TS350

TELESCOPIC CRANES OPERATORS' MANUAL

VERSION 3

November 2025

The purpose of this manual is to provide the customer with the operating procedures essential for ensuring proper machine operation for its intended use. The importance of correct and safe usage cannot be overstated. All information contained in this manual must be read and fully understood before any attempt is made to operate the machine.

Since the manufacturer has no direct control over the machine's application or operation, compliance with safe working practices remains the responsibility of the user and their operating personnel.

All procedures described in this manual are based on use of the system under proper operating conditions and without deviation from the original design. Any alteration or modification of the equipment is strictly prohibited unless prior written approval is obtained from Elec-Mech (Pty) Ltd.

The Safe-Aid TS350 Rated Capacity Indicator (RCI) / Load Moment Indicator (LMI) is intended solely as an aid to the operator. When correctly configured, the system will warn the crane operator of an approaching overload condition or any situation that may result in equipment damage, property damage, or injury to the operator or personnel in the vicinity of the crane and its load.

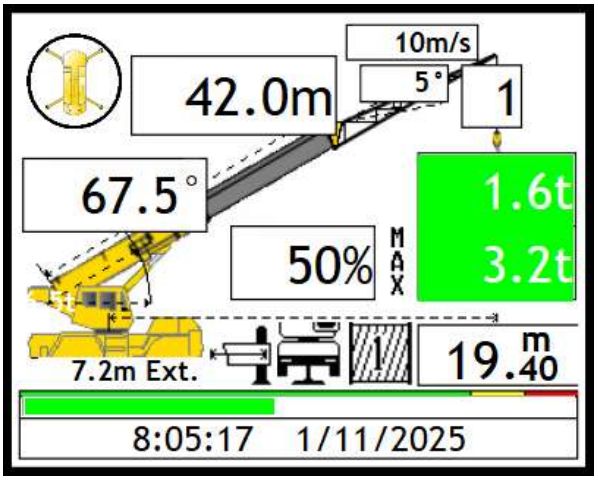
Under no circumstances should this system be regarded as a substitute for the operator's training, experience, or sound judgment when performing approved crane-operating procedures. The ultimate responsibility for the safe operation of the crane lies with the crane operator. If the system is incorrectly set, it may not prevent damage caused by overloading or related factors.

Before operating a crane fitted with a Safe-Aid TS350 RCI, the operator must carefully read and understand the information in this manual. Proper system performance depends on routine daily inspections. Any suspected fault or visible damage must be reported immediately to the responsible person before the crane is used.

Contents

SYSTEM USE

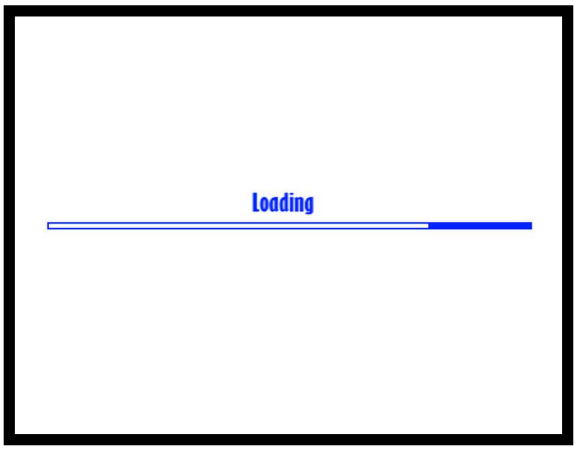
The TS350 unit is designed with ease of operation in mind. The crane configuration is selected and confirmed by the operator before the system goes into its operating/monitoring screen, requiring no further input from the operator unless the crane configuration is changed. Before this is done the crane will remain in safe mode, i.e. the dump circuit (Auto Stop) will be operational (if the crane has a dump system fitted). All inputs to the system are done by the operator via the touch screen including the buzzer override function and momentary bypass. The touch screen is sensitive to touch therefore it is **not** necessary to **push hard** on the screen (*if touch screen does not work or selects incorrectly see* ***Touch Screen Calibration***).



SYSTEM STARTUP

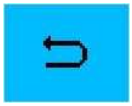
The TS350 display (LMI) will automatically come on when the crane is powered up, the buzzer will sound once then the system will run a CRC (cyclic redundancy check) to make sure that all raw data is correct.

Once the system has completed the CRC the buzzer will sound again, and a set of internal diagnostics (watchdogs) will be utilised to verify that all inputs and outputs are working correctly.



CRANE CONFIGURATION SELECTION

The system will now run through a series of selections to establish the current crane configuration. These selections are setup by the crane manufacturer and correspond to the relevant load chart and may or may not be displayed in the same order as laid out in the manual.

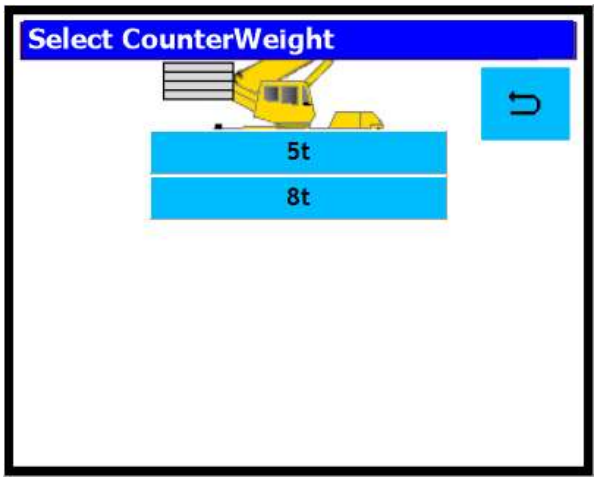
Use the back button  ***to start the complete selection from the beginning at any time.***

Some manufacturers have telescoping monitoring conditions that may require the boom to be fully retracted before changing the configuration, in this case a **Retract Boom** message will be displayed when trying to change the configuration with the boom extended.

Laid out below are the most common selections available.

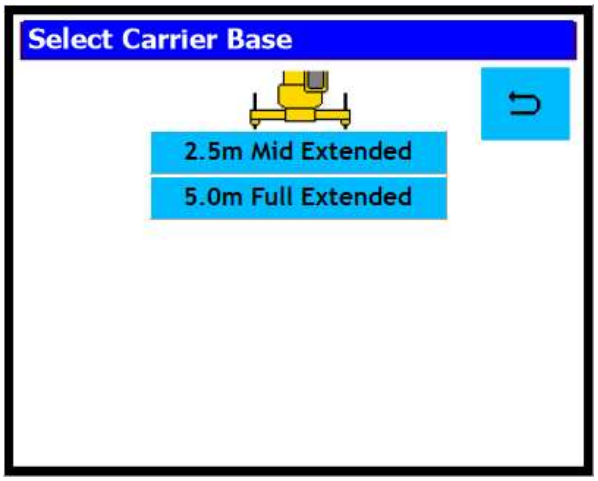
COUNTERWEIGHT

Select the counterweight fitted.



CARRIER BASE

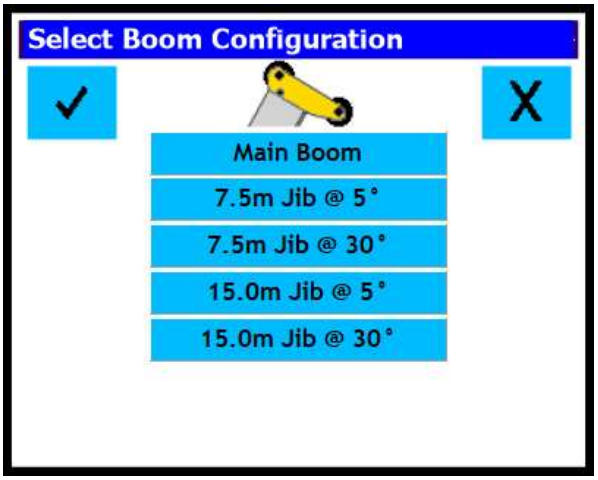
Select the current carrier base.



BOOM CONFIGURATION

Each boom configuration can be selected by pushing on the configuration that is required. Some manufacturers have telescoping monitoring conditions that may require the boom to be fully retracted before changing configuration, in this case a **Retract Boom** message will be displayed when trying to change the program with the boom extended.

The correct selection of the configuration is imperative as this determines the correct rated capacities and work areas. If selected incorrectly, a higher rated capacity than allowed could be selected for that crane configuration, this is very dangerous as it can cause the boom to bend / break or the crane to tip / fall over.

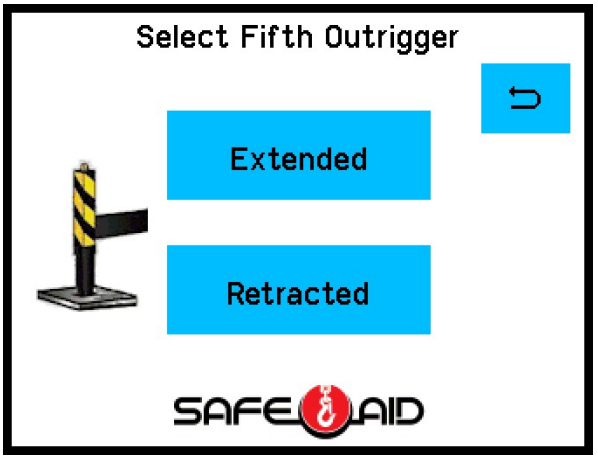


FIFTH OUTRIGGER

Truck-mounted cranes may be equipped with additional outriggers—front jack, rear jack, or both—which can be either extended (down) or retracted (up). The position of these outriggers directly affects the crane's rated lifting capacities when operating over the front or rear. If the 5th outrigger is retracted, it may result in reduced lifting capacity or trigger a slew error. To ensure accurate setup:

Select "**Extended**" if the 5th outrigger is **down**

Select "**Retracted**" if the 5th outrigger is **up**

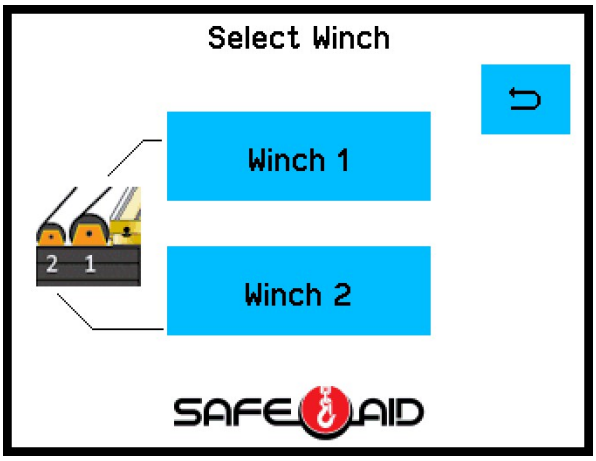


WINCH

This step will be skipped if the system has been programmed with only one winch.

The following option is to determine the winch being used for lifting. Simply select the option required. Select the relevant winch.

Winch 1 – Main Winch
Winch 2 – Auxiliary Winch

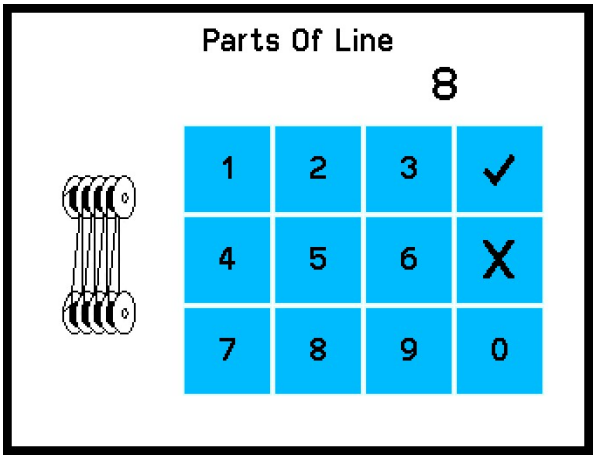


PARTS OF LINE

This step will be skipped in the following conditions:

- ***The system has been programmed with fixed parts of line.***
- ***A fixed hook has been selected (no winch rope).***

Once the correct winch has been selected the number of parts of line (reeving / falls) for the hook block (total parts of line between hook block and sheave wheels) must be selected. A numerical keypad will be displayed. Key in the number of parts of line for the selected winch followed by enter ✓ Press the clear button X if the incorrect number is keyed and start again. Once the enter button is pressed the next selectable option or the operating screen will appear



While working in the main running screen or if an error has been made and the parts of line needs to be changed, press the block on the main running screen where the winch rope goes down to the lifted load and the system will respond by changing to the Parts of Line entry screen.

DEDUCTIONS

This step will be skipped in if no deductions for the relevant program are available.

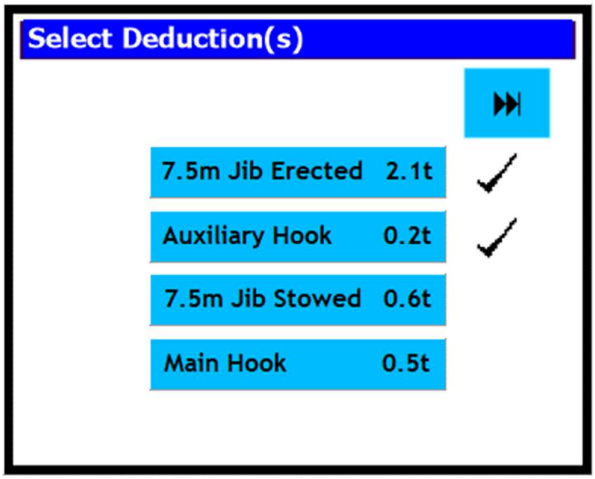
For cranes where the main boom is used in conjunction with an erected fly jib—or where the main hook block remains attached while the fly jib is in use—the manufacturer may specify load deductions that must be subtracted from the rated capacity for safe operation.

These deductions are automatically applied by the TS350 system once the appropriate configuration options are selected during setup.

To apply deductions:

Press the required deduction option; a ✓ will appear next to the selected item

If multiple deductions apply, select each relevant option

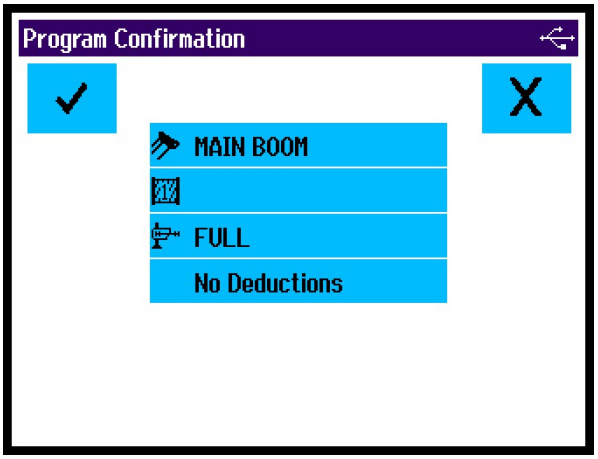


Once all applicable deductions are selected, press ⏭ to proceed

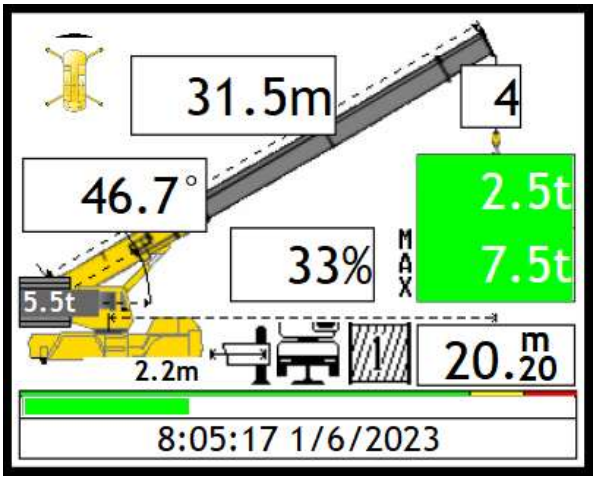
PROGRAM CONFIRMATION

This screen will only be displayed if the system has been programmed to allow this, if this is not programmed the system will go through all the selections again on power up.

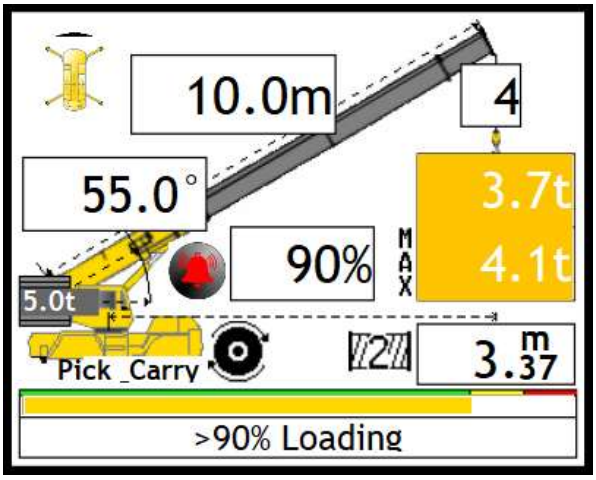
If none of the configuration settings have changed when powering up to the confirmation screen confirm by pressing the ✓ to continue to the working screen. If any of the configurations have changed, then press the X and the system will automatically go to the first configuration selection. Select the correct configuration step by step and the system will automatically save the configuration for the next start up.

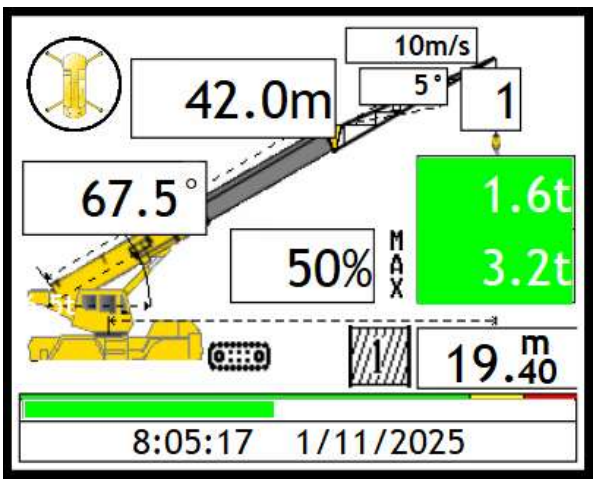


OPERATING SCREENS



All the crane and system information can be viewed from here including all the parameters selected from power up.





Should a different program need to be selected, press the crane graphic on the screen, the system will go back to the beginning as on system start up. Repeat the steps above.

In operating mode, you can see all the current parameters of the crane.

 **or**  **or**  **or**  **or**  **Carrier Base:** This is the current carrier base – represented by the outrigger picture with outrigger length or a picture of a tyre or tracks with the travel speed.

 **Fifth Outrigger:** This is the fifth outrigger position down selected.

 **Fifth Outrigger:** This is the fifth outrigger position up selected.

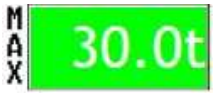
 **Winch:** This is the main winch selected

 **Winch:** This is the auxiliary winch selected

 **Counterweight:** This is the total weight of counterweights fitted

 **Radius:** This is the current radius from centre line of rotation to the centre of the hook block (load) if the hook block (load) is suspended and hanging vertical.

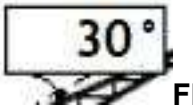
 **Lifted Load:** This is the load on the hook at the present time, if the green light and the load are flashing it is a tare load (the tare has been pressed).

 **Rated Capacity:** This is the maximum load allowed to be picked up with the selected configuration at that current radius as specified by the manufacturer.

 **Main Boom Length:** This displays the current total main boom length.

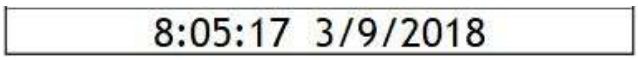
 **Parts of Line:** This is the current parts of line (reeving / number of falls) selected.

Main Angle: This displays the main boom angle.



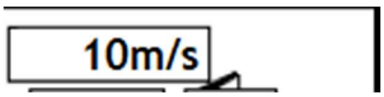
Fly Angle*:* A fixed angle will be shown for a fixed fly and for a monitored fixed fly the angle will change as the fly angle changes. The fixed fly angle is measured relative to the main boom i.e. 0° being straight with the main boom and increasing as the offset to the main boom increases.

Utilisation*:* Percentage utilisation is the percentage of rated load used by the current lifted load.



Date & Time*:* This is the current date and time.


Utilisation Bar*:* The percentage utilisation is also displayed graphically by a bar graph, going from green (0% - 89%), then amber (90% - 99%) and finally red (100% and above) increasing incrementally with the percentage utilisation.



Windspeed*:* This is the current windspeed (optional).

Area Selection: This is not user selectable and shows the current area the crane is working in:


360 Degrees


Over Side & Rear


Direct over front


Direct Over Rear


Direct Over Front & Rear


Over Side

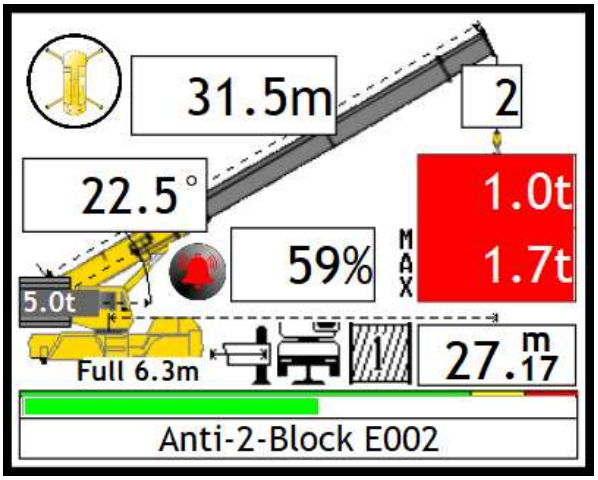

Over Front & Side


Over Front Outrigger to Outrigger


Over Rear Outrigger to Outrigger

ERROR MESSAGES

The TS350 will sound a buzzer, and the green load blocks will be replaced by orange or red blocks if any error occurs on the system. These errors are displayed at the bottom of the screen as either an error code only or the error description with the error code e.g. Anti-2-Block E002 where program selection is normally displayed. If more than one error occurs the errors will scroll on the bottom until rectified.



For all the errors, we have given indication of the problem and the common solutions, these can be done by the operator or an individual who has some basic crane knowledge. If the given solution does not work, please contact the original installer or someone from our service network where we can try and help telephonically or send a technician to repair the system.

SAFE-AID TS350 SYSTEM ERROR TABLE

CODE	SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION	BASIC FAULT-FINDING SOLUTION
E001	Slew Error	Boom is not over an area covered by the current configuration selected.	Slew the boom into a safe working area.	Check area selection sensor or Potentiometer.
E002	Anti-2-Block	The main or auxiliary hook has been pulled up too close to the boom head sheave wheels.	Lower Winch 1 or 2.	Troubleshoot A-2-B errors.
E003	Anti-2-Block Aux	The hook has been pulled up to close to the jib tip sheave wheel.	Lower Winch	Troubleshoot A-2-B errors.
E004	≥ 90% Loading	The lifted load is greater than or equal to 90% of the rated capacity	Move load into safe working position - winch down, boom up or retract boom.	Check load calibration.
E005	Overload	The lifted load is greater than or equal to 100% of the rated capacity	Move load into safe working position - winch down, boom up or retract boom.	Check load calibration.
E007	Length Exceeded	The length allowed for the selected configuration has been exceeded or the length is greater than maximum manufacturer's specified length.	Retract boom & check configuration selection is correct.	Check length calibration.
E008	Low Angle	The angle of the boom is below the crane manufacturer's minimum specification.	Raise boom.	Check angle calibration.
E009	Extend Boom	Crane is working below the specified working length for the selected boom configuration.	Extend boom to the correct working length & check program selection.	Check length calibration.
E010	Rope Overload	The maximum line pull specified by the manufacturer has been exceeded.	Put Load down – check correct parts of line selected.	Check Parts of Line is set correctly or check load calibration.
E011	Manual Pin Error	The manual pin is still inserted while extending boom.	Remove pin to prevent damage to boom or pin.	Check manual pin monitoring switch and wiring.

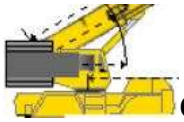
CODE	SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION	BASIC FAULT-FINDING SOLUTION
E012	Low Supply Voltage	Crane supply voltage has dropped below 10VDC	Check system supply voltage.	Check battery voltage and voltage at M400
E013	Retract Boom	Program or Mode has been changed forcing the system to need boom position reset.	Retract boom to fully retracted state.	Check boom length and all retract switches.
E014	Incorrect M400	M400 software is incorrect for system setup type	Call installer or service technician.	Check system setup is correct
E025	Telesequence Error	The boom has been telescoped incorrectly NOT according to the manufacturer's specifications.	Retract boom fully and telescope according to the manufacturer's specifications.	Check all length calibrations & boom telescope sequence monitoring switches.
E027	Main A400 No Comms	No communication between Main A400 and M400 / display.	Call installer or service technician.	Check cabling & Wiring.
E028	Aux A400 No Comms	No communication between Aux A400 and M400 / display.	Call installer or service technician.	Check cabling & Wiring.
E029	M400 No Comms	No communication between M400 and display.	Call installer or service technician.	Check cabling & Wiring.
E031	High Angle	The angle of the boom is above the crane manufacturer's maximum specification.	Lower boom.	Check A400 angle calibration.
E033	R400 No Comms	No communication between R400 and M400 / display.	Call installer or service technician.	Check cabling & Wiring.
E034	No Load Chart Data	You are working out of the manufactures specified working range – incorrect working radius	Lower Boom to within the manufacturers specified working range.	Check angle & length Calibration.
E035	No Moment Value	Pressure Error	No empty and loaded moment data at specific length and angle.	None.
E038	Anti-2-Block Short Circuit	There is a short circuit between the two A-2-B wires.	Call installer or service technician.	Check for damage on boom length cable or boom tip wiring.

CODE	SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION	BASIC FAULT-FINDING SOLUTION
E039	Anti-2-Block Fly Short Circuit	There is a short circuit between the two A-2-B wires on the fly jib.	Call installer or service technician.	Check for damage on boom length cable or boom tip wiring.
E053	No Dump Supply	No supply (power) on the selected dump supply.	Check 5A dump fuse.	Check all fuses, cabling & wiring.
E054	Keyswitch Override	Override Key has been turned to the override position - key cannot be removed from the switch	Turn override key to position where key can be removed.	If key removed and message still being displayed, check wiring and replace complete key switch if necessary.
E058	Maximum Windspeed	Maximum windspeed limit as per installer or site has been reached	Retract and lower boom to safe position.	Replace windspeed meter (anemometer) if faulty.
E064	2ND Main A400 No Comms	No communication between 2nd Main A400 and Main A400 / M400 / display.	Check boom length cable or Call installer or service technician.	Check cabling & wiring including cable drum slip ring and boom length cable.
E065	P/Tdx Bottom Error	Bottom pressure transducer reading below 3.75mA – 5400 - 5410 counts.	Call installer or service technician.	Check bottom pressure transducer, cabling & plug - Replace transducer, cable & plug or M400 motherboard if defective.
E066	P/Tdx Top Error	Top pressure transducer reading below 3.75mA – 5400 - 5410 counts.	Call installer or service technician.	Check top pressure transducer, cabling & plug - Replace transducer, cable & plug or M400 motherboard if defective.
E067	Length Transducer Error	Length potentiometer is reading below minimum allowed reading.	Call installer or service technician.	Check length potentiometer and wiring - replace potentiometer or A400 Angle board if defective.
E070	User Min Length Limit	Main boom length is less than the user selected minimum length setting.	Extend main boom or clear user selected minimum length.	Check main boom length calibration.
E071	User Max Length Limit	Main boom length is greater than the user selected maximum length setting.	Retract main boom or clear user selected maximum length.	Check main boom length calibration.

CODE	SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION	BASIC FAULT-FINDING SOLUTION
E072	User Min Radius Limit	Radius is less than the user selected minimum radius setting	Extend or lower main boom to increase working radius or clear user selected minimum radius.	Check main boom length & angle calibration.
E073	User Max Radius Limit	Radius is greater than the user selected minimum radius setting.	Retract or raise main boom to decrease working radius or clear user selected maximum radius.	Check main boom length & angle calibration.
E074	User Min Angle Limit	Boom angle is less than the user selected minimum angle setting.	Raise main boom or clear user selected minimum angle.	Check main boom angle calibration.
E075	User Max Angle Limit	Boom angle is greater than the user selected maximum angle setting.	Lower main boom or clear user selected maximum angle.	Check main boom angle calibration.
E077	User Min Luffing Angle Limit	Luffing Jib angle is less than the user selected minimum angle setting.	Raise luffing jib or clear user selected minimum angle.	Check Luffing Jib angle calibration.
E078	User Max Luffing Angle Limit	Luffing Jib angle is greater than the user selected maximum angle setting.	Lower luffing jib or clear user selected maximum angle.	Check Luffing Jib angle calibration.
E079	Winch Underwind Error	Winch has less than 3 layers on the drum	Winch up	Check winch Underwind switch.
E080	Rigging Mode	Rigging mode activated	Deactivate rigging mode	None.
E086	User Min Tip Height Limit	Total tip height is less than the user selected total tip height.	Increase boom or jib angle or extend boom.	Check ALL boom & jib length & angle calibration.
E087	User Max Tip Height Limit	Total tip height is greater than the user selected total tip height	Decrease boom or jib angle or retract boom.	Check ALL boom & jib length & angle calibration.

WORKING OPERATIONS

Operators have several different touch areas/places on the operating screen which can be pressed to initiate a function.

1.  **Configuration selection** is the crane graphic on the screen. If at any given time the current configuration needs to be changed, press on the crane graphic and this will return to the first selection as if powering up for the first time. For example, if working main boom on outriggers and now required to work on tyres, immediately change the configuration to on tyres as the cranes rated capacities and limits will be different.

2.  or  **Winch selection** is the winch graphic on the screen to change winches push this graphic and then select the winch required and the relevant reeving.

3.  While working in the main running screen or if an error has been made and the parts of line needs to be changed, press the block on the main running screen where the winch rope goes down to the lifted load and the system will respond by changing to the Parts of Line entry screen.

4.  **The buzzer override** which is in the **left centre** of the screen; buzzer override will only be displayed 5 seconds after an error condition occurs. When the buzzer override is pressed, a red cross will be placed through the picture of the buzzer, and the buzzer will shut off.

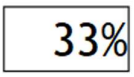
    The buzzer override is needed for each alarm condition i.e. if one error has been overridden and another occurs; the buzzer will sound again.

5.  **The momentary override** which is the radius display in the bottom right corner of the screen. By holding your finger anywhere in this area, the dump solenoids (lever cut-off) can be overridden momentarily (while pushing on the screen in that area) to allow the crane to be folded up.
   Note: This function can only be used if activated by the installer.

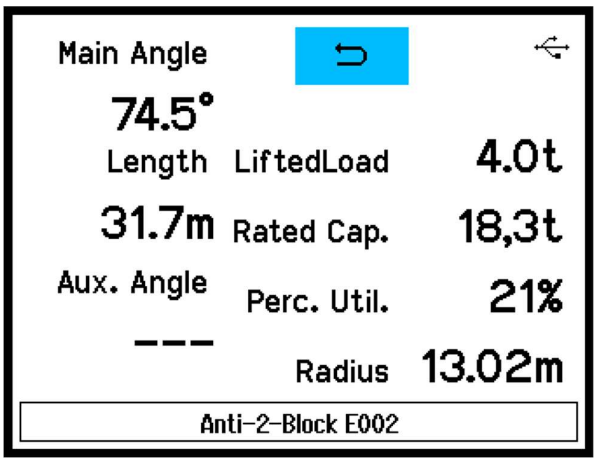
6. **Password Access -** This is accessed by pressing the top left-hand corner on the area graphic. Once pressed a password screen will be displayed, enter the relevant password to access the required menu. To exit and return to the operator's screen press **Enter** button. Screen Brightness is accessed from this menu, see **Screen Brightness**.

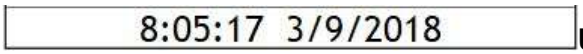
7. 

The Tare which is activated by pressing directly on the lifted load when a load is displaying on the hook. The Lifted Load will be zeroed allowing for a reading excluding the original weight. The original weight is still considered when calculating the percentage of utilization therefore the TS350 will still give the correct 90% and 100% warnings. Once pressed, the numbers under the lifted load will flash showing no value, only 0,0t. Thereafter, if a load is lifted, only the load lifted will be displayed and not the load together with hook block or any other additional weight. To return to the actual load, press the lifted load again, it will stop flashing showing the actual load on the hook.

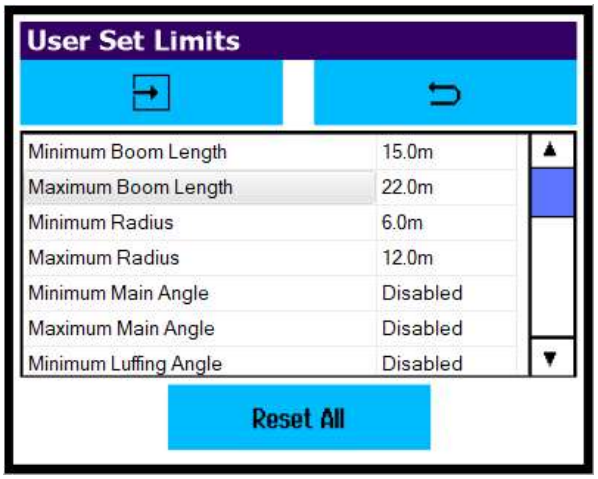
8. 

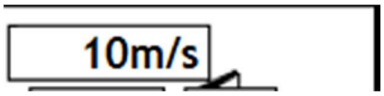
2nd Function Summary Screen Activated by pressing on Utilisation %and used for summary info or for giving factory technicians information for fault finding.



9. 

User Limit Setup – Press the screen at the bottom where the date & time or error code is displayed to access the User Limit Setup screen. Highlight the required limit to be set by pressing on the description, press the Select button to access the keypad and type in the limit that is required. Once all the limits have been set press the Back button to return to the working screen. To disable the limit, highlight the limit by pressing on the description and press the **Disable Selected** button, **Disabled** will then be displayed next to the description, and the limit will now be disabled. To disable all limits, press the **Reset All** button.





Windspeed*:* This is the current windspeed. Press on the windspeed to set the units and maximum windspeed limit. The alarm will sound if maximum windspeed is reached but no functions will be cut.
Note: This is only displayed if fitted and setup by the installer.
See Windspeed Setup

INDICATING STATUS LIGHTS - DUMP OUTPUT (AUTO STOP)

The lifted load and rated load are illuminated like a traffic robot.

The load BLOCKS are illuminated depending on the working state and error conditions. These BLOCKS are a basic way of checking the LMI.

The following chart gives the BLOCK status, buzzer status as well as the status of the DUMP (AUTO STOP) i.e. DUMP ON the crane will cut-out and DUMP OFF the crane is able to work. To rectify or check the error, please check the error message chart.

The **GREEN BLOCK** will flash when TARE function is used, and the crane is within the limits specified by the manufacturer, if not normal errors will resume.

The blocks will be green when the system is in the correct working condition i.e. no errors.

CODE	SCREEN DISPLAY	BLOCK STATUS	DUMP STATUS	BUZZER STATUS
E001	Slew Error	RED	ON	ON
E002	Anti-2-Block	RED	ON	ON
E003	Anti-2-Block Aux	RED	ON	ON
E004	≥ 90% Loading	YELLOW	OFF	INTERMITTENT
E005	Overload	RED	ON	ON
E007	Length Exceeded	RED	ON	ON
E008	Low Angle	RED	ON	ON
E009	Extend Boom	YELLOW	OFF	INTERMITTENT
E010	Rope Overload	RED	ON	ON
E011	Manual Pin Error	RED	ON	ON
E012	Low Supply Voltage	GREEN	OFF	OFF
E013	Retract Boom	RED	ON	ON
E014	Incorrect M400	GREEN	OFF	ON
E025	Telesequence Error	RED	ON	ON
E027	Main A400 No Comms	RED	ON	ON
E028	Aux A400 No Comms	RED	ON	ON
E029	M400 No Comms	RED	ON	ON
E031	High Angle	RED	OFF	ON

CODE	SCREEN DISPLAY	BLOCK STATUS	DUMP STATUS	BUZZER STATUS
E033	R400 No Comms	RED	ON	ON
E034	No Load Chart Data	RED	OFF	ON
E035	No Moment Value	RED	ON	ON
E038	Anti-2-Block Short Circuit	RED	ON	ON
E039	Anti-2-Block Aux Short Circuit	RED	ON	ON
E053	No Dump Supply	RED	ON	ON
E054	Keyswitch Override	RED	OFF	ON
E058	Maximum Windspeed	RED	OFF	ON
E064	2ND Main A400 No Comms	RED	ON	ON
E065	P/Tdx Bottom Error	RED	ON	ON
E066	P/Tdx Top Error	RED	ON	ON
E067	Length Transducer Error	RED	ON	ON
E070	User Min Boom Length Limit	YELLOW	OFF	INTERMITTENT
E071	User Max Boom Length Limit	YELLOW	OFF	INTERMITTENT
E072	User Min Radius Limit	YELLOW	OFF	INTERMITTENT
E073	User Max Radius Limit	YELLOW	OFF	INTERMITTENT
E074	User Min Angle Limit	YELLOW	OFF	INTERMITTENT
E075	User Max Angle Limit	YELLOW	OFF	INTERMITTENT
E077	User Min Luffing Angle Limit	YELLOW	OFF	INTERMITTENT
E078	User Max Luffing Angle Limit	YELLOW	OFF	INTERMITTENT
E079	Winch Underwind Error	YELLOW	OFF	INTERMITTENT
E080	Rigging Mode	YELLOW	OFF	OFF
E086	User Min Tip Height Limit	YELLOW	OFF	INTERMITTENT
E087	User Max Tip Height Limit	YELLOW	OFF	INTERMITTENT

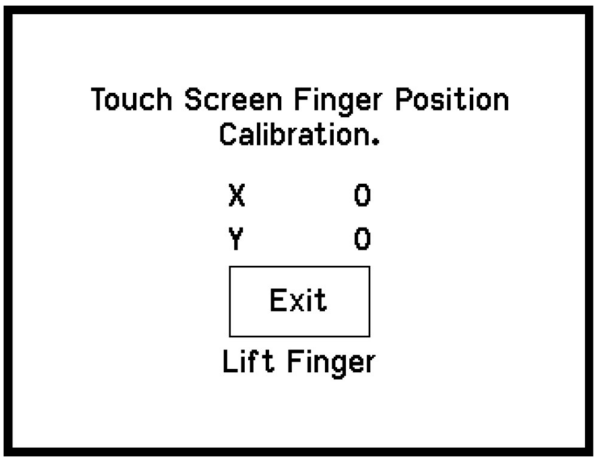
TOUCH SCREEN CALIBRATION

If the touch screen is not responding correctly to touch the touch screen may need to be calibrated.

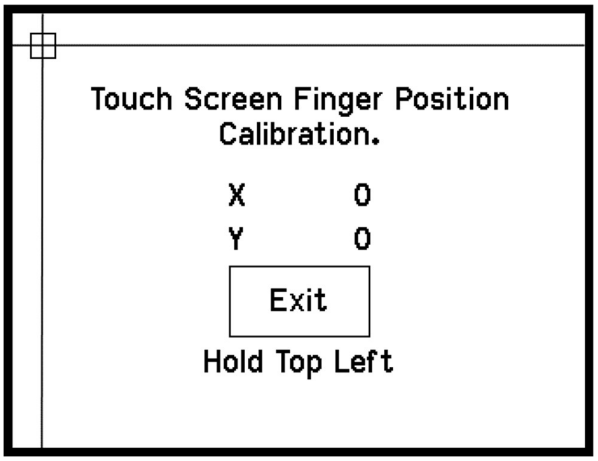
Switch the TS350 system power off then power up the TS350 and wait for the splash screen to appear.

While the splash screen is on, press and hold the screen for five full seconds in the centre until the touch calibration is activated and loaded.

Once the touch calibration has been loaded follow the on-screen prompts.



If the calibration screen has been entered by accident and touch calibration is not necessary, press the **Exit** button without pushing anywhere else on the screen. This process exits the touch screen calibration and continues with the standard start up procedure.



If touch calibration is required, follow the below procedures:

Press and hold finger where the two lines meet inside the small box (bottom left-hand corner).

Calibration works fine when using a finger but for better results use a pen taking care not to press too hard or the screen will be damaged.

Hold finger/pen in this area until prompted to lift. The software will then prompt for three more touch zones resulting in co-ordinates for all four corners of the screen.

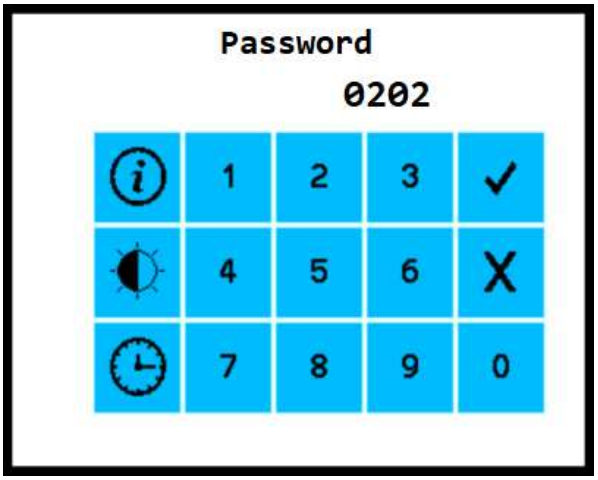
Once calibration is completed the software automatically begins the standard start up procedure.

SCREEN BRIGHTNESS

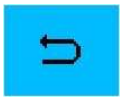
The screen backlight can be set as required.

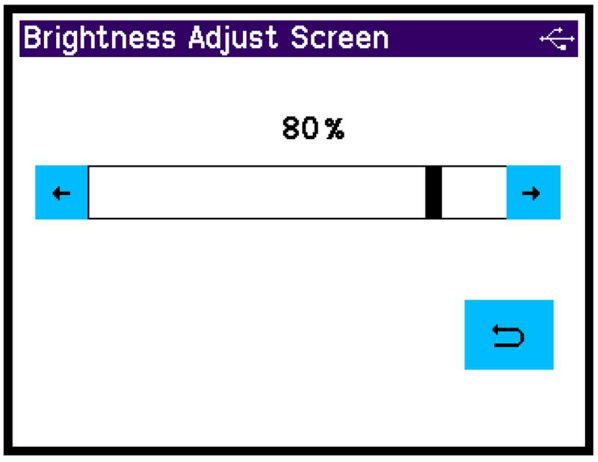
Use the following steps to adjust the screen brightness:

1. Press the top left-hand corner and the **Password** screen will be displayed.



2. Press the  and the Brightness adjust screen will be displayed. Use the slider bar to adjust the screen to the required brightness.

3. Once the brightness has been adjusted press the  button to return to the operating screen.

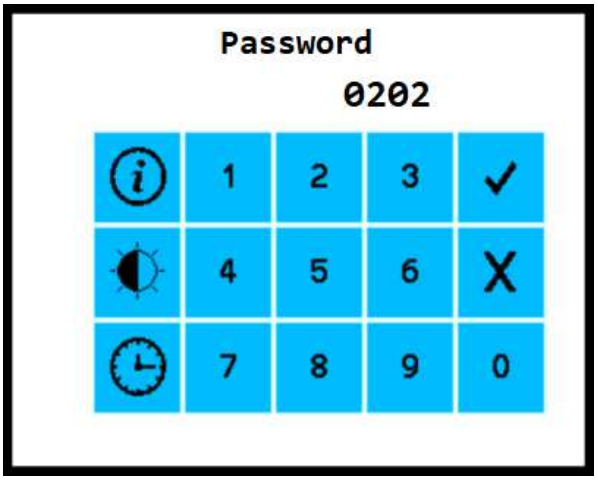


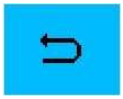
SET DATE & TIME

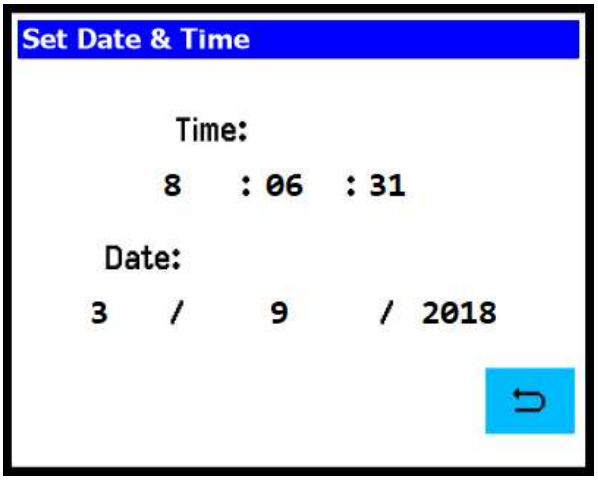
The date and time can be adjusted as required, if the date and time does not save the battery for the real time clock is no longer working (see **Real Time Clock Battery Replacement**).

Use the following steps to adjust the date & time:

1. Press the top left-hand corner and the **Password** screen will be displayed.



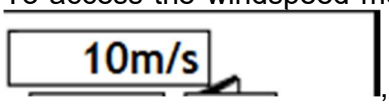
2. Press the  and the Set Date & Time screen will be displayed. Select the data to be adjusted and set the correct time and date.
3. Time format is 24 Hour Clock hh: mm: ss
4. Date format is dd / mm / yyyy
5. Once the time & date have been adjusted press the  button to return to the operating screen.



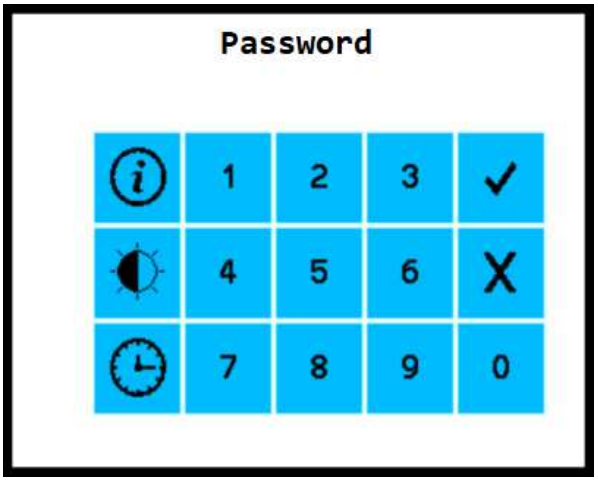
WINDSPEED

Live wind speed is shown on the screen permanently if the optional anemometer is fitted and setup by the installer.Units of measure and the maximum wind speed can be adjusted on the screen using the following steps:

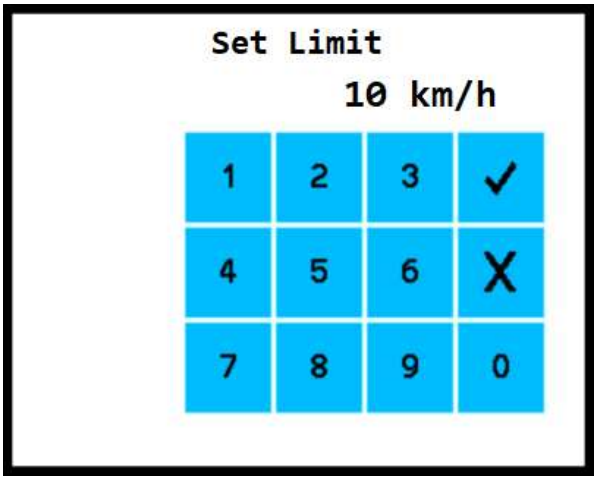
The wind speed units of measure and maximum wind speed can be set from the working screen using the 3-digit rigging password.

1. To access the windspeed menu from the operating screen press the wind speed block 

, the **Password** screen will be displayed.



2. Enter the 3-digit rigging password. This password is made available by the installer.



3. Change the units of measure by pressing the area of the screen where Set Limit and the limit value are written. The units of measure will change each time the area is pressed i.e. m/s – meters / second, kts - knots, mph – miles / hour and km/h – kilometers / hour.
4. If the units need to be converted press the units again and the system will automatically convert into the unit required e.g. 10m/s will auto covert to 36km/h if the units are changed.
5. Once you have selected the correct units of measure use the keypad to type in the limit value required then press  to return to the working screen.

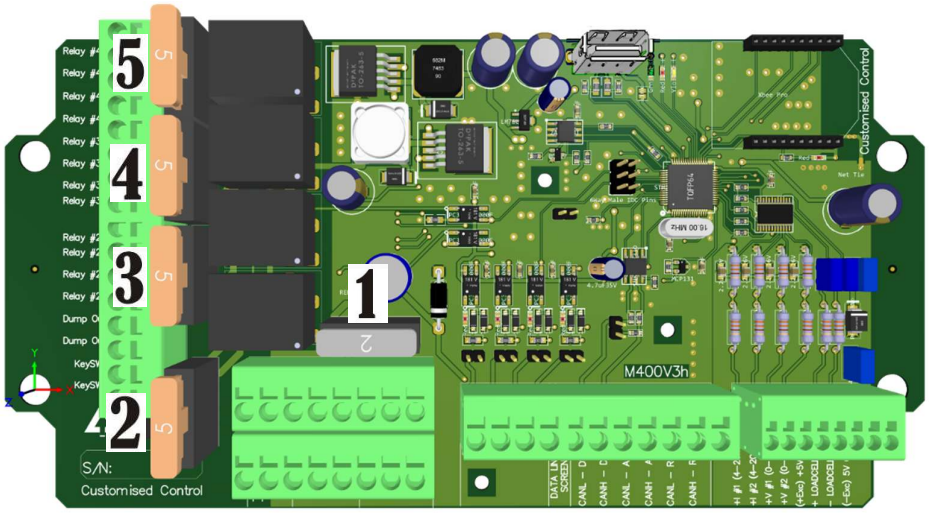
KEYSWITCH OVERRIDE

The Override Keyswitch is located on the right side of the M400 Motherboard box. The key can be removed when the override is not engaged once the override is engaged the key cannot be removed and the display will show **Keyswitch Override E054**.

This switch is used to override the Dump (Auto Stop) so should only be done under supervision as a last resort.

FUSES

All the outputs and the voltage in are protected by standard blade fuses.



1	**2 Amp Main System Fuse**		
2	5 Amp Dump / Auto Stop Fuse	**3**	5 Amp Relay #2 Fuse
4	5 Amp Relay #3 Fuse	**5**	5 Amp Relay #4 Fuse

QUICK USE FLOW CHART