

danfoil injection - operation guide

NORMAL START UP & USE

- A. CONSTANT VALUES:** With the contacts of the boom sections in OFF position, check if the values are correctly typed in. Values are to be changed with INC/DEC
- WORKING WIDTH: SET-UP setting, WIDTH is displayed (4.4 in the manual).
- FLOWNUMBER: SET-UP setting, CARRIER, VOL. APPLIED is displayed (4.5 in the manual).
- WHEEL CIRCUMFERENCE-FACTOR: SET-UP setting, DISTANCE is displayed (4.6 in the manual).
- CALIBRATION OF PUMP #s: SET-UP setting, CHEMICALS, CHEM. APPLIED is displayed, Choose the wanted pump (4.7 in the manual).
- B. SETTING OF DOSING:** With the contacts of boom sections in OFF position, check if the values are correctly typed in. Values are changed with INC/DEC
- WATER (with chemicals): OPERATE setting, CARRIER, APPL. RATE is displayed (4.2.1. in the manual).
- CHEMICAL (Standard setting): SET-UP setting, CHEMICALS, CHEM. RATE, Pump # contact in mid-position, ON is displayed (4.2.2. in the manual).
- CHEMICAL (Alternative setting): SET-UP setting, CHEMICALS, CHEM. RATE, Pump # contact in up-position, Alt. Rate is displayed (4.2.3. in the manual).
- CHANGE OF CHEMICALDOSING BY PERCENTAGE: SET-UP setting, CHEMICALS, % RATE is displayed (4.3.2. in the manual).
- C. STORED AREA, AMOUNT AND DISTANCE:**
- The contacts of boom sections should be in OFF position.
- Reset to zero as wished with the DEC-contact.
- AREA #1: OPERATE setting, AREA is displayed.
- AREA #2: SET-UP setting, AREA is displayed.
- WATER: OPERATE setting, CARRIER TOTAL. APPLIED is displayed.
- CHEMICAL: OPERATE setting, CHEMICAL, CHEM. APPLIED is displayed.
- DISTANCE: OPERATE setting, DISTANCE is displayed.
- D. OPERATION OF SPRAYER:** Start with the boom shut OFF.
- Turn the liquid pump ON.
- Turn the wished chemical pumps ON.
- Drive to the beginning of the spraying track.
- Turn on the wished boom sections.

CONTROLLED SPRAYING HAS STARTED

To stop spraying, turn OFF the liquid with the main contact.

E. CONTROL OF THE SPRAYER: To stop the spraying.

Put down the speed of the vehicle to 0 KM/H, or shut OFF the main contact

F. CONTROL OF THE FUNCTIONS OF THE BOOM

THE MAINCONTACT will shut OFF the BOOM and CHEMICAL PUMPS.

An individual boom section contact will only shut OFF the selected boom section and force a reaction in the regulating valve and in the CHEMICAL PUMPS (Full boom compensation)

H. CHANGE IN THE SETTINGS OF THE DOSING:

WATER: in OPERATE setting, CARRIER, APPL. RATE is displayed, any activation of the INC./DEC contact will increase or decrease the setting with the pre-determined amount, (a warning alarm will beep regularly).

CHEMICAL: in OPERATE setting, CHEMICAL, % RATE will be displayed, any activation of the INC./DEC contact will increase or decrease the settings of all CHEMICAL PUMPS with the pre-determined % rate (an alarm will beep regularly).

CHANGE BETWEEN THE CHEMICALS: in OPERATE setting, pump contact in Alt. Rate position, (an alarm will beep regularly).

SPECIAL FUNCTIONS

A. PRIME (CONTRIBUTION) OF THE SPRAYER'S INJECTION TUBES

Use the contribution procedure at the beginning of the workday to fill the tubes of the pump with chemical before start of spraying. See section 4.7.3. and 4.7.4. in the manual to get help with typing the correct amounts in the PRIME memory of the control console.

MAIN CONTACT in OFF position

Setting contact in OPERATE position

Turn the chose contact in PRIME position

Pump contacts in ON position, the mid position (one or more pumps can be chosen at a time)

Five lines will appear in the display

INC./DEC contact is to be kept down I five seconds and the display will show 0.0 Litre.

Chose pump on the revolving contact on the prime-operation board. Keep the up in PRIME position until the pump has filled up the system. The pump will stop by itself when the correct amount has been achieved.

Repeat the procedure for each pump.

The monitor will show the amounts that have been pumped of each injection pump during the PRIME function. The display will automatically go through the position of each pump. Chose any normal setting from the Display contact and the TASC system is ready to begin the spraying.

B. POSSIBILITY FOR DISREGARDING ACTUAL SPEED

Disregarding of actual speed can be useful in order to get the sprayer in operation very fast, especially when starting from a full stop in a narrow corner of the field. With the main contact in OFF position, reverse the vehicle to the entrapped corner and stop. Turn ON the main contact and the wished boom sections as well as the dosing pumps (the sprayer will not start because the vehicle is inoperative). Activate the contact for disregarding the actual speed (GSO SPEED), and the sprayer will immediately start, as if the vehicle was moving with the pre-determined speed (GSO SPEED). When the vehicle has accelerated to a speed faster than the GSO speed, the system will automatically change the control to the actual speed. De-activate the GSO contact and the sprayer will hereafter operate as usual. (NOTICE: the system **WILL NOT** check the sprayer at speeds less than the pre-determined GSO-speeds when the speed control of the sprayer is disregarded. When the actual speed is less than the speed with the GSO in operation, a visual alarm and a beep will warn the operator about a **possible overdose**).

The GSO-function can also be used for flushing the sprayer before leaving the field. The vehicle is stopped a sufficient place and all dosing pumps are put in OFF position, and all boom sections are put in ON position. Activate the contact to disregarding the speed control (GSO button). The sprayer will start the spraying (only water), as if it was moving in the pre-determined GSO speed. De-activate the GSO function when the boom and the injection tubes have been emptied satisfying for chemicals.

C. CHANGE OF THE UNITS SHOWED IN THE DISPLAY

The operator can adjust the units in the display according to the area where the system is in operation, e.g.:

ENGLISH = Gallons per. acre

METRIC = Litre per hectare

METRISH = Litre per acre

Set the MODE contact in OPERATE position and the DISPLAY SELECTOR contact to SPEED. The actual speed units will be shown in the display. Keeping the INC./DEC contact down until the display is changing appearance (approx. 5 seconds) the equivalent, units can be chosen. The chart beneath will show

if the operator needs to press up or down on the contact to chose the wanted setting.

<u>UNITS</u>	<u>INC./DEC Contact</u>
English to the Metric system	*DOWN*
Metric system to the English system	*DOWN*
English to the Metrish system	*UP*
Metrish to the English system	*DOWN*

NOTICE: it is not possible to convert from the Metric system to the Metrish system.
Convert first to the English system and afterwards to the Metrish system.

ERROR-MESSAGES

TYPICALLY MISADJUSTMENTS (Section 7.0. in the manual)

- Err: Indicates an incorrectly SET-UP procedure. Examine all settings.
- Err 0: Indicates that a constant value has been set to 0. Examine and adjust eventual failures in the constant values.
- Err 1: The sprayer cannot supply enough amount from CHEMICAL- or WATER. Slow down the speed.
- Err 2: The vehicle is driving to slow to supply accurate amounts. Speed up.
- Err 3: No flow in either CHEMICALS or WATER. It is necessary to stop the sprayer to remove the error indication. Restart the sprayer when the failure has been corrected.
- Err 4: The pump is out of control. Continue only when the failure has been corrected.
- Err 5: Water flow is too high and the vent is not reacting correctly. It is however possible to finish the spraying of the field since the chemicals are under complete control.
- Err L: Only little amount of power is left on the battery of the vehicle.

OFLO: The concrete value is too large to be shown in the display. Reset the display with the DEC. contact.

Monitor in OPERATE position activates the following functions:

SPEED:

The actual speed of the vehicle.

AREA:

Accumulated area #1

CHEMICALS CHEM. APPLIED:

The amount of chemicals which will be supplied by each pump.*

CHEMICALS CHEM. RATE:

The usual chemical dosing each dosing pump is supplying. An alternative dosing can also be chosen for each pump by using the ALT. RATE function.

CHEMICALS %RATE:

The programmed dosage by percentage, this works for ALL activated dosing pumps. This % can be changed to a fixed number by the use of the INC./DEC. contact.***

CARRIER APPL. RATE:

The wanted dosage of water (incl. chemical).**

When the spraying has been started, the actual calculated rate of flow will be shown here.***

CARRIER VOL. APPLIED:

The accumulated amount of water (incl. chemical).*

WIDTH:

The working width in operation. This depends on which boom sections that have been turned ON

DISTANCE:

The accumulated distance*

PRIME:

Is used for filling up chemicals in the tubes of the dosing pump.

To change to normal operation the switch is turned back.

TEST SPEED:

The speed with which the monitor has been set to carry out stationary tests of the sprayer**

SCAN:

The display will change between the following; SPEED, AREA, USED AMOUNT OF CHEMICALS, DOSAGE OF CHEMICALS, DOSAGE OF WATER AND USED WATER (INCL. CHEMICALS).

Monitor in SET-UP position activates the following functions:

SPEED: GSO Km/h;

This is the speed that is used at disregard of the actual speed.

AREA:

Accumulated area #2.*

CHEMICALS CHEM. APPLIED:

The calibration number of the dosing pumps for each connected pump (ON). Err means that either no pump has been chosen or more than one pump has been chosen**

CHEMICALS CHEM. RATE:

The set dosing (standard or alternative) each dosing pump.

Err means that there has been chosen either more or less than one pump**

CHEMICALS % RATE:

The change of dosage of the dosing pump by percentage at each activation of the INC./DEC button.

This is the change for all active dosing pumps by percentage when this function has been chosen during the spraying**

CARRIER VOL. APPLIED:

This is the calibration of the flowmeter (flow no.)**

WIDTH:

Working width of the individual boom sections. The display will show the individual boom sections in a sequence with less a special boom section contact has been activated**

DISTANCE:

The actual wheel-circumference-factor.**

PRIME:

The contribution amount of each pump. Err means more or less than one pump has been chosen**

TEST SPEED:

The actual test speed. Use the INC./DEC. button for changing this value.**

SCAN: Err;

This is an incorrect combination of settings.

REMARKS:

*It is possible to reset the total in this setting

** The values are programmable in this setting.

*** The values can be changed with an increase/decrease by percentage.

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