CRANEMATIC DIAGNOSTIC SOFTWARE

USER MANUAL

Tool Version: Chelidon v3.1
Software Version: Cranematic Diagnostics v1.0.0 ***Nov. 2025***

CRANEMATIC

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1. INTRODUCTION

This manual describes the functionality and usage of the Cranematic diagnostic software for crane control systems. The software is designed to provide configuration, monitoring, and diagnostic tool for supported crane models and control system versions.

The user interface is organized into user controls, each focusing on a specific system area such as sensors, levers, remote controls, stability, and system diagnostics. Screenshots in this manual include numbered callouts that correspond to detailed descriptions, allowing easy navigation between the software interface and the documentation.

Some features and user controls may not be available for all crane models or control system versions. Such features are marked accordingly in the manual.

The diagnostic software provides both real-time system information and configuration options.

This manual is intended to help users understand the available functions, correctly configure system parameters, and efficiently diagnose system behavior.

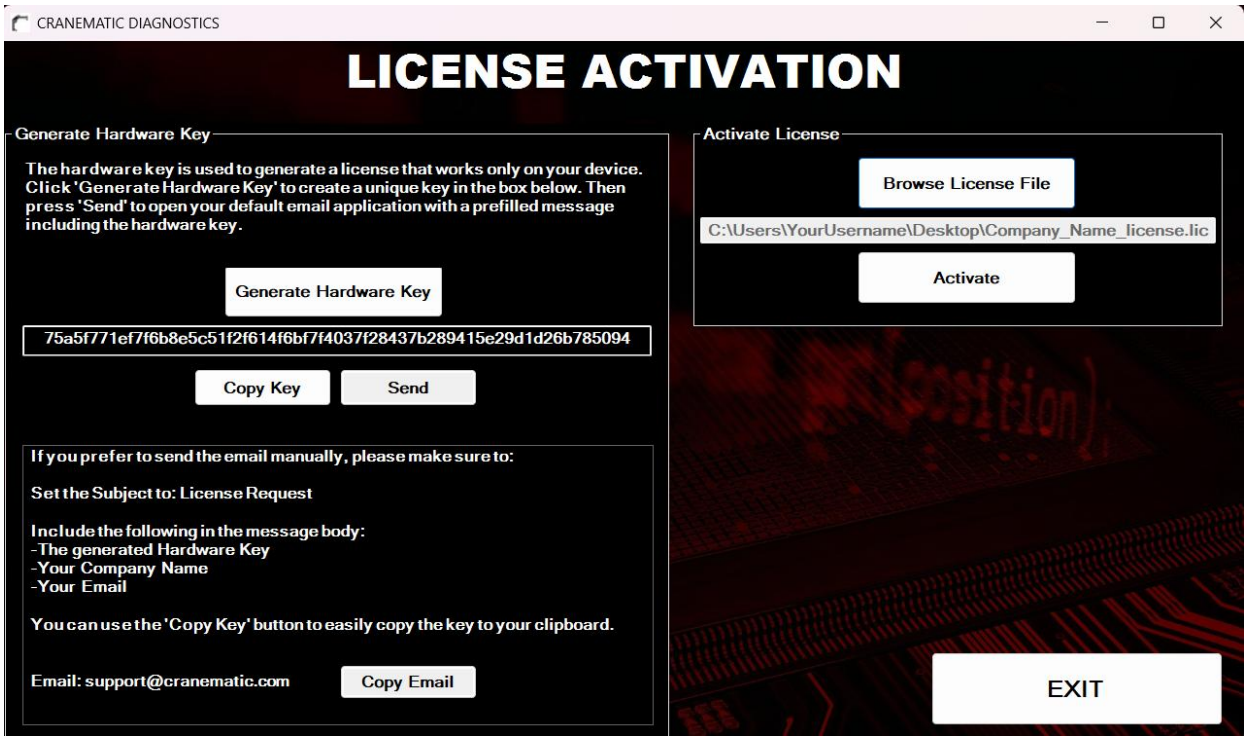
2. USING THE CRANEMATIC DIAGNOSTICS SOFTWARE

This section explains how to use the **Cranematic Diagnostics Software** in combination with the **Chelidon Diagnostic Tool** to communicate with and configure the crane.

2.1 First Launch and License Activation

When the diagnostic program is opened for the first time, it will prompt the user to activate a license in order to access its full functionality. A dedicated **License** window will appear automatically.

ⓘ **NOTE:** During the license process, it is **not necessary to be connected to the crane**. You can activate the software entirely from your computer.



Step 1: Generate Hardware Key

- Click the **"Generate Hardware Key"** button.
- The program generates a unique hardware ID based on your system.

ⓘ **Note:** The hardware key will always remain the same on the same computer. You can safely **close the program and continue later** — the same key will still be available when you reopen it.

Step 2: Requesting a License

Option 1: Automatic Email via Windows Mail App

- Click **"Send"**
- This opens your default Windows email application (e.g., Outlook or Mail).
- A pre-filled message addressed to **support@cranematic.com** appears.
- You only need to fill in:
    - **Company Name**
    - **Your Email Address**
- Then click **Send** to complete the request.

Option 2: Manual Email via Web Browser

- Click **"Copy Key"** to copy the generated hardware key.
- Send email:
    - **To:** support@cranematic.com
    - **Subject:** License Request
    - **Body:** Hardware Key: [paste your hardware key here]

      Company Name: [your company name]

      Email: [your email address]

Step 3: Receiving the License File

Once the support team receives your request, they will generate a license file named:

Company_Name_license.lic

This file will be sent to your provided email address. Save this file to your computer.

ⓘ **Note:** Depending on support availability, sending the license file may take **up to** 1 business day.

You can safely **close the program** and return to activate the license later using the same hardware key.

Step 4: Activating the License

1. Open the diagnostic program again — the License window will appear.
2. Click **"Browse License File"**.
3. Locate and select the **.lic** file you received.
4. Click **"Activate"** to complete the activation process.

ⓘ **Note:** If the license is valid, the software will unlock and continue to the main interface. You only need to activate the license **once per computer**, and future launches will skip this step automatically — **as long as the license remains valid**.

ⓘ **Note:** If activation fails, please double-check that the license file matches your hardware and was not renamed or altered.

2.2 Setting Up Connection

Once the license is successfully activated, the program will automatically open the **Connection** View. This window will also appear every time the program is launched — as long as a valid license is present.

ⓘ **Note:** The **License** window will only appear again if no valid license file is found.

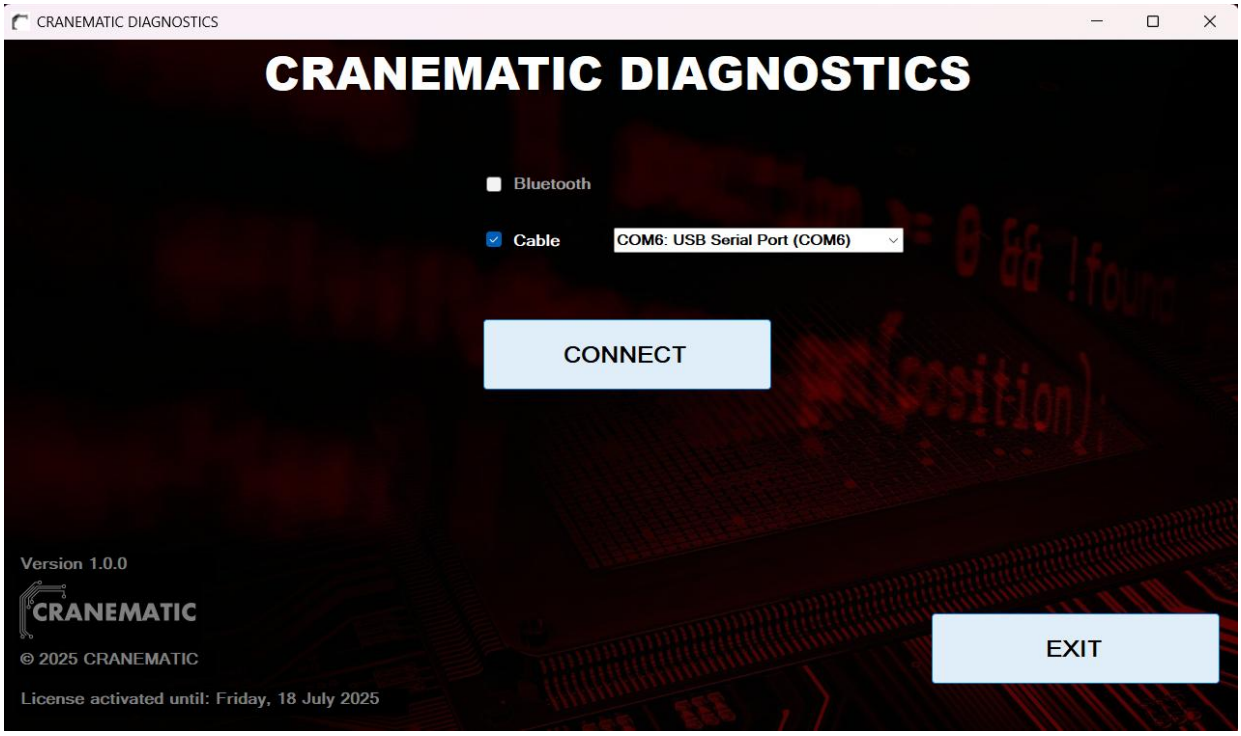
Before attempting to connect, make sure the following conditions are met:

- The diagnostic tool is connected to the **crane** via the crane connector cable
- The **crane is powered on**

ⓘ **Note:** Without power from the crane, the diagnostic tool cannot operate, and connection will fail.

Connection Options

The connection window offers **two options** to select the preferred communication method:



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1) Bluetooth Connection

1. Check the **"Bluetooth"** checkbox.
2. Click the **"Connect"** button.
3. The program will automatically attempt to connect with the tool by bluetooth.
4. Once connected, the program will proceed to the main interface.

---

2) Cable (USB) Connection

1. Check the **"Cable"** checkbox.
2. A **dropdown selection** will appear showing available COM ports.
3. Select the port labeled similar to:
   COM?: USB Serial Port (COM?)
4. Click the **"Connect"** button.
5. If the selected port is correct and the tool is properly connected, the program will proceed to the main interface.

ⓘ **Note:** If no COM ports appear, make sure the USB cable is connected and that drivers are correctly installed.

You can get the latest VCP driver from FTDI's official site:
👉 https://ftdichip.com/drivers/vcp-drivers/

3. GENERAL FUNCTIONS

This section describes the general user interface elements that are common across multiple user controls in the diagnostic software. These functions provide standard ways to reset parameters, save changes, view information, and understand the availability of values.

The behavior described in this section is consistent throughout the software unless stated otherwise in a specific user control description. Familiarizing yourself with these general functions will help ensure correct and efficient use of the diagnostic system.

- **Reset Default Button**
  The "*Reset Default"* button restores all parameters in the current user control to their factory default values. Any unsaved changes will be discarded.

- **Save Button**
  The "*Save"* button stores the current parameter values of the user control.
  After pressing this button, a confirmation dialog will appear asking whether you want to save the changes.

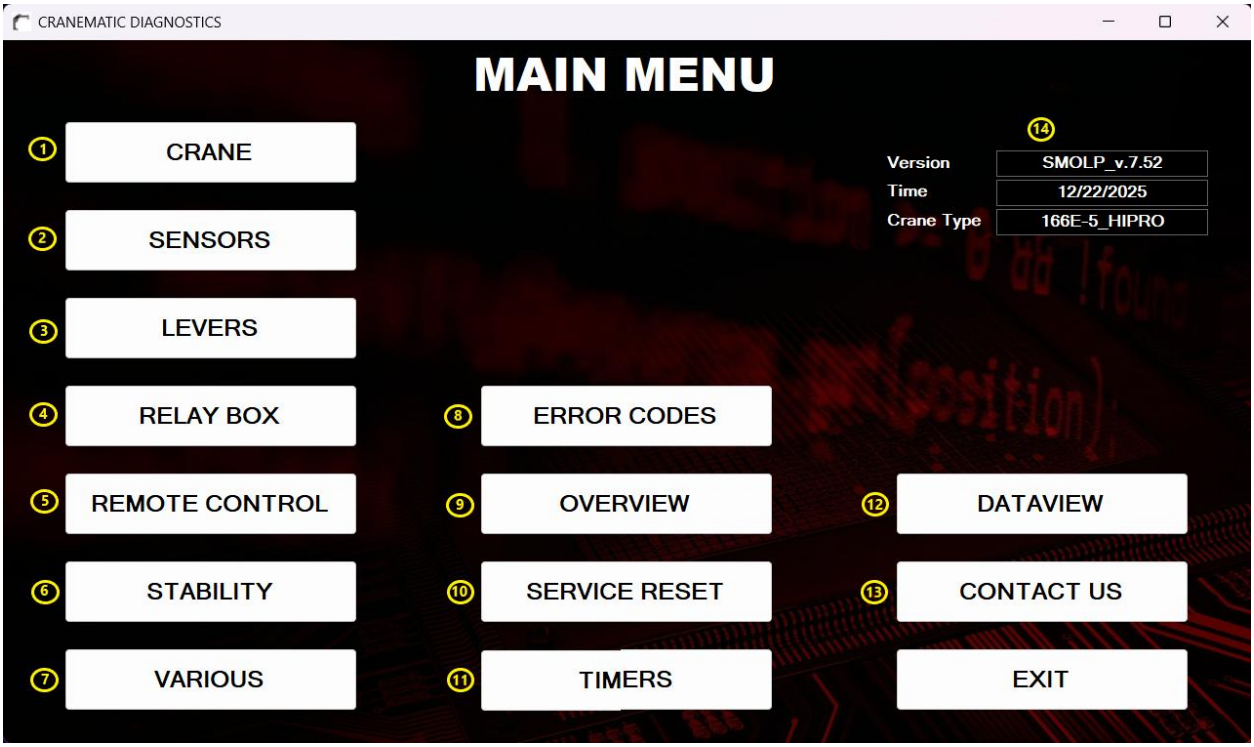
- **N/A Values in Text Boxes**
  If a text box displays "**N/A"** or **" - "**, the parameter is either not present or not used by the currently selected control unit.

- **Information / Help Text Box**
  Most user controls include an information text box that displays contextual help.
  Depending on the cursor position, it can show a description of a parameter, a group box, or a variable, including relevant limits and default values where applicable.

- **Feature Availability " * "**
  Some user controls and functions are only available for certain crane models or control system versions.
  Features marked with an asterisk " ***** " indicate that availability may vary depending on the crane model and control system version.

4. MAIN MENU

The Main Menu provides access to all major configuration, monitoring, and diagnostic sections of the crane control system. Each button opens a dedicated user control where the selected system or function can be viewed or configured in more detail.



*** Feature availability may vary depending on crane model and control system version.**

① **CRANE -** Provides access to core crane system information and configuration options, including active system features, load protection, winch parameters, connected user interfaces, and vehicle-related data.

② **SENSORS -** Allows monitoring, configuration, and calibration of sensors used by the crane system, including pressure, tilt, rotation, leg position, and length measurement sensors.

③ **LEVERS -** Used to monitor lever inputs, assign crane functions to levers, and calibrate analog lever signals to ensure accurate and reliable operation.

④ **RELAY BOX* -** Provides configuration and real-time monitoring of relay outputs used for external devices and auxiliary functions.

⑤ **REMOTE CONTROL* -** Grants access to configuration and diagnostics for supported remote control systems, including speed behavior, function mapping, and controller setup.

⑥ **STABILITY* -** Used to configure crane stability zones and reduced lifting capacity areas based on operating conditions.

⑦ **VARIOUS -** Contains additional system-specific or custom functions.

⑧ **ERROR CODES -** Provides access to active and historical error information for troubleshooting and diagnostics.

⑨ **OVERVIEW -** Displays a real-time system-wide overview of crane operation, enabling fast diagnostics by showing sensor states, inputs, limits, and warnings in one place.

⑩ **SERVICE RESET -** Used to view service-related information and reset service intervals after maintenance work has been completed.

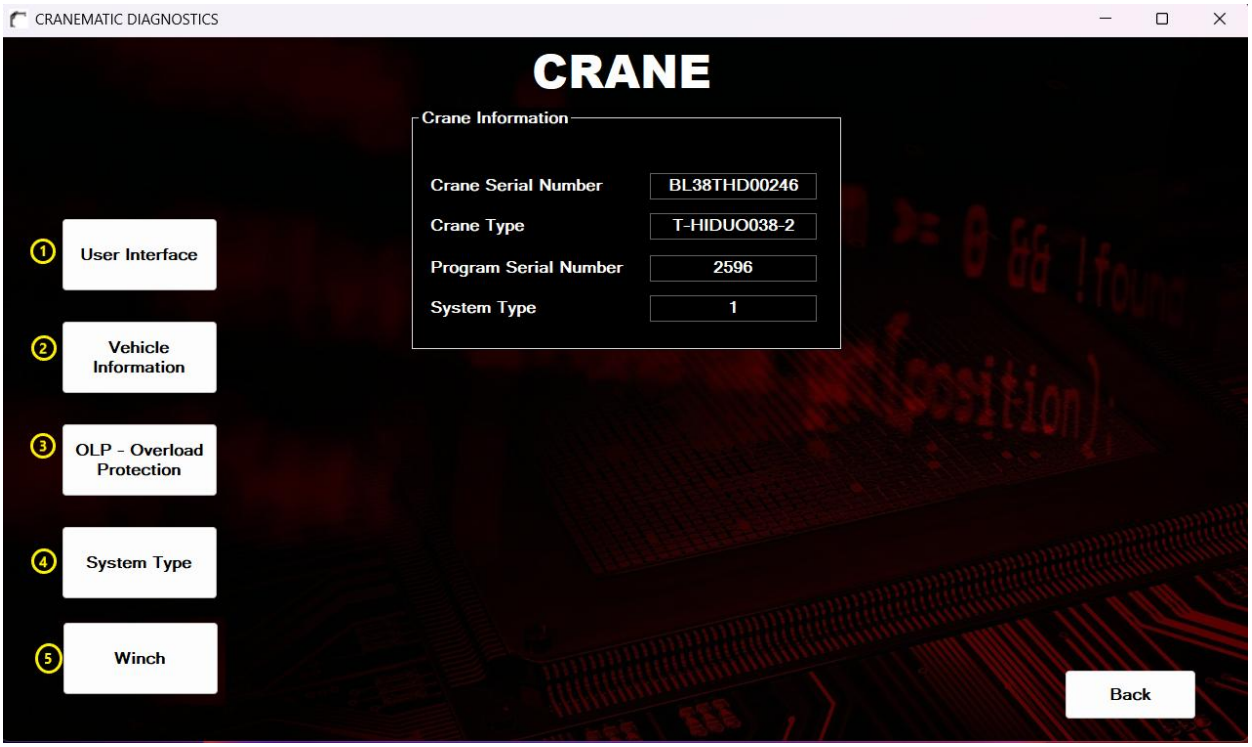
⑪ **TIMERS -** Displays operating time counters, including total runtime, function usage time, and event-related counters.

⑫ **DATAVIEW -** Provides access to a complete list of raw system data.
This view displays all available parameters and variables currently present in the active crane control system and is primarily intended for advanced diagnostics and troubleshooting.

⑬ **CONTACT US -** Provides contact information for Cranematic support and user feedback.

⑭ **Current system information -** Essential system status information, allowing quick identification of the active crane configuration and control unit state. This information is useful for verifying the correct system, software version, and internal time before performing diagnostics, configuration, or service actions.

5. CRANE



① **User Interface Configuration*** - Configure CAN-based UI modules connected to the system.

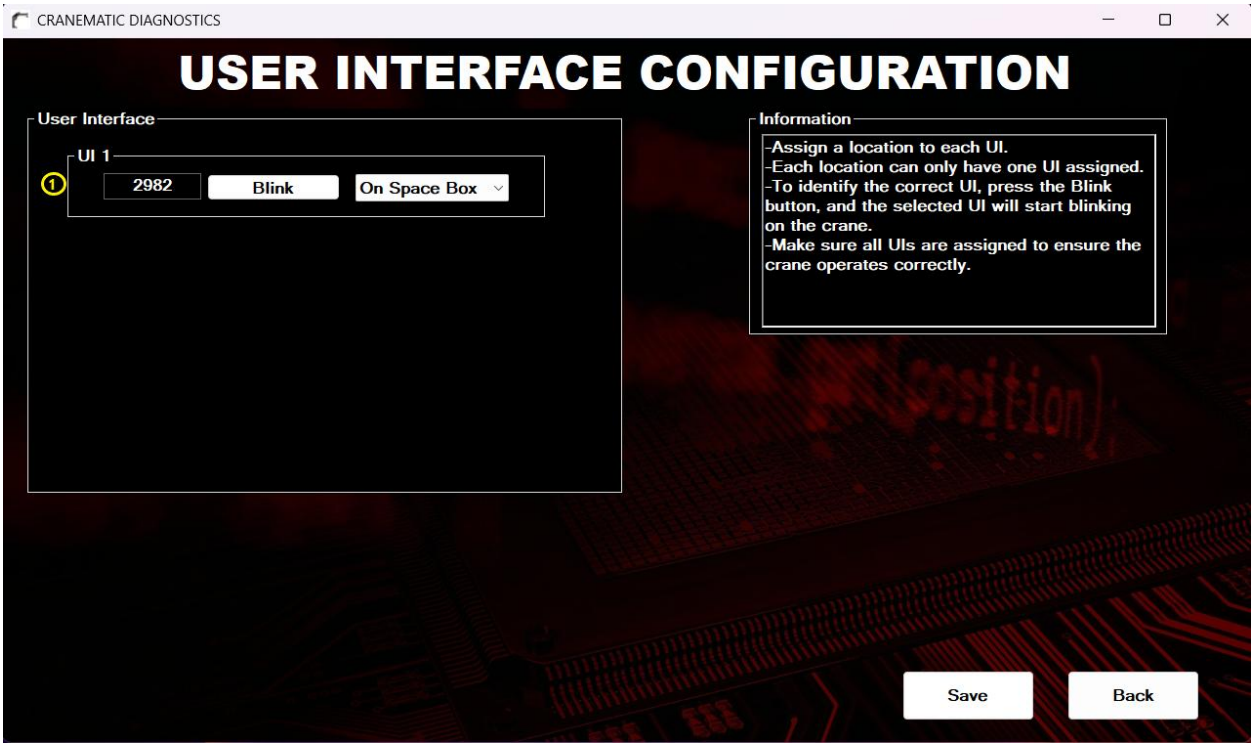
② **Vehicle Information*** - View crane/vehicle dimensions, weight, crane and support leg placement.

③ **OLP – Overload Protection** - Shows overload limits and sensor values for calculations.

④ **System Type** - Displays what functions and features are active in the current crane system.

⑤ **Winch*** - Access winch parameters and monitor winch-related variables.

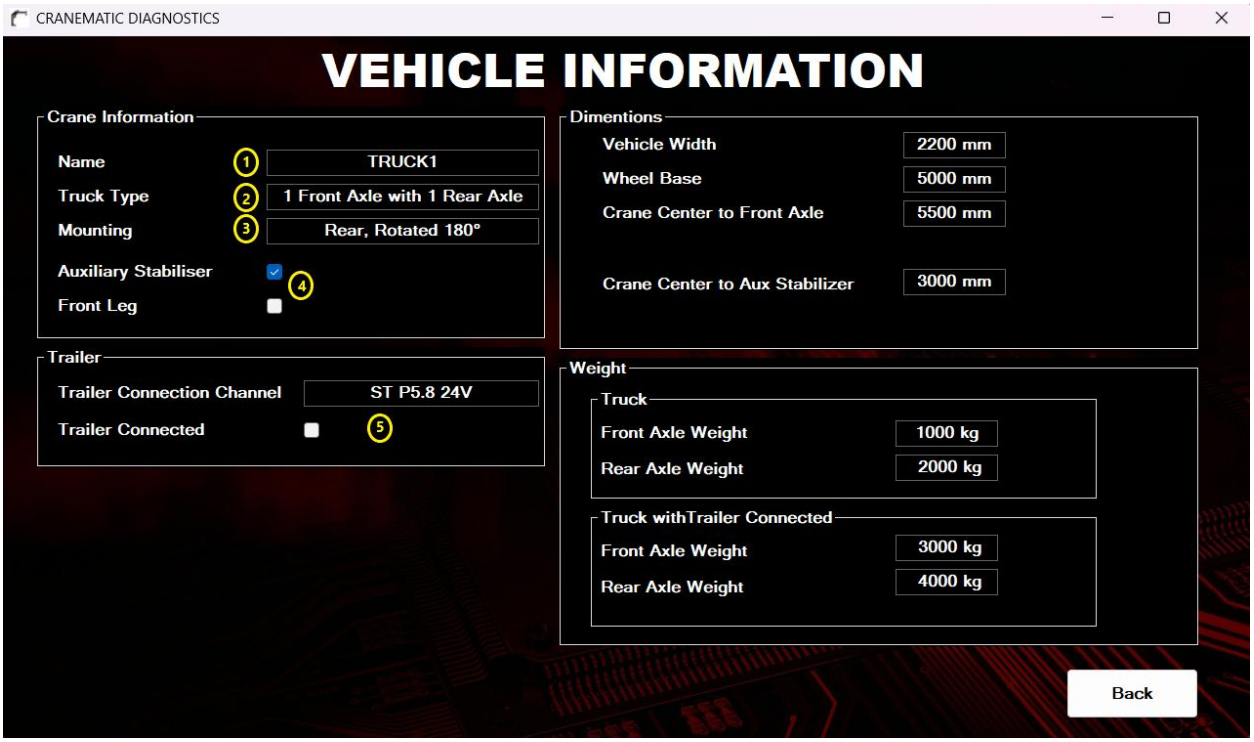
5.1 User interface



①

- Each UI can be uniquely identified by its serial number and assigned to a specific location on the crane.
- The blink function allows the user to visually identify the selected UI module. When activated, the corresponding UI will blink, making it easier to match the physical device with the configuration shown in the software.
- The location selection allows the user to define where the UI is installed or used within the crane system, ensuring correct system behavior and signal mapping.

5.2 Vehicle information



① **Name of equipment -** Displays an informative name assigned by the crane installer to identify the equipment on which the crane is mounted.

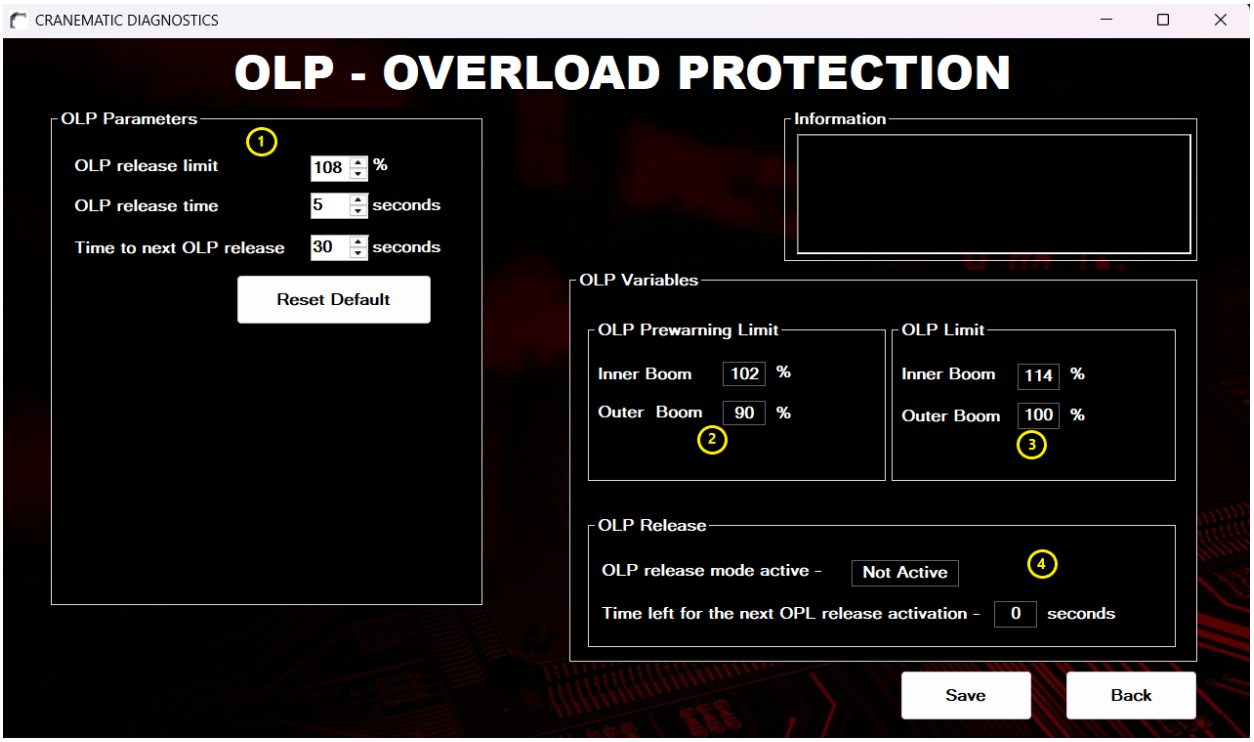
② **Truck Type –** Indicates the type of vehicle used as the carrier for the crane.

③ **Mounting –** Shows where the crane is mounted on the equipment and indicates the crane's mounting orientation relative to the vehicle.

④ **Stabilizers in use –** Indicates which stabilizers are active in the system. Checked stabilizers are included in system operation and stability calculations.

⑤ **Trailer information -** Indicates whether a trailer is connected to the system. The trailer connection channel shows which input is used to detect the trailer connection.

5.3 OLP – Overload Protection



① **OLP Parameters** - Defines the behavior of the overload release function:

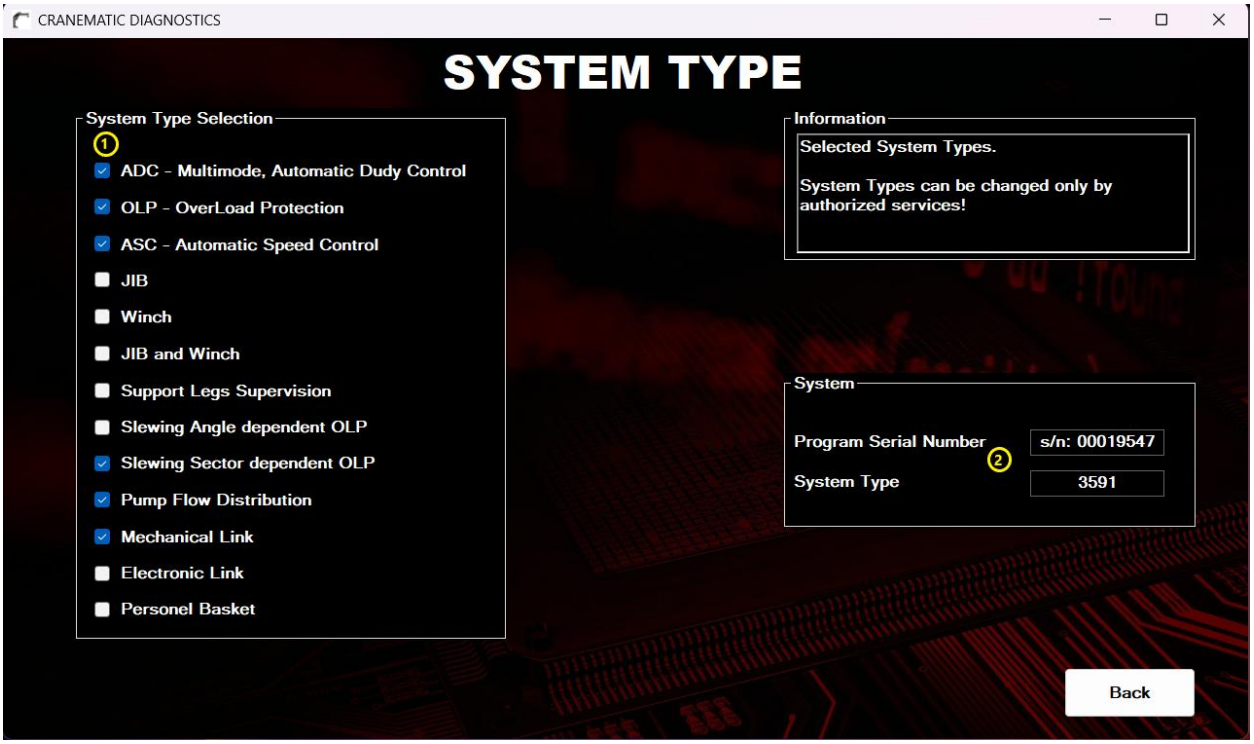
- **OLP release limit (%)** – Sets the overload protection limit applied when the release button is pressed.
- **OLP release time** – Defines how long the release button can be held while the OLP release is active.
- **Time to next OLP release** – Specifies the required waiting time before the release button can be pressed again after a release cycle.

② **OLP Prewarning Limits** - Displays the overload percentage at which a prewarning is activated and indicates the current prewarning status.

③ **OLP Limits** - Shows the current crane load as a percentage relative to the overload limit in real time.

④ **OLP Release related information** - Displays information related to the release function, including whether the release mode is currently active and a countdown showing the remaining wait time before the release button can be used again.

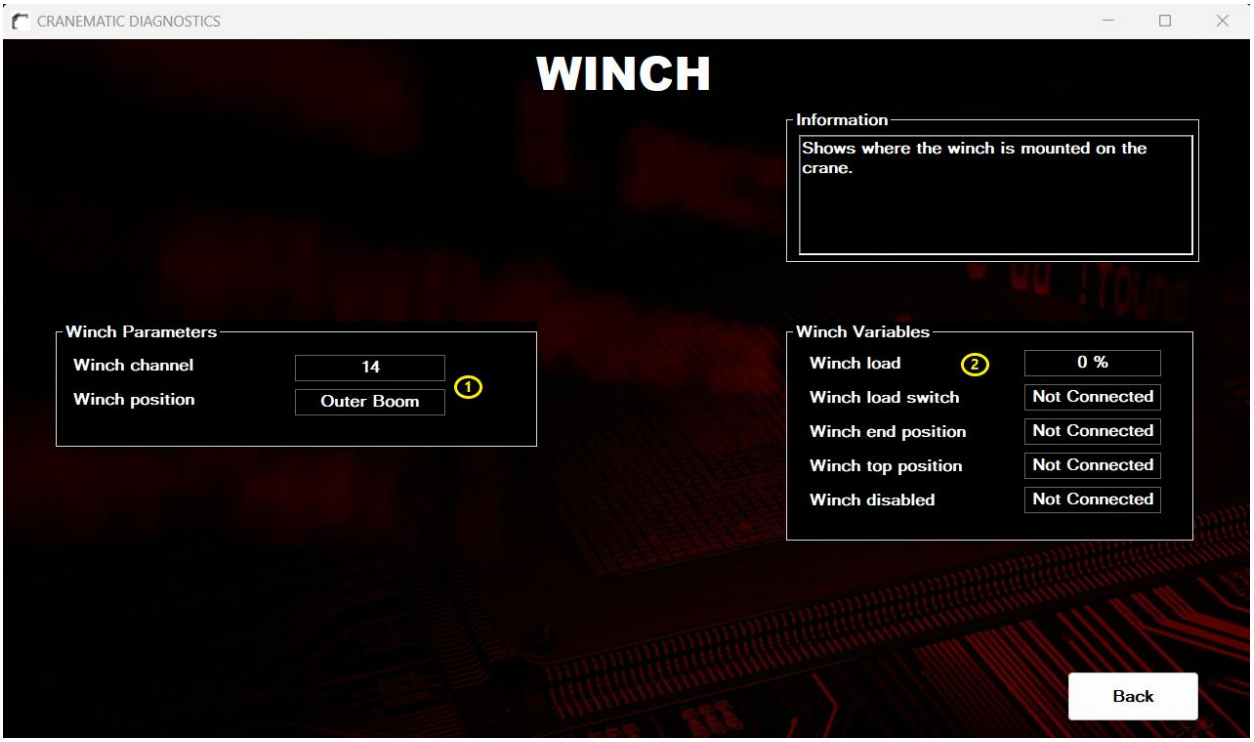
5.4 System Type



① **System Type selected -** Selection boxes indicate which features and functions are currently enabled in the crane control system. Marked items represent functions that are active and available.

② **System Type information -** Displays system-related information stored in the control unit, providing an overview of the active crane configuration.

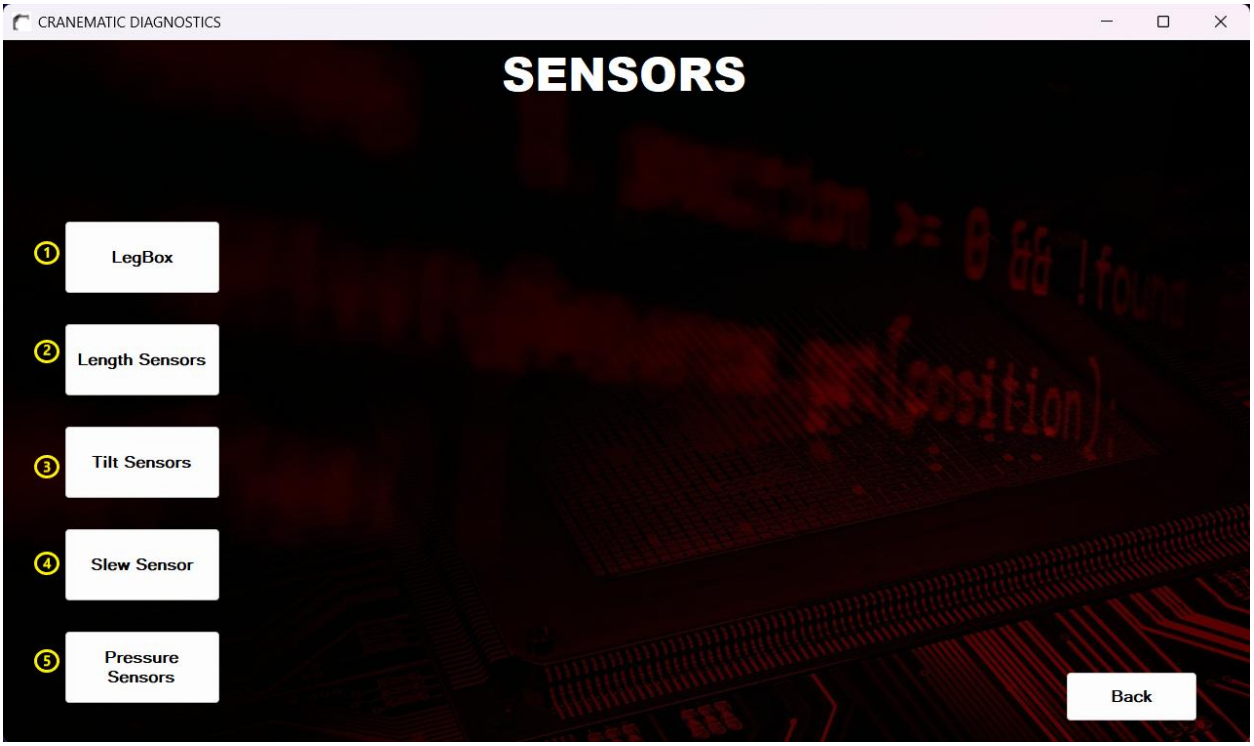
5.5 Winch



① **Winch position -** Indicates the position of the winch on the crane, showing where the winch is installed or assigned within the crane configuration.

② **Winch input data -** Displays real-time input information from the winch, including the current load percentage and the status signal.

6. SENSORS



① **LegBox Configuration*** - Configure and test connected LegBoxes.

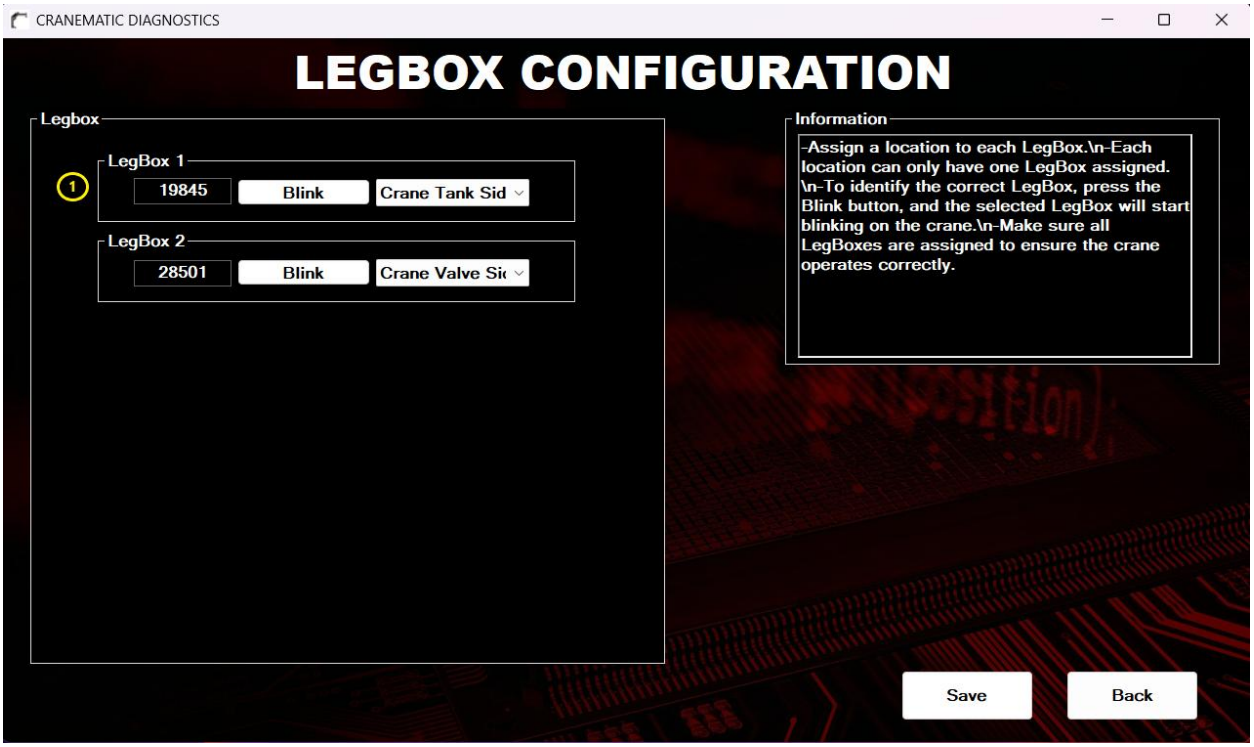
② **Length Sensor Configuration*** - Configure Length Sensors.

③ **Tilt Sensors** - View tilt angles and values from inclination sensors.

④ **Slew Sensors*** - Monitor rotation sensor values and perform sensor calibration.

⑤ **Pressure Sensors** - Monitor pressure-related values in real time.

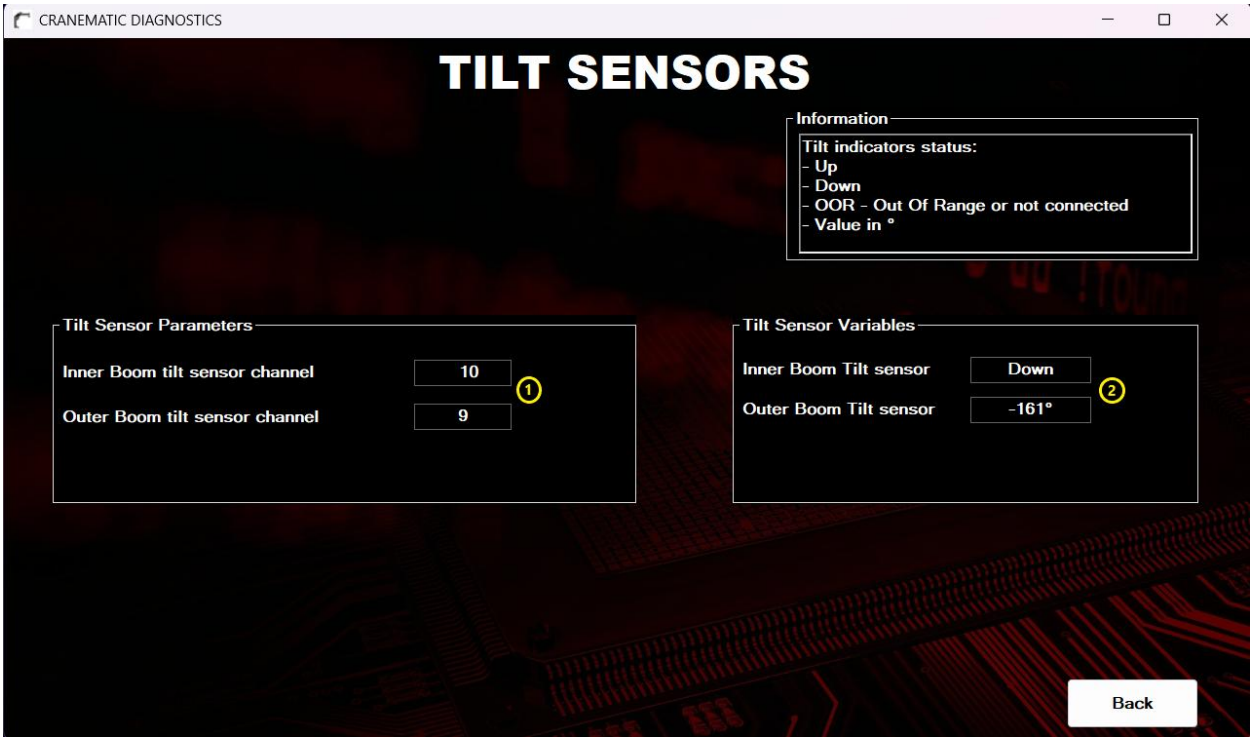
6.1 Legbox



①

- Each LegBox can be uniquely identified by its serial number and assigned to a specific location on the crane.
- The blink function allows the user to visually identify the selected LegBox module. When activated, the corresponding LegBox will blink, making it easier to match the physical device with the configuration shown in the software.
- The location selection allows the user to define where the LegBox is installed or used within the crane system, ensuring correct system behavior and signal mapping.

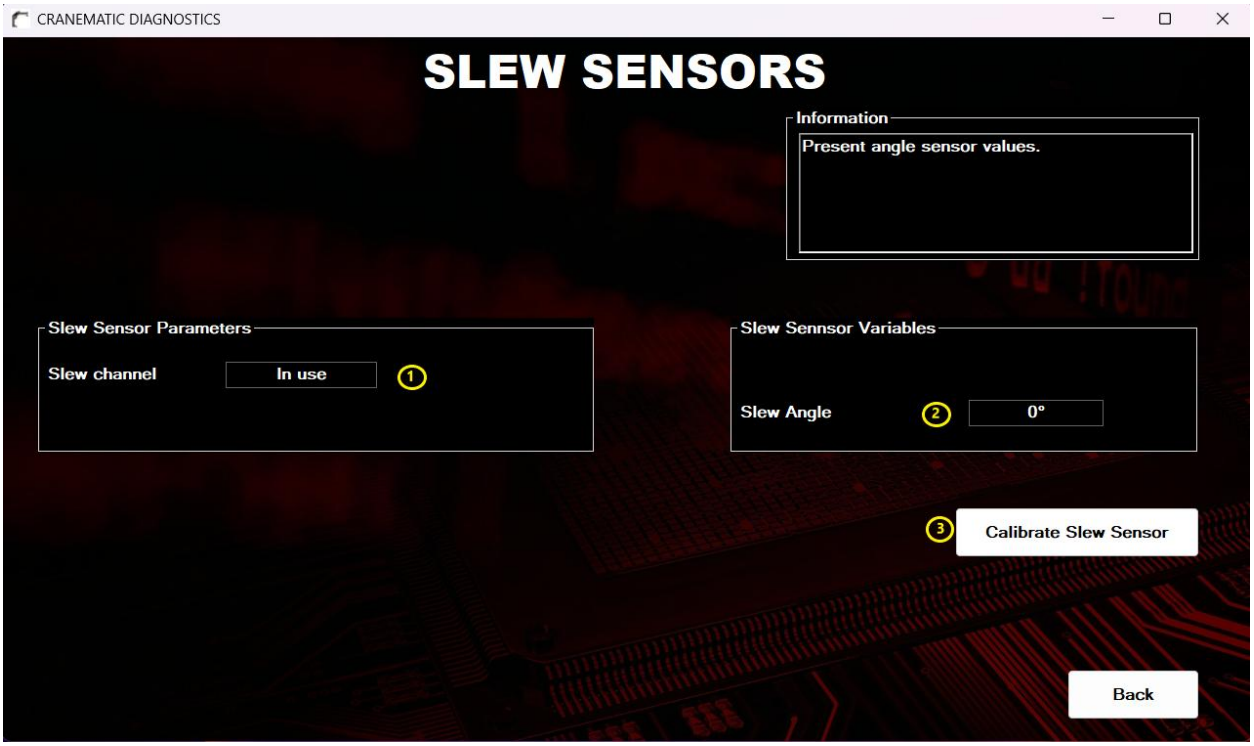
6.2 Tilt sensors



① **Tilt sensors input channels -** Shows which input channel each tilt sensor is connected to within the control system.

② **Tilt Sensors Values -** Displays real-time angle values or status information for all connected tilt sensors.

6.3 Slew sensors

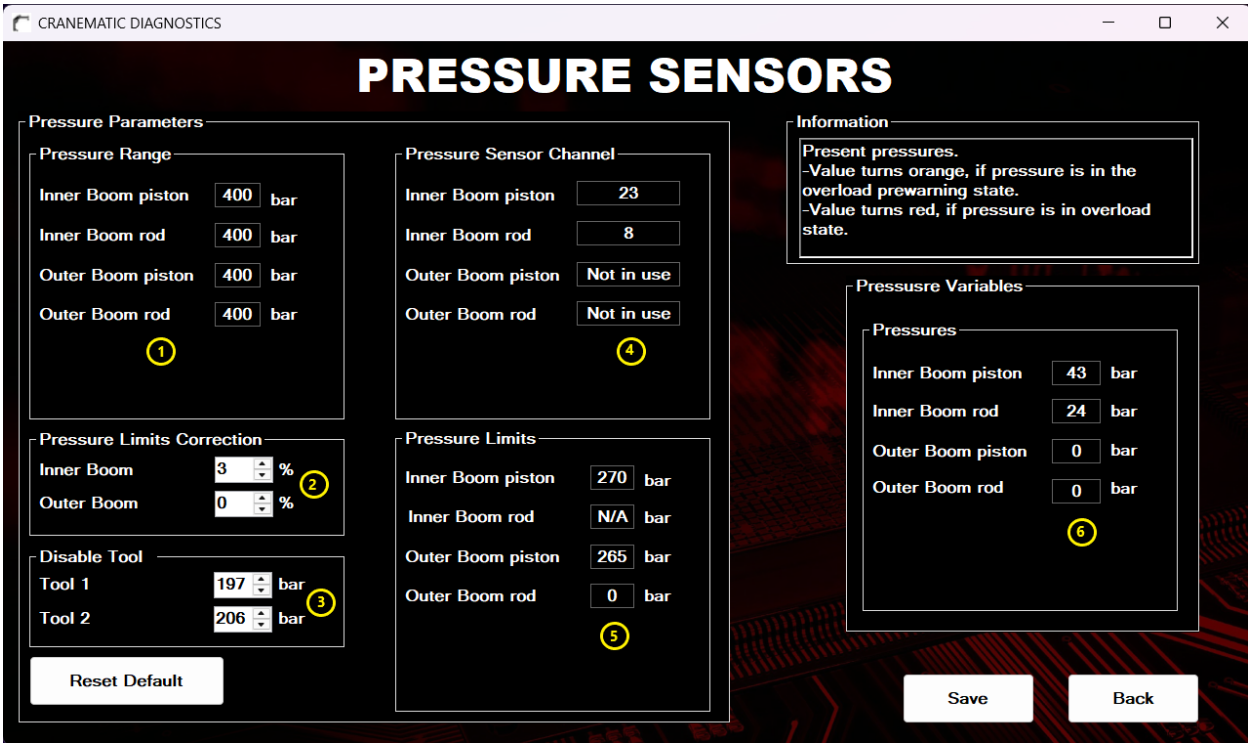


① **Slew sensor status -** Indicates whether the slew (rotation) sensor is active and used by the control system.

② **Actual input value for slew -** Displays the current rotation angle detected by the control system in real time.

③ **Slew sensor calibration -** Starts the slew sensor calibration process.
When activated, follow the on-screen instructions to complete the calibration procedure.

6.4 Pressure sensors



① **Pressure range of pressure sensors -** Displays the maximum pressure rating of the physical pressure sensors installed on the crane.

② **Correction of the pressure sensors input -** Allows adjustment of the pressure reading to match the actual measured pressure with the value read by the control system.

③ **Tool Disable Pressure -** Defines the pressure limit at which the tool function is disabled. If the measured pressure exceeds this value, the tool function will be deactivated.

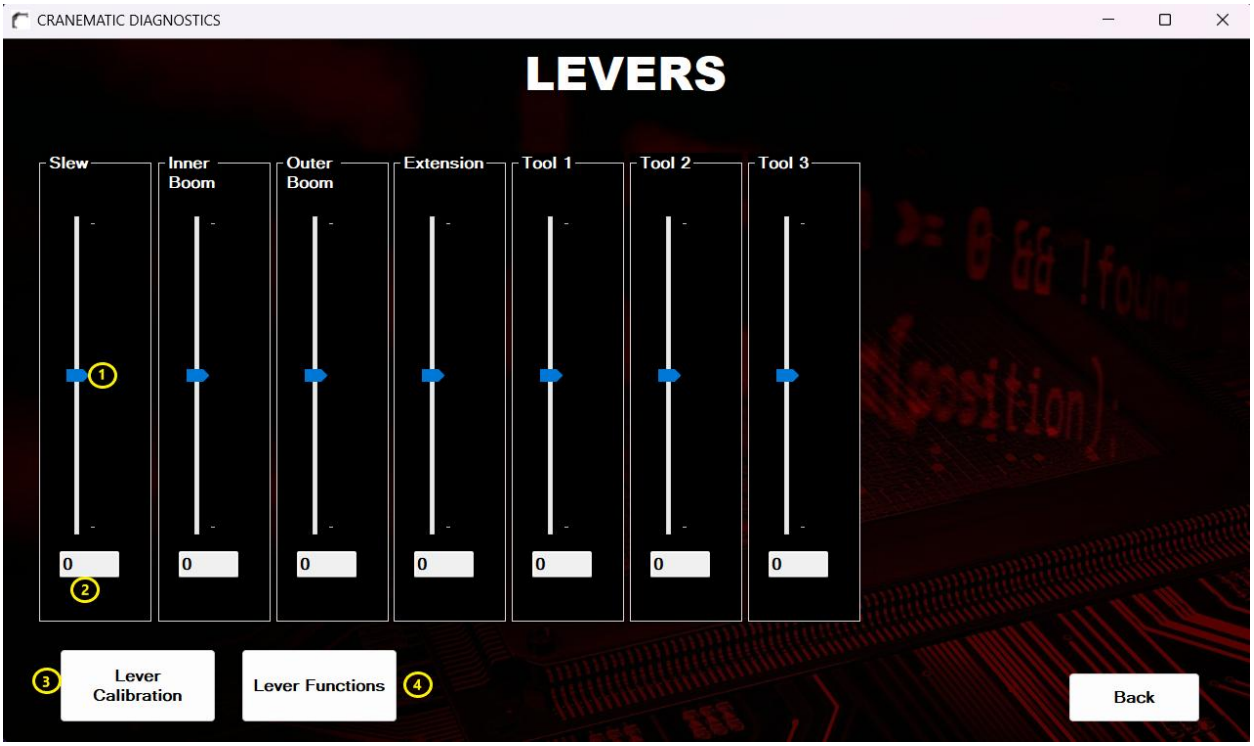
④ **Pressure sensors connection -** Shows the input channels where the pressure sensors are connected to the control system.

⑤ **Pressure limits for each pressure sensor -** Displays the maximum allowable pressure for crane operation.

⑥ **Pressure readings -** Shows real-time pressure values for all pressure sensors.

- **Yellow** indicates a prewarning pressure level
- **Red** indicates an overload pressure condition

7. LEVERS



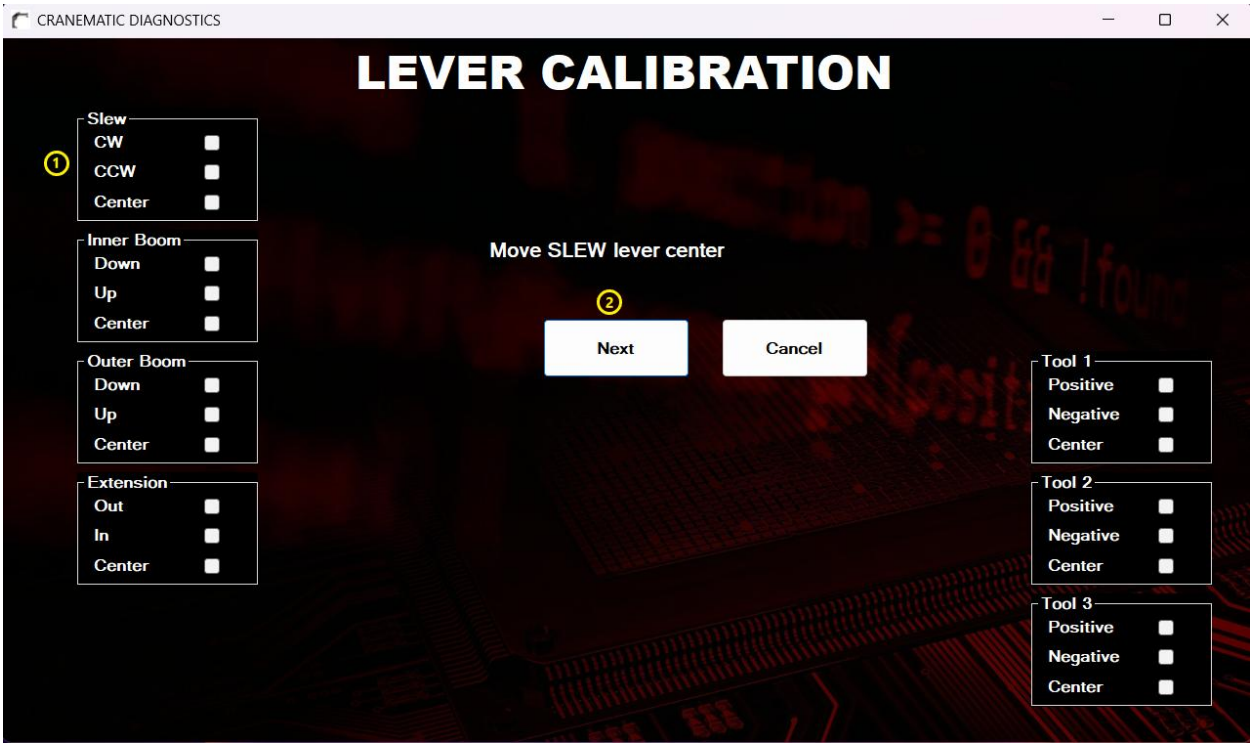
① **Lever position indicator -** A visual indicator shows the current position of the hydraulic distributor lever as read directly from the spool sensors by the control system.

② **Lever position value -** Displays the current hydraulic distributor lever position as a percentage value.

③ **Lever Calibration -** Calibrate analog lever signals for accurate reading.

④ **Lever Functions -** Assign specific functions to each lever.

7.1 Lever Calibration

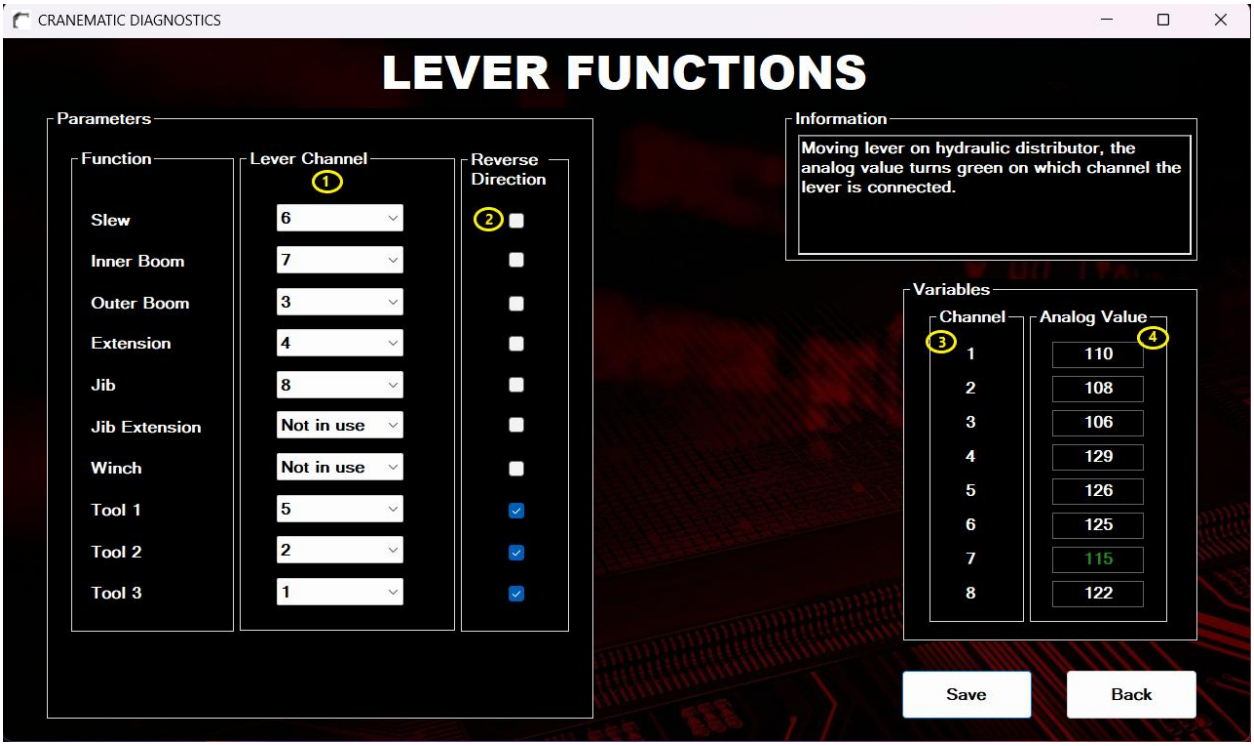


① **Calibration progress -** Each calibration step is marked as completed once the required action has been successfully performed.

② **Calibration procedure –**

- Follow the on-screen instructions and place the lever in the position indicated.
- After setting the lever as instructed, press "**Next"** button to proceed to the following step.
- The calibration process is completed when all steps have been successfully performed.

7.2 Lever Functions



① **Lever input assignment -** Selects the input channel used for the function.
This setting defines which input signal controls the function and **does not** indicate the physical lever location.

② **Revers direction -** When enabled, the movement direction of the selected function is reversed on hydraulic distributor.

③ **Input channel number -** Displays the channel number that corresponds to the detected input signal.
This number is used to select the correct channel in the lever input assignment.

④ **Input signal activity -** Shows the actual signal value received from the hydraulic distributor spool sensors.
When a lever is moved, the corresponding value briefly turns green to help identify which input channel is active.

7.3.1 Assigning the Correct Lever Channel

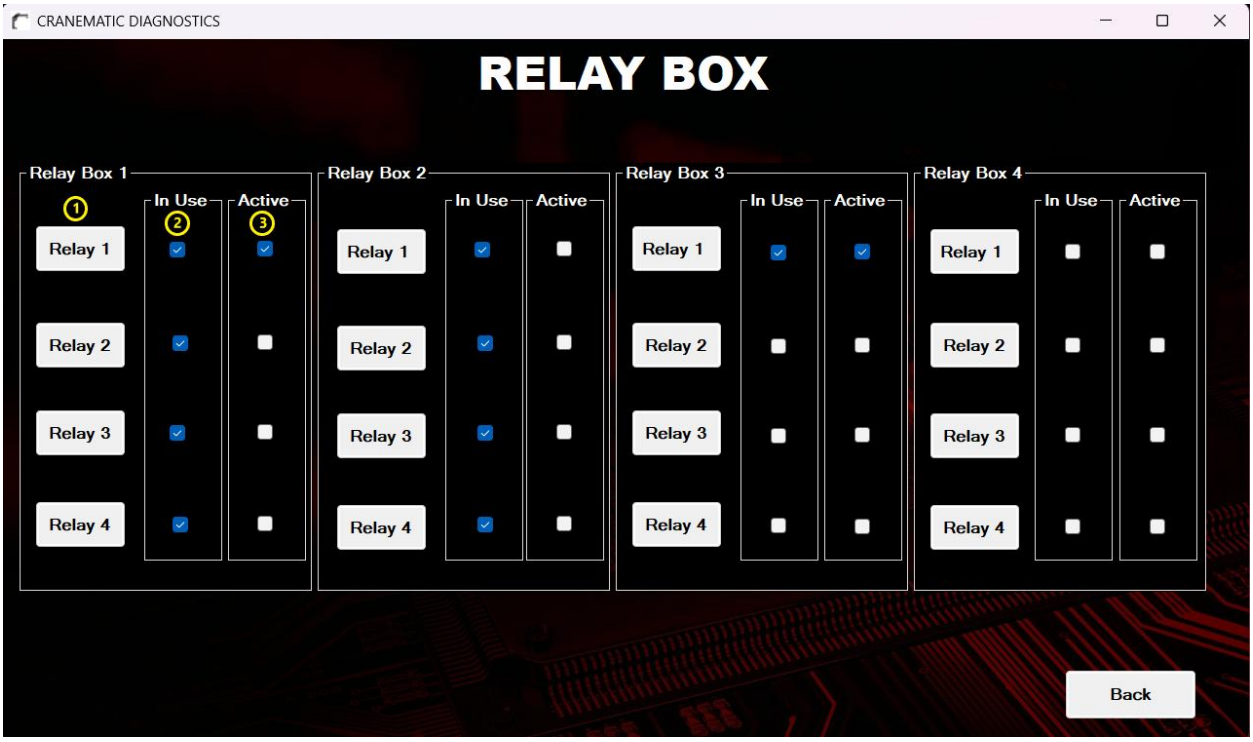
To assign the correct lever to a function, follow these steps:

- Select the function for which the lever assignment needs to be changed.
- Move the desired lever on the crane.
- Observe which input signal value turns green (see item 4).
- Note the corresponding input channel number (see item 3).
- Select this channel in the lever input assignment (see item 1).
- Save the changes.
- After saving, lever calibration is required.
- The system will automatically guide you to the **Lever Calibration** page to complete the process.

8 RELAY BOX

8.1 Olsbergs Relay Box

8.1.1 Relay Box Selection (Olsbergs)

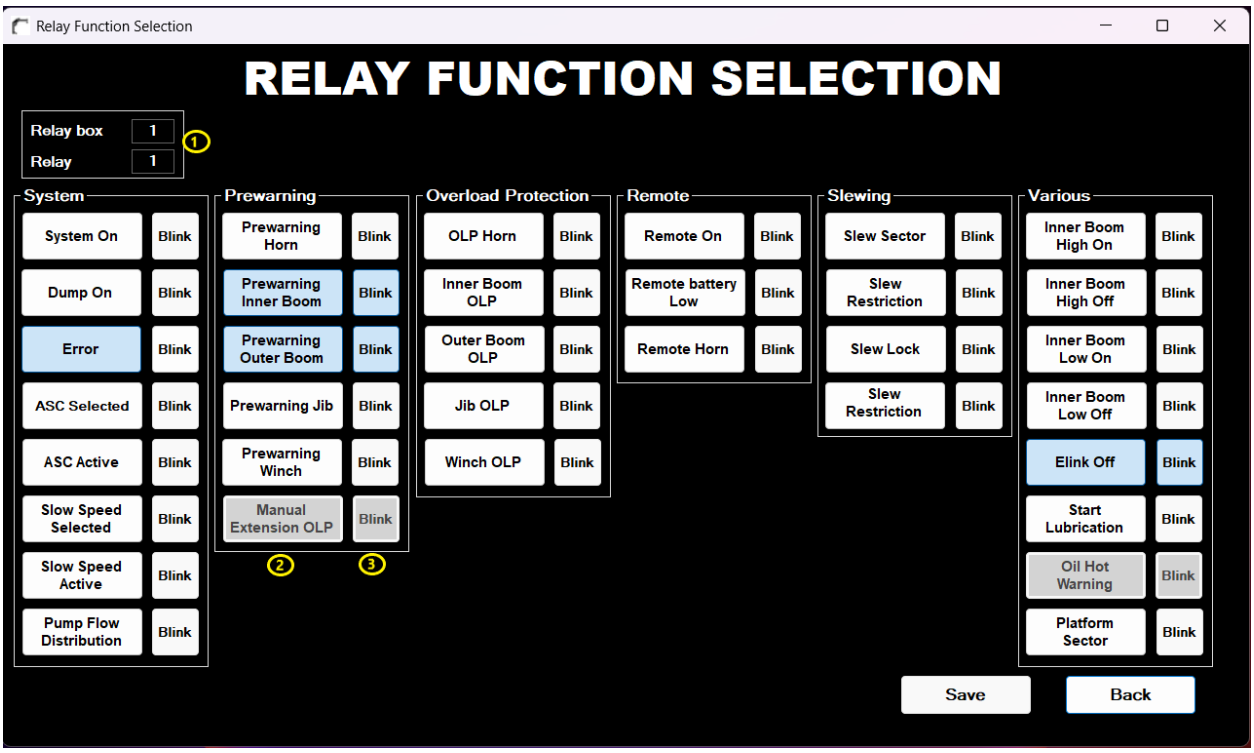


① **Relay Function Assignment -** Each relay output can be assigned to one of up to four relay boxes. Selecting a relay allows the relay function to be configured or changed.

② **Relay Function Assigned -** Indicates whether a function has been assigned to the selected relay. When marked, a relay function is configured for that output.

③ **Relay Status -** Indicates whether the selected relay is currently active.
A marked status shows that the relay is energized.

8.1.2 Relay Function Selection (Olsbergs)

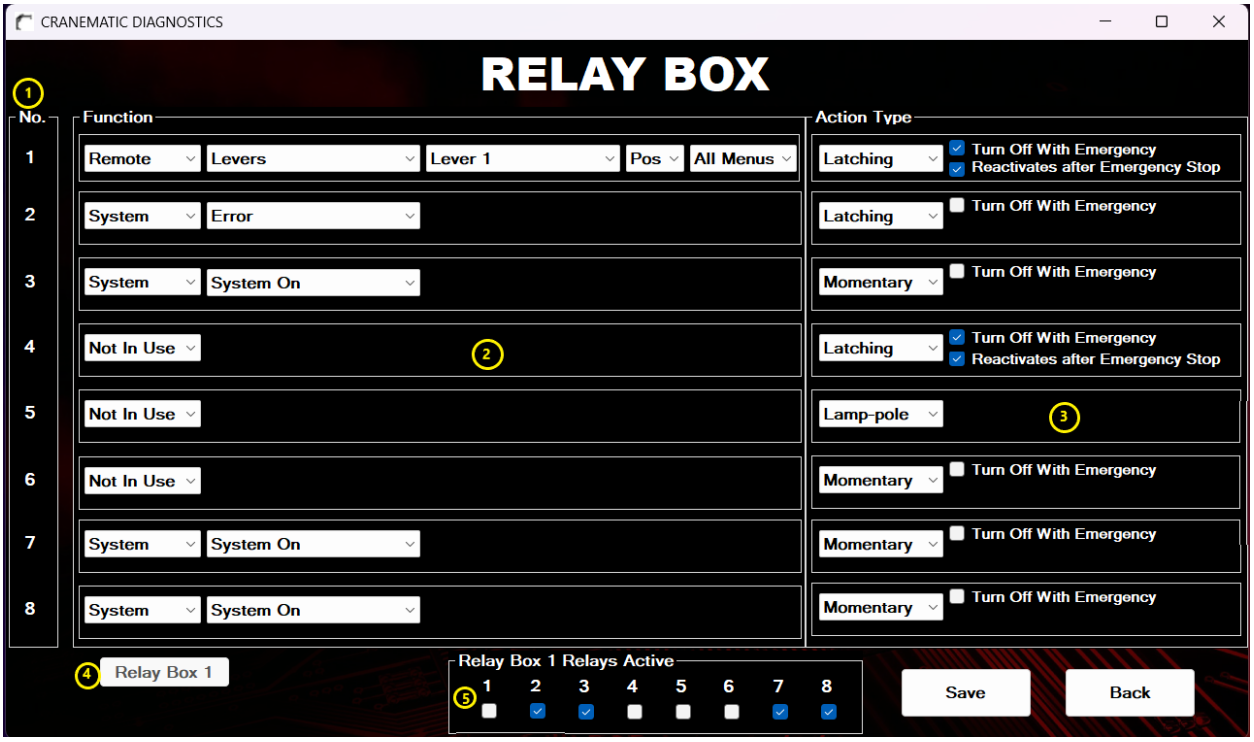


① **Selected relay identification -** Displays which relay box and relay output are currently selected for configuration.

② **Relay function selection -** Allows selection of one or more functions for the relay. Functions shown in gray are not available for the current control unit.

③ **Relay blink mode -** Enables a blinking output for the selected relay when the relay is active. This option is used instead of a steady output signal.

8.2 XS Drive Relay Box



① **Relay number -** Indicates the relay output number within the selected relay box.

② **Relay function selection -** Allows selection of the main function assigned to the relay. After a function is selected, additional related options (subfunctions) become available for selection.

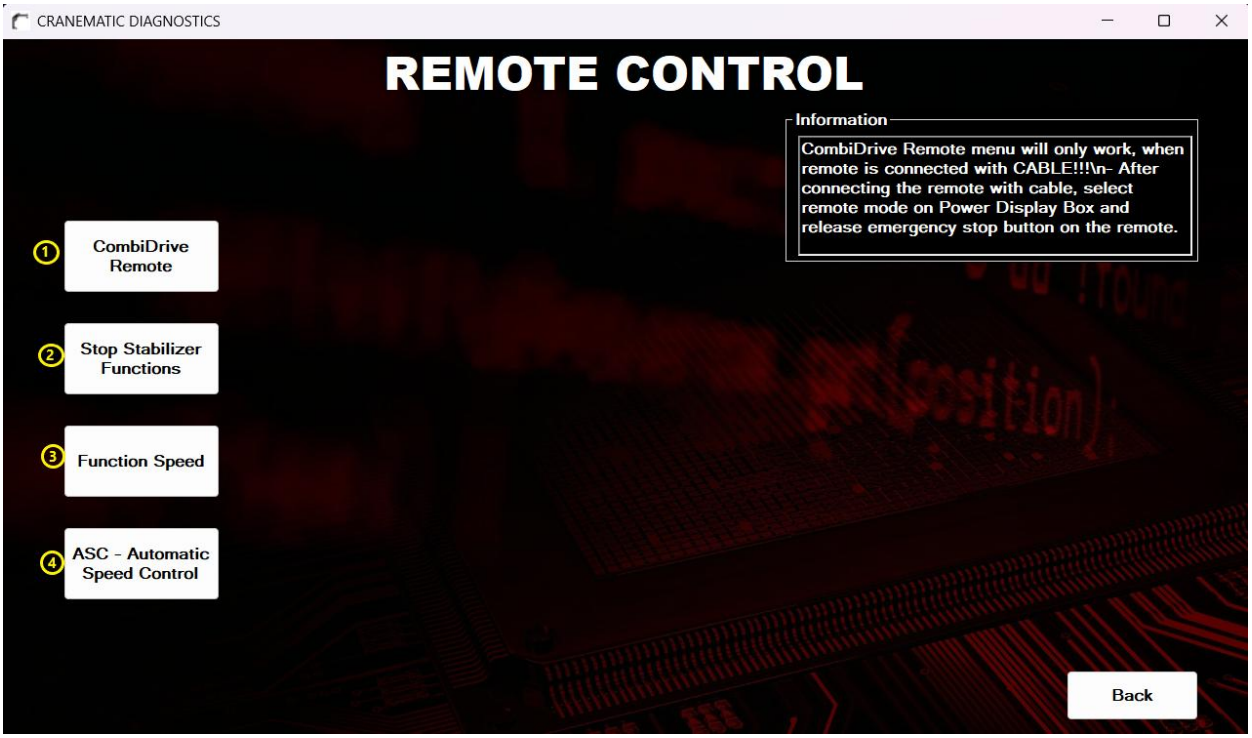
③ **Relay activation behavior -** Defines how the relay is activated by the user.

④ **Relay box selection -** Selects which relay box is being configured.
The system supports up to four relay boxes.

⑤ **Relay status overview -** Provides a visual indication of which relays are currently active in real time.

9 REMOTE CONTROL

9.1 Remote Control Olsbergs



① **CombiDrive Remote -** Assign functions to buttons, configure additional controls, and enable special features.

The CombiDrive remote menu is available only when the remote is connected to the system using a cable.

To access this menu:

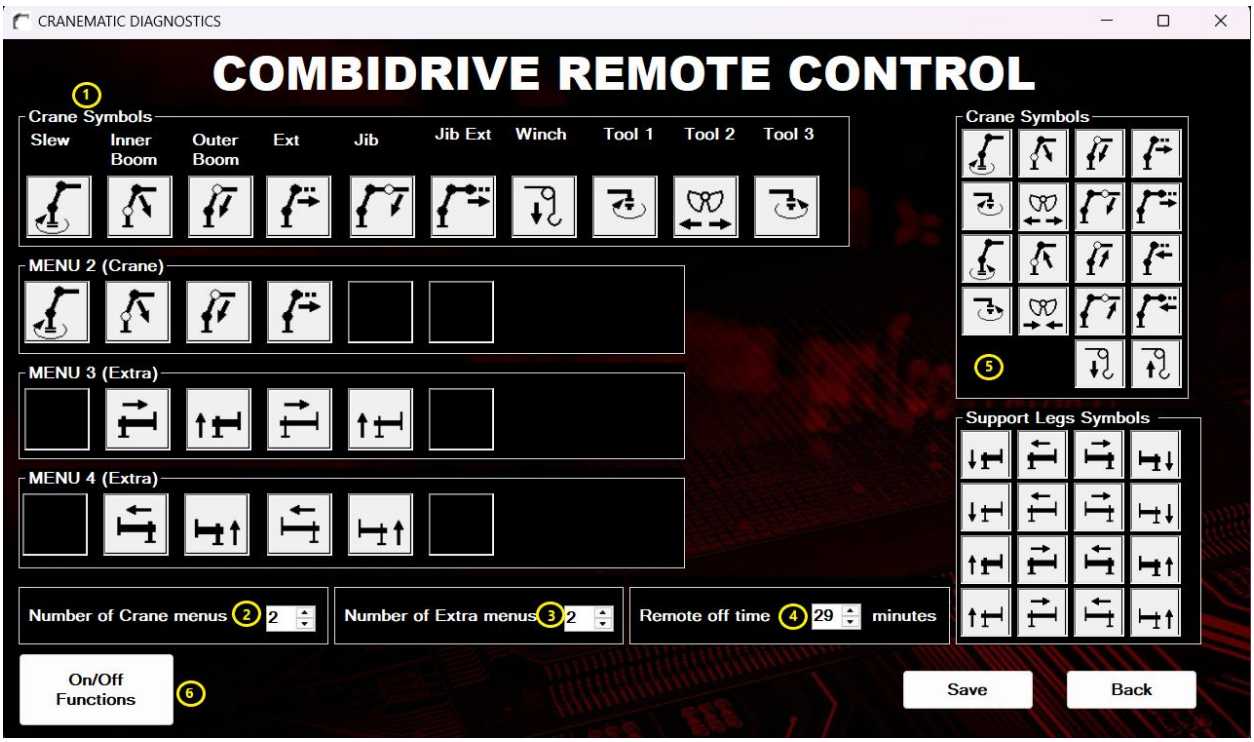
- Connect the CombiDrive remote to the system using the cable.
- Select **Remote Mode** on the Power Display Box.
- Release the stop button on the remote.
- Once these steps are completed, the CombiDrive Remote menu can be opened and configured.

② **Stop Stabilizer Functions –** Configure which crane functions will be stopped when the pressure reaches the configured limit.

③ **Function Speed -** Set custom speed levels for individual crane functions.

④ **ASC – Automatic Speed Control -** Configure dynamic speed adjustment based on lever input and load.

9.1.1 CombiDrive Function Selecion (Olsbergs)



① **Selected menu symbols -** Displays the symbols for all selected menus.
Up to four menus can be configured.

② **Number of Crane menus -** Selects how many crane menus are available on the remote. These menus can be accessed using the "**Crane"** button on the remote.

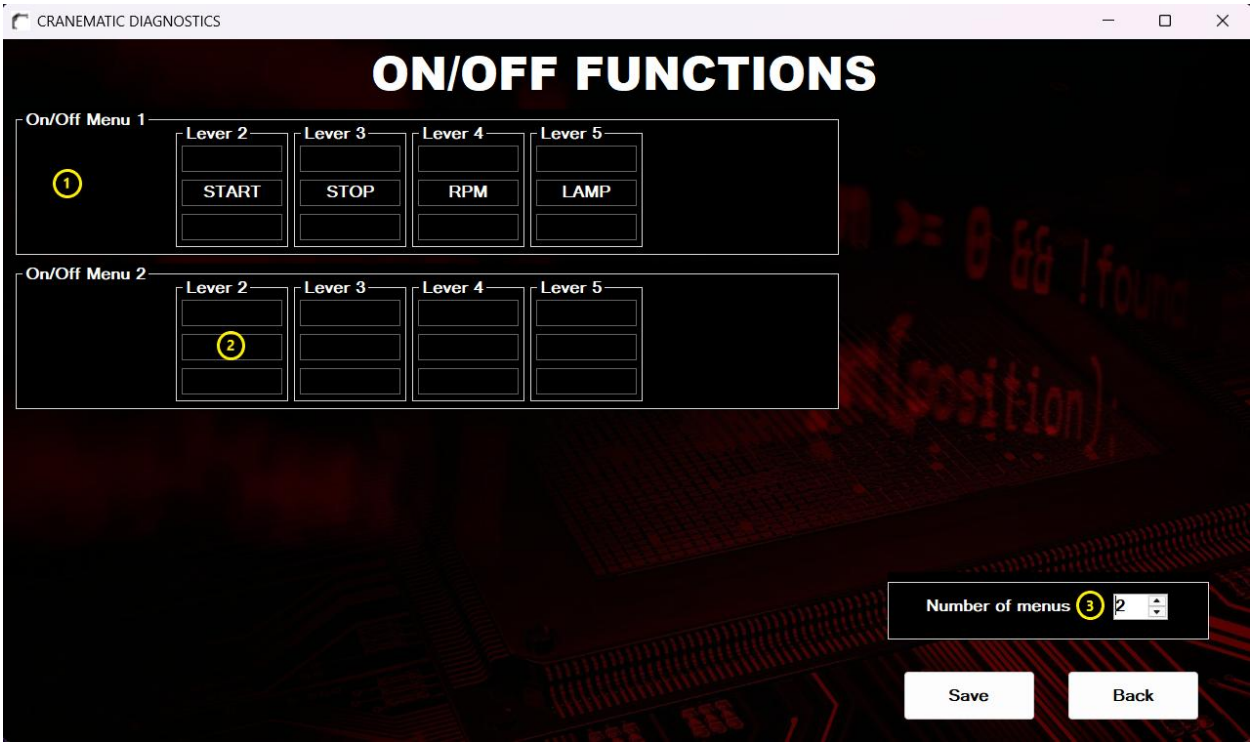
③ **Number of Extra menus -** Selects how many extra menus are available on the remote. These menus can be accessed using the "**Extra"** button on the remote.

④ **Remote auto-power off time -** Defines how long the remote remains powered on after no levers or buttons have been operated.

⑤ **Menu icon selection -** Selection of icons for the remote menus using drag-and-drop. Icons can be removed by right-clicking on the corresponding menu symbol (on item 1).

⑥ **On/Off functions -** Opens the menu on/off selection user control.

9.1.2 CombiDrive On/Off Selection (Olsbergs)

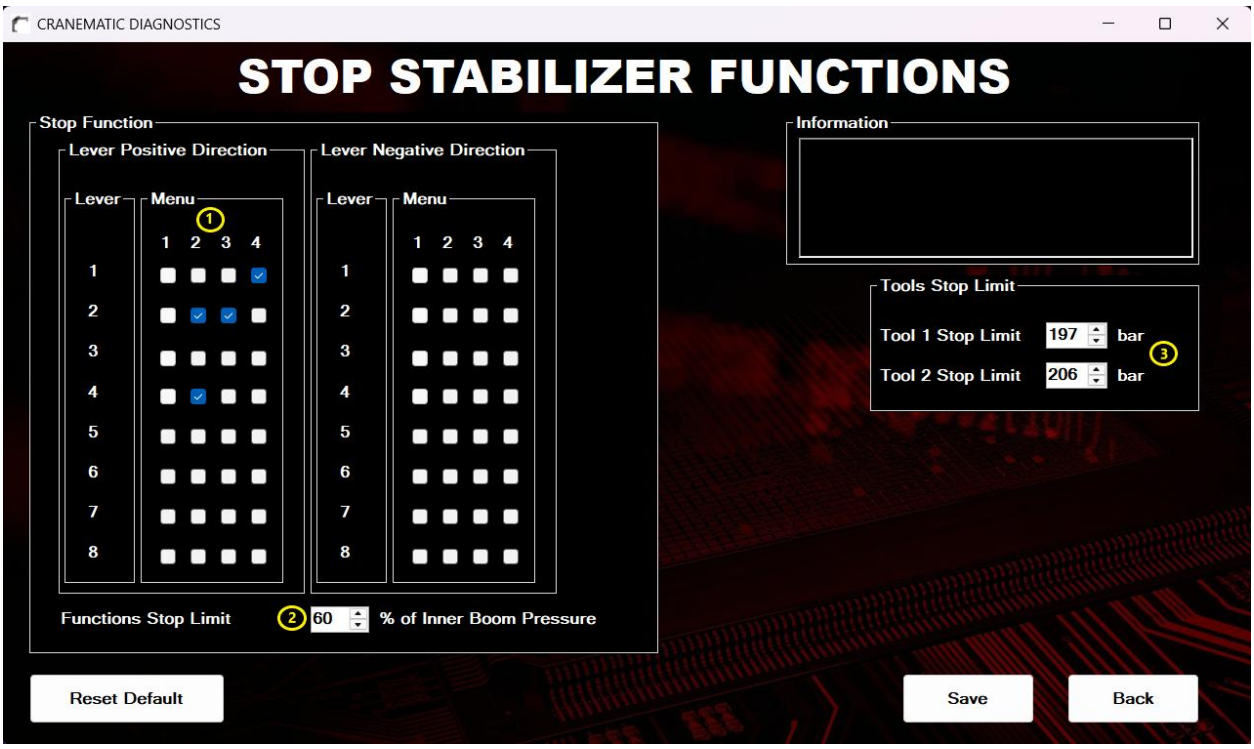


① **Menu configuration sections -** Provides separate configuration sections for all menus. Each menu can be configured individually.

② **Menu display text -** Defines the text shown on the remote display for the selected menu. Only letters (A–Z) are allowed.
The text can contain up to three lines, with a maximum of 6 characters per line.

③ **Number of selectable menus -** Selects how many menus can be accessed using the "**ON/OFF"** button on the remote.

9.1.3 Stop Stabilizer Functions (Olsbergs)

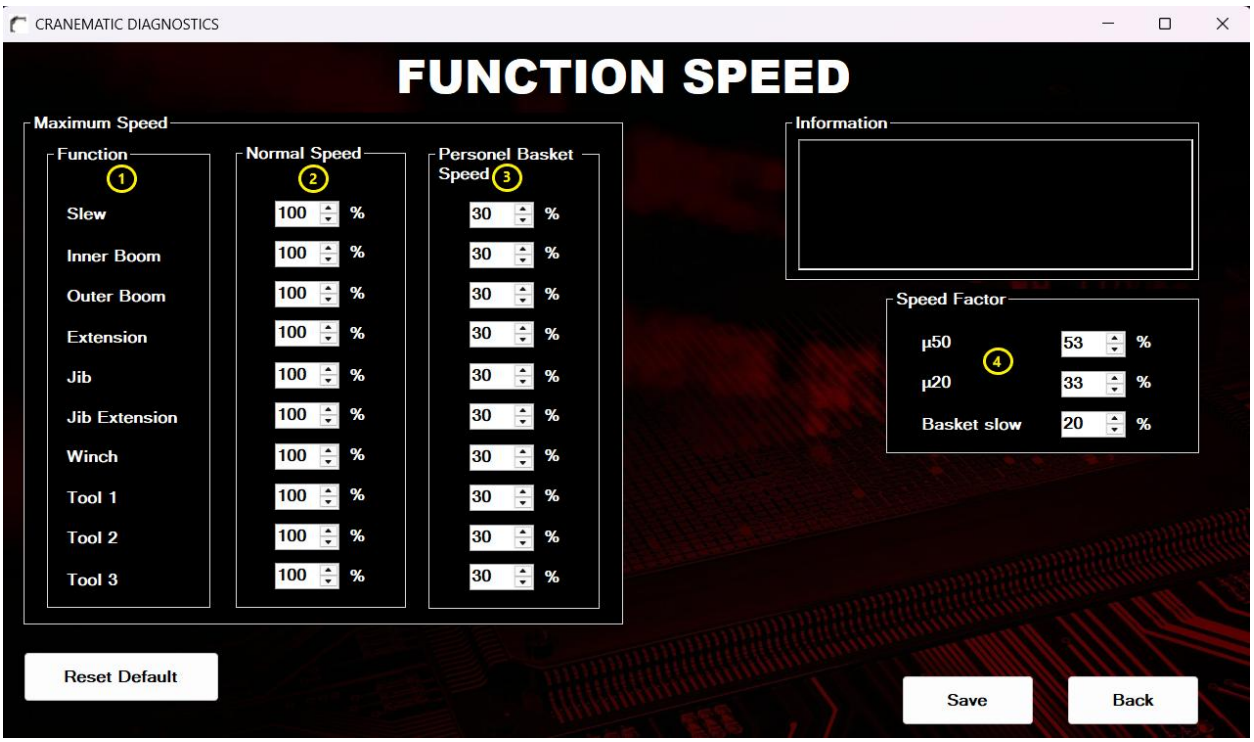


① **Function stop selection -** Selects which functions will be stopped when the stabilizer pressure limit is exceeded in either direction.

② **Function stop pressure level -** Defines the pressure level for the inner boom, expressed as a percentage, at which the selected functions will be stopped.

③ **Tool stop pressure level -** Selects the pressure level at which the tool function will be stopped when this pressure is exceeded.

9.1.3 Function Speed (Olsbergs)



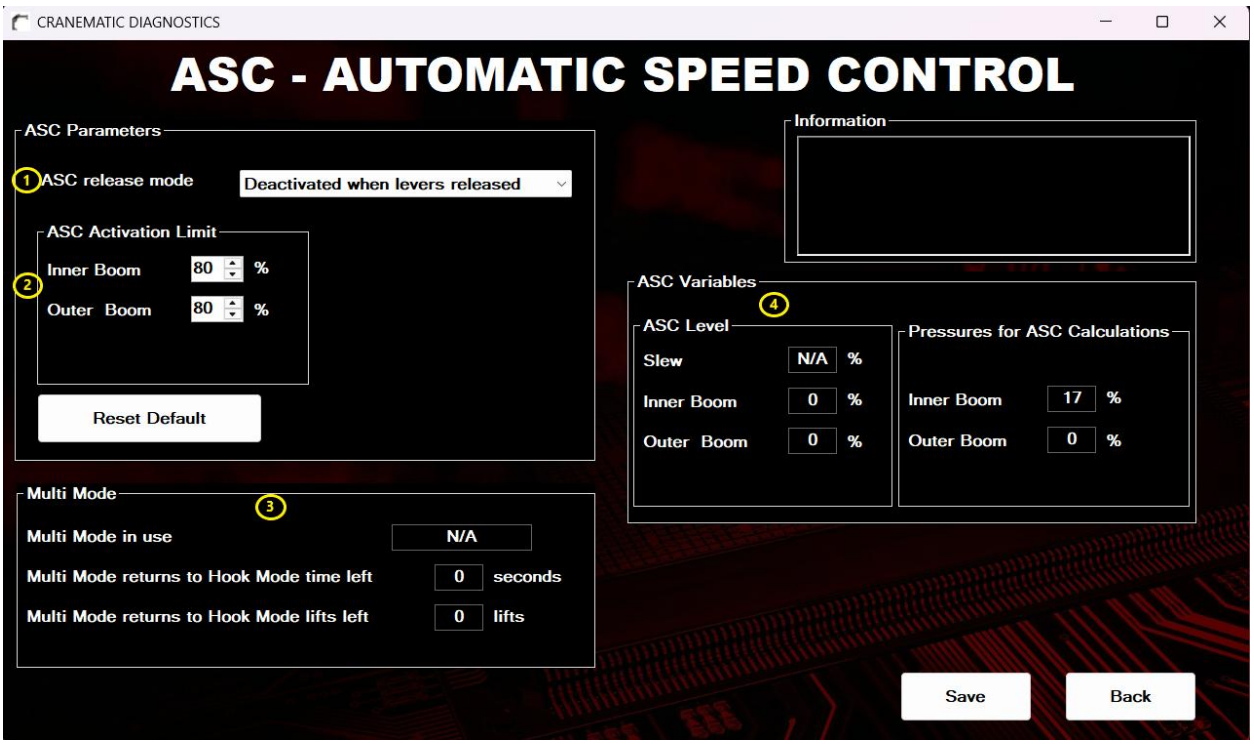
① **Functions** - The crane function for which speed settings are configured.

② **Maximum remote speed** - Defines the maximum allowed speed for the selected function when operated using the remote control.

③ **Maximum remote speed(Basket mode)** - Defines the maximum allowed speed for the selected function when the system is operating in basket mode.

④ **Remote speed factor** - Defines the speed reduction factor that can be selected using the "**µ**" button on the remote control.

9.1.4 ASC – Automatic Speed Control (Olsbergs)



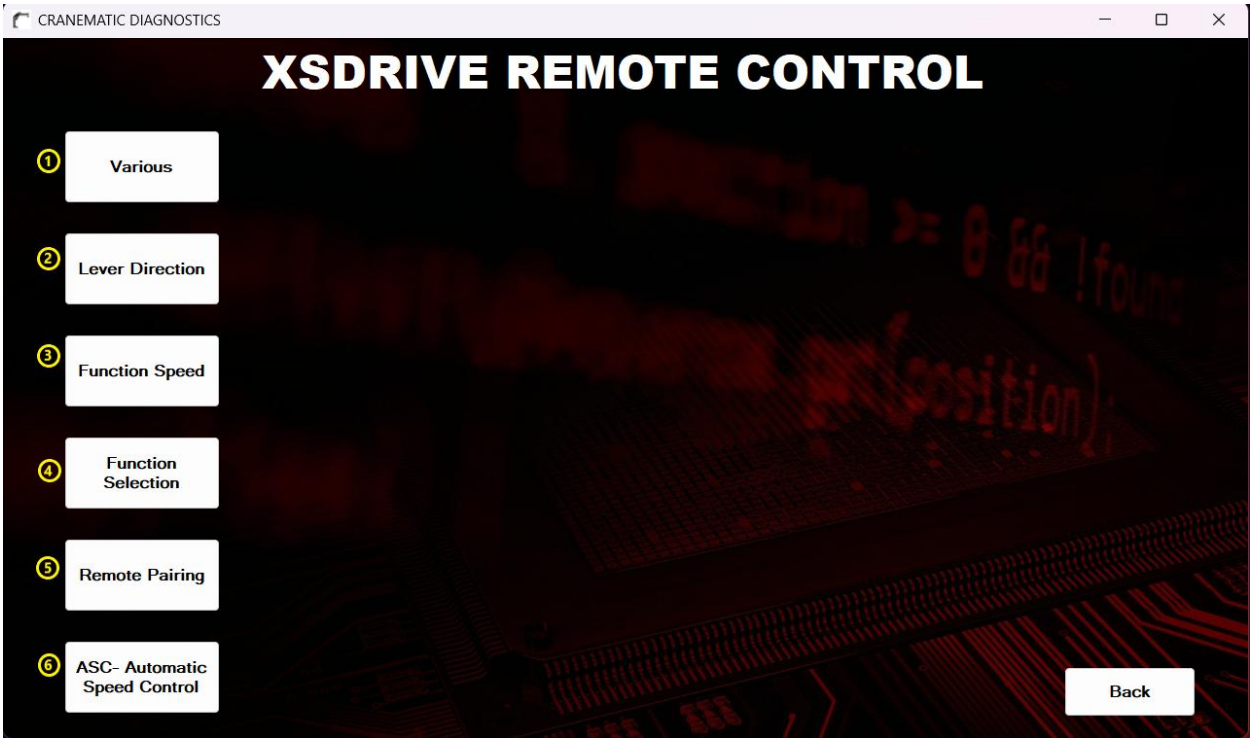
① **ASC release mode -** Defines how ASC is released, either automatically or only when all levers are in the neutral position.

② **ASC activation pressure limit -** Sets the pressure level, expressed as a percentage, at which ASC becomes active.

③ **Multi mode -** Displays which tool the system currently detects as installed on the crane.

④ **ASC level and pressure data -** Defines the maximum allowed speed when ASC is active and the pressure thresholds used by ASC to adjust the operating speed.

9.2 Remote Control (XS Drive)



① **Various -** Provides access to additional or system-specific functions configured for the XSDrive remote.

② **Lever direction -** Allows the operator to change the control direction of the levers on hand controller.

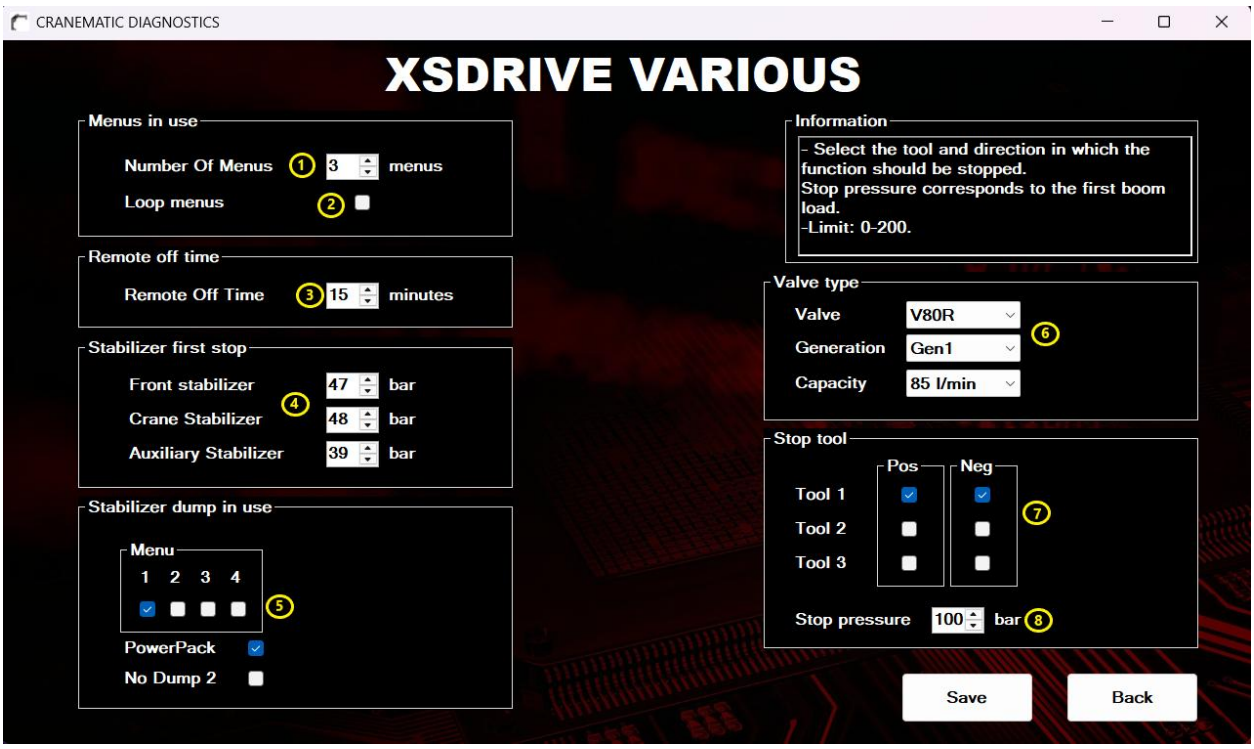
③ **Function speed -** Set custom speed levels for individual crane functions.

④ **Function selection -** Configure button assignments and advanced features.

⑤ **Remote pairing -** Start pairing mode to connect a new XSDrive Controller.

⑥ **ASC - Automatic Speed Control -** Enable and configure dynamic speed adjustment based on lever input or load.

9.2.1 Various (XS Drive)



① **Number of menus in use -** Selects how many menus are available on the remote control. Up to four menus can be configured.

② **Loop menus -** When enabled, menu selection on the remote will loop from the last menu back to the first when moving to the next menu.

③ **Remote auto power off -** Defines how long the remote will remain powered on after no user input is detected.

④ **Stabilizer first stop -** Stops lever movement while lowering stabilizer legs when the pressure limit is exceeded.

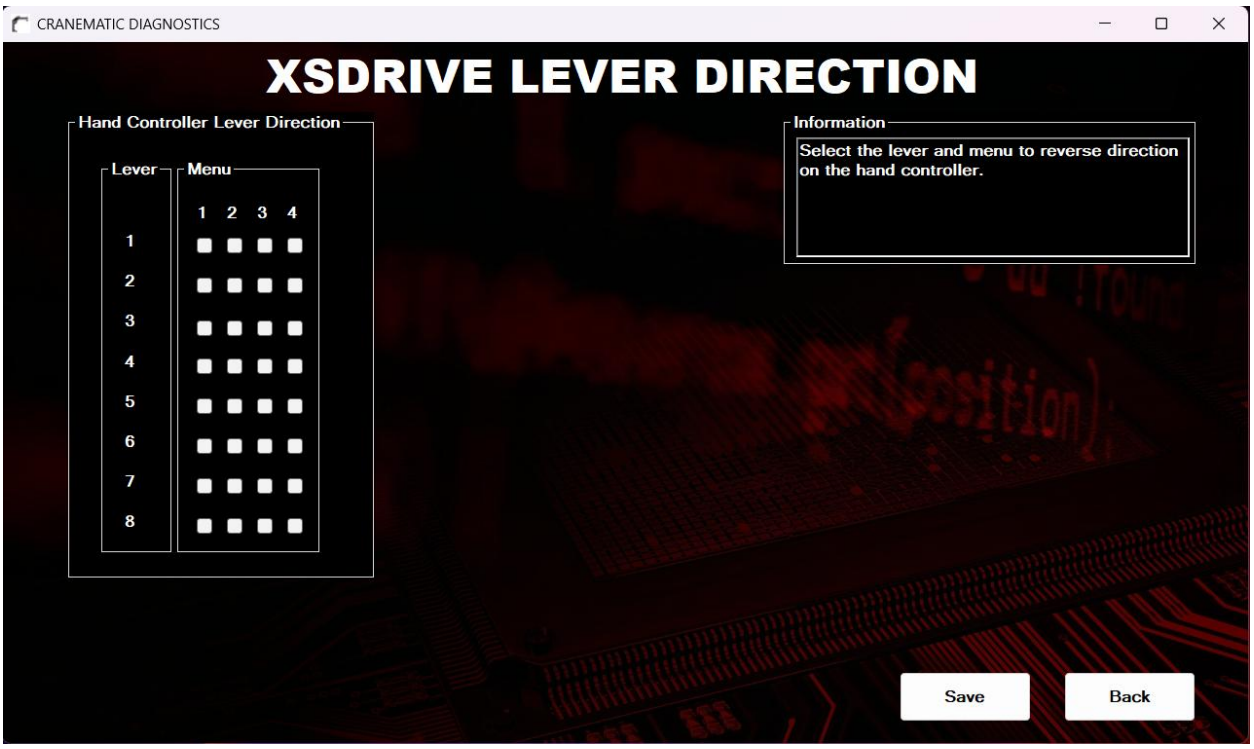
⑤ **Stabilizer dump function activation -** Enables the dump function based on the menu in which the stabilizer legs dump is configured.

⑥ **Valve type -** Selects the valve type used by the system. Each valve type applies its own predefined parameter set to optimize movement behavior.

⑦ **Tool stop selection -** Selects which tool will be stopped when the pressure limit is exceeded.

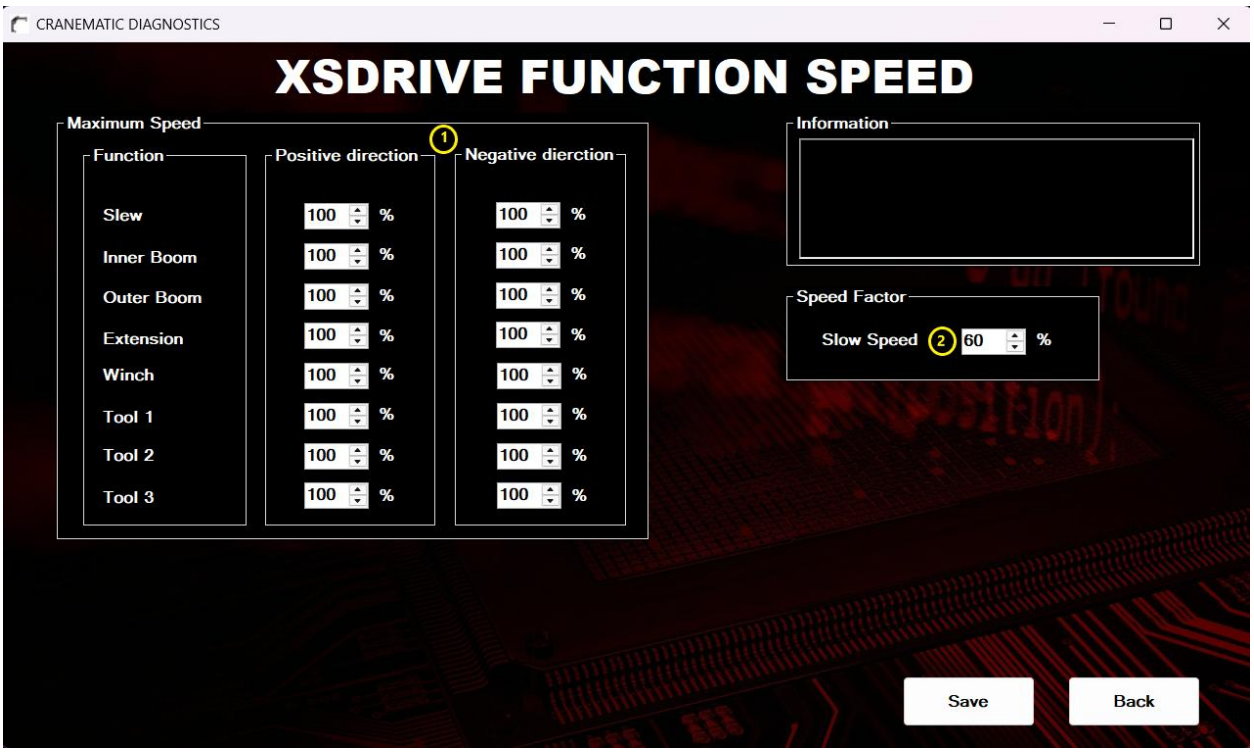
⑧ **Tool stop pressure level -** Defines the pressure level, expressed as a percentage, at which the selected tool will be stopped.

9.2.2 Lever Direction (XS Drive)



Select the lever and the menu for which the remote lever direction should be changed. This allows the control direction to be adapted to the selected menu or operating situation, ensuring intuitive crane operation.

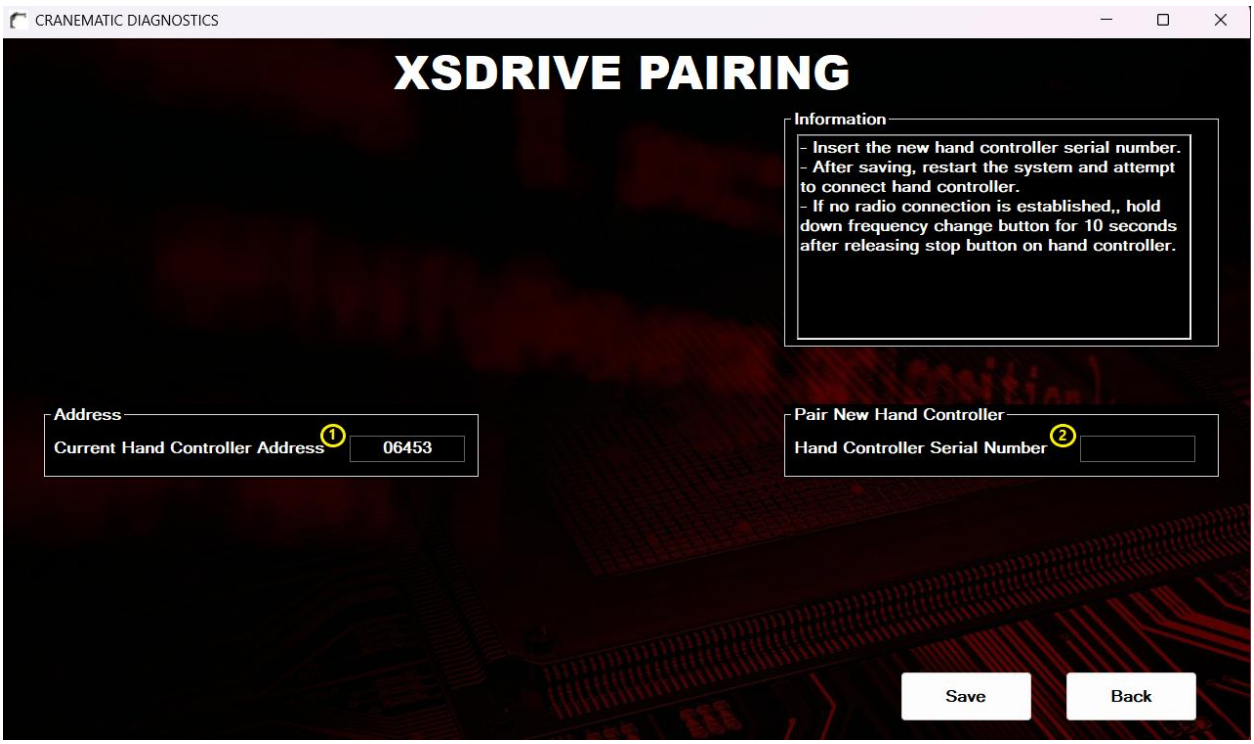
9.2.3 Function Speed(XS Drive)



① **Function maximum speed limits -** Defines the maximum operating speed for each function, configured separately for both movement directions.

② **Slow speed factor -** Defines the speed reduction factor, expressed as a percentage, that is applied when slow speed mode is selected on the remote control.

9.2.4 Remote Pairing(XS Drive)



① **Current hand controller address -** Displays the address of the currently paired hand controller. This address can be found on the identification label on the remote controller.

② **New hand controller address -** Enter the address of a new hand controller to be paired. The address can be found on the identification label on the remote controller.

Pairing a New Hand Controller

To pair a new hand controller with the system, follow these steps:

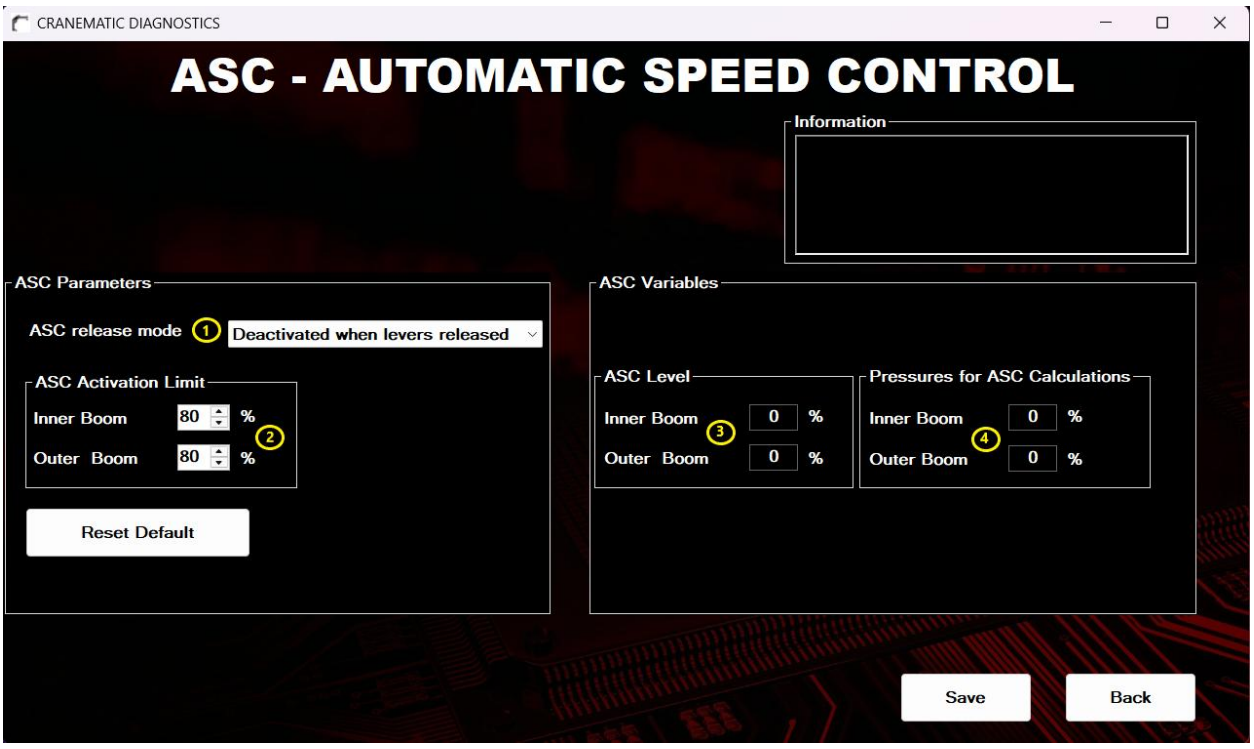
- Enter the serial number (address) of the new hand controller.
- Save the changes.
- Restart the system.
- Attempt to connect the hand controller.

If no radio connection is established:

- Release the stop button on the hand controller.
- Press and hold the frequency change button for approximately 10 seconds.

The system will then attempt to establish the radio connection.

9.2.5 ASC-Automatic Speed Contol(XS Drive)



① **ASC release mode -** Defines how ASC is released, either automatically or only when all levers are in the neutral position.

② **ASC activation pressure -** Defines the pressure level, expressed as a percentage, at which ASC becomes active.

③ **Current ASC level -** Displays the current ASC level at the present moment.

④ **ASC pressure readings -** Displays the pressure value currently read by the control unit for ASC operation.

10 STABILITY

10.1 Stability Digital Sensors

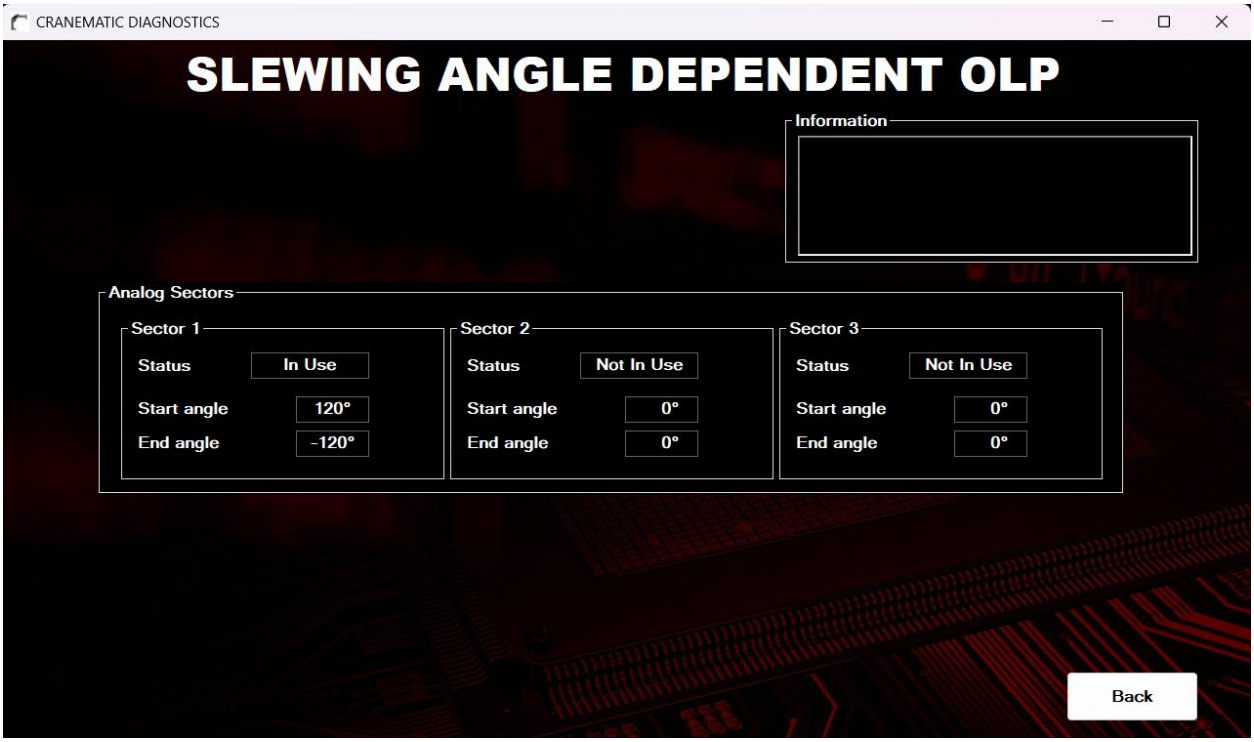
① **Sector status -** Indicates whether the sector is active or not.
If sensor connections are selected, the sector is automatically set to active.

② **Sector type -** Selects the sector type, which defines how the sector affects crane operation.

③ **Sector capacity -** Defines the allowed lifting capacity when the crane is operating within the sector.

④ **Sensor connections -** Defines the positive and negative input channels used by the sensors for sector detection.

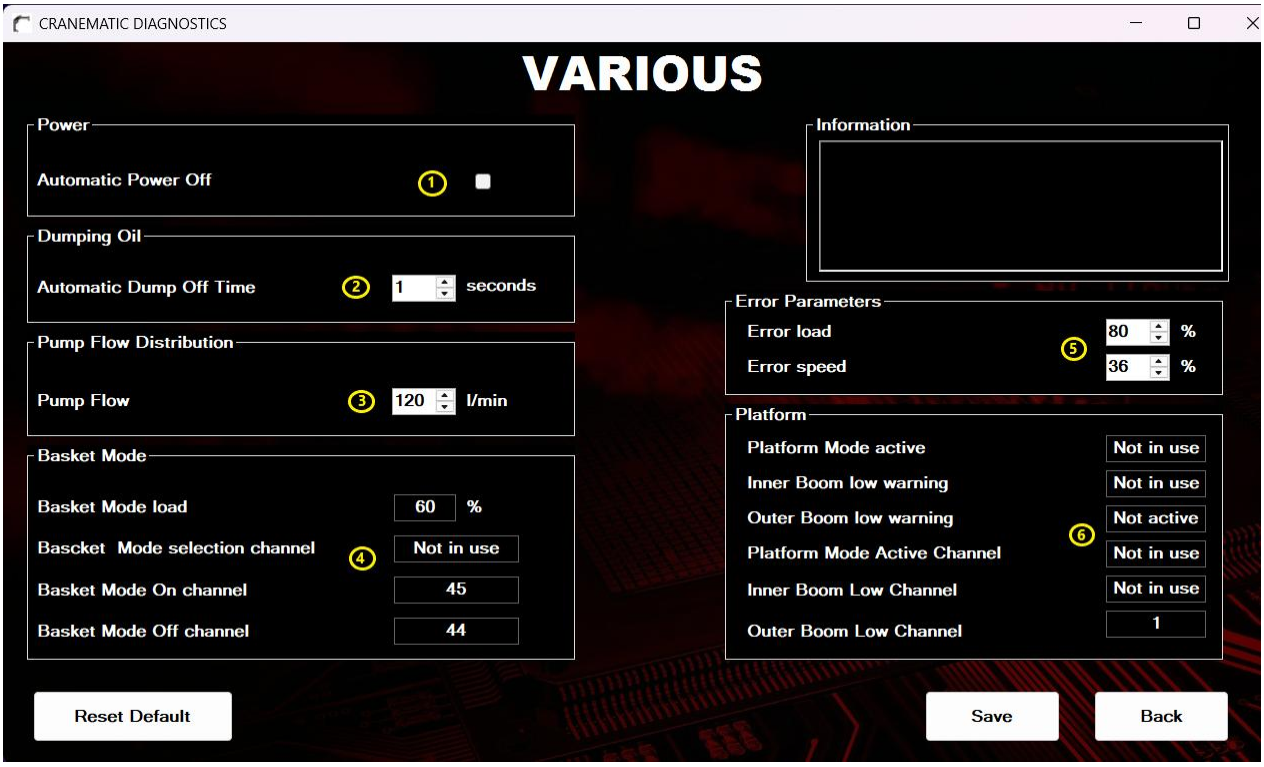
10.2 Stability Analog Sensors



The status indicator shows whether the angle sector is currently in use.
The angle display shows the start and end angles that define the active sector range.

11 VARIOUS

11.1 Various Older Versions



① **Automatic system shutdown -** Enables or disables automatic system shutdown after 30 minutes of inactivity.

② **Dump activation time -** Defines how long the dump function remains active after the lever is released and all levers have returned to the neutral position.

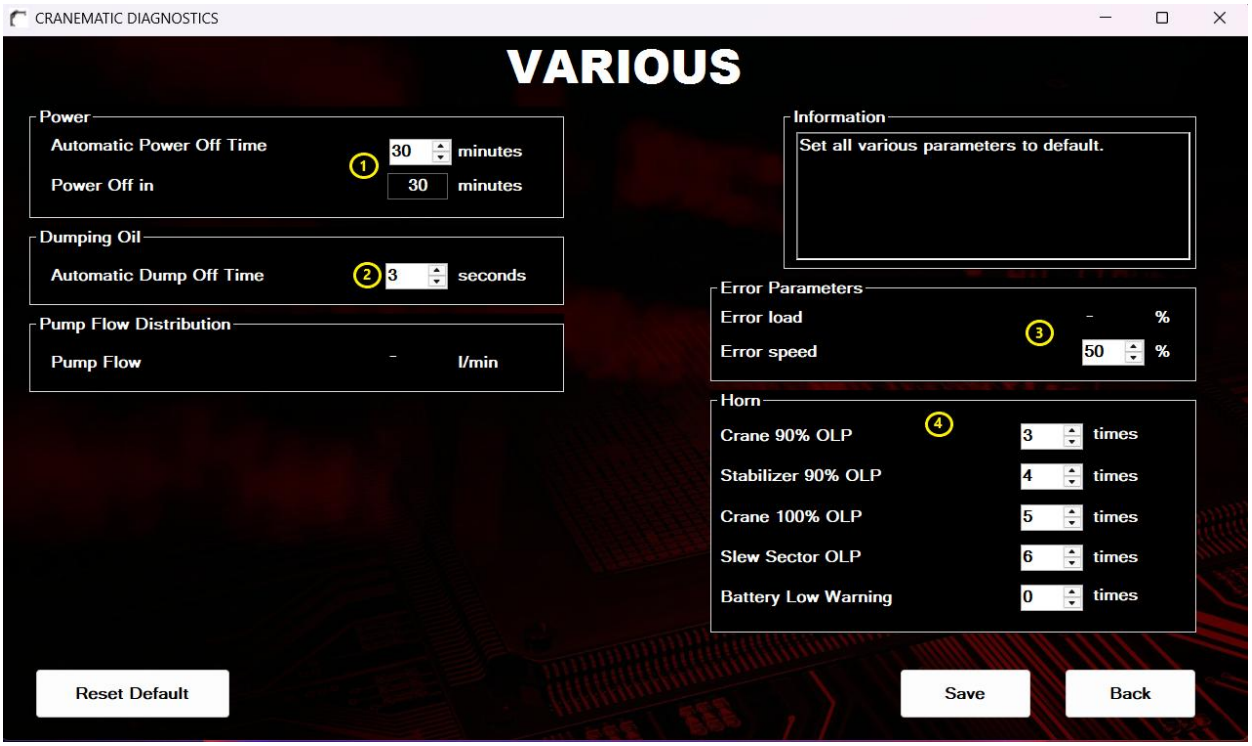
③ **Pump flow setting -** Defines the pump flow supplied to the crane.
This setting is required when pump flow distribution is used.

④ **Basket mode information -** Displays information related to basket mode operation.

⑤ **Error mode limits -** Defines the maximum allowed speed and lifting capacity when an active error is present in the system.

⑥ **Platform information -** Displays information related to platform operation.

11.2 Various Newer Versions



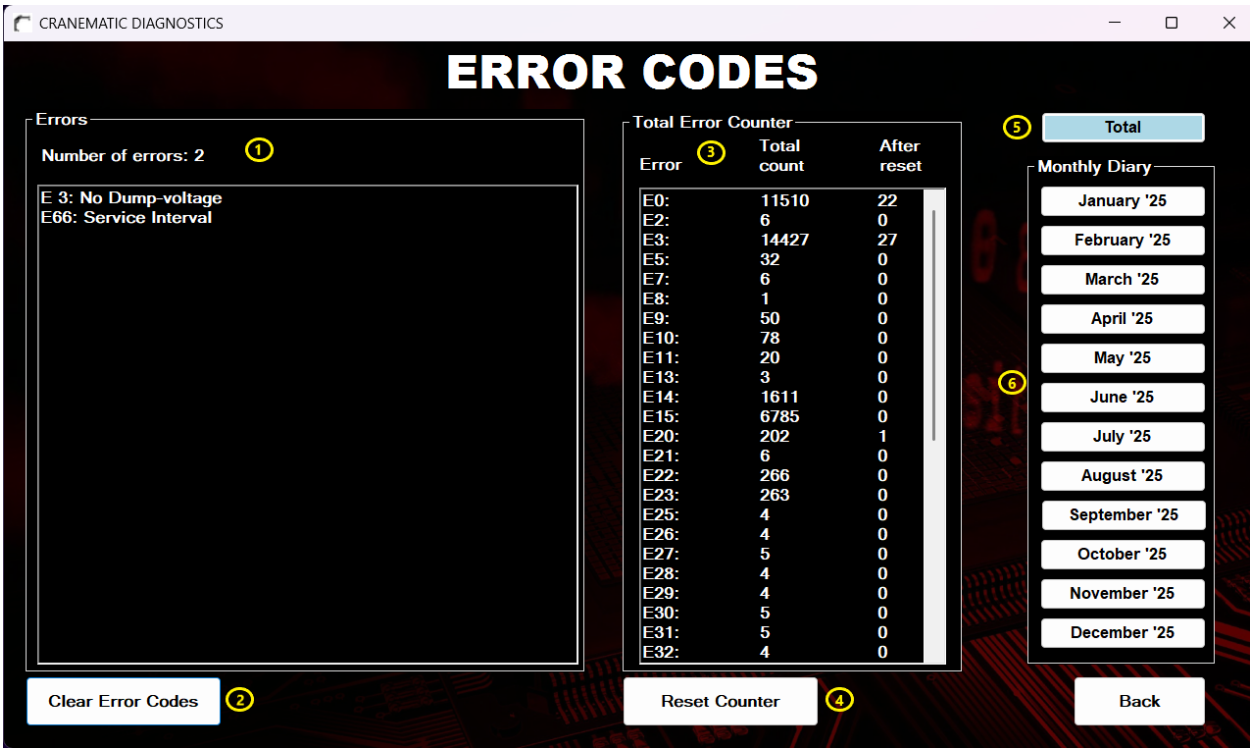
① **Automatic system shutdown -** Defines the time after which the system will automatically turn off when not in use.
A value of "**0**" disables automatic shutdown.
A countdown displays the remaining time until the system turns off.

② **Dump activation time -** Defines how long the dump function remains active after the lever is released and all levers have returned to the neutral position.

③ **Error mode limits -** Defines the maximum allowed speed and lifting capacity when an active error is present in the system.

④ **Horn configuration -** Configures the horn behavior, how many times it will sound in each defined situation.

12 ERROR CODES



① **Active error codes -** Displays all error codes that are currently active in real time.

② **Clear error codes -** Refreshes the error list. Inactive errors are removed, while any errors that are still active will reappear.

③ **Error history -** Displays all error codes that have occurred during the system's lifetime and since the last reset.

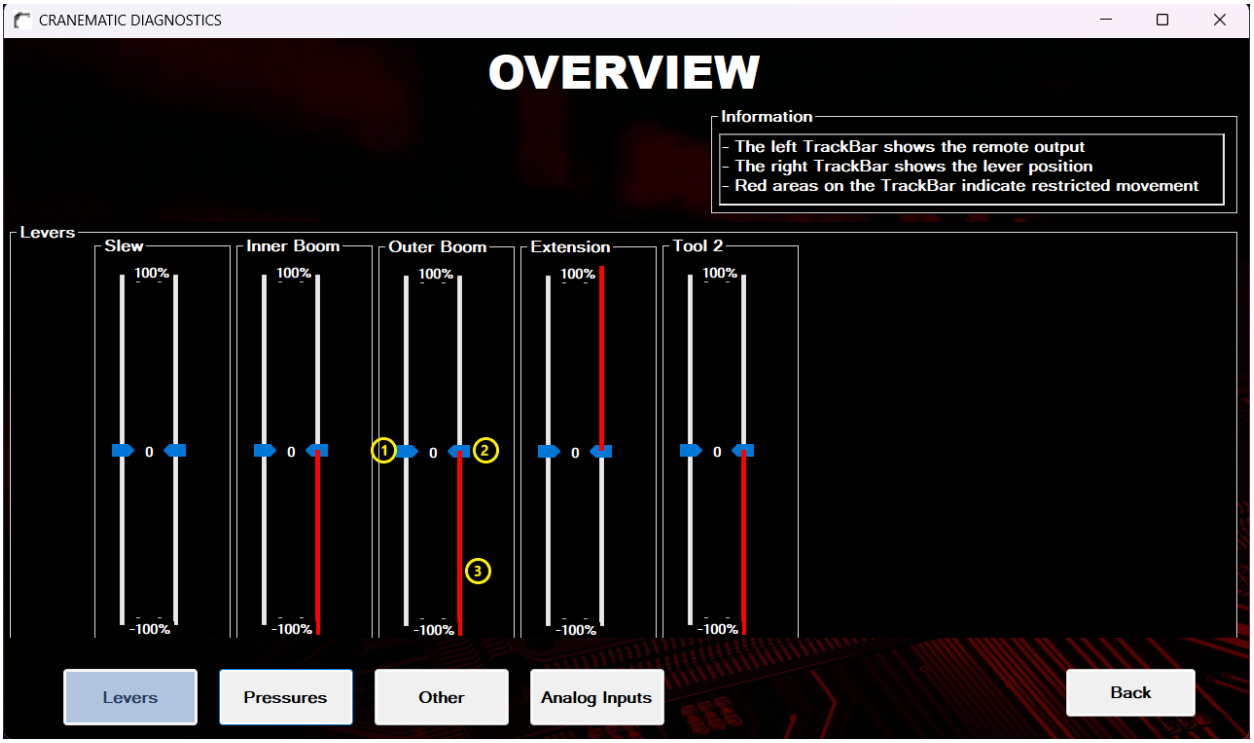
④ **Reset counters -** Resets the counters shown in the *"After Reset"* column.

⑤ **Total error counters -** Displays the number of occurrences for each error, both for the total system lifetime and since the last reset.

⑥ **Monthly counters -** Displays error occurrence counts by month.

13 OVERVIEW

13.1 Overview Levers

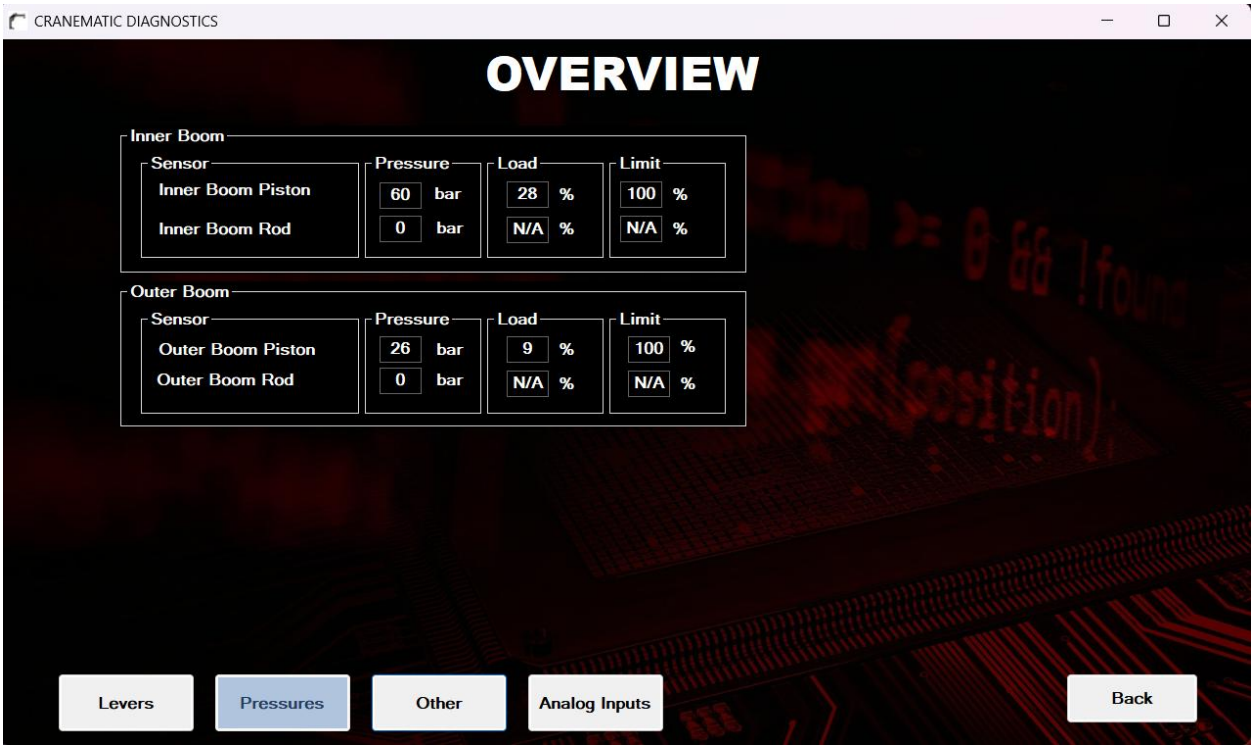


① **Remote lever input indicator -** Displays a visual bar representing the input from the remote control levers.

② **Spool sensor indicator -** Displays a visual bar representing the input values read from the hydraulic distributor spool sensors.

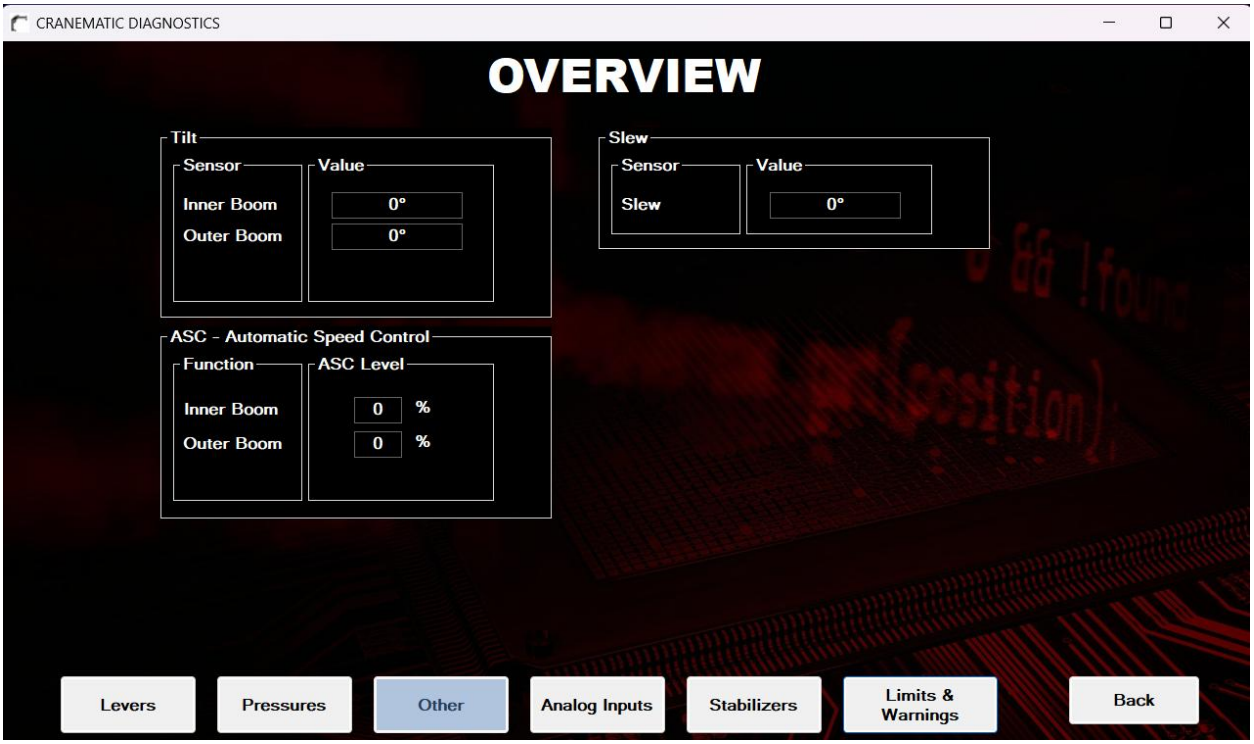
③ **Movement limit indicator -** A red marker indicates the maximum allowed movement limit for hydraulic distributor.

13.2 Overview Pressures



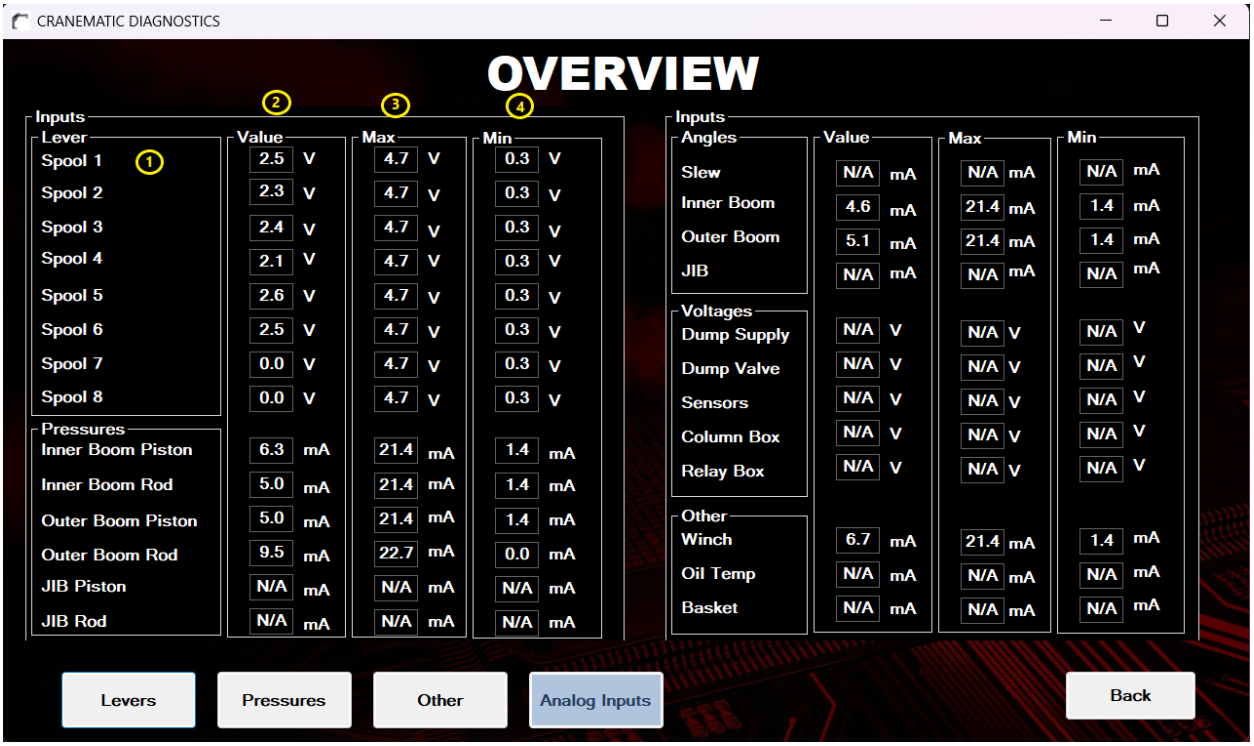
Displays an overview of all pressure sensors in the system, including current pressure values, calculated loads, and configured pressure limits.

13.3 Overview Other



Displays an overview of all other sensor values in the system, providing a real-time view of sensor inputs used by the control unit.

13.4 Overview Analog Inputs



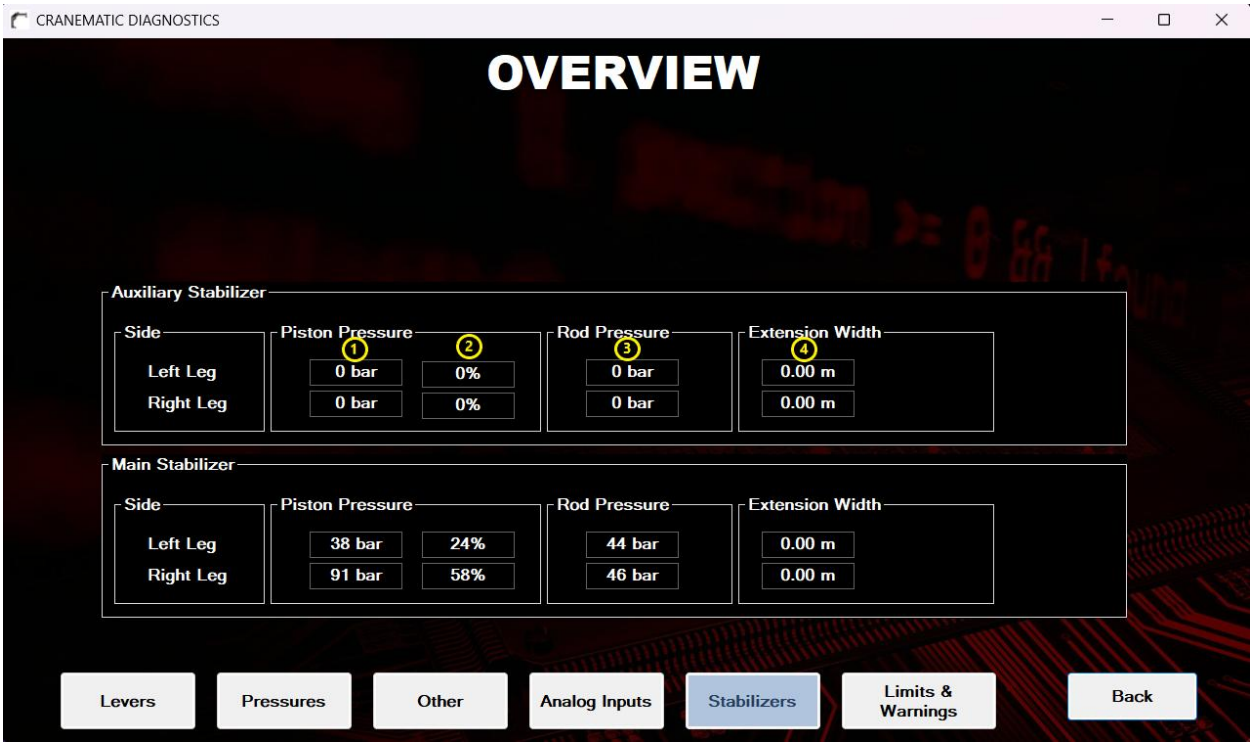
① **Input identification -** Lists all analog inputs by their assigned names.

② **Measured input value -** Displays the actual raw value received from each sensor.

③ **Maximum input limit -** Displays the maximum allowed value for each input.

④ **Minimum input limit -** Displays the minimum allowed value for each input.

13.5 Overview Stabilizers



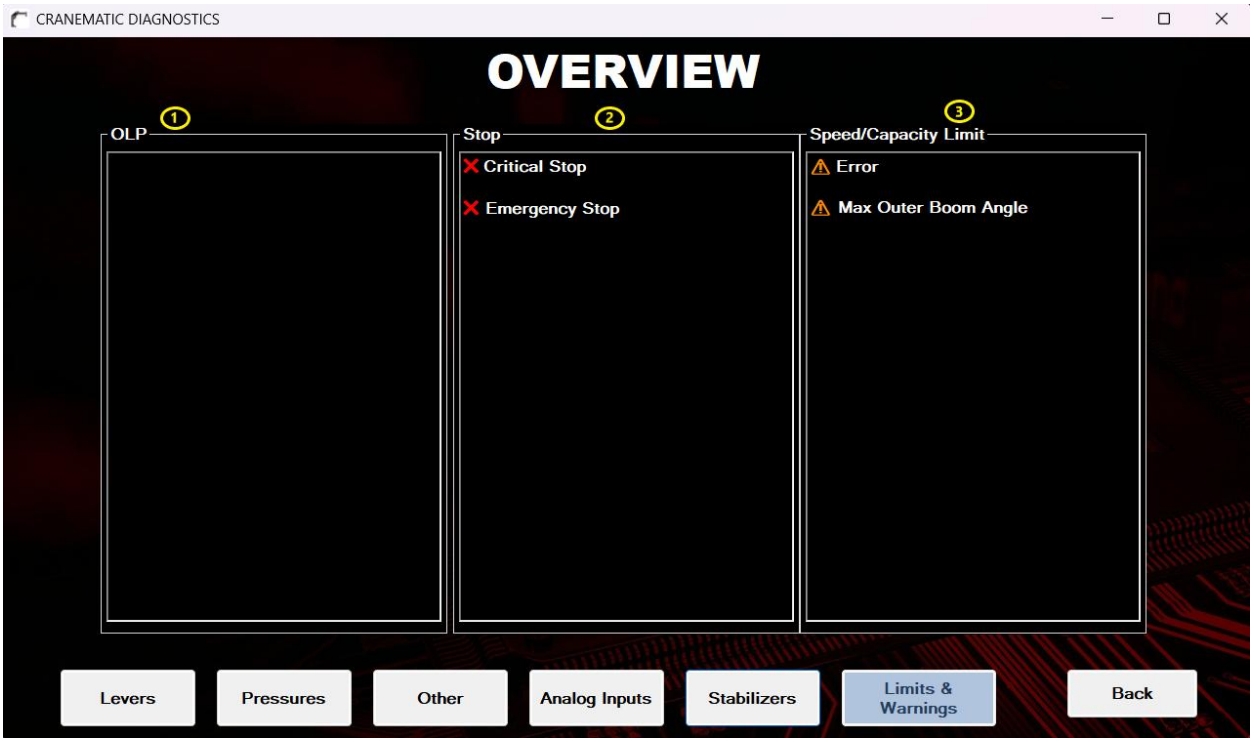
① **Stabilizer piston side pressure -** Displays the actual pressure measured on the piston side of each stabilizer leg.

② **Stabilizer pressure percentage -** Displays the pressure on each stabilizer leg as a percentage of the maximum allowed pressure.

③ **Stabilizer rod side pressure -** Displays the actual pressure measured on the rod side of each stabilizer leg.

④ **Stabilizer extension position -** Displays how far each stabilizer leg is extended.

13.6 Overview Warnings & Limits

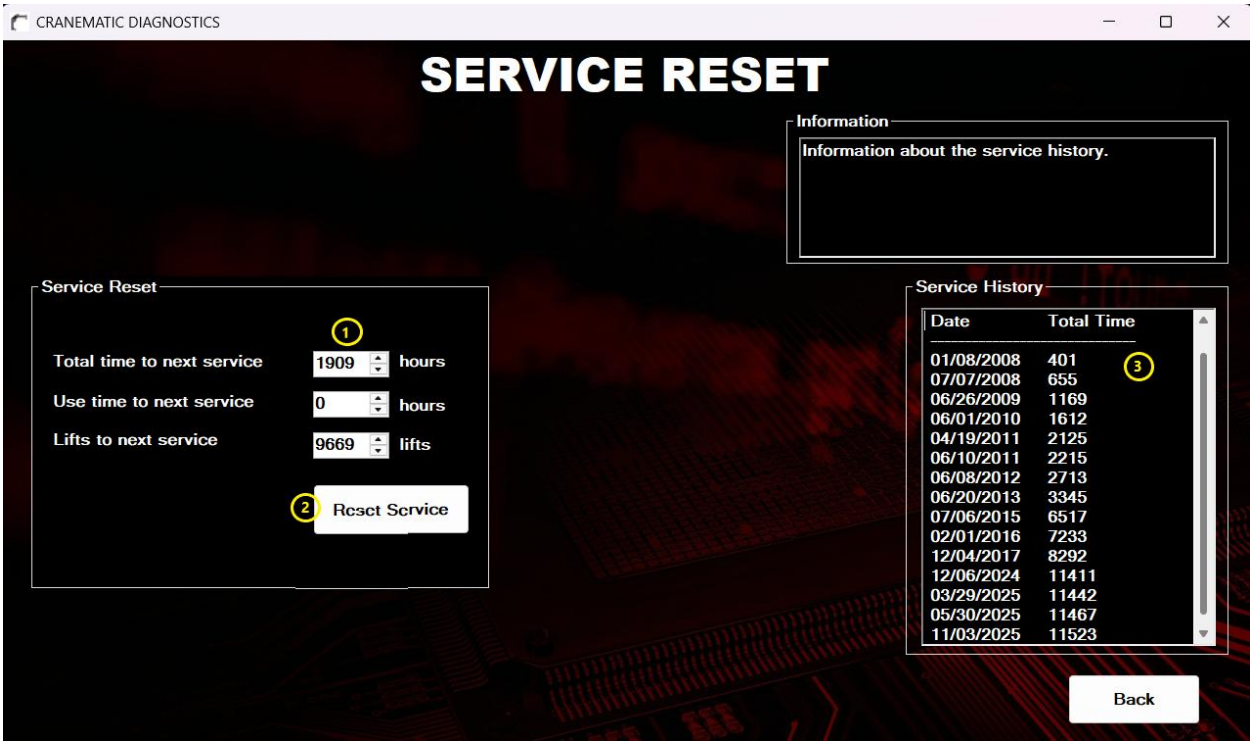


① **Overload protection -** Displays limitations applied due to overload protection conditions.

② **Movement blocking -** Displays the reason why crane movements are currently blocked.

③ **Speed and capacity reduction -** Displays the reason why crane speed and lifting capacity have been reduced.

14 SERVICE RESET



① **Service interval settings -** Defines the operating time and counter values for the next scheduled service.
When a value reaches "**0**", the service indicator is activated and the corresponding service error is displayed in the error codes list.

② **Reset service -** Saves the new service interval values and resets the service indicator.

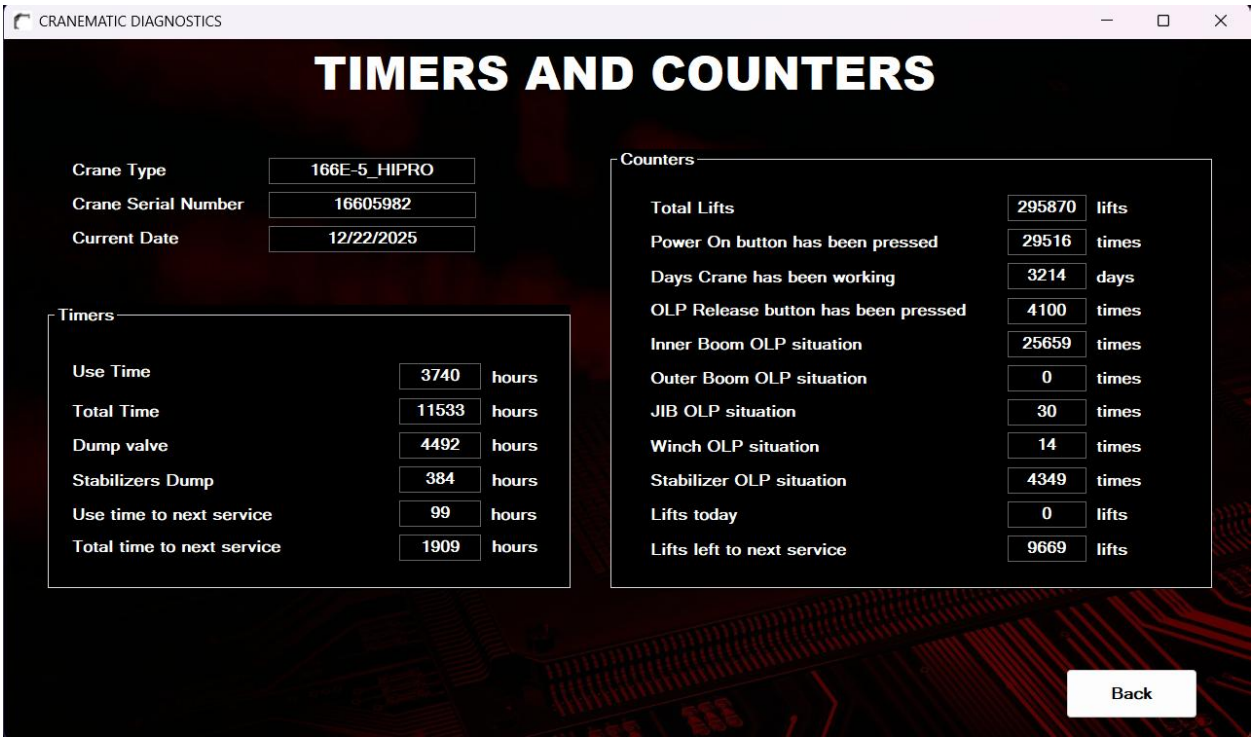
③ **Service history -** Displays a history of previous service resets for the crane.

14.1 Resetting the Service Interval

After the crane has been serviced, reset the service interval as follows:

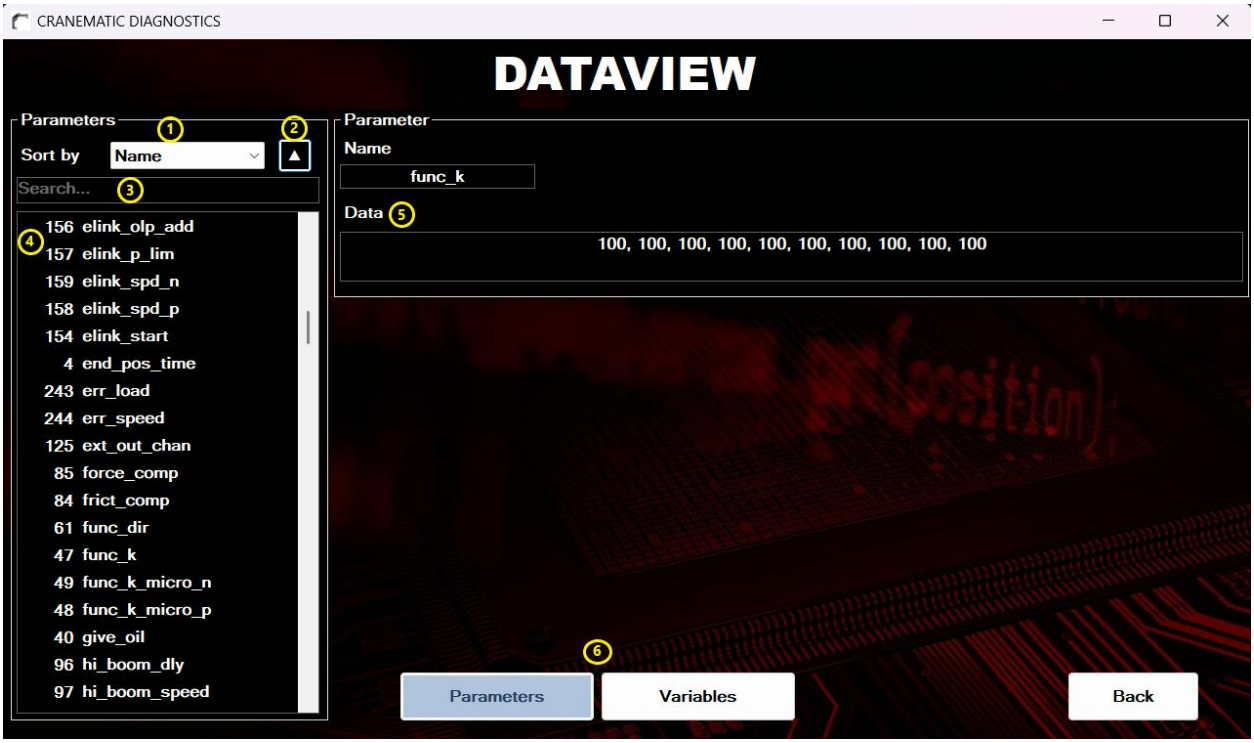
1. Enter the new times and counters for the next service interval (see item 1).
2. Press **Reset Service** (see item 2).

15 TIMERS



This section displays current crane operating information, including runtime timers and event counters.
The information provides an overview of crane usage and operating history for service and diagnostic purposes.

16 DATAVIEW



① **Sort mode selection -** Selects whether the data list is sorted in alphabetical or numerical order.

② **Sort direction -** Changes the sorting direction.

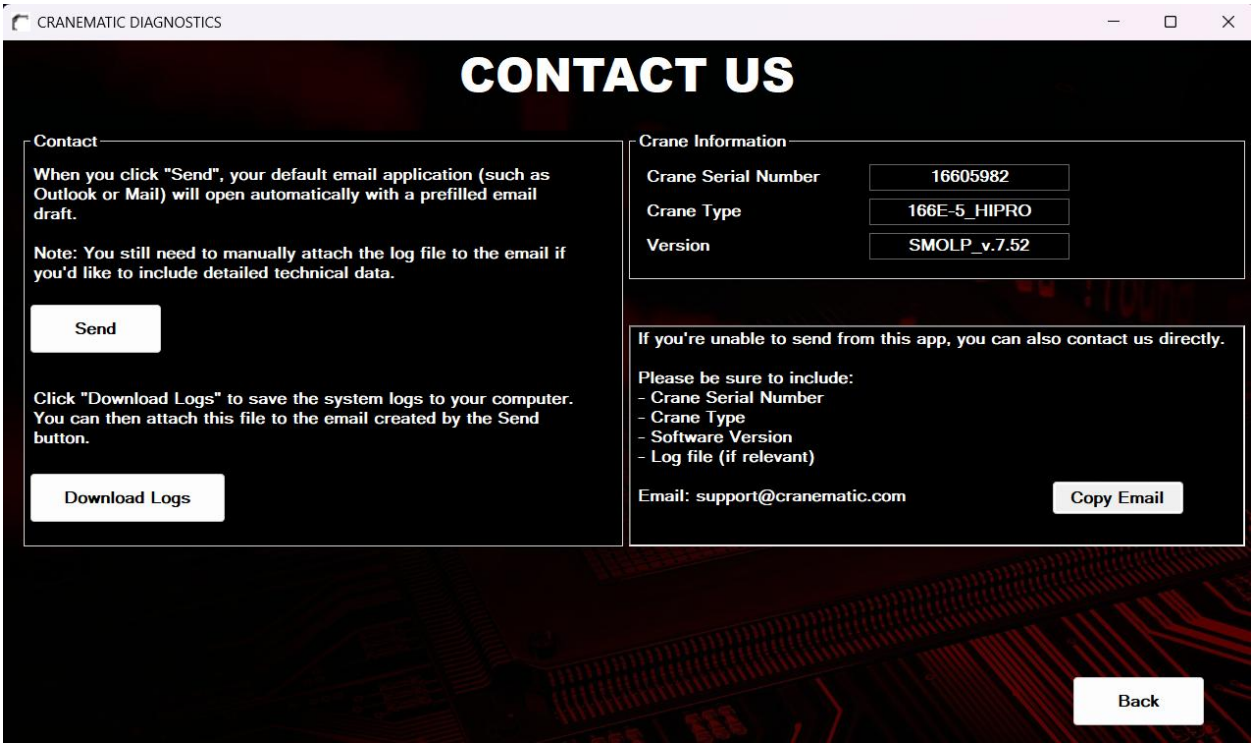
③ **Search -** Enter a search term and press "**Enter**" to display related data items.

④ **Data list -** Displays the list of available data items based on the selected sorting and filtering options.

⑤ **Selected data details -** Displays detailed information for the data item selected from the data list.

⑥ **Data type selection -** Allows switching between parameters and variables.
Both views follow the same sorting and search logic.

17 CONTACT US



This section provides contact information and support options.
Users can automatically generate and send support messages with system information included, or manually fill in the required details.

Log files can be downloaded and attached to support requests, allowing detailed diagnostic information to be sent for analysis.