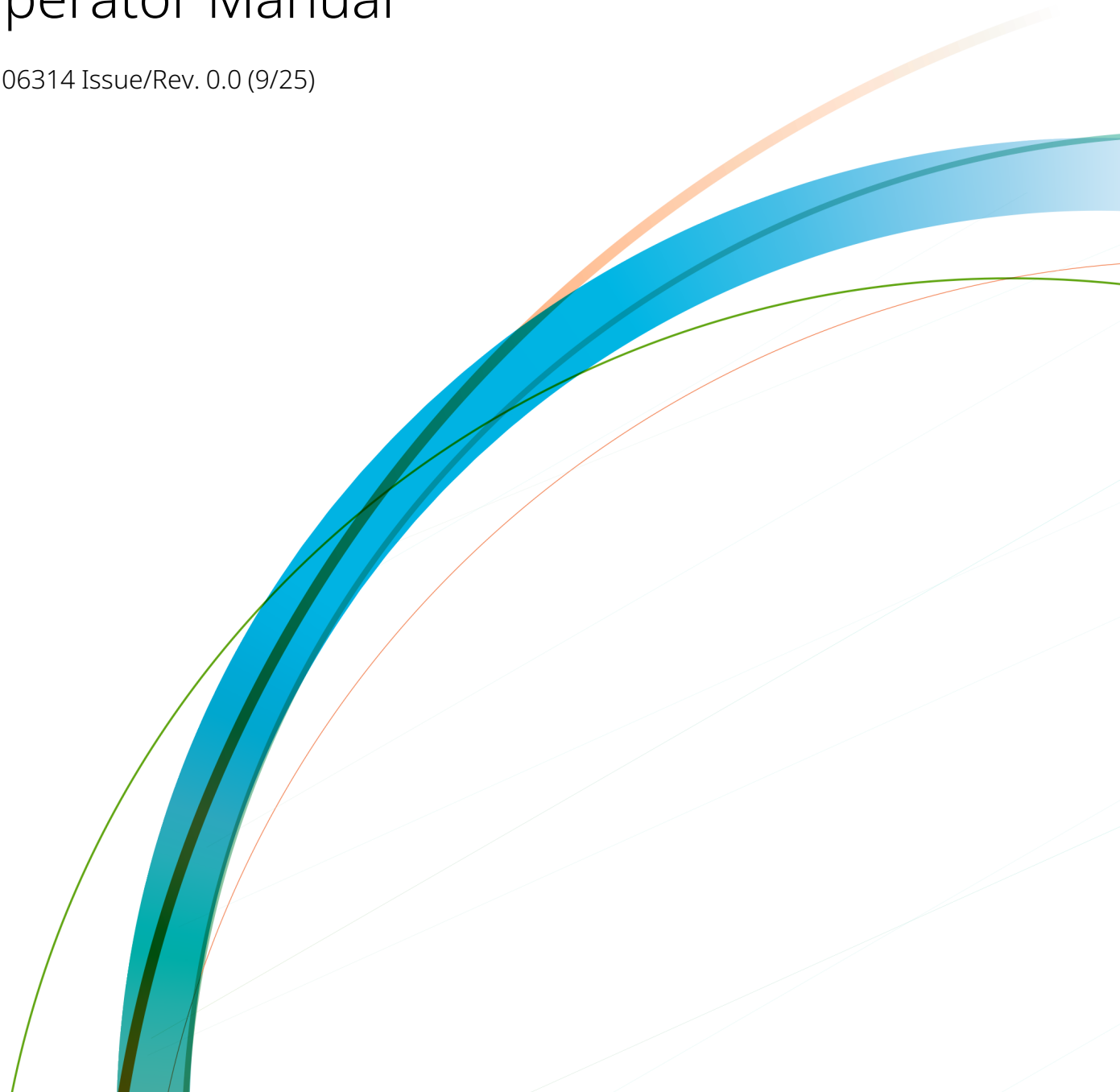
GUIDANT

1010CB Load Computer

Operator Manual

MN06314 Issue/Rev. 0.0 (9/25)



Important

All information and technical specifications in this document have been carefully checked and compiled by the author; however, we cannot completely exclude the possibility of errors. Guidant Measurement is always grateful to be informed of any errors; contact us at TechnicalCommunications@GuidantMeasurement.com.

Caution

The default or operating values used in this document and in the configuration parameters of the product described in this document are for factory testing only and should not be construed as default or operating values for your system. Each system is unique and each configuration parameter must be reviewed and programmed for that specific system application.

Disclaimer

Guidant hereby disclaims all responsibility for damages, including but not included to consequential damages arising out of or related to the inputting of incorrect or improper program or default values entered in connection with the product described in this document.

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Contents

1 Overview

1.1 Description

This manual describes the operation of the Model 1010CB loading system with additive injection and blending capabilities. This also describes the error and fault messages that may be encountered.

The procedures the operator uses will depend on the way in which the instrument is configured for functions such as authorisation and computer communications.

The programming of the instrument is covered in the 1010CB Programming Manual.

This manual does not cover the operation of the ancillary equipment such as flow meters, loading lines or other mechanical components, which are supplied separately.

1.2 Terminology and Conventions

In this document, “instrument” refers to the generic Model 1010 loading system, and “computer” refers to the interfaced computer, Distributed Control System (DCS) or Terminal Automation System (TAS).

RIT stands for Remote Interaction Terminal. It is designed to aid the operator in the operation of the instrument without using the instrument keyboard. Only required input/outputs are taken on RIT. Inputs are operated through push buttons and outputs are indicator lamps.

The table below describes the standard models of instrument and the features they offer.

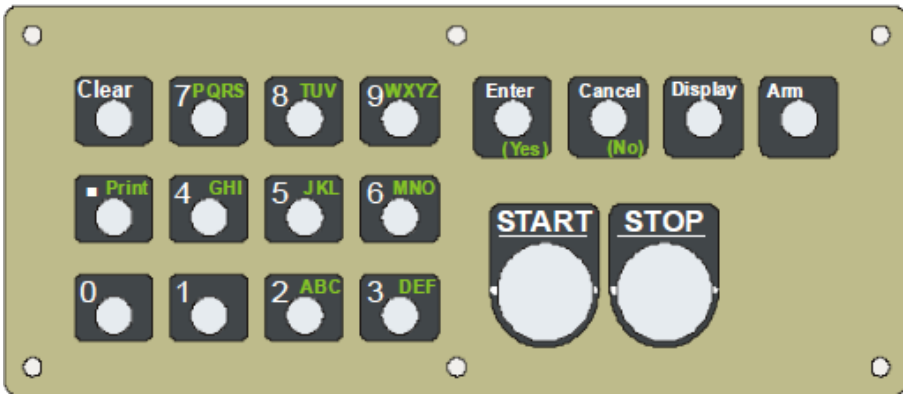
SW Mode	Description	TAS Mode		Internal Additives	RIT PANEL
		Arm 1	Arm 2		
A	One arm Loading	Single Product	NA	4	YES
B	One arm Loading with ratio blending.	2 product ratio	NA	4	YES
C	One arm Loading with side stream blending.	2 product side stream	NA	4	YES
D	Two arm Loading	Single Product	Single Product	4	YES
E	Two arm loading, each comprising of 2 product ratio blending	2 product ratio	2 product ratio	4	YES
F	Two arm loading, one straight loading, one with side stream blending.	Single Product	2 product side stream	2	YES
K	One arm loading, straight loading with vapour return	Single Product	NA	NA	NA

2 Keyboard Operation

2.1 Description

This chapter describes how to use the instrument keyboard.

Figure 2-1: Standard Model 1010A - 18 key alphanumeric keypad



2.2 Navigation and Selection

Enter (Yes) Press the Enter (Yes) key to

- Accept the displayed value
- Accept a default value or selection
- Answer “yes” to a question on the display
- Return to the previous display after pressing the Display or Arm keys Cancel (No)

Press the Cancel (No) key to

- Cancel an entry (prior to starting a batch).
- Answer “no” to a question on the display.
- Return to the previous display after pressing the Display or Arm keys

Display During or after loading, it is possible to display a range of parameters by pressing the Display key to show the SERVICE DISPLAY. Although not normally required by the operator, this mode is useful for system checking and may be required for weights and measures purpose.

The loading information is displayed in the format shown in the screen above.

The Arm key allows the selection of which arm to display when the SERVICE MODE is active. After selecting a parameter to display, repeatedly pressing the Arm key and releasing within 1 second displays the value for that parameter for each arm, for example ARM 1 -> ARM 2

It is possible to scroll back to a top level within the service display, for example ARM -> METER -> ADDITIVE -> ARM. This change is done by holding down the ARM key for a period of 2 seconds.

Once the arm or meter has been selected the DISPLAY key allows the selection of a specific parameter for that arm or meter. If that particular parameter is not configured for that arm or meter, the values are displayed as an asterisk in the display.

When an arm is selected the following information may be available:

- Preset —Preset quantity for the compartment
- Remaining— Remaining quantity before the end of the batch
- Ratio—Current blend ratio (for blending arms only)
- Net Total— Net total for current compartment on arm
- Gross Total—Gross total for current compartment on arm
- Net Accum—Accumulated Net total for arm
- Gross Accum— Accumulated Gross total for arm

- Flowrate— Arm flow rate
- Additive injection—The target load value at which the next injection will occur (only for the intelligent additive).
- Additive injection – Additive injection for four additive streams
- Truck Number – The number plate of the loading truck
- System Time & Date—Current Date and Time
- When a meter is selected the following information may be available for the product metered by the selected meter.
- Preset —Preset quantity for the compartment
- Remaining— Remaining quantity before end of batch
- Net Total— Net total of the product
- Gross Total—Gross total of the product
- Net Accum—Accumulated Net total of the product
- Gross Accum— Accumulated Gross total of the product
- Flowrate— Product stream flow rate
- Density—Instantaneous density of the product
- Temp—Instantaneous temperature of the product
- Pressure—Instantaneous pressure of the product
- Expansion Factor —Expansion factor
- Last Load Temp— Temperature of the last loaded batch
- Last Load Pres—Pressure of the last loaded batch
- Last Load Density—Density of the last loaded batch When an additive meter is selected the following information will be available.
- Preset —Preset quantity for compartment
- Gross Total—Gross total of internal additive line

- Gross Accum— Accumulated Gross total of internal additive line
- Injection Quality—Batch quantity for the additive line expressed in PPM or quantity for each injection expressed in cc or mls for mass loading
- Additive Injection—The target load at which the next injection will occur.

Press the Display key to step through each parameter in turn.

If the Test Mode is off (see the 1010CB Programming Manual Section 4.3), and the Display key is not pressed within the entry timeout period, the display shows the previous screen and the SERVICE DISPLAY mode is cancelled.

Press the Cancel (No) or Enter (Yes) keys to cancel the SERVICE DISPLAY mode and return to the previous screen immediately.

If the Test mode is on, SERVICE DISPLAY mode does not time out. You must press Cancel or Enter to return to the previous screen.

2.2.1 Character Entry

The instrument allows the entry of alphanumeric characters in much the same way as a mobile telephone. The time between key presses determines the cursor movement.

To enter ‘E’ press the 3 key three times in rapid succession:

1. Press 3 - Display reads “3”
2. Press 3 - Display reads “D”
3. Press 3 - Display reads “E”

To enter ‘ARM’

1. Press 2 - Display reads “2”
2. Press 2 - Display reads “A”
3. Pause and cursor will shift to allow the next character to be entered
4. Press 7 - Display reads “A7”
5. Press 7 - Display reads “AP”

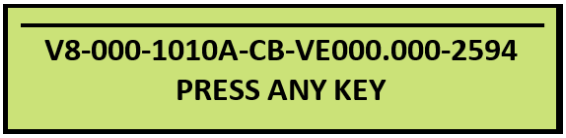
6. Press 7 - Display reads “AQ”
7. Press 7 - Display reads “AR”
8. Pause and cursor will shift to allow the next character to be entered.
9. Press 6 - Display reads “AR6”
10. Press 6 - Display reads “ARM”

Clear all Press and hold clear key for 1 sec to clear entire line from the screen.

- 0 Use the 0 key to enter any of the following characters: ‘0’, ‘-’, ‘/’, ‘(’, ‘)’, ‘=’
- 1 Use the 1 key to enter any of the following characters: ‘1’, ‘ ’ (the space character), ‘.’, ‘,’, ‘:’
- Decimal point (.) Use the Decimal point key to enter a decimal point within programming mode.

2.3 Displaying Software Information

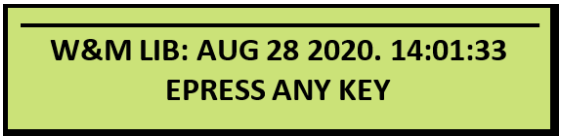
Press and hold the ‘2’ key for 10 seconds to display the Software Version.



Press any key to show the time and date that the application software was compiled.

Press any key to show the Weights & Measures software version.

Press any key to advance the display to show the time and date that the Weights & Measure (W&M) section of the software was compiled.



Press any key.

The instrument shows the default display.

> NOTE: Images are for the reference purpose. It may change in the next release.

2.3.1 Setting Display Contrast

Press and hold down the START key for 10 seconds to reset the display contrast to the default 50% setting. Display contrast can be changed through display contrast menu. Refer to the 1010CB Programming Manual.

The contrast can also be adjusted remotely via the SLIP protocol command DC. For more information, see the 1010CB Protocol Manual.

2.3.2 Starting or Stopping Loading

START - Use the START key to commence loading in response to the message “PRESS START OR CANCEL”. This key can also be used to start another load if a spare line is available.

STOP - Press the STOP key to interrupt the loading of all active arms. When RIT panel is enabled:

START - Use the Start push button on RIT panel arm 1 to start loading on arm 1.

Use Start push button on RIT panel arm 2 to start arm 2. The start key on the instrument is disabled.

STOP - Use the Stop push button on RIT panel arm 1 to stop loading on arm 1.

Use Stop push button on RIT panel arm 2 to stop arm 2. Use stop key on the instrument to stop both arms.

2.3.3 Cooling Cycle

"9" Button Use "9" key to activate or deactivate the cooling cycle.

When a loading truck comes to the loading bay area, check the pressure of the truck. If the truck pressure is high, press '9' key for 5 seconds to open the vapor. Device displays "Cooling Cycle Active" information. Press '9' key again to close the vapour isolation valve.

2.3.4 Language Options

"7" Button Use "7" key to change the language from Simplified Chinese to English.

3 Loading Operation

3.1 Description

This chapter covers the steps required to perform a loading operation. The procedures vary depending on the way the instrument is programmed for functions such as authorisation and computer communications.

3.2 Basic Loading Procedure

The basic loading procedure (RIT panel disabled) involves the following:

- Obtain Authorisation
- Begin Loading
- End Loading

3.2.1 Authorisation

1. The actions required to start the loading sequence will depend on which initial message is displayed on the unit. Depending on what is the initial display, perform the actions required as described in the following table.

   > NOTE: In general, only the standard messages are shown in this manual.

   Configurable messages are available for most parameters.

Display	Meaning
SYSTEM AVAILABLE PRESS ENTER	Press the Enter key and then continue from step 2.
CONNECT OVERFILL/GROUND	Connect the overfill system and then continue from step 2.

Display	Meaning
CONNECT VAPOUR RECOVERY	Connect the overfill & vapour recovery systems and the continue from step 2.
CONNECT PROGRAMMABLE PERMISSIVE	Close the permissive input on the instrument and then continue from step 2.
CUSTOM MESSAGE	Depending on how the instrument has been programmed (see “Configure Messages” in the 1010CB Programming Manual) the loading sequence can continue pressing the Enter key.

2. Enter the personnel authorisation that is required according to the message the instrument displays. Refer to the following table.

Display	Meaning
[None]	This step is bypassed. The system will proceed to step 3.
ENTER PERSONNEL PIN >	Enter a valid PIN number.
PRESENT PERSONEL TOUCH KEY	Present a valid Personnel Touch key to the instrument Touch Key Reader.
PRESENT PERSONEL NEXKEY CARD	Present a valid Personnel NEXWATCH Card to the instrument RF Tag Reader.

If the instrument displays TOUCH KEY AUTHORISED, continue with the next step.

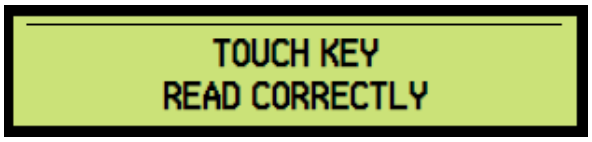
The screen that is displayed depends on how the instrument is configured. The following table shows when each screen appears.

Screen Displayed			TAS Mode			
Invalid Touch Key	Touch Key Read Correctly	Touch Key Authorised	Stand-alone	Load Schedule	Remote Authorise	Touch Keys Stored Locally
		YES	YES			YES
YES			YES			

Screen Displayed			TAS Mode			
Invalid Touch Key	Touch Key Read Correctly	Touch Key Authorised	Stand-alone	Load Schedule	Remote Authorise	Touch Keys Stored Locally
		YES	YES		YES	YES
	YES		YES		YES	
		YES		YES		YES
YES				YES		
		YES		YES	YES	YES
				YES	YES	

Example 1: If Terminal Automation Mode is Stand Alone and a valid personnel ID is presented to the instrument, then the instrument will display TOUCH KEY AUTHORISED and then continue to the next step.

Example 2: If Terminal Automation Mode is Load Scheduling and a valid personnel ID is presented to the instrument then the instrument will display TOUCH KEY READ CORRECTLY and then continue to the next step.



3. Enter the vehicle authorisation that is required according to the message that the instrument displays. Refer to the following table.

Display	Meaning
[None]	This step is bypassed and the system will proceed to Section 3.2.2: Beginning Loading.
ENTER VEHICLE PIN >	Enter a valid PIN number.
PRESENT VEHICLEL TOUCH KEY	Present a valid Vehicle Touch Key to the instrument Touch Key Reader.

Display	Meaning
PRESENT VEHICLE NEXKEY CARD	Present a valid Vehicle NexWatch Card to the instrument card reader.

If the instrument displays TOUCH KEY AUTHORISED, continue with the next step.

If the instrument displays TOUCH KEY READ CORRECTLY, the details passed to the system computer for authorisation.

4. If the instrument displays TRUCK NUMBER >, enter the truck number (Max Length: 14 alphanumeric digits)

This prompt is applicable for standalone.

5. If the instrument displays LOAD NUMBER >, enter the load number (Max Length: 10 Digits).

If instrument is in load scheduling mode, “PLEASE WAIT” is displayed and the load number is checked with TAS.

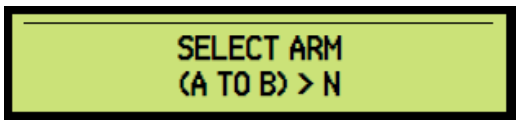
If the load number is not approved, a reason is displayed and operation returns to Step 1.

6. If the instrument displays LOADING TYPE >, select loading type (Top Loading/Bottom Loading).

3.2.2 Beginning Loading

> NOTE: This section is applicable only in Stand-Alone mode with RIT panel disabled.

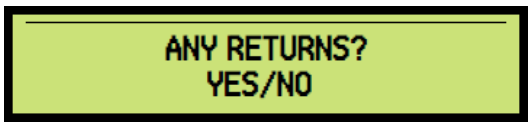
1. When “SELECT ARM” prompt is displayed, enter the arm number. A and B are the limits for valid arm numbers. N is the first available Arm number.



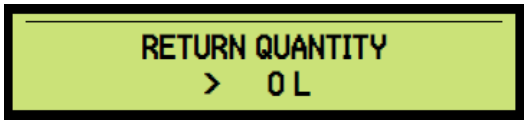
2. If the instrument prompts for a recipe (to control the blend percent or injecting of additive) use the enter key to select the displayed recipe. Use display key to scroll through the available recipes for selected arm.

3. If prompted, enter the compartment number (Range 1 to 20).

4. If the instrument prompts for returns, the following message is displayed.

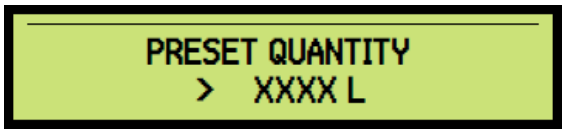


   - If the target compartment is empty, press the Cancel (No) key and continue from step 6.
   - If the target compartment already has some product, press the Enter (Yes) key. The instrument displays the following message:



5. Enter the return quantity for the compartment.

6. If the instrument displays the following prompt, enter the preset quantity.



> NOTE: If a Return Quantity was entered at step 4, this quantity is deducted from the Preset Quantity.

7. The instrument displays the following.

   For Top Loading,

   For Bottom Loading,

8. The instrument displays the following. For Top Loading,

   For Bottom Loading,

   Press the START key to begin loading the compartment, or the Cancel key to cancel loading the compartment.

9. After the loading is started in the step 7 on an arm, if the there are arms still available and the loading option of SIMULTANEOUS ARM LOADING is enabled, then the following message is displayed.

Do one of the following:

- Press the Yes key to continue from Step 1.
- Press the No key to continue from the next step if loading has begun, or from Step 1 in Section 3.2.2: Beginning Loading if loading has not begun.

10. During loading, the instrument activates the SERVICE DISPLAY, automatically displaying the preset quantity on each active arm, changing the displayed arm every 6 seconds. Other parameters may be displayed using the Display and Arm keys, as described in Section 2: Keyboard Operation.

If the instrument is programmed to use the Dead Man Timer, you must press a key at least once every 'dead man period' to prevent flow being interrupted.

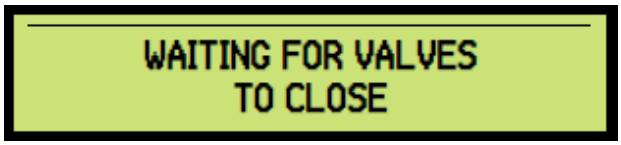
As each arm completes delivery of the preset quantity, the operation continues from step 7, provided "multiple loads per arm" and "simultaneous arm loading" are enabled and the number of batches for the transaction has not exceeded 20, otherwise the load will end.

3.2.3 Ending Loading

At the end of loading the complete vehicle, and when all arms are idle, the instrument displays the Load another Compartment prompt.

1. Press the No key to terminate the load.

2. The instrument displays the following message until all flow has stopped (line and/or control valves have closed) at the end of a load.



3. If the instrument is using a permissive (for example an overfill system), it displays the following message.

> NOTE: You must remove the permissive to end the load.

4. The instrument displays the following message for 6 seconds.

5. The instrument continues from step 1 in Section 3.2.1: Authorisation.

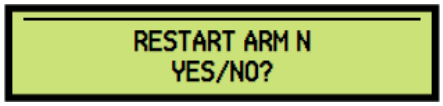
3.3 Additional Loading Procedures

3.3.1 Pausing and Resuming Loads

1. To pause all active loads, press the STOP key. When loading is paused, the instrument displays the following message.

- Press No to cancel the running loads. The operation continues from step 1 in Section 3.2.3: Ending Loading.
- Press Yes to restart an arm.

2. The instrument displays the following prompt for each arm, n, that had a load running.



- Press No for all of these prompts to cancel the loads. The operation continues from step 2 in Section 3.2.3: Ending Loading.
- Press Yes to restart the selected arm. The operation returns to step 9 in Section 3.2.2: Beginning Loading.

3.3.2 Blend out of tolerance

Blend tolerance errors pause the load. The user can ignore the out of tolerance error and continue the load. One of the prompts below will be displayed depending upon the type of blend error.

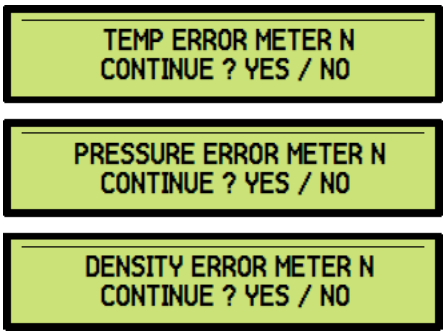
3.3.3 Emergency Stop Active whilst unit is in idle or set-up mode

If an Emergency Stop is activated during the load set-up sequence, the instrument displays the following.

You must clear the Emergency Stop to continue the load set-up.

3.3.4 Probe error

Temperature, pressure or density probe failure pauses the load when breakdown values are enabled. One of the following prompts are displayed, depending upon the type of error.



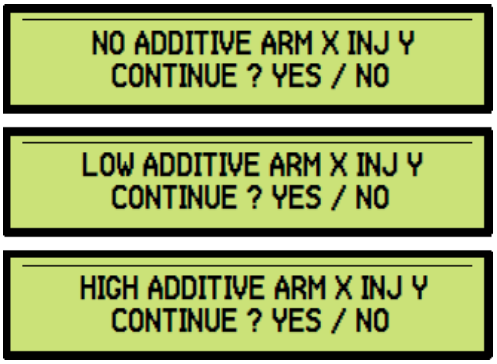
If the user continues the load, the instrument uses the breakdown value entered by the user for correction calculations.

> NOTE: When the break down value is enabled the instrument no longer meets the MID standard.

3.3.5 Error on Internal Additive:

When the Continue batch on additive alarm feature is enabled, the load is paused when an internal additive error occurs. The user can continue the load without the faulty injector. Other injectors on the arm will continue injection.

One of the following prompts are displayed, depending upon type of error.



If the user continues the load, the batch will continue without the faulty injector.

4 Loading Operation with the RIT Panel

4.1 Description

This chapter covers the steps required to perform a loading operation using the RIT panel. The procedures vary depending on the way the instrument is programmed for functions such as authorisation and computer communications.

4.2 Basic Loading Procedure with RIT panel enabled

The basic loading procedure (with RIT panel enabled) involves the following:

- Obtain Authorisation
- Begin Loading
- End Loading

4.2.1 Authorisation

Authorisation of personnel and or vehicles will be done in same manner as described in Section 3.2.1: Authorisation.

> NOTE: When the RIT panel is used, the RIT ACK button can be used as the ENTER /YES key on the instrument to acknowledge the prompts, and the RIT STOP button can be used as the Cancel key for prompts.

4.2.2 Beginning Loading

> NOTE: This section is applicable only in Stand-Alone mode with RIT panel enabled.

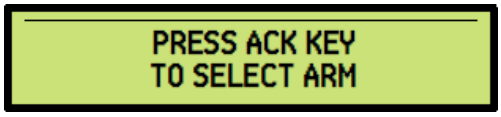
With RIT enabled the following loading options are disabled by default:

- Ask load number
- Ask compartment number
- Ask preset
- Ask return quantity.

Users can enable the options by entering configuration using the “8” key.

To begin loading

1. To select the arm, press the ACK button on the RIT panel at the following prompt.

2. If the arm is configured for blending or additive, the instrument prompts for a recipe.

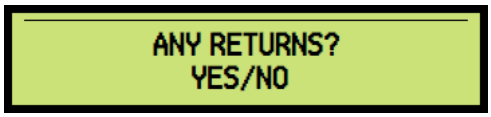
   

   To select the recipe, press the ACK button of the selected arm. To scroll through the available recipes for the selected arm, use the display key on the instrument.

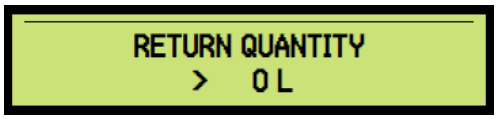
3. If prompted, for a compartment number, press the ACK button of the selected arm to select it.

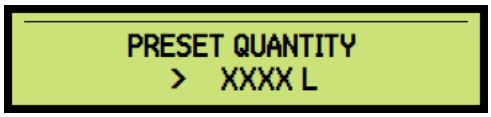
4. If the instrument prompts for returns, the following message is displayed.



- If the target compartment is empty, press the STOP button of the selected arm to cancel, and then continue from step 6.
- If the target compartment already has some product, press the ACK button of the selected arm. The instrument displays the following message:



5. Enter the return quantity for the compartment.
6. If the instrument displays the following prompt, enter the preset quantity.



> NOTE: If a Return Quantity was entered at step 4, this quantity is deducted from the Preset Quantity.

7. The instrument displays the following.

   For Top Loading,

   For Bottom Loading,

   Press the START button on the given arm to begin loading or press the STOP button on the arm to cancel loading the compartment.

8. If the instrument has arms still available, and the loading option SIMULTANEOUS ARM LOADING is enabled, then the following message is

displayed.

Do one of the following:

- Press the ACK button to continue from Step 2.
- Press the STOP button of the available arm to continue from the next step if loading of the other arm has begun, or from Step 1 if loading has not begun.

9. During loading, the instrument activates the SERVICE DISPLAY, automatically displaying the preset quantity on each active arm, changing the displayed arm every 6 seconds. Other parameters may be displayed using the Display and Arm keys, as described in Section 2: Keyboard Operation.

If the instrument is programmed to use the Dead Man Timer, you must press a key at least once every 'dead man period' to prevent flow being interrupted.

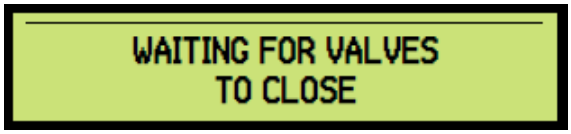
As each arm completes delivery of the preset quantity, the operation continues from step 2, provided "multiple loads per arm" and "simultaneous arm loading" are enabled and the number of batches for the transaction has not exceeded 20, otherwise the load will end.

4.2.3 Ending Loading

At the end of loading the complete vehicle, and when all arms are idle, the instrument displays the Load another Compartment prompt.

1. Press the RIT STOP button on the arm to terminate the load.

2. The instrument displays the following message until all flow has stopped (line and/or control valves have closed) at the end of a load.



3. If the instrument is using a permissive (for example an overfill system), it displays the following message.

> NOTE: You must remove the permissive to end the load.

4. The instrument displays the following message for 6 seconds.

5. The instrument continues from step 1 in Section 4.2.2: Beginning Loading.

4.3 Additional Loading Procedures

This section describes Pausing and resuming load with RIT.

4.3.1 Pausing All Active Loads

1. To pause all active loads, press the STOP key on the instrument.

   When loading is paused, the instrument displays the following message.

   - To cancel the running loads, press the No key on the instrument or any STOP button on the RIT panel. The operation continues from step 1 in Section

4.2.3: Ending Loading.

- To restart the load, press the Yes key on the instrument or any ACK button on the RIT panel.

2. The instrument displays the following prompt for each arm, N, that had a load running.

- To stop the load on arm N, press the RIT STOP button for arm N.
- To restart the load on arm N, press the RIT START button for arm N.

4.3.2 Pausing an Arm

1. Press the RIT STOP button of arm N. When arm N is paused, the instrument displays the following message.

- To stop the load on arm N, press the RIT STOP button for arm N.
- To restart the load on arm N, press the RIT START button for arm N.

4.3.3 Blend out of tolerance

Blend tolerance errors pause the load. The user can ignore the out of tolerance error and continue the load. One of the prompts below will be displayed depending upon the type of blend error.

4.3.4 Emergency Stop Active whilst unit is in idle or set-up mode

If an Emergency Stop is activated during the load set-up sequence, the instrument displays the following.

> NOTE: You must clear the Emergency Stop to continue the load set-up.

4.3.5 Probe error

Temperature, pressure or density probe failure pauses the load when breakdown values are enabled. One of the following prompts are displayed, depending upon the type of error.

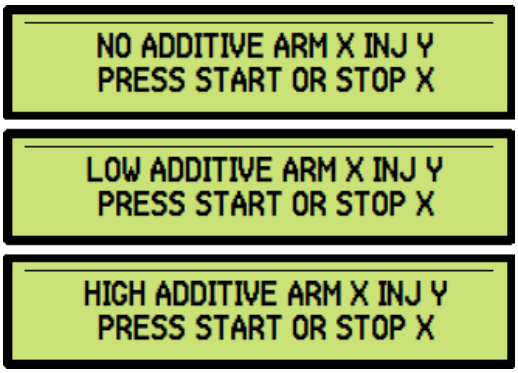
If the user continues the load, the instrument uses the breakdown value entered by user for correction calculations.

> NOTE: When the break down value is enabled the instrument no longer meets the MID standard.

4.3.6 Error on Internal Additive:

When the Continue batch on additive alarm feature is enabled, a load is paused when an internal additive error occurs. The user can continue the load without the faulty injector. Other injectors on the arm will continue injection.

One of the following prompts are displayed, depending upon type of error.



5 Loading Operation with Weighbridge

5.1 Weighbridge Operation

The 1010CB continuously checks for weighbridge communication. If communication fails within weighbridge comms timeout, the device will raise "Weighbridge Comms Fail, Contact Manager" alarm.

To record the tare weight in pre-load sequence, 1010CB waits for steady status from weighbridge as shown below.

If 1010CB does not receive steady status from weighbridge within status timeout, the device displays "Retry" option.

Press 'Yes' to retry and 'Cancel' to go back to idle screen.

The Operation screen (press DISPLAY key) displays the tare weight and the gross weight.

During loading, the gross weight is calculated along with truck tare weight which is kept same as shown below.

6 Error Message

6.1 Description

Error Messages may be encountered during the authorisation or load setup

6.2 Authorisation Error Message

The following errors may occur during the personnel and vehicle authorisation phase.

6.2.1 Error 1 —Illegal Access

This error is displayed after a programmed number of invalid PIN, Touch Key or NexWatch access attempts have been made when loading option Illegal Access has been enabled and the number of programmable illegal retries has been reached.

This error can be cleared locally by powering down the instrument or entering the manager reset password at the password prompt, or remotely by a Manager Reset SLIP command issued from an attached computer.

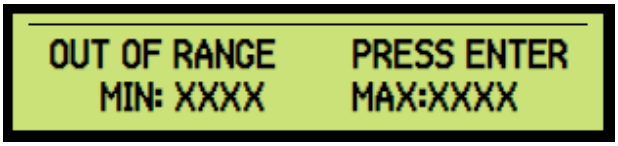
6.2.2 Error 2—Invalid Touch Key

This error is displayed if a Touch Key is faulty, or the Touch Key number is not programmed in the instrument. Similar messages are displayed for Invalid PINs, or NexWatch cards.

6.3 Load Set-up Error Message

The following errors may occur while setting up a load.

6.3.1 Error 3—Out of Range



This error is displayed when the operator enters a value outside the range of values allowed.

If Enter is pressed, the value can be re-entered.

6.3.2 Error 4—No Computer Reply

This message is displayed if during the load set-up communications are lost between the instrument and the computer. This error is only applicable when the Terminal Automation Mode is set to Load Scheduling and/or Remote Authorisation is enabled and the comms timeout is not set to 0 (disabled).

6.3.3 Error 5—Arm In Use

This error is displayed when the arm n requested by the operator is already in use.

6.3.4 Error 6—Arm Faulty

This error is displayed when the arm n requested by the operator has previously had a temperature and/or pressure and/or density fault and is unavailable for use.

6.3.5 Error 7—All Arms Faulty

This error is displayed at idle if all the arms are faulty. Loading cannot occur until the faults have been cleared by the manager.

6.3.6 Error 8 —No Recipes Available

This error is displayed when a blend arm has no recipes associated with it.

6.3.7 Error 9 - ARM Disabled

This error is displayed when arm N requested by operator is disabled by configuration.

7 Fault & Alarm Conditions

7.1 Description

You may encounter the following error and fault messages during the loading operation. These messages are classified as External Fault Messages (due to equipment faults outside of the instrument), Internal Fault Messages (due to faults within the instrument), and Dead Man Alarm Messages.

7.2 External Fault Messages

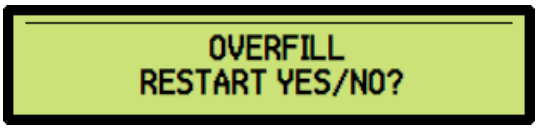
The following fault messages are due to equipment faults external to the instrument.

7.2.1 Fault Message 1 — Overfill Disconnected

Cause: the overfill detection system is disconnected or activated during loading.

7.2.1.1 Timeout Mode

- If the overfill is cleared or reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.



- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period, then the Load is Terminated and this prompt is displayed.

7.2.1.2 Manage Reset Mode

- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period and the load is terminated, the instrument displays the following prompt. Further loading is no allowed unless the manager reset password is entered at the password prompt or the MR command is issued.

7.2.2 Fault Message 2 — Vapour Recovery Disconnected

Cause: the vapour recovery hose detection system is activated during loading.

7.2.2.1 Timeout Mode

- If the overfill is cleared or reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.

- If the Vapour Recovery hose is reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.

- If there is no Operator response within the programmable Clear/ Reconnect Timeout Period, then the Load is Terminated and this prompt is displayed.

7.2.2.2 Manager Reset Mode

- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period and the load is terminated, the instrument displays the following prompt. Further loading is not allowed unless the manager reset password is entered at the password prompt or the MR command is issued.

7.2.3 Fault Message 3 — Programmable Permissive

Cause: the Programmable Permissive is disconnected or activated during loading.

> NOTE: Depending on the configuration of these permissives, different messages are displayed. For more information, see the 1010CB Programming Manual.

7.2.3.1 Timeout Mode

- If the Programmable Permissive is cleared or reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.

- If there is no Operator response within the programmable Clear/ Reconnect Timeout Period then the Load is Terminated and this prompt is displayed.

7.2.3.2 Manager Reset Mode

- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period and the load is terminated, the instrument displays the following prompt. Further loading is not allowed unless the manager reset password is entered at the password prompt or the MR command is issued.

7.2.4 Fault Message 4 — Programmable Input N error

> NOTE: There can be total 6 programmable inputs. In the message, N can range from 1 to 6.

Cause: a Programmable Input error is detected.

7.2.4.1 Timeout Mode

- If the programmable input N is cleared or reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.
- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period, then the Load is Terminated and this prompt is displayed.

7.2.4.2 Manager Reset Mode:

- If there is no operator response within the programmed Clear/ Reconnect Timeout Period, the load is terminated. The following prompt follows the error message. Further loading is not allowed unless manager reset password is entered at password prompt or the MR command is issued. Further batches can be started once the manager reset is issued.

7.2.5 Fault Message 5 — Arm Input N error

> NOTE: There can be total 8 Arm inputs. In the message N can range from 1 to 8.

Cause: an Arm Input error is detected. Timeout Mode

- If the programmable input N is cleared or reconnected within the programmed reconnect time, a restart request is displayed and the arm can be restarted.

If there is no Operator response within the programmed Clear/ Reconnect Timeout Period, then the batch is Terminated and this prompt is displayed.

7.2.5.1 Manager Reset Mode:

- If there is no Operator response within the programmed Clear/ Reconnect Timeout Period, the load is terminated. The following prompt follows the Error message. Further loading is not allowed unless manager reset password is entered at password prompt or the MR command is issued. Further batches can continue once the manager password is entered and authorised.

> NOTE: There can be maximum four meters. The value of N in Meter faultmessages can be from 1 to 4.

7.2.6 Fault Message 6 — Flow Timeout

Cause: no flow is detected for more than the programmed No Flow Timeout during loading on arm n.

Press the Enter key to cancel the load on the arm. You can then start another load.

7.2.7 Fault Message 7 — Flow Error

Cause: a flow meter pulse error is detected on arm n.

Press the Enter key to cancel the load on the arm. You can then start another load.

7.2.8 Fault Message 8 — Phase Error

Cause: a phase error is detected on the dual pulse meter inputs for arm n.

Press the Enter key to cancel the load on the arm. You can then start another load

7.2.9 Fault Message 9 — Temperature Error

Cause: a temperature sensor fault is detected on arm n. This disables the arm from further use until restored by the manager.

7.2.10 Fault Message 10 — Pressure Error

Cause: a pressure sensor fault is detected on arm n. This arm is disabled from further use until restored by the manager.

7.2.11 Fault Message 11 — Density Error

Cause: a density sensor fault is detected on meter n. The associated arm is disabled from further use until restored by the manager.

7.2.12 Fault Message 12 — Arm Not Available

Cause: a temperature sensor fault is detected on arm n. This arm is disabled from further use until restored by the manager.

7.2.13 Fault Message 13 — No Additive Flow

Cause: an attached additive injection controller detects no additive flow for the additive injector on arm n.

Press the Enter key to cancel the load on the arm. You can then start another load.

7.2.14 Fault Message 14 — Additive Volume/High Additive

Cause: an attached additive injection controller cannot slow down the additive delivery for the additive injector on arm n.

Press the Enter key to cancel the load on the arm. You can then start another load.

7.2.15 Fault Message 15 — Leaking Additive/Low Additive

Cause: an attached additive injection controller cannot deliver enough additive for the additive injector on arm n.

Press the Enter key to cancel the load on the arm. You can then start another load.

7.2.16 Fault Message 16 — Emergency Stop

Cause: the emergency stop signal is detected by the instrument. All arms are stopped. The instrument is then disabled from further use until restored by the manager.

7.2.17 Fault Message 17 — Additive Comms Fail

Cause: Communication to the attached injector fails when the Mini-Pak additive controller is used in conjunction with the 1010 instrument.

7.2.18 Fault Message 18 — Slow Flow High

Cause: The flow rate during the slow flow stage exceeds the arm slow flow rate by the high alarm percentage.

7.2.19 Fault Message 19 — Slow Flow Low

Cause: The flow rate during the slow flow stage falls below the arm slow flow rate by the low alarm percentage.

7.2.20 Fault Message 20 — High Flow High

Cause: The flow rate during the high flow stage exceeds the arm high flow rate by the high alarm percentage.

7.2.21 Fault Message 21 — High Flow Low

Cause: The flow rate during the high flow stage falls below the arm high flow rate by the low alarm percentage.

7.2.22 Fault Message 22 — Low Flow High

Cause: The flow rate during the low flow stage exceeds the arm low flow rate by the high alarm percentage. The instrument must be configured for a low flow alarm.

7.2.23 Fault Message 23 — Low Flow Low

Cause: The flow rate during the low flow stage falls below the arm low flow rate by the low alarm percentage.

7.2.24 Fault Message 24 — Blend Tolerance High

Cause: The blend tolerance exceeds the high tolerance setting on an arm during a batch. The instrument must be configured for a blend tolerance alarm to get this message.

7.2.25 Fault Message 25 — Blend tolerance low

Cause: The blend tolerance falls below the low tolerance setting on an arm during a batch. The instrument must be configured for a blend tolerance alarm.

7.3 Dead Man Alarm Messages

The following messages are due to the dead man alarm system, which requires the operator to indicate presence by pressing a key at regular intervals. For more information, see the 1010CB Software Manual for information on the Dead Man Timer operation.

7.3.1 Fault Message 30 — Deadman Timeout

Cause: The operator has not pressed a key within the Deadman Pause Timeout Period (Default = 3 mins), since starting a load. All loads are paused.

Typically, an external reminder indicator is activated after 2½ minutes (default setting) (Deadman Warning Programmable Timer).

- To restart the loads, press the Yes key within two minutes of this message appearing.
- To cancel the load, press the No key within the Deadman Termination Timeout (Default Time = 2 minutes).

7.3.2 Fault Message 31 — Deadman Timeout

Cause: The operator has not pressed any key within the cumulative Deadman Timeouts since starting a load. All loads are cancelled.

7.3.3 Fault Message 32 — Internal Additive No Flow This fault must be cleared by the manager.

Cause: No additive flow is detected for internal additive during a batch. The instrument must be configured to use internal injectors for the batch.

7.3.4 Fault Message 33 — Internal Additive Leakage

Cause: Internal additive flow is detected without a command from the instrument to inject. The instrument must be configured to use internal injectors.

7.3.5 Fault Message 34 — Internal Additive High

Cause: Internal additive injector injects more than the predefined higher percentage volume during a batch. The instrument must be configured to use internal injectors for the batch.

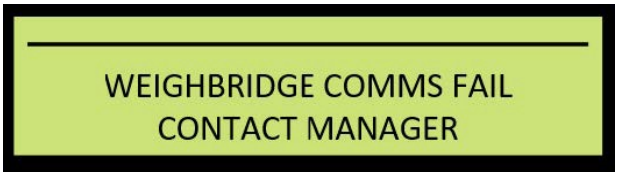
7.3.6 Fault Message 35 — Internal Additive low

Cause: Internal additive injector injects less than the predefined lower percentage volume during a batch. The instrument must be configured to use internal injectors for the batch.

7.4 Weighbridge Alarm Messages

The following messages are due to weighbridge faults to the instrument and should be recorded and reported to the manager.

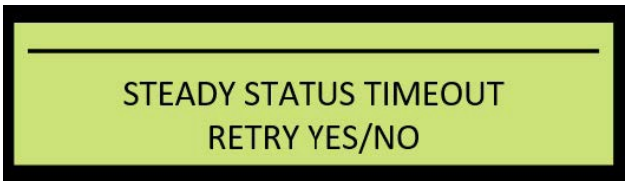
7.4.1 Fault Message 36 — Weighbridge Comms Fail



Cause: 1010CB continuously checks for weighbridge communication. If communication fails within weighbridge comms timeout, the device will raise "Weighbridge Comms Fail, Contact Manager" alarm.

Press W&M key and give the Manager Reset pin to clear the alarm.

7.4.2 Fault Message 37 — Weighbridge Steady Status Timeout

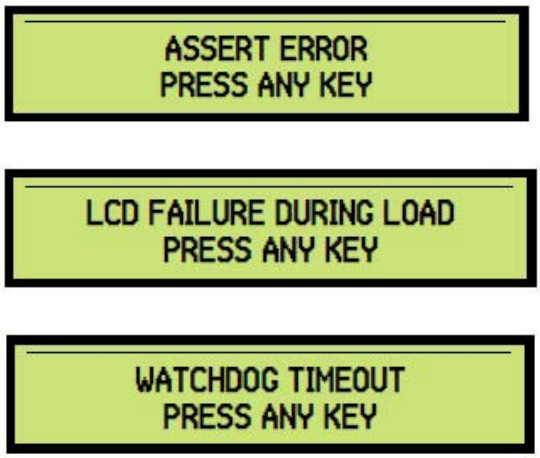


Cause: 1010CB displays "Retry" option if the device does not receive steady status from weighbridge within status timeout.

Press 'Yes' to retry and 'Cancel' to go back to idle screen.

8 Internal Fault Message

The following fault messages are due to faults internal to the instrument and should be recorded and reported to the manager.


ASSERT ERROR
PRESS ANY KEY
LCD FAILURE DURING LOAD
PRESS ANY KEY
WATCHDOG TIMEOUT
PRESS ANY KEY

9 Error Status Codes

9.1 Description

When an instrument detects an error or fault condition, the error code for that condition is recorded in the batch segment of the transaction file.

The following Error Status Codes are valid for the instrument:

Error Status Codes		
0 - No Error	27 - Additive EPROM	61 - Arm 1 stopped by RIT
1 - ESD/Emergency Stop	28 - Additive Communication Failure	62 - Arm 2 stopped by RIT
2 - Overfill/Ground Disconnected	29 - No Additive Comms Response	70 - Internal additive No flow
3 - Vapour Recovery Disconnected	30 - Arm input 1 disconnected	71 - Internal additive Leakage
4 - Flow Meter Error	31 - Arm input 2 disconnected	72 - Internal additive high
5 - Flow Meter Timeout	32 - Arm input 3 disconnected	73 - Internal additive low
6 -Temperature Fault	33 - Arm input 4 disconnected	80 - Illegal Argument
7 -Valve Fault	34 - Arm input 5 disconnected	81 - Volume Correction Factor Out of Range
8 - Deadman Timeout	35 - Arm input 6 disconnected	82 - Non-convergence
9 - Not Used	36 - Arm input 7 disconnected	83 - Temperature Out of Range
10 - Power Failure	37 - Arm input 8 disconnected	84 - Density or Exp Coefficient Out of Range
11 - Additive Leakage		85 - Pressure Out of Range
12 -Additive Volume		86 - Supercritical Fluid
13 - No Activity on Additive		87 - No Reference Fluids
14 - No Additive Flow		
15 -Remote Stop		
16 - LCD Failure		

Error Status Codes		
17 - Phase Error		88 - Calculation No Solution
18 - Pressure Error	38 - Transaction Terminated Remotely	
19 - Programmable Permissive Disconnected		90 - Meter Fault* (refer to meter error status)
	41 - Blend Tolerance High Alarm	99 - Transaction File in use
20 - Programmable Input1 Disconnected		100 -Illegal Flow
	42 - Blend Tolerance Low Alarm	101 – Comms Failure
21 - Programmable Input2 Disconnected	51 - High Flow - High Alarm	102 – Unauthorized flow
		103 – Overrun
22 - Programmable Input3 Disconnected	52 - High Flow - Low Alarm	104 – Push Button
		105 – Battery switch off
23 - Programmable Input4 Disconnected	53 - Low Flow - High Alarm	106 – Fire Extinguisher placed
24 - Programmable Input5 Disconnected	54 - Low Flow - Low Alarm	107 – Hand break applied
	55 - Slow Flow High	
25 - Programmable Input6 Disconnected	56 - Slow Flow low	
	60 - Stopped by operator	
26 - Additive Firmware		

9.2 Error Status 1 - ESD/Emergency Stop

The instrument detects this error if the Emergency Stop signal is disconnected during loading.

All arms are stopped and the instrument is disabled from further use until restored by the Manager Reset (MR). The MR bit in the enquiry will also be set indicating that a MR is requested.

9.3 Error Status 2 - Overfill/Ground Disconnected

This error is detected if the overfill/ground is disconnected or tripped during loading. The mode in which the loading effect is programmed determines whether the instrument displays a reconnect message. For more information, see Section 9.49: Loading Effect.

9.4 Error Status 3 - Vapour Recovery Disconnected

This error is detected if the vapour recovery is disconnected or tripped during loading. The mode in which the loading effect is programmed determines whether the instrument displays a reconnect message. For more information, see Section 9.49: Loading Effect.

9.5 Error Status 4 - Flow Meter Error

This error is detected if the lost pulses on the 'a' channel of the flow meter exceeds 0.1% of the total number of pulses on the 'b' channel while the 'b' pulse input frequency exceeds the cutoff frequency, or vice versa during loading. For this error to be to be detected the instrument must be configured for a dual pulse flow meter.

9.6 Error Status 5 - Flow Meter Timeout

This error is detected during a load when there is an absence of flow meter pulses for a time exceeding the no flow timeout period. The batch is terminated.

9.7 Error Status 6 - Temperature Fault

This error is recorded when the temperature probe fault is detected on a meter during a batch. If a breakdown value is enabled, the user can continue the batch with the breakdown temperature value, otherwise the batch is terminated and an error recorded. This disables the arm from further use and requires the MR to re-enable the arm.

9.8 Error Status 7 - Valve Fault

This error is recorded at the completion of the batch when the actual flow rate is outside the deadband limit during prestop. This error is recorded in the transaction but the batch is not terminated.

9.9 Error Status 8 - Deadman Timeout

This error is recorded and all batches terminated if the operator has not pressed any key for five minutes after starting a load. Typically an external reminder indicator is activated after 2.5 minutes. All loads are paused if the operator has not pressed a key for 3 minutes since the start of loading. This error is recorded and the traction is terminated only after 5 minutes without any key press.

> NOTE: All the deadman timers are configurable, the examples given are default values.

9.10 Error Status 9 - Density Fault

This error is recorded when a densitometer fault is detected on a meter during a batch. If a breakdown value is enabled, the user can continue the batch with the breakdown density value. Otherwise the batch is terminated and an error recorded. This disables the arm from further use, and requires the MR to re-enable the arm.

9.11 Error Status 10 - Power Failure

This error is recorded and the transaction terminated when the instrument detects a power failure during a load.

9.12 Error Status 11 – Additive Leakage/Low Additive

This error is recorded when an attached additive injector controller cannot deliver enough additive for an additive injector during a batch. The batch is terminated.

Only applicable when a Mini-Pak additive controller is used in conjunction with the 1010 instrument.

9.13 Error Status 12 - Additive Volume/High Additive

This error is recorded when an attached additive injector controller cannot slow down the additive delivery for an additive injector during a batch. The batch is terminated.

Only applicable when a Mini-Pak additive controller is used in conjunction with the 1010 instrument.

9.14 Error Status 14 - No Additive Flow

This error is recorded when an attached additive injector controller detects no additive flow for an additive injector during a batch. The batch is terminated.

Only applicable when a Mini-Pak additive controller is used in conjunction with the 1010 instrument.

9.15 Error Status 15 - Remote Stop

This error is recorded when the instrument receives a valid external remote stop (SM) command. The specified batch (indicated by the arm number in the command) is terminated.

9.16 Error Status 16 - LCD Failure

This error is recorded when a LCD failure is detected on the graphics display. The batch is terminated and the instrument restarted. On restart a warning is displayed.

9.17 Error Status 17 - Phase Error

This error is recorded when the flow meter phase error is detected on an arm during a batch. The instrument must be configured for a dual pulse flow meter. The batch is terminated.

9.18 Error Status 18 - Pressure Error

This error is recorded when the pressure sensor fault is detected on an arm during a batch. If a breakdown value is enabled, the user can continue the batch with the breakdown pressure value. Otherwise the batch is terminated and an error recorded. This disables the arm from further use, and requires the MR to re-enable the arm.

9.19 Error Status 19 - Programmable Permissive Disconnected

This error is detected if the programmable permissive is disconnected or tripped during loading. The mode in which the loading effect is programmed determines

whether the instrument displays a reconnect message. For more information, see Section 9.49: Loading Effect.

9.20 Error Status 20 to 25 – Programmable Input n Discon- nected

- Error Status 20 - Programmable Input 1 Disconnected
- Error Status 21 - Programmable Input 2 Disconnected
- Error Status 22 - Programmable Input 3 Disconnected
- Error Status 23 - Programmable Input 4 Disconnected
- Error Status 24 - Programmable Input 5 Disconnected
- Error Status 25 - Programmable Input 6 Disconnected

These errors are detected if the programmable input is disconnected or tripped during loading. The mode in which the loading effect is programmed determines whether the instrument displays a reconnect message. For more information, see Section 9.49: Loading Effect.

9.21 Error Status 30 to 37 - Arm Input n Disconnected

- Error Status 30 - Arm Input 1 Disconnected
- Error Status 31 - Arm Input 2 Disconnected
- Error Status 32 - Arm Input 3 Disconnected
- Error Status 33 - Arm Input 4 Disconnected
- Error Status 34 - Arm Input 5 Disconnected
- Error Status 35 - Arm Input 6 Disconnected

- Error Status 36 - Arm Input 7 Disconnected
- Error Status 37 - Arm Input 8 Disconnected

These errors are detected if the arm input is disconnected or tripped during loading. The mode in which the loading effect is programmed determines whether the instrument displays a reconnect message. For more information, see Section 9.49: Loading Effect.

9.22 Error Status 38 - Transaction Terminated Remotely

Only applicable when the transaction is terminated by the protocol command TT (Terminate Transaction). This error is recorded in all batches that are active at the time of the command being received. All active arms are stopped and the transaction is terminated.

9.23 Error Status 41 - Blend Tolerance High Alarm

This error is recorded when the blend tolerance exceeds the high tolerance setting on an arm during a batch. The instrument must be configured for a blend tolerance alarm. The batch is suspended, with the option to either continue with the blend tolerance error by restarting the arm, or terminate the batch.

9.24 Error Status 42 - Blend Tolerance Low Alarm

This error is recorded when the blend tolerance falls below the low tolerance setting on an arm during a batch. The instrument must be configured for a blend tolerance alarm. The batch is suspended, with the option to either continue with the blend tolerance error by restarting the arm, or terminate the batch.

9.25 Error Status 51 - High Flow - High Alarm

This error is recorded when the flow rate during the high flow stage exceeds the arm high flow rate by the high alarm percentage. The instrument must be configured for a high flow alarm. The batch is terminated.

9.26 Error Status 52 - High Flow - Low Alarm

This error is recorded when the flow rate during the high flow stage falls below the arm high flow rate by the low alarm percentage. The instrument must be configured for a high flow alarm. The batch is terminated.

9.27 Error Status 53 - Low Flow - High Alarm

This error is recorded when the flow rate during the low flow stage exceeds the arm low flow rate by the high alarm percentage. The instrument must be configured for a low flow alarm. The batch is terminated.

9.28 Error Status 54 - Low Flow - Low Alarm

This error is recorded when the flow rate during the low flow stage falls below the arm low flow rate by the low alarm percentage. The instrument must be configured for a low flow alarm. The batch is terminated.

9.29 Error Status 55 - Slow Flow High

This error is recorded when the flow rate during the slow flow stage exceeds the arm slow flow rate by the high alarm percentage. The instrument must be configured for a slow flow alarm. The batch is terminated.

9.30 Error Status 56 - Slow Flow Low

This error is recorded when the flow rate during the slow flow stage exceeds the arm slow flow rate by the low alarm percentage. The instrument must be configured for a slow flow alarm. The batch is terminated.

9.31 Error Status 60 - Stopped by operator

This error is recorded when the operator stops the batch with the stop button and does not restart the batch. The batch is terminated.

9.32 Error Status 61 - Arm 1 stopped by RIT

This error is recorded only for batches running on arm 1 when the operator stops the batch with the RIT stop button for arm 1. The batch is terminated.

9.33 Error Status 62 - Arm 2 stopped by RIT

This error is recorded only for batches running on arm 2 when the operator stops the batch with the RIT stop button for arm 2. The batch is terminated.

9.34 Error Status 70 - Internal additive No flow

This error is recorded when the control solenoid opens and no additive flow is detected for an internal additive injector point during a batch. The batch is terminated.

Only applicable for internal additive injection points when available with the instrument.

9.35 Error Status 71 - Internal additive leakage

This error is recorded when additive flow is detected on an internal additive injector and the control solenoid is closed.

Only applicable for internal additive injection points when available with the instrument.

9.36 Error Status 72 - Internal additive high

This error is recorded when the additive amount exceeds a predetermined higher deviation percentage set point for an internal additive injector point during a batch. The batch is terminated.

Only applicable for internal additive injection points when available with the instrument.

9.37 Error Status 73 - Internal additive low

This error is recorded when the additive amount exceeds a predetermined lower deviation percentage set point for an internal additive injector point during a batch. The batch is terminated.

Only applicable for internal additive injection points when available with the instrument.

9.38 Error Status 80 - 89 - Correction Calculation Errors

These errors are generated should an error occur during any of the correction calculations used in the instrument. These are internal errors that result in the

instrument terminating the current batch. Contact Guidant if these errors are encountered.

- Error Status 80 - Illegal Argument
- Error Status 81 - Volume Correction Factor Out of Range
- Error Status 82 - Non-convergence
- Error Status 83 - Temperature Out of Range
- Error Status 84 - Density or Exp Co-efficient Out of Range
- Error Status 85 - Pressure Out of Range
- Error Status 86 - Supercritical Fluid
- Error Status 87 - No Reference Fluids
- Error Status 88 - Calculation No Solution
- Error Status 89 - Spare

9.39 Error Status 90 - Meter Fault (refer to meter error status)

This error is recorded when an error occurs on one of the meters associated with the current loading arm. Refer to the meter error status to determine which meter was in error and the error type.

9.40 Error Status 99 - Transaction File in use

This error is recorded when either:

- The transaction and/or batch is not successfully completed
- The instrument is writing or internally using the transaction and/or batch, and the BT command is used to attempt to access the transaction or batch.

9.41 Error Status 100 - Illegal Flow

Unauthorised flow needs to be enabled by setting an unauthorised flow value other than 0 for each metering line before this error is possible.

This error is recorded when unauthorised flow is detected. A new batch and/or transaction is started to record the event.

9.42 Error Status 101 – Comms failure

This error is recorded when communication failure occurs between TAS and BCU. To enable this error, set Comms Timeout to non-zero value.

9.43 Error Status 102 – Unauthorized flow

This error is recorded when unauthorised flow is detected. A new batch and/or transaction starts to record the event.

9.44 Error Status 103 – Overrun

This error is recorded when overrun volume is detected at the end of the batch.

9.45 Error Status 104 – Push button

These errors are detected if the push button input is disconnected or tripped during loading. Always pause loading effect applicable for this error. During this error, 1010CB displays “ACKNOWLEDGE SAFETY CHECK”.

To operate this error, enable push button in configuration menu.

9.46 Error Status 105 – Battery switch off

These errors are detected if the Battery Switch input is disconnected or tripped during loading. Always pause loading effect applicable for this error. During this error, 1010CB displays “BATT SWITCH OFF CHECK”.

To operate this error, enable EXTRA_PUSH_BUTTON in configuration menu.

9.47 Error Status 106 – Fire Extinguisher placed

These errors are detected if the Fire Extinguisher placed input is disconnected or tripped during loading. Always pause loading effect applicable for this error. During this error, 1010CB displays “FIRE EXTINGUISHER PLACED CHECK”.

To operate this error, enable FIRE EXTINGUISHER placed in configuration menu.

9.48 Error Status 107 – Hand break applied

These errors are detected if the Hand Breaks applied input is disconnected or tripped during loading. Always pause loading effect applicable for this error. During this error, 1010CB displays “HAND BREAKS APPLIED CHECK”.

To operate this error, enable HAND BREAKS APPLIED in configuration menu.

9.49 Loading Effect

> NOTE: Permissive and programmable inputs pause or terminate a load while arm inputs pause or stop a batch for the associated arm.

The loading effect is programmed as follows:

- None

  Disabled—has no effect on the load or batch operation.

- Pause

  The load or batch is paused as soon as the error is detected. The screen displays a reconnect message. You can restart the load or batch after reconnecting.

- Timeout

  The load or batch is paused as soon as the error is detected. The screen displays a reconnect message. You must reconnect within a preconfigured time or the load or batch is terminated.

- Terminate

  The load or batch is terminated as soon as soon as the error is detected. The reconnect message is not displayed.

- Manager Reset

  The load or batch is paused as soon as the error is detected. The screen displays a reconnect message. You must reconnect within a preconfigured time or the arm is disabled and then requires the Manager Reset (MR) to re-enable it. The load or batch can continue once the manager password is entered and authorised.

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