

CHAPTER 4 ERROR MESSAGES

INTRODUCTION If for any reason the machine does not complete a particular sequence in the time allowed for in software, an error condition arises. The relevant error message is displayed on the machine monitor.

Machine Errors are detected by sensors specifically designed for checking correct machine status (System Power, Pneumatic Power, etc.) or by functions failing to achieve their correct operation. These latter errors are either detected by a limit sensor being operated or by setting a time limit for their completion. The time limits are set so they are 1.5 times the longest possible time taken for that particular operation, after which, if not completed, an error is reported on the machine monitor.

When an error occurs the relevant message is displayed on the machine monitor. The displayed error message is accompanied by information regarding the possible causes and the corrective action to be taken.

The Tricolour beacon changes to red and records the error in the Event Log file.

ERROR RECOVERY

When an error message is displayed the following options maybe available to recover the machine:

Abort	Pressing this option re-initializes the entire printer, ejecting any product that may be in the printer and returning to the main control page.
Retry	Selecting this option re-checks the error condition and if clear continues the print cycle.
Recover	Pressing this option attempts to continue with any cycle that is in operation. This function sets modules (paste dispenser, print carriage, etc.) to their home position and ejects the board that is currently in the printer without re-initializing the machine. This option should be the first to be operated if there is an error reported.
Diagnostics	This option enables the diagnostics to be entered immediately, normally by a technician, for more in-depth investigation of the problem.
Head	This option allows the operator to select ' Head ' to gain access to the tooling area of the machine.
Continue	When this option is available, selecting the continue key clears the error message and continue with the cycle that is in operation.
Fiducial Setup	When this option is available, selecting the Fiducial Setup key allows the user to relearn the reported 'Not Found' fiducial.
Auto Search	When this option is available, selecting the Auto Search key instigates a search within the selected window size to locate the 'Not Found' fiducial.
Search Step	When this option is available, selecting the Search Step key moves the camera the first step in a search procedure designed to locate the 'Not Found' fiducial. Further selection of the key moves the camera to the second step etc. Once the fiducial is visible in the region of interest, the Retry key can be selected to capture the fiducial.
Search Reset	When this option is available, selecting the Search Reset key returns the camera to its original position, before the Search Step key was selected. This is the position from which the 'Not Found' fiducial was reported.

ERROR MESSAGE LISTING

Error Message	Interpretation
Alignment Out of Range	This indicates that the actuator positions required to achieve a satisfactory alignment are not attainable.
Alignment Close to Limit/Out of Range	Actuator limit exceeded.
AutoFlex Timed Out	This error reports that with AutoFlex tooling on high power and the tooling pins up, the process time of 5 minutes has been exceeded. When this message is displayed the power is also switched to low.
Board Detected At Board Stop, Print Terminated.	With the machine running in any mode, this error reports that the board stop sensor has been activated out of sequence. Possible causes are: Board already loaded into the machine. Sensor is detecting tooling. Sensor is faulty.
Board Fiducial Not Found	This error reports that the vision system has been unable to locate the board fiducial.
Board Not Over Input Sensor	This error reports a machine has started without a board on the rails. The user has ignored the message to place a board on the rails and selects continue on the machine.
Board On Rails, Remove and Continue	This error reports that a board has been sensed on the rails during one of the following operations: Initialization Loading a new board file Entering the rail system in diagnostics.
Board Stop Not Lowered	This error reports that the board stop is up and has not lowered within the time-out period of 3 seconds. The possible causes are: Board stop sensor - enter Diagnostics and check the sensor changes state. Air pressure failure to the board stop.
Board Stop Not Retracted	This error reports that the board stop is down and has not retracted within the time-out period of 3 seconds. A possible cause is: Board stop sensor - enter Diagnostics, Digital Inputs and check the sensor changes state.
Board Stop Stuck	This error reports that the board stop, which is housed in the camera assembly has failed to lower or retract.
Board Stuck in Rails	This error reports that the board has failed to either reach the board stop or exit the machine after being printed.
Camera X Axis Error	This error reports that the camera carriage has failed to reach its home position in the X axis.
Camera Y Axis Error	This error reports that the camera carriage has failed to reach its home position in the Y axis.
Command Timed Out (Belt Motors)	This error reports if a board on the belt fails to move over the board at left/right sensor within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.

Error Message	Interpretation
Command Timed Out (Camera Axes)	This error reports that the camera has failed to move to the demanded position within the time period. This error applies to both the X and Y camera axis. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (Paste Dispense Carriage)	This error reports that the paste dispense carriage has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed out (Print Carriage)	This error reports that the print carriage has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (Print Head)	This error reports that the print head fails to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (ProFlow)	This error reports that the ProFlow unit has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (Rail System)	This error reports that the moving rail has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (Screen Actuators)	This error reports that the actuator has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Command Timed Out (Screen Change)	This error reports that the screen change has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.

Error Message	Interpretation
Command Timed Out (Front/Rear Squeegee)	This error reports that the front/rear squeegee has failed to move to the demanded position within the time period. Possible causes are: Home sensor fault, if occurring during initialization. Motor fault, if occurring during initialization. Motor not running. NextMove card faulty.
Downline Board Transfer Fault	This error reports that the time the downline interface has waited for a board has exceeded the time-out.
Downline Machine Not Available	This error reports that the downline machine is unavailable to accept the next board.
Dual Shuttle Fault	This error reports that the 20 seconds time-out period has been exceeded when loading or unloading a screen.
Event File Open Error	This error reports that there was a problem opening the event log backup file.
Failed to Determine Tooling Deviation	This error reports that while monitoring the tooling deviation, the number of samples (pressure variations) during the print stroke was less than 2 or the minimum value was zero. This error message is only valid where tooling deviation is authorized and enabled. Check tooling support is sufficient. Check underside components are clear of tooling.
Front Squeegee Error	This error reports that the front squeegee has failed to reach its fully up position.
Front Squeegee Pressure Error	When this error is detected a new window displays the set pressure reading and the actual pressure reading.
File Error	This message appears if there is an error writing or reading a machine file.
Have All Tooling Pins Been Removed?	This message appears for the user to confirm that all magnetic tooling pins have been removed, before setting up the machine for a new board file that uses AutoFlex tooling.
Invalid Calibration Data. Recalibrate ProFlow Heights	This error reports that the ProFlow calibration data is corrupt or invalid.
Invalid Calibration Data. Recalibrate Squeegee Heights	This error reports that the squeegee calibration data is corrupt or invalid.
Lid Bolt Fault	This indicates that the lid bolt has failed to either open or close.
No Paste Knead Cycles Selected	This error reports when Knead Paste is selected on main menu page and Knead Deposits in Set Prefs is selected to 0 cycles.
Paste Carriage Error	This error reports that the paste carriage has failed to reach its home position.
Paste Cartridge Tilt Error	This error reports that the paste cartridge mechanism has failed to either make its up or down limit switches.
Pneumatic Power Down	This error message reports that the pneumatic supply is either too low or has been disconnected.
Position Error (Camera)	This error reports that the cameras actual position is not within the tolerance of 1% of the designated position.
Position Error (Print Carriage)	This error reports the print carriage actual position is not within tolerance of its designated position.
Position Error (Rising Table)	This error reports that the rising table has failed to reach its home position.

Error Message	Interpretation
Position Error (Screen Load)	This error reports that a problem has occurred while unloading the screen. Possible causes are: Motor fault Sensor fault
Print Carriage Error	This error reports that the print carriage has failed to move.
Proflow Downstop At Limit	This error reports when the downstop reaches set limits whilst using the jog buttons in Diagnostics, Drive Downstop Using Jog Buttons.
Proflow at Movement Limit	This error reports when the proflow reaches set limits whilst using jog buttons in Diagnostics, Drive System Using Jog Buttons.
Rail Lifted Error, Check Tooling	This error reports that either the left rail lifted sensor or the right rail lifted sensor are out of their home positions when any of the following moves are taking place: Alignment of the screen Board stop moving into position Initialization of the machine Initialization of the AutoFlex tooling Possible causes are: A misfed board Tooling/object on the rising table striking the underside of the rails
Rear Squeegee Error	This error reports that the rear squeegee failed to reach its fully up position.
Rear Squeegee Pressure Error	When this error is detected a new window displays the set pressure reading and the actual pressure reading.
Rising Table Error	This error reports that the rising table has either failed to reach its fully down position or that when attempting to reach the required height during the machine cycle did not achieve the positional accuracy.
Rising Table Out of Position	This error reports that either; the camera axes are not at the home position when the rising table is to be lifted, or the rising table is at a height greater than vision height by 1mm.
Screen/Board Fiducial Not Found	This error reports that the vision system has been unable to locate the screen/board fiducial (n). Possible causes are: Incorrect board file for the product being run. Incorrect board loaded. Correct board loaded the wrong way up.
Screen Changer Drive Error	This error indicates that no screen movement has been detected when the screen changer is attempting to move the screen either at initialization or at a screen change request.
Screen Cleaner Out Of Position	This error reports that the screen cleaner is out of position. Possible causes are: Screen Cleaner not at the home position. Home sensor - enter Diagnostics, Digital Inputs and check the sensor changes state. If a screen cleaner is not fitted, check that the home sensor is not connected.
Screen Couplings Not Extended	This error reports that the screen couplings have failed to extend within the 4 second time-out period.
Screen Fiducial Not Found	This error reports that the vision system has been unable to locate the screen fiducial.
Screen XF Error	This error reports that the X forward screen actuator failed to initialize to its central datum.

Error Message	Interpretation
Screen XR Error	This error reports that the X rear screen actuator failed to initialize to its central datum.
Screen Y Error	This error reports that the Y screen actuator failed to initialize to its central datum.
Set Pressure %2.21f Actual Pressure %2.21f (Front/Rear Squeegee)	This error reports if the front/rear squeegee pressure differs from the pressure set by more than $\pm 1.00\text{Kg}$.
Stop After Idle Time Exceeded	This error reports if the idle time is exceeded, the options to continue or abort are displayed. Continue resets the idle timer or abort allows for Manual or Auto unload.
System Power Down	This error reports that the 24V motor power has been switched off either by the Emergency Stop button being activated (including upline and downline external machines) or that the removable frame access cover has been removed.
System Suspended While Covers Open	This error reports that whilst the machine was switched on, one or more of the cover interlock switches were out of position.
Table Movement Inhibited, Camera Not Home.	This error reports that the camera is over the table and the NextMove is sent an instruction to move the rising table.
This Diagnostic Cannot Run Until Proflow Is At home	This error reports if proflow is not in the home position (Print Carriage Diagnostics only).
This Diagnostic Cannot Run With Proflow Fitted	This error reports if in Print Carriage Diagnostics, Move Print Carriage to Paste Position is selected.
Unable to Find Fiducial	This error reports that the vision system is unable to locate the relevant screen or board fiducial.
Upline Board Transfer Error	This indicates that there is a problem in loading a board from the upline machine.
Upline Machine Not Available	This error reports that the upline machine is unavailable to accept the next board.
Window Error	This error reports that the menu structure has failed to open correctly.
X Actuator Limit Exceeded	This error reports that either X actuators are driven past its limit set during calibration.
Y Actuator Limit Exceeded	This error reports that the Y actuator is driven past its limit set during calibration.

