common volume. $V_F = V_C + V_{flexible\ plein}$
- **HOSE 2**: V_F. Quantity of product contained between the manifold and the outlet of the full hose. The hose volume includes the common volume. $V_F = V_C + V_{flexible\ plein}$

  BREWING VOLUME: Brewing volume V_B. It corresponds to the quantity of product in the piping for which the quality is indefinite due to the mixture of products.

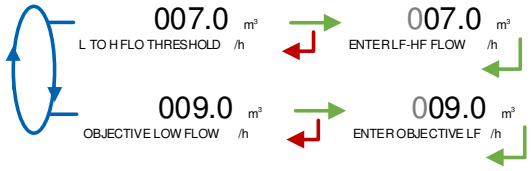
6.4.2 Sub-menu FLOWRATE SETTINGS

When the system manages two measuring systems, choose the measuring system.

For each measuring system, set the flowrate values that follow:

L TO H FLO THRESHOLD: For pumped measuring systems only. Set the flowrate beyond which the measuring system (running in low flowrate) controls the high flowrate.

OBJECTIVE LOW FLOW: With incremental valve only. Set the objective flowrate to regulate the low flowrate.



6.4.3 Sub-menu TIMING SETTINGS

Access restricted to the Maintenance

You can set the timing parameters that follow:

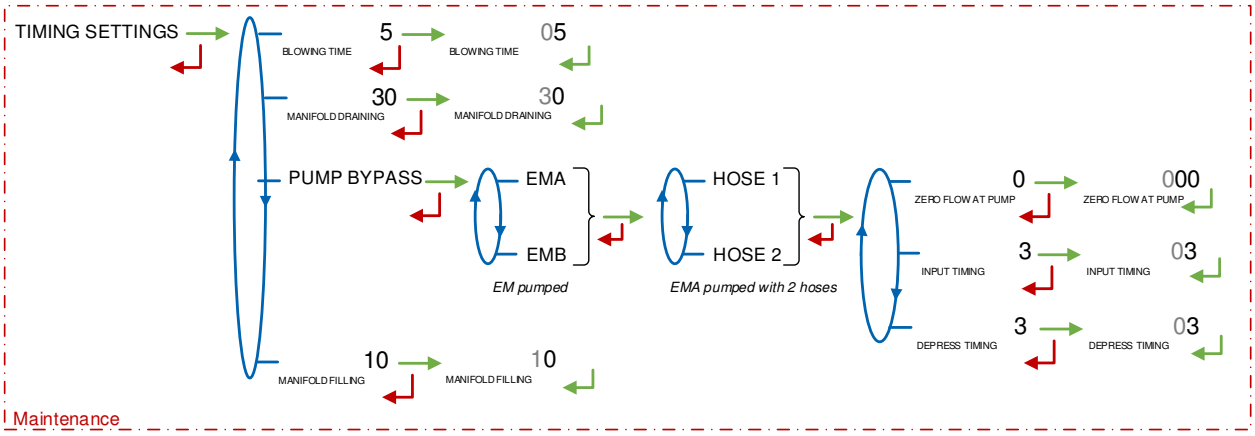
BLOWING TIME: Blowing duration for product return probes (in seconds)

MANIFOLD DRAINING: Manifold draining duration (in seconds)

PUMP BYPASS: According to the number of pumped measuring systems, choose the measuring system and/or the hose. Then:

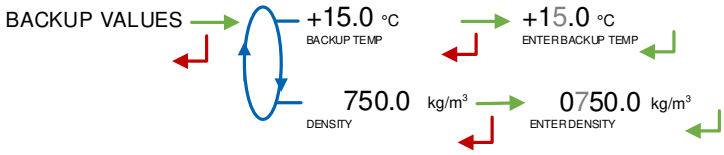
- **ZERO FLOW AT PUMP**: Set the maximum permissible duration of the pump in operation at zero flow condition (in seconds). Minimum input value: 60; typical value: 180; 0 disables the function. Recorded on the parameters printing as: Flow timing
- **INPUT TIMING**: Set the time (in seconds)
- **DEPRESS TIMING**: Set the time (in seconds)

MANIFOLD FILLING: Duration of the manifold filling (in seconds)



6.4.4 Sub-menu BACKUP VALUES

This menu allows setting the backup values for temperature and density. This menu is available when the conversion is ON in METROLOGICAL mode: CONFIGURATION>CONVERSION→ON.



6.5 Menu TIME ADJUSTMENT

Date and time are set in METROLOGICAL mode. You can adjust time (±2h) one time a day. Use French format, for example: 14.41 means 2.41 pm.

6.6 Menu PRINTER SETTINGS

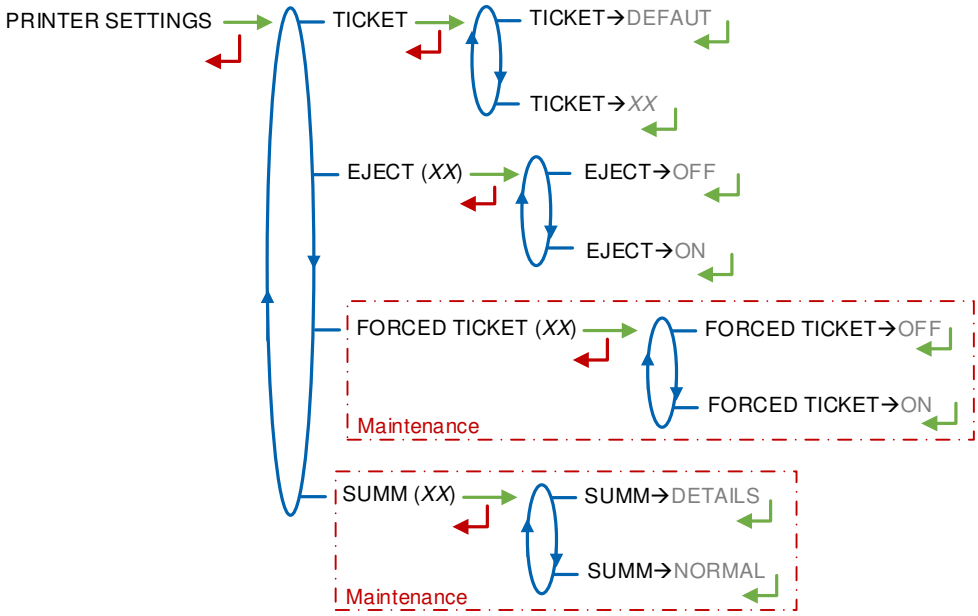
This menu is used to configure printing options.

TICKET: Choose the ticket format for printing the delivery ticket.

EJECT: Choose to eject or not the sheet of paper at the end of printing (allowing the embedded computing to print its part). In case of printing default, use the 'RELEASE' button of the printer device to eject the sheet manually.

FORCED TICKET: *Access restricted to the Maintenance* At the end of delivery the printing of the delivery ticket or invoice printing is proposed. It is possible to force the printing by choosing FORCED TICKET→ON.

SUMM – *Access restricted to the Maintenance*: Choose to make appear or not details of the deliveries when printing the summary.



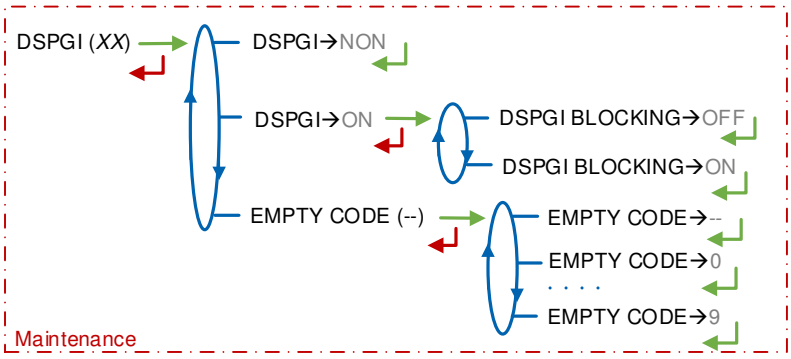
6.7 Menu DSPGI

Access restricted to the Maintenance

This menu is used when the MICROCOMPT+ is connected to a DSPGI device.

DSPGI→ON: The option is activated. The product name is given by the DSPGI device to the MICROCOMPT+ which will display it after the selection of the compartment at the beginning of a DELIVERY

- **DSPGI BLOCKING→OFF:** Make this choice to allow the user to discharge a product different from those in the pipe. Allows to start a new delivery regardless of whether the purge is completed or not.
- **DSPGI BLOCKING→ON:** Make this choice to make any mixture of product impossible. Requires to complete the hose purge before starting a new delivery.
- **EMPTY CODE:** Assign a DSPGI code to an empty compartment.



6.8 Menu COMPUTING

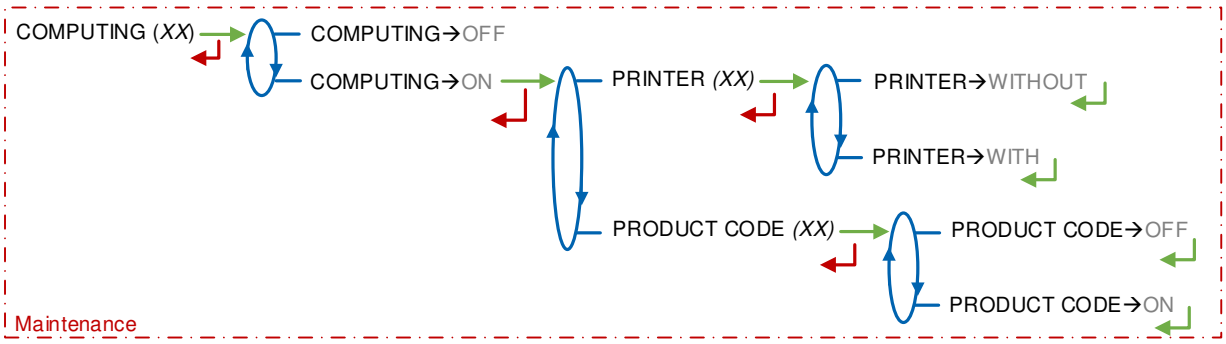
Access restricted to the Maintenance

Operation with or without embedded computing. When operating with embedded computing, you must set the parameters below:

PRINTER:

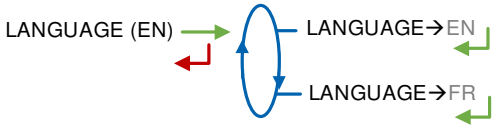
- **PRINTER→WITH:** The delivery ticket and the invoice must be printed via the embedded computing. They cannot be printed via the MICROCOMPT+.
- **PRINTER→WITHOUT:** The delivery ticket and the invoice must be printed via the MICROCOMPT+

PRODUCT CODE: This menu allows activating or not the control of the product codes by the embedded computing



6.9 Menu LANGUAGE

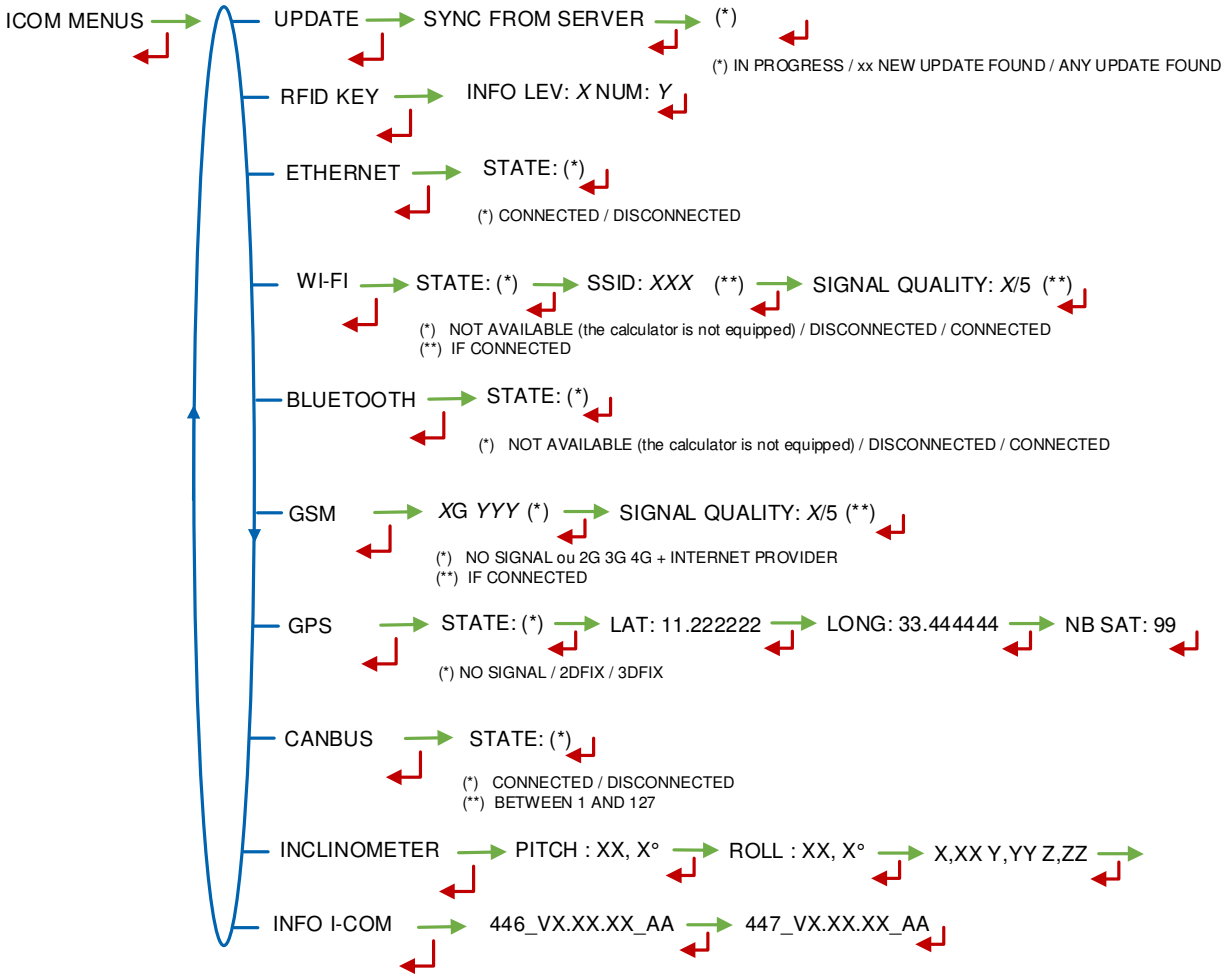
Select the display language. This menu is available if a translation catalogue is uploaded in the MICROCOMPT+.



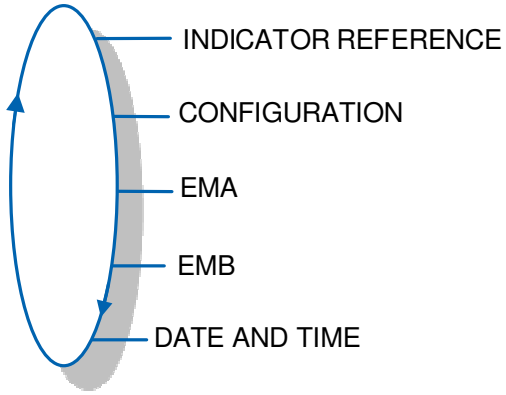
6.10 Menu ICOM MENUS

The sub-menus are different according to the level of access: The ANNEX 1 shows all the sub-menus available.

Put the blue RFID key to display the available parameters as shown below:


ICOM MENUS
UPDATE
SYNC FROM SERVER
(*)
(*) IN PROGRESS / xx NEW UPDATE FOUND / ANY UPDATE FOUND
RFID KEY
INFO LEV: X NUM: Y
ETHERNET
STATE: (*)
(*) CONNECTED / DISCONNECTED
WI-FI
STATE: (*)
SSID: XXX (**)
SIGNAL QUALITY: X/5 (**)
(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
(**) IF CONNECTED
BLUETOOTH
STATE: (*)
(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
GSM
XG YYY (*)
SIGNAL QUALITY: X/5 (**)
(*) NO SIGNAL ou 2G 3G 4G + INTERNET PROVIDER
(**) IF CONNECTED
GPS
STATE: (*)
LAT: 11.222222
LONG: 33.444444
NB SAT: 99
(*) NO SIGNAL / 2DFIX / 3DFIX
CANBUS
STATE: (*)
(*) CONNECTED / DISCONNECTED
(**) BETWEEN 1 AND 127
INCLINOMETER
PITCH : XX, X°
ROLL : XX, X°
X,XX Y,YY Z,ZZ
INFO I-COM
446_VX.XX.XX_AA
447_VX.XX.XX_AA

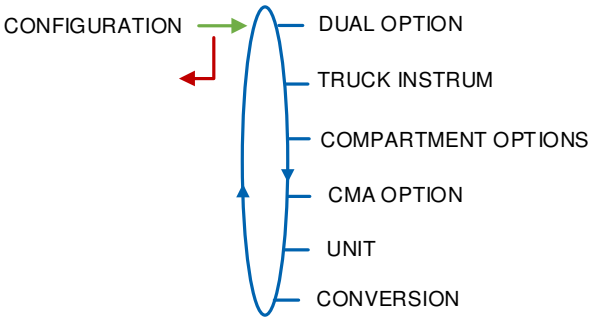
7 CONFIGURE THE DUAL TRONIQUE: METROLOGICAL MODE



7.1 Menu INDICATOR REFERENCE

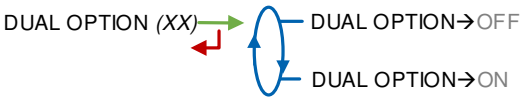
Record the MICROCOMPT+ serial number and then the slave number.

7.2 Menu CONFIGURATION



7.2.1 Sub-menu DUAL OPTION

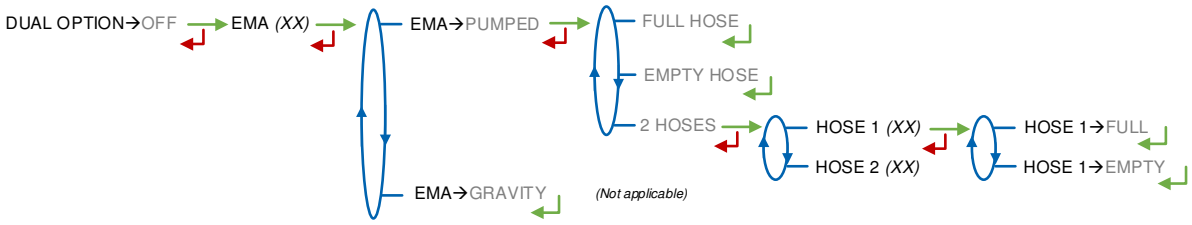
This menu is used to configure the system with a single measuring system EMA or with two measuring systems EMA and EMB



Then, configure the distribution ways for each measuring system.

7.2.1.1 DUAL OPTION NOT ENABLED

Validate DUAL OPTION→OFF. The system operates with a single pumped measuring system EMA.

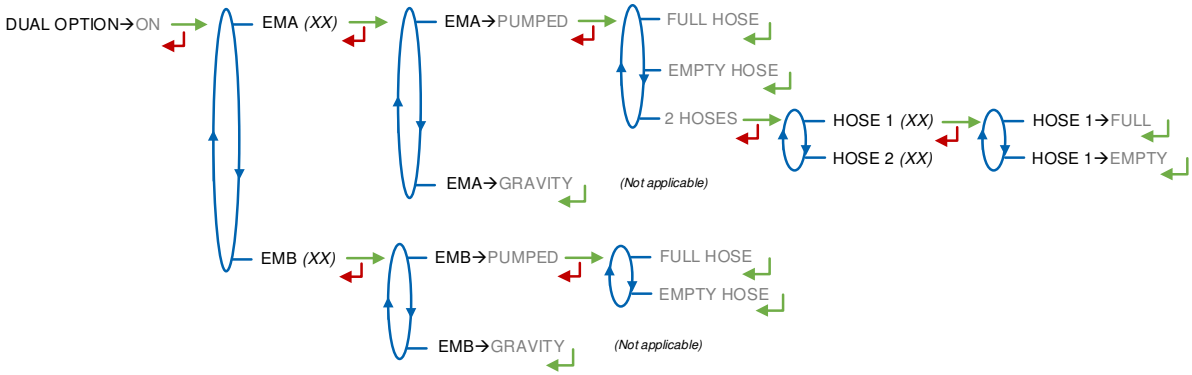


EMA (PUMPED)

- **FULL HOSE**: Full hose with authorization valve operation
- **EMPTY HOSE**: Operation with empty hose
- **2 HOSES**: Operation with two hoses. Each may be full or empty hose

7.2.1.2 DUAL OPTION ENABLED

The system operates with two pumped measuring systems EMA and EMB. For both one, configure the distribution ways.



EMA (PUMPED)

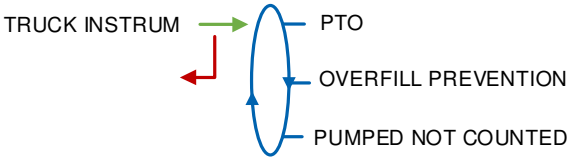
- **FULL HOSE**: Full hose with authorization valve operation
- **EMPTY HOSE**: Operation with empty hose
- **2 HOSES**: Operation with two hoses. Each may be full or empty hose.

EMB (PUMPED)

- **FULL HOSE**: Full hose with authorization valve operation
- **EMPTY HOSE**: Operation with empty hose.

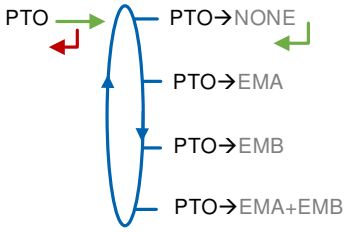
7.2.2 Sub-menu TRUCK INSTRUM

This menu is available when at least one line is set in pumped mode. It is used to configure the truck instrumentation.



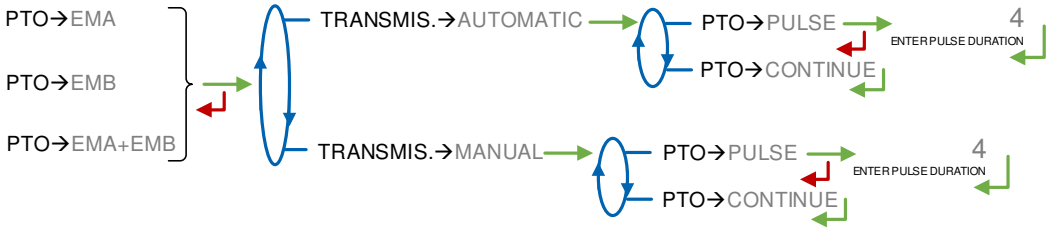
7.2.2.1 PTO

This menu allows to operating with or without power take-off. When the system operates without power take-off, choose PTO→OFF



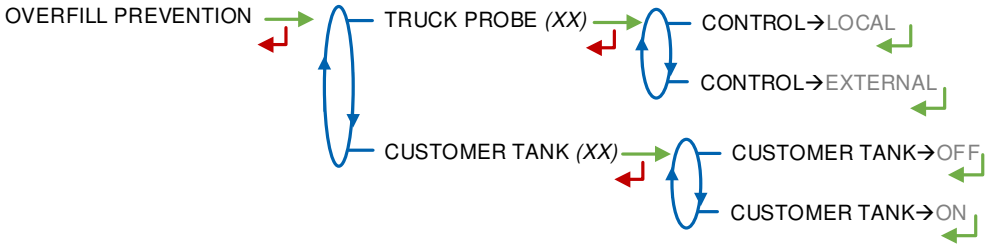
When the system operates with power take-off, select the relevant pumped measuring system (EMA, EMB or both). Then choose the transmission the truck is equipped with. It is used to take into account the engine start and stop, clutching and power take off.

TRANSMIS: Choose the type of transmission (automatic or manual) and the type of command: non-stop command or by pulse



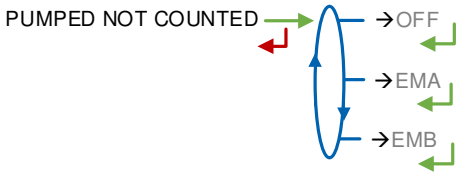
7.2.2.2 OVERFILL PREVENTION

Control of the overfill protection of the truck and of the customer tank.



7.2.2.3 PUMPED NOT COUNTED

This menu is available when at least one line is set in pumped mode with two distribution ways: upstream and downstream the meter. Choose the measuring system that can be used in pumped not counted mode.



7.2.3 Sub-menu COMPARTMENT OPTIONS

This menu is used to configure the compartments and their assignment to each measuring system. First, set the number of compartments.

NUMBER OF CPT: Number of compartments. Maximum number: 9 with a single measuring system and 6 with two measuring systems

For each compartment, set the parameters below. Attention, you can configure a limited number of traps and returns. See the table in ANNEX 3.

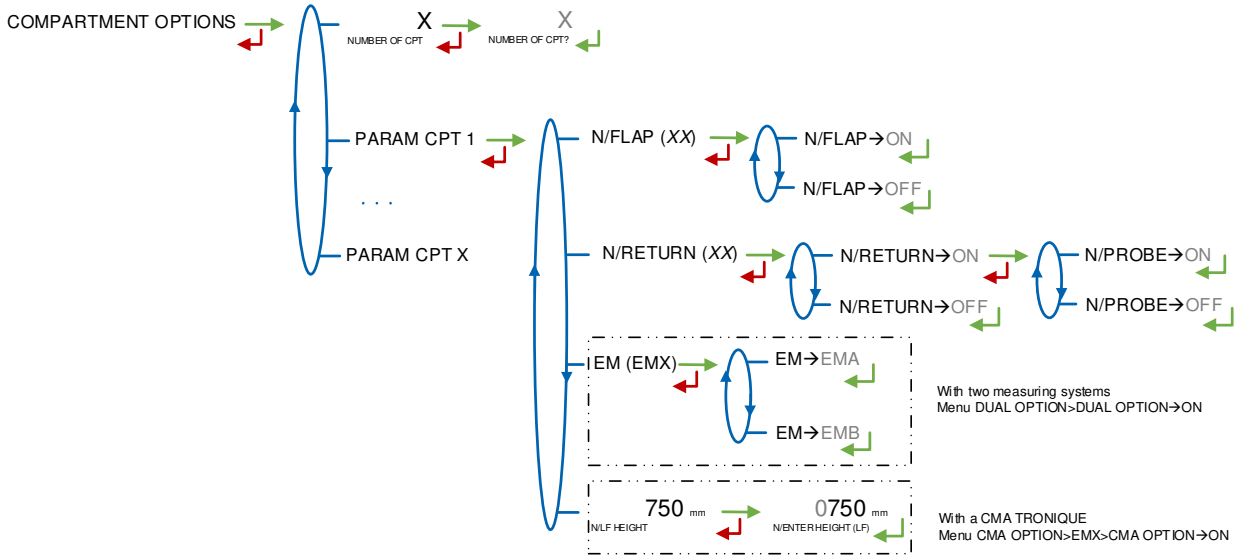
FLAP: Operation with or without flap control

RETURN: Operation with or without product return. Used for pumped measuring system with full hose

- **PROBE**: Overfill protection probe of the compartment

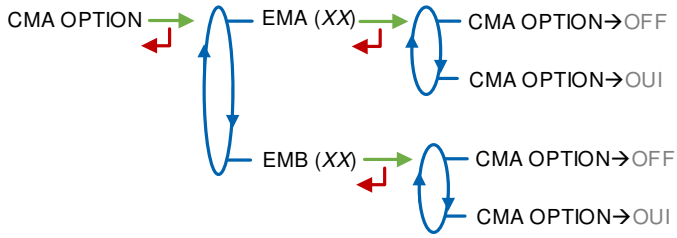
EM (EMX): For DUAL only. Measuring system connected to the compartment

LOW FLOW HEIGHT: For CMA only. Geometric height to command low flow (mm).



7.2.4 Sub-menu CMA OPTION

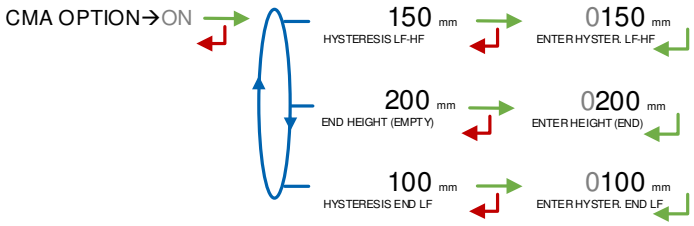
This menu is available when at least one line is set in pumped mode. For each pumped line, you must indicate if the measuring system is a CMA TRONIQUE. If so, the menu gives access to the configuration of specific parameters.



HYSTERESIS LF-HF: At the beginning of a measurement or following an intermediate stop. Before switching again from low to high flowrate, the calculator-indicator checks both parameters LOW FLOW HEIGHT and HYSTERIS LF-HF

HEIGHT END (EMPTY): Height for which the compartment is considered as empty (mm)

HYSTERESIS END-LF: Always applied. To allow pouring, the product height shall be equal to or greater than the sum of parameters END HEIGHT and HYSTERIS END-LF

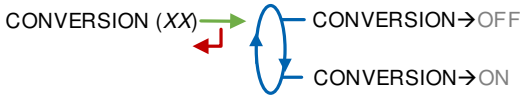


7.2.5 Sub-menu UNIT

This menu is used to determine whether the measured quantity is a volume or a mass.

7.2.6 Sub-menu CONVERSION

The CMA TRONIQUE can operate with conversion or without conversion. This feature is available only if measured quantities are volumes (CONFIGURATION>UNIT>QUANTITY>QUANTITY→L).



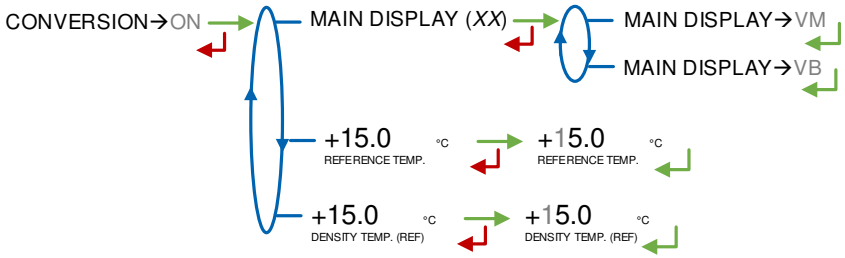
When conversion is active, the following parameters must be set:

MAIN DISPLAY: Select the type for displayed quantity

- **VM**: volume in metering conditions
- **VB**: volume converted to the reference temperature

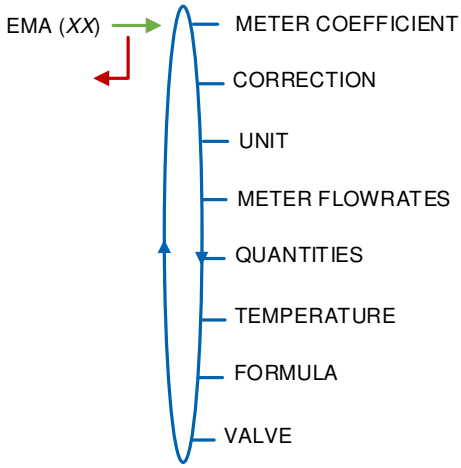
REFERENCE TEMP.: Record the reference temperature for conversion. Default value: 15°C for the most common conversion.

DENSITY TEMP (REF): Record the reference temperature for set up densities. Default value: 15°C for density at 15°C (MV15).



7.3 Menu measuring system EMA

This part allows to define the characteristics of the EMA measuring system.



7.3.1 Sub-menu METER COEFFICIENT

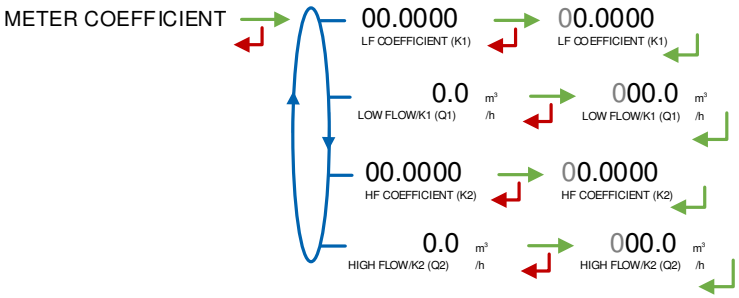
Enter the coefficient of the EMA measuring system meter.

LF COEFFICIENT (K1): Coefficient for low flow. The unit depends on settings (pulses/liter or pulses/kg)

LOW FLOW/K1 (Q1): Reference low flow so that [flowmin]≤Q1<[flowminx1.5]. According to the flow unit

HF COEFFICIENT (K2): Coefficient for high flow. The unit depends on settings (pulses/liter or pulses/kg)

HIGH FLOW/K2 (Q2): Reference high flow so that [flowminx3]≤Q2<[flowmax]. According to the flow unit



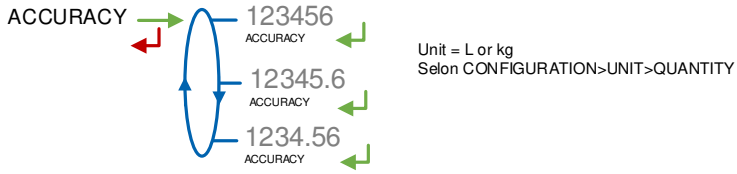
7.3.2 Sub-menu CORRECTION

Set the correction factor per thousand (‰) of the measuring system for a measurement with low viscosity products. See the marking of the meter or the calibration certificate. Maximum value: ±5‰.

7.3.3 Sub-menu UNIT

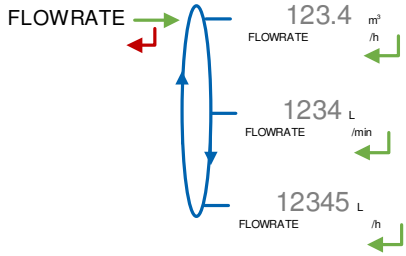
Choose the accuracy of the quantity and the unit of the flow that will be displayed and printed for the EMA measuring system.

ACCURACY: Choose the accuracy of the quantity that will be displayed and printed. According to the unit set in menu CONFIGURATION>UNIT>QUANTITY (measure of a volume or a mass).

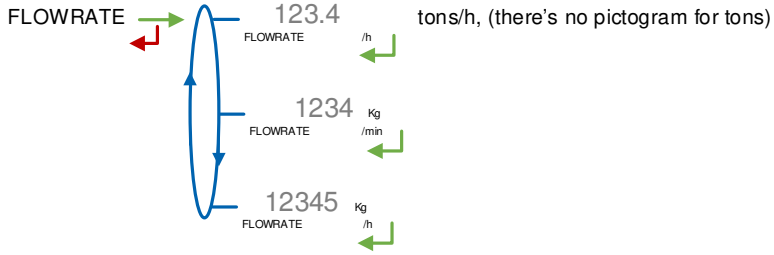


FLOWRATE: Choose the accuracy of the quantity that will be displayed and printed. According to the unit set in menu CONFIGURATION>UNIT>QUANTITY (measure of a volume or a mass).

CONFIGURATION>UNIT>QUANTITY>QUANTITY→L



CONFIGURATION>UNIT>QUANTITYQUANTITY→KG

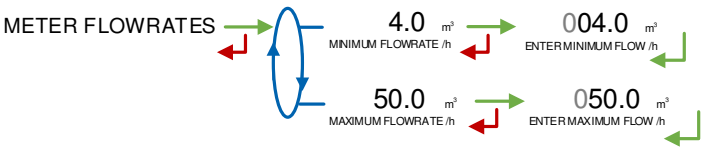


7.3.4 Sub-menu METER FLOWRATES

The accuracy and the unit of the displayed values are specific to the measurement system and depend on the choices made during the metrological configuration EM>UNIT menu.

MINIMUM FLOWRATE: Set the metrological minimum flowrate of the EMA measuring system

MAXIMUM FLOWRATE: Set the metrological maximum flowrate of the EMA measuring system



7.3.5 Sub-menu QUANTITIES

The accuracy and the unit of the displayed values are specific to the measurement system and depend on the choices made during the metrological configuration EM>UNIT menu.

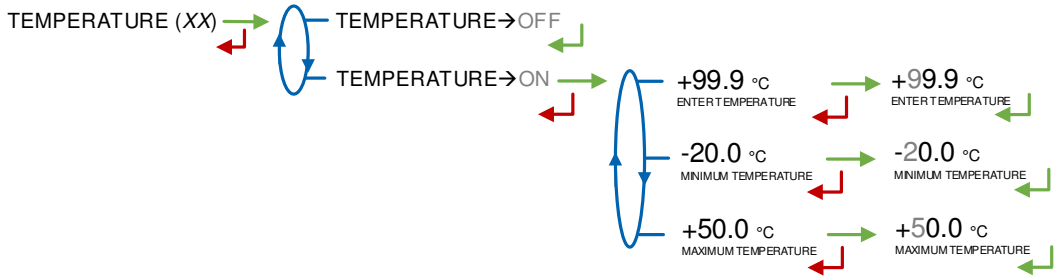
MINIMUM QUANTITY:Set the minimum quantity of the EMA measuring system. This value is given by the association of the turbine meter, the MICROCOMPT+ and other parts of the measuring system.

MANIFOLD VOLUME: For CMA TRONIQUE only in volume (quantity unit = liter). This menu is used to set the manifold volume to ensure its emptying during the purge operations (or preset+purge). If this volume is set to zero, there's no manifold drain, the flap is directly opened. Maximum value: 59 liters.

7.3.6 Sub-menu TEMPERATURE

This menu is used to calibrate the temperature into the MICROCOMPT+ for EMA. Depending on the probe, it's possible to:

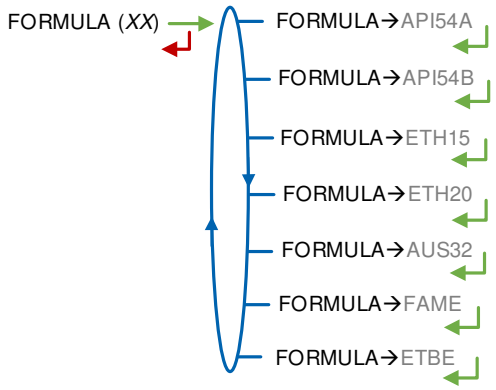
- Calibrate temperature. See maintenance sheet FM 8510 for temperature calibration
- Set the minimum temperature below which an alarm is triggered
- Set the maximum temperature below which an alarm is triggered



7.3.7 Sous-menu FORMULA

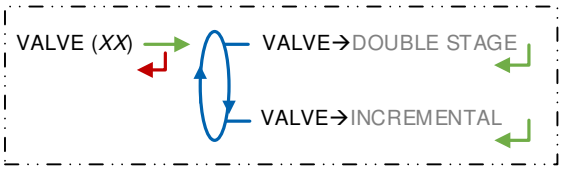
This menu is available when conversion is active CONFIGURATION>CONVERSION→ON. Choose the formula used for volume conversion. The choice of the conversion formula causes an implicit definition of valid density and temperature ranges to guarantee the conversion result. See the table below to select the conversion table that corresponds to type of fuel used:

Product	Conversion formula
Crude products	API54A
Refined products	API54B
Ethanol at 15°C	ETH15
Ethanol at 20°C	ETH20
Ad-Blue	AUS32
Fatty acid methyl esters	FAME
Ethyl tert-butyl ether	ETBE



7.3.8 Sub-menu VALVE

For CMA only. Define the valve type.

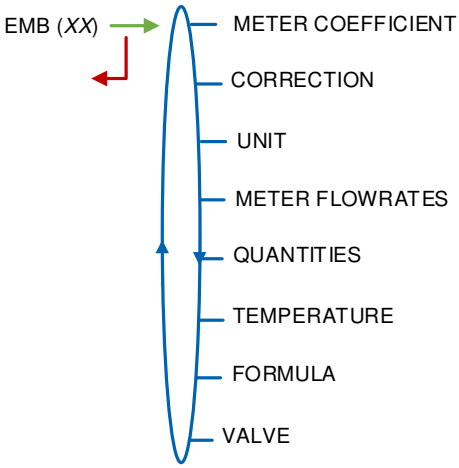


With a CMA TRONIQUE
Menu CMA OPTION>EMX>CMA OPTION→ON

For pumped measuring system other than the CMA TRONIQUE, the associated valve is a double-stage type.

7.4 Menu measuring system EMB

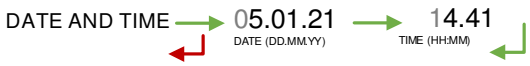
This menu is available when the system manages two measuring systems (menu DUAL OPTION→ON). You can configure the EMB measuring system in the same way as in the previous chapter for EMA.



7.5 Menu DATE AND TIME

This menu is used to update the calculator's clock.

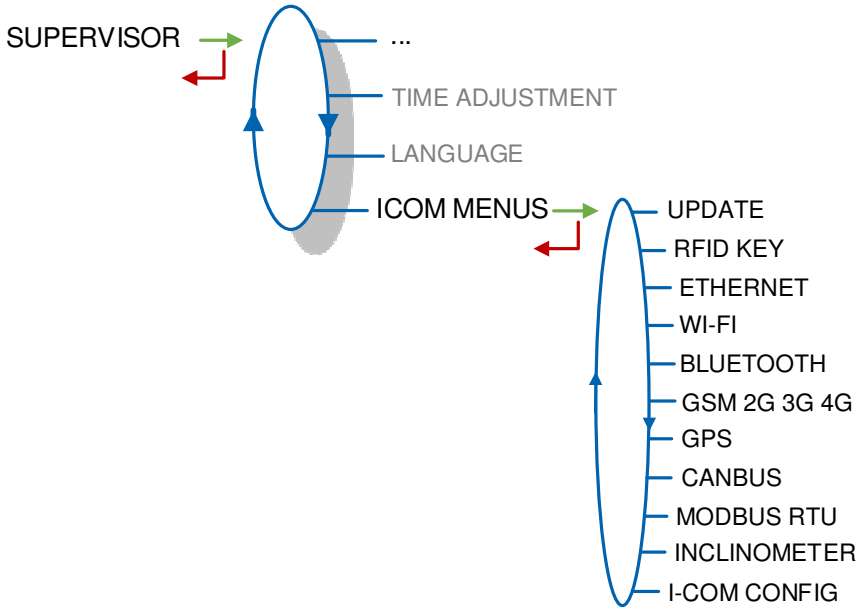
The stored measurement results are completely erased if you delay or advance the time by more than 2 hours.



ANNEX 1: PRESENTATION OF THE MENU SUPERVISOR>ICOM MENUS

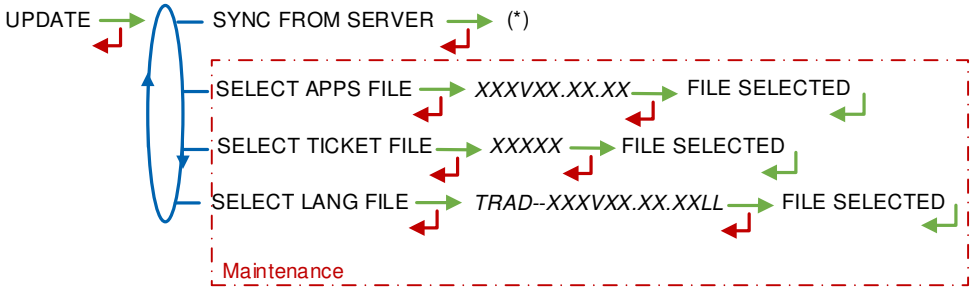
The sub-menus are different according to the level of access:

- ⇨ Level-User: The sub-menus are not highlighted. See Menu ICOM MENUS for simplified presentation
- ⇨ Level-Manager: Use the RFID green key to display the sub-menus indicated in green boxes
- ⇨ Level-Maintenance: Use the RFID red key to display the sub-menus indicated in red boxes



1.1. Menu UPDATE

The MICROCOMPT+ connects to the server via Wi-Fi, Bluetooth, Ethernet or GSM.



(*) IN PROGRESS / xx NEW UPDATE FOUND / ANY UPDATE FOUND

SYNC FROM SERVER: Synchronization of the updated files from ALMA server. If an update of the functions or the communication configuration is uploaded, it will be applied on the next reboot of the MICROCOMPT+.

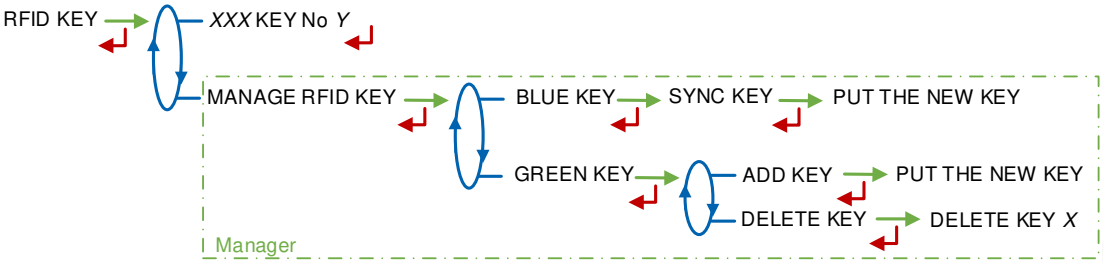
SELECT APPS FILE(*) – *Access restricted to the Maintenance*: Display and select the version(s) of the application available on the SD card. NO FILE is displayed if there's no file to download.

SELECT TICKET FILE(*) – *Access restricted to the Maintenance*: Display and select the version(s) of the ticket file available on the SD card. NO FILE is displayed if there's no file to download.

SELECT LANG FILE(*) – *Access restricted to the Maintenance*: Display and select the version(s) of the translation catalogue available on the SD card. NO FILE is displayed if there's no file to download.

(*) Selected files are automatically downloaded onto the AFSEC board when switching the MICROCOMPT+ into 'Resident' mode. See the operating manual MU 7037 (§2).

1.2. Menu RFID KEY



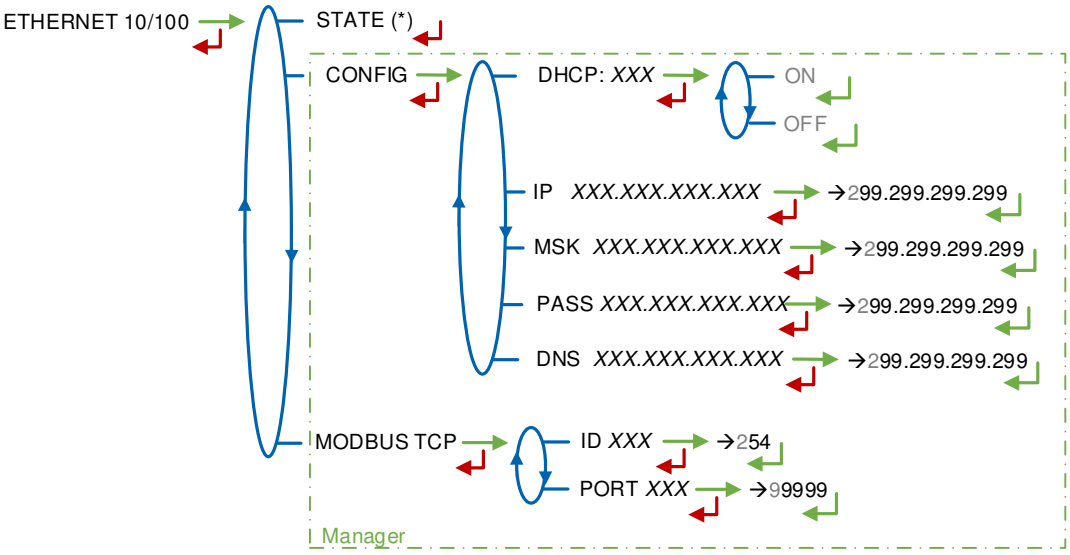
KEY:
Displays the color and the identifier of the RFID key placed on the screen. E.g.: RED KEY No 123

MANAGE RFID KEY – *Access restricted to the Manager*:

BLUE KEY: Used to associate a User blue key to the MICROCOMPT+

GREEN KEY: Used to associate a Manager green key to the MICROCOMPT+ or to remove keys that have already been associated. Use a blue key to initialize the first green key.

1.3. Menu ETHERNET



(*) CONNECTED / DISCONNECTED

STATE: Status of the Ethernet connection

CONFIG – *Access restricted to the Manager*:

DHCP: If ON is enabled, IP parameters can be initialized through the DHCP protocol. If OFF is enabled, parameters are set manually

IP: MICROCOMPT+ IP address

MSK: Subnet mask (IP mask for the internal IP address allocation)

PASS: Gateway (IP Address for the internet access of the Ethernet interface)

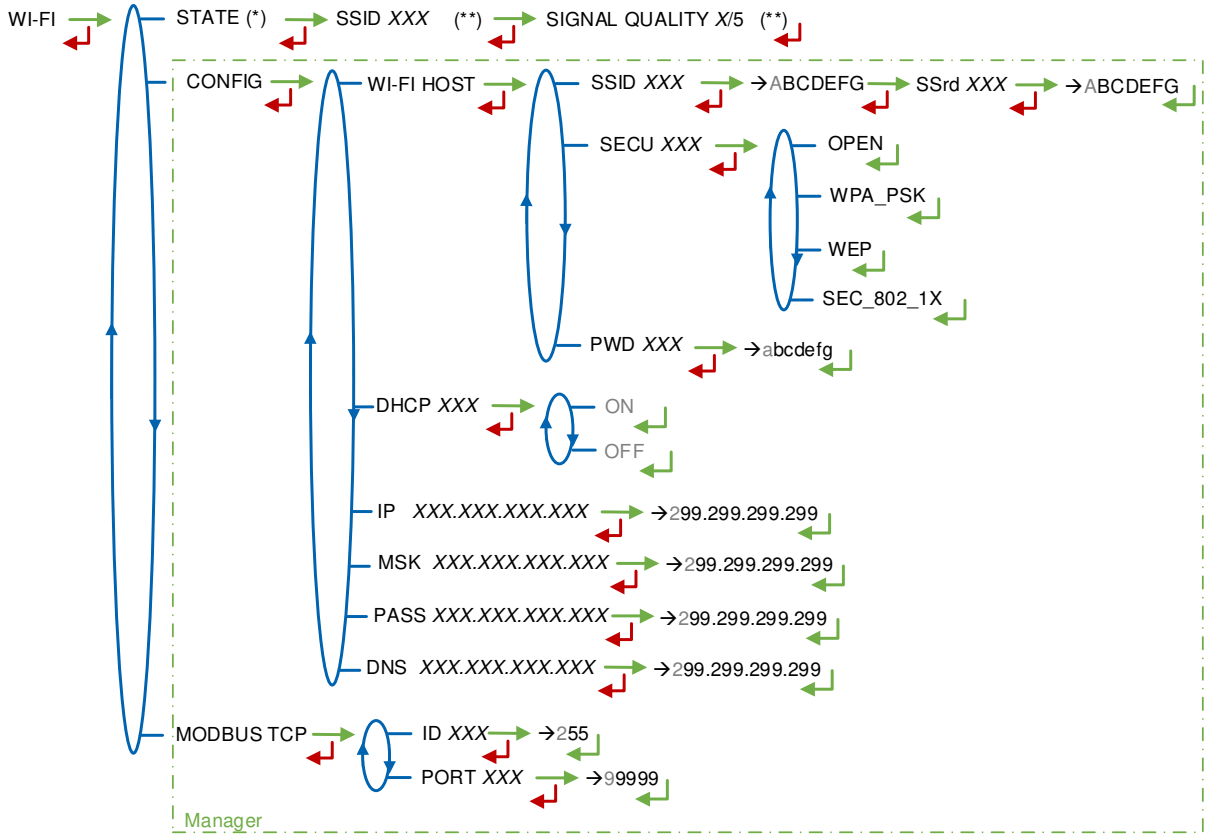
DNS: IP address to access a DNS server

MODBUS TCP – *Access restricted to the Manager*:

ID: MICROCOMPT+ Modbus identifier between 0 and 255

PORT: TCP/IP access port for Modbus protocol

1.4. Menu Wi-Fi



(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED
(**) IF CONNECTED

STATE: Status of the Wi-Fi connection. If connection is successful, you can do a check of SSID and quality

WI-FI HOST: Set the characteristics of the wireless network access point

SSID: Wi-Fi network name (32 characters-alphanumeric key that identifies the wireless network uniquely)

SECU: Type of security protocol for the network

OPEN: Free Wi-Fi

WPA_PSK: Encryption protocol by a 128 bits-dynamic key

WEP: Encryption protocol by a key encoded in 64 or 128 bits

SEC_802-1X: Encryption protocol compatible with the standard IEEE 802.1X

PWD: Wi-Fi network password.

Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

DHCP: If ON is enabled, IP parameters can be initialized through the DHCP protocol. If OFF is enabled, parameters are set manually

IP: MICROCOMPT+ IP address

MSK: Subnet mask (IP mask for the internal IP address allocation)

PASS: Gateway (IP Address for the internet access of the Ethernet interface)

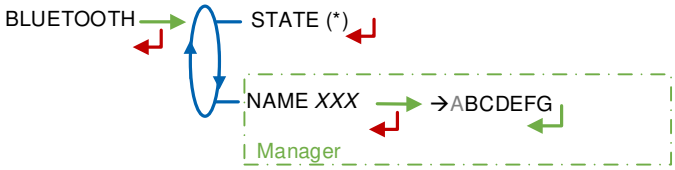
DNS: IP address to access a DNS server

MODBUS TCP – *Access restricted to the Manager*:

ID: MICROCOMPT+ Modbus identifier between 0 and 255

PORT: TCP/IP access port for Modbus protocol

1.5. Menu BLUETOOTH



(*) NOT AVAILABLE (the calculator is not equipped) / DISCONNECTED / CONNECTED

STATE: Status of the Bluetooth connection

NAME – *Access restricted to the Manager*: Bluetooth name of the MICROCOMPT+ (alphanumeric value such as the serial number for example)

1.6. Menu GSM 2G 3G 4G

(*) NO SIGNAL ou 2G 3G 4G + INTERNET PROVIDER
(**) IF CONNECTED

XG YYY: The signal is being received: the type of mobile network is displayed (with X=2 for 2G, X=3 for 3G, and X=4 for 4G) according to the protocols GSM / GPRS / EDGE, UMTS / HSPA+ / LTE, followed by the name of the service provider. Otherwise NO SIGNAL is displayed

APN – *Access restricted to the Manager*: Name of the internet access point, only if ALMA does not supply it

ALMA SYSTEM – *Access restricted to the Maintenance*: Information of connection to the ALMA FTP server for files transfer

URL: Web address of the ALMA FTP server (host)

PORT: ALMA FTP server port, default value: 21

LOG: ALMA FTP server identifier

PWD: ALMA FTP server password.

Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

WEBGRIF SYSTEM – *Access restricted to the Manager*: Information of connection to the Webgrif FTP server for files transfer

URL: Web address of the Webgrif FTP server (host)

PORT: Webgrif FTP server port, default value: 21

LOG: Webgrif FTP server identifier

PWD: Webgrif FTP server password.

Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

GPS PERIOD: Backup period of GPS coordinates (from 1 to 999 seconds)

OTHER SYSTEM – *Access restricted to the Manager*: Information of connection to the FTP server for files transfer

URL: Web address of the FTP server (host)

PORT: FTP server port, default value: 21

LOG: FTP server identifier

PWD: FTP server password.

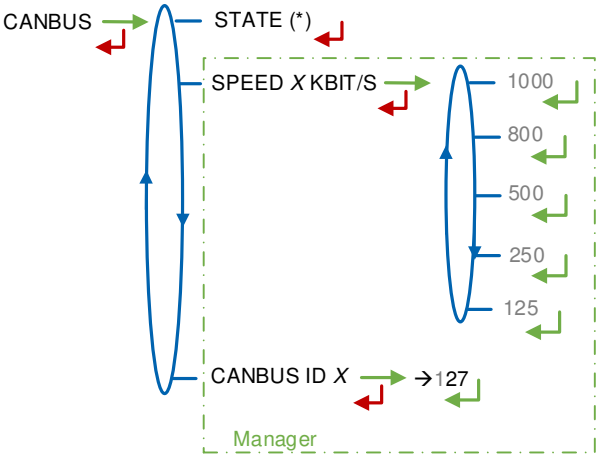
Permitted characters: <space>!"#$%&'()*+,-./0123456789:;<=>?@ABCD EFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~<DEL> (Visualization of the permitted characters on the MICROCOMPT+ display)

1.7. Menu GPS

(*) NO SIGNAL / 2DFIX / 3DFIX

STATE: The signal is being received: the type of signal is displayed 2DFIX or 3DFIX. Validating the data makes the GPS coordinates appear (latitude then longitude), and lastly appears the number of satellites which signals are simultaneously received (that gives information about the position accuracy). Otherwise NO SIGNAL is displayed

1.8. Menu CANBUS



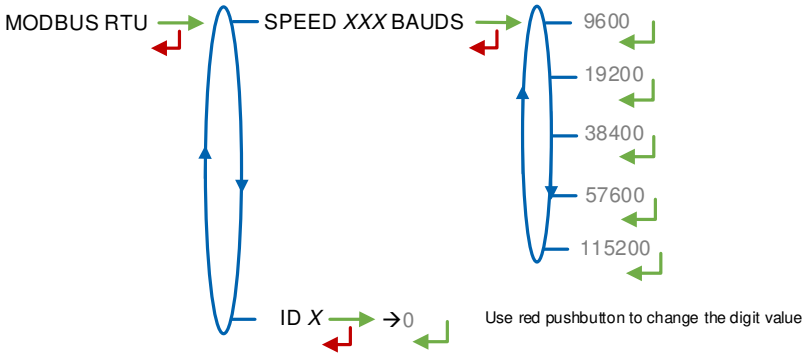
(*) CONNECTED / DISCONNECTED
(**) BETWEEN 1 AND 127

STATE: Status of the CANBus connection

SPEED – *Access restricted to the Manager*: Speed of the CANBus connection

CANBUS ID – *Access restricted to the Manager*: MICROCOMPT+ identifier for the CANBus protocol (between 1 and 127)

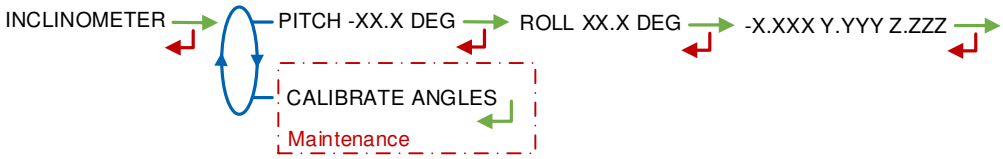
1.9. Menu MODBUS RTU



SPEED: Speed of the Modbus connection

ID: Modbus identifier of the slave (between 0 and 254)

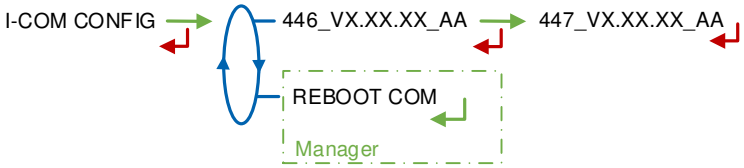
1.10. Menu INCLINOMETER



PITCH: Used to display the bank angles of the truck and the inclinometer raw data

CALIBRATE ANGLES – *Access restricted to the Maintenance*: Used to reset the angles 'pitch' and 'roll' when the truck has a horizontal position in order to correct the assembly tolerances of the MICROCOMPT+ on the truck.

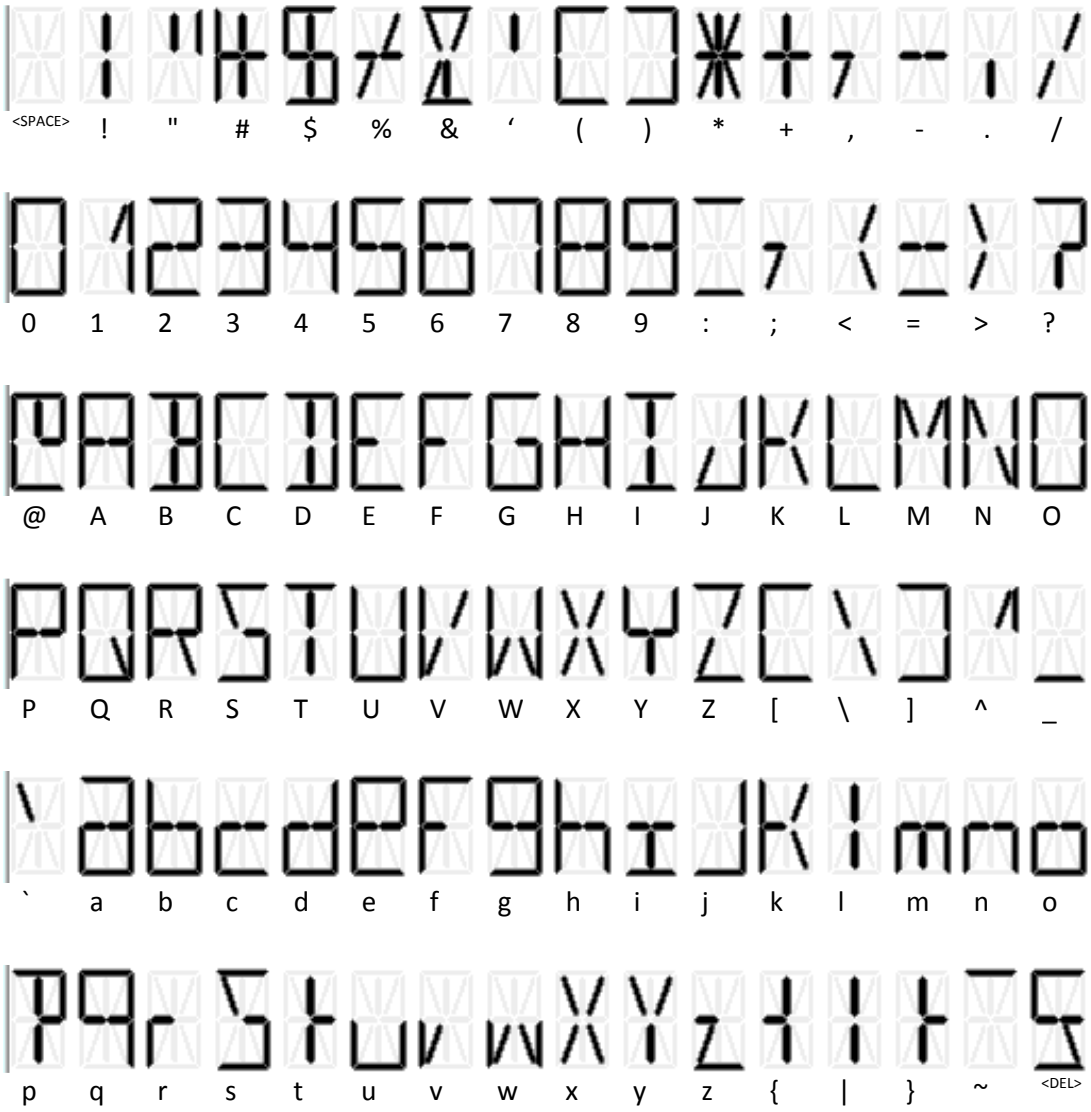
1.11. Menu I-COM CONFIG



446_V: Software's number and version

REBOOT COM – *Access restricted to the Manager*: Reset of the interface com board.

ANNEX 2: VISUALIZATION OF THE PERMITTED CHARACTERS ON THE MICROCOMPT+ DISPLAY:



ANNEX 3: ASSIGNMENTS TABLE ACCORDING TO THE NUMBER OF FLAPS, PRODUCT RETURNS AND ADDITIVE INJECTORS

Flaps and product returns assigned to the compartments are set in METROLOGICAL mode menu CONFIGURATION>COMPARTMENT OPTIONS.

Additive injectors are set in SUPERVISOR mode menu CONFIGURATION>ADDITIVE TYPE.

The table below present the assignment options:

				MICROCOMPT+ power supply board V1 (from REV11)									
Nb of Flaps	Nb of Returns	Addit #1	Addit #2	45	44	43	42	41	40	39	67	66	65
5	0-4	yes	yes	addit#2	ret#4	flap#5	flap#4	flap#3	flap#2	flap#1	ret#3	ret#2	ret#1
5	5	yes	no	ret#5	ret#4	flap#5	flap#4	flap#3	flap#2	flap#1	ret#3	ret#2	ret#1
6	0-3	yes	yes	addit#2	flap#6	flap#5	flap#4	flap#3	flap#2	flap#1	ret#3	ret#2	ret#1
6	4	yes	no	ret#4	flap#6	flap#5	flap#4	flap#3	flap#2	flap#1	ret#3	ret#2	ret#1
6	5-7	yes	yes	addit#2	flap#6	flap#5	flap#4	flap#3	flap#2	flap#1	PLEXMI 1 (ret#1-ret#7)		
7	0-3	yes	no	flap#7	flap#6	flap#5	flap#4	flap#3	flap#2	flap#1	ret#3	ret#2	ret#1
7	4-7	yes	no	flap#7	flap#6	flap#5	flap#4	flap#3	flap#2	flap#1	PLEXMI 1 (ret#1-ret#7)		
8	0-6	yes	no	ret#6	ret#5	ret#4	flap#8	PLEXMI 1 (flap#1-flap#7)			ret#3	ret#2	ret#1
9	0-5	yes	no	ret#5	ret#4	flap#9	flap#8	PLEXMI 1 (flap#1-flap#7)			ret#3	ret#2	ret#1
9	6-9	yes	no	ret#9	ret#8	flap#9	flap#8	PLEXMI 1 (flap#1-flap#7)			PLEXMI 2 (ret#1-ret#7)		

If both PLEXMI electronic boards are useful, PLEXMI 1 is fixed to the MICROCOMPT+ frame and PLEXMI 2 (ret#1-ret#7) has to be installed in a 24VDC-supplied independent box.

ANNEX 4: PRINTINGS

PARAMETERS: COMPLETE PRINTING

Here, EMA is a CMA TRONIQUE and EMB is a pumped measuring system

```
  DUALTRONIQUE 4053+.001
  VERSION 01.05.04 DATED 29.03.21
  BOOT LOADER 04.00.00 (6F7E)
  VEHICLE :  AA-215-EL
  REFERENCE :  03201
  PRINTED ON THE 29.03.21 AT 11:26

********* GENERAL PARAMETERS  *********

TRANSMIS. AUTOMATIC       :PULSE 4s
PTO                       :EMA+EMB
PUMPED NOT COUNTED        :EMA
OVERFILL PROBE            :LOCAL
CUSTOMER PROBE            :ON
CONVERSION                :OFF
COMPUTING                 :ON
 PRODUCT CODE             :ON
 PRINTER                  :WITHOUT
PUMPED TICKET             :TEST
GRAVITY TICKET            :TEST
CURRENCY                  :EUR
EJECT TICKET              :ON
FORCED TICKET             :OFF
SUMMARY                   :DETAILS
LANGUAGE CATALOG          :env1.5.4
SCHEDULING                :ON(C3C2C1)
END LOW FLOW VOLUME       :50 L
DSPGI                     :OFF
LOADING PLAN              :EMA (OPTION)
BLOWING TIMING            :5 s
MANIFOLD FILL TIMING      :5 s
NAME LINE OR MEASURING SYSTEM:
EMA      : EMA
EMB      : EMB
LINE 1   : FLEXIBLE 1
LINE 2   : FLEXIBLE 2
              H1    H2    COMMON    EMB
PURGE V.      90L   30L     30L     90L
BREWING V. 13L                      13L
PRODUIT       01    01      01      07
NUMBER OF CPT             :9
CPT/FLAP/RETURN/PROBE  /LF.H  /EM
  1 /ON   /ON     /ON     /0750  /A
  2 /ON   /OFF    /OFF    /0750  /A
  3 /ON   /OFF    /OFF    /0750  /A
  4 /ON   /OFF    /OFF    /0750  /A
  5 /ON   /OFF    /OFF    /0750  /A
  6 /ON   /ON     /ON     /0750  /A
  7 /ON   /ON     /ON     /0750  /B
  8 /ON   /ON     /ON     /0750  /B
  9 /ON   /ON     /ON     /0750  /B
CPT PLEXMI: Y,     RETURN PLEXMI: N

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```

```
  DUALTRONIQUE 4053+.001
  VERSION 01.05.04 DATED 29.03.21
  BOOT LOADER 04.00.00 (6F7E)
  VEHICLE :  AA-215-EL
  REFERENCE :  03201
  PRINTED ON THE 29.03.21 AT 11:26

********* EM PARAMETERS *********

EMA: PUMPED FH-EH
 VALVE TYPE                :INCREMENTAL
 F1/ TPSIA: 3TU     / TPSID: 3TU
 F2/ TPSIA: 3TU     / TPSID: 3TU
 MIN FLOW: 04.00  / MAX: 050.00 M3/H
 COEFFICIENT K1            :10.0000 IMP/L
 FLOW Q1 (LF)              :  0.000 M3/H
 COEFFICIENT K2            :10.0000 IMP/L
 FLOW Q2 (HF)              :  0.000 M3/H
 CORRECTION                :+0
 TEMPERATURE               :+35.3°C
  MIN (-10.0°C) - MAX (+40.0°C)
 CMA OPTION                :ON
  HYSTERESIS LF-HF         :150 MM
  END HEIGHT               :200 MM
  HYSTERESIS END-LF        :100 MM
 ZERO FLOW TIMING H1   :180s
 ZERO FLOW TIMING H2   :200s
 LF/HF: 007.0 / OBJ LF: 009.0 M3/H
 MANIFOLD VOLUME :12L
 STOP FLOW  0.000 M3/H WITH 0.2 L
 PRESET END COEFF.    :0.0992

EMB: PUMPED FH
 VALVE TYPE                :DOUBLE STAGE
 MIN FLOWRATE: 04.00/ MAX: 050.00 M3/H
 COEFFICIENT K1            :10.0000 IMP/L
 FLOW Q1 (LF)              :  0.000 M3/H
 COEFFICIENT K2            :10.0000 IMP/L
 FLOW Q2 (HF)              :  0.000 M3/H
 CORRECTION                :+0
 TEMPERATURE               :OFF
 CMA OPTION                :OFF
 ZERO FLOW TIMING   :0s
 LF/HF: 007.0 / OBJ LF: 009.0 M3/H
 MANIFOLD VOLUME :0L
 STOP FLOW  0.000 M3/H WITH 0.5 L
 PRESET END COEFF.    :0.1700

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```

```
  DUALTRONIQUE 4053+.001
  VERSION 01.05.04 DATED 29.03.21
  BOOT LOADER 04.00.00 (6F7E)
  VEHICLE :  AA-215-EL
  REFERENCE :  03201
  PRINTED ON THE 29.03.21 AT 11:26

********* ADDITIVES PARAMETERS *********

ADDITIVE INJ 1            :EMA
ADDITIVE RETURN           :OFF
ADDITIVE LEVEL CTRL       :OFF
ADDITIVE PULSE            :0.5 s
ADDITIVE INJ 2            :EMA
ADDITIVE RETURN           :OFF
ADDITIVE LEVEL CTRL       :OFF
ADDITIVE PULSE            :0.5 s

********* PRODUCT PARAMETERS *********

  FOD   (01/-) OFF CO+NA+BA
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  FOD+  (02/-) OFF CO+A+BA
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  GO    (03/-) OFF NC+NA+10
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  GO+   (04/-) OFF NC+A+10
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  GNR   (05/-) OFF CO+NA+10
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  GNR+ (05/-) OFF CO+A+10
EMA NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  ADBL   (07/-) OFF NC+NA+BA
EMB NO ADD
UP:0000.0 EUR/M3 TTC TAX : 0020.0

  ADBL+  (08/-) OFF NC+NA+BA
EMB INJ1 50L
UP:0000.0 EUR/M3 TTC TAX : 0020.0

                  Page 3/3
```

SUMMARY:

```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 15:40

SUMMARY OF DELIVERIES
DAY 088 (29.03.21)
007 MEMORISED RESULTS

**** DAILY TOTALISERS ****

FOD      (01) :      00000300 L   +11,3°C
FOD+     (02) :      00001400 L   +10,5°C
GO       (03) :      00001090 L   +11,2°C
GO+      (04) :      00000000 L   +00,0°C
GNR      (05) :      00000000 L   +00,0°C
GNR+     (06) :      00000500 L   +11,9°C
ADBL     (07) :      00001000 L     - - -

TOTAL FROM 1 TO 7: 00004290 L

********** DAILY SUMMARY **********
 HR     HR   NO  E             (L)      (°C)
START END  MES M PROD  VOLUME  TEMP
09:40  09:42 A01 A  FOD    00300     +11,3
10:26  10:29 D02 A  FOD+   01000     +10,3
10:38  10:40 A03 A  FOD+   00400     +11,1
10:02  10:07 D04 A  GO     01000     +11,2
11:29  11:31 P05 A  GO     00090     +11,5
11:51  11:54 D06 A  GNR+   00500     +11,9
13:43  14:22 D07 B  ADBL   01000      - - -

(D) PRESET; (L) FREE;
(A) PRESET+PURGE; (P) PURGE;
(T) TRANSFERT;
```

With active option

```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 15:40

SUMMARY OF DELIVERIES
DAY 088 (29.03.21)
007 MEMORISED RESULTS

**** DAILY TOTALISERS ****

FOD      (01) :      00000300 L    - - -
FOD+     (02) :      00001400 L    094%
GO       (03) :      00001090 L    - - -
GO+      (04) :      00000000 L    - - -
GNR      (05) :      00000000 L    - - -
GNR+     (06) :      00000500 L    099%
ADBL     (07) :      00001000 L    - - -

TOTAL FROM 1 TO 7:00004290 L

********** DAILY SUMMARY **********
HR     HR   NO  E             (L)      (%)
START END  MES M PROD  VOLUME  RATE
09:40  09:42 A01 A FOD    00300     - - -
10:26  10:29 D02 A FOD+   01000     100
10:38  10:40 A03 A FOD+   00400     080
10:02  10:07 D04 A GO     01000     - - -
11:29  11:31 P05 A GO     00090     - - -
11:51  11:54 D06 A GNR+   00500     099
13:43  14:22 D07 B ADBLU  01000     - - -

(D) PRESET; (L) FREE;
(A) PRESET+PURGE; (P) PURGE;
(T) TRANSFERT;
```

TOTALISERS:

```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 15:41


********** TOTALISERS**********

TOTALISER EMA (VM) : 00056638 L
TOTALISER EMB (VM) : 00056638 L

FOD      (01) :      00000798 L
FOD+     (02) :      00000399 L
GO       (03) :      00000999 L
GO+      (04) :      00000000 L
GNR      (05) :      00000000 L
GNR+     (06) :      00000000 L
ADBL     (07) :      00001000 L
ADBL+    (08) :      00000000 L
         (09) :      00000000 L
         (10) :      00000000 L
         (11) :      00000000 L
         (12) :      00000000 L
         (13) :      00000000 L
         (14) :      00000000 L
         (15) :      00000000 L
         (16) :      00000000 L

TOTAL FROM 1 TO 16 : 000003196 L
NO ALLOCATED VOLUME : 00000008 L
```

Main display according to the configuration:
VM, VB or blank (for masses)
Unit: depending on the set scale interval

LOADING PLAN

```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 14:47

********** LOADING PLAN **********

CPT      PROD.      QUANTITY (L)

 1       FOD          1000
 2       FOD+         2000
 3       GO           3000
 4       GO+          4000
 5       GNR          5000
```

DELIVERY TICKET (according to customer)

```
Date                : 29/03/21
Starting            : 14:48
Vehicle             : AA-215-EL
Indicator : 03201
Product             : FOD
Temperature         : +11.2°C
Quantity            : 199 L
Index 012 before  00005461
Index 013 after   00005660

In case of dispute, the measurement
results stored by the main indicating
device providing proof.
```

CARGO PLAN

```
DUALTRONIQUE 4053+.001
VERSION 01.05.04 DATED 29.03.21
BOOT LOADER 04.00.00 (6F7E)
VEHICLE :  AA-215-EL
REFERENCE :  03201
PRINTED ON THE 29.03.21 AT 14:52

********** CARGO PLAN **********

CPT      PROD.      QUANTITY (L)

 1       FOD           500
 2       FOD+         2000
 3       GO           1500
 4       GO+          3000
 5       GNR          5000
```

RELATED DOCUMENTS

GU 7093	User Guide
DI 025	Installation guide
FM 8000	Replacement of the backup batteries on the AFSEC electronic board
FM 8001	Diagnostic support for power supply failure
FM 8002	Diagnostic support for a display failure
FM 8003	Diagnostic support for DEB_0 or ZERO FLOW DEFAULT alarm
FM 8004	Diagnostic support for GAS or PRESENCE GAS alarm
FM 8005	Diagnostic support for METERING PROBLEM alarm
FM 8006	Diagnostic support for DATE AND TIME LOST alarm
FM 8007	Diagnostic support for MEMORY LOST or DEF MEMO alarm
FM 8010	Diagnostic support for EEPROM MEMORY LOST alarm
FM 8011	Configuration of jumpers and adjustment of metering thresholds on the AFSEC+ electronic board
FM 8013	Replacement of the backup batteries on the AFSEC+ electronic board
FM 8501	Adjustment of a DMTRONIQUE
FM 8510	Adjustment of a temperature chain in a MICROCOMPT+