08732
Spectrum Z™510 Troubleshooting Guide

Rev E

Revision History:

Rev 02:	BDS	1/28/2005	Unreleased revision
Rev A:	BDS	2/8/2005	RELEASED - ECN 1460
Rev B:	BCM	6/7/2005	ECN 1522
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Rev E:	BCM	9/19/2008	ECN 2532

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Machine will not boot or come online	Power not connected	+	Plug in to appropriate voltage
	Fuse blown or incorrect rating	-	Replace fuse with the proper rating - check that proper voltage is being used
	Network Initialization failed	+	Machine will enter set up mode - (See 08605 Network Setup Procedure)
	FPGA load errors	-	Replace Ebox (See 08742 Ebox Module Install)
	Ebox failures	-	Replace Ebox (See 08742 Ebox Module Install)
Short Head Life	Air in tubing	+	make sure air is bled if binder bottles are disconnected or run dry
	Low flow rate	+	Check flow rate (See 08744 Flow Rate Test)
	Service Station	+	See service station troubleshooting
Low Flow Rate	Plumbing	-	Look for kinks in plumbing
	Binder bottle cap clogged	+	Wash cap in hot water
	Binder bottle filter clogged	-	Replace binder bottle
Service Station Troubleshooting	Service station overflowing	+	Check that connection is made to the waste bottle and under the service station
			Ensure vent in waste bottle cap is open (wash cap in hot water)
			Replace Service Station and flush waste line with hot water
	Service Station	+	Clean service station
			Refill wash fluid if empty
			Replace service station module
Part Color Issues	Old Printheads.	-	Replace the Printheads. Refer to the maintenance section of the users manual for instructions.
	Service Station is dirty.	+	Clean the Service Station. Refer to the maintenance section of the users manual for instructions.
	Incorrect Saturation Levels.	-	Check and correct the Saturation level in the ZPrint Powder Settings dialog. Check or change the Shell and/or Core Saturation settings in the Powder Settings dialog.
	Printheads are not aligned.		Run an alignment pattern to realign the Printheads.
	Alignment failed.		When the Alignment pattern fails it will cause the color of the part to be compromised. A proper Alignment pattern is your queue that the Printheads are correctly aligned and functioning as expected. Run the auto Alignment pattern. If the pattern is stripy, or the colors are bad, the Printhead(s) may have failed. Change the Printhead(s) and rerun the auto alignment pattern. See also errors 40006, 40007, or 40008.
	Wash Fluid is empty or not the correct type.		Check the Wash Fluid level. If needed, add Wash Fluid. If the Wash Fluid is the incorrect type (should be zc5 for your Spectrum 510) you must replace it with the correct type.
	Service Station Squeegee is worn.		Call Service to replace the 06873 Service Station.
	Parking Cap is damaged.		Call Service to replace/repair the 06873 Service Station
	Expired/Incorrect Binder.		Call Service. If the binder is expired or incorrect, it must be removed from the printer and the lines sanitized before replacing with new or correct Binder.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Part Color Issues (Continued)	The Printer is short spreading, rough spreading, or spreading powder unevenly.		See Rough or Uneven Spreading Issues.
	Dirty Pogo contacts.		Remove the Printheads and clean the Pogo Pins with an alcohol swab.
	Fast Axis Rails are dirty.		Check for powder buildup or residue on the rails. To clean the rails, take a paper towel and dampen it with distilled water. Wipe off the rails and then thoroughly dry with a paper towel.
	Fast Axis Bearing needs grease.		ZPrint will prompt you if the Fast Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Fast Axis Bearing and then reset the Maintenance Reminder in ZPrint. See Fast Axis Lubrication for instructions.
	Slow Axis Bearing needs grease.		ZPrint will prompt you if the Slow Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Slow Axis Bearing and then reset the Maintenance Reminder in ZPrint. See Slow Axis Bearing Lubrication for the correct procedure.
Part Geometry Issues	Old Printheads.	+	Replace the Printheads. Refer to the maintenance section of the users manual for instructions.
	Service Station is dirty.	+	Clean the Service Station. Refer to the maintenance section of the users manual for instructions.
	Incorrect Saturation Levels		Check and correct the Saturation level in the ZPrint Powder Settings dialog. Check or change the Shell and/or Core Saturation settings in the Powder Settings dialog.
	Wash Fluid is empty or not the correct type.		Check the Wash Fluid level. If needed, add Wash Fluid. If the Wash Fluid is the incorrect type (should be zc5 for the Z510) you must replace with the correct type.
	Service Station Squeegee is worn.		Call Service to replace 06873 Service Station.
	Expired/Incorrect Binder.		Call Service. If the binder is expired or incorrect, it must be removed from the printer and the lines sanitized before replacing with new or correct Binder.
	The Printer is short spreading, rough spreading, or spreading powder unevenly.		See Powder Spreading Issues.
	Parking Cap is damaged.		Call Service to replace/repair the 06873 Service Station
	Heater is not coming up to temperature.		The Heater Module is damaged. Call Service to replace the Heater Module.
Part Strength Issues	Old Printheads.	+	Replace the Printheads. Refer to the maintenance section of the users manual for instructions.
	Service Station is dirty.	+	Clean the Service Station. Refer to the maintenance section of the users manual for instructions.
	Parking Caps are dirty.	+	Clean the Parking Caps. Refer to the maintenance section of the users manual for instructions.
	Incorrect Saturation Levels	+	Check and correct the Saturation level in the ZPrint Powder Settings dialog. Check or change the Shell and/or Core Saturation settings in the Powder Settings dialog.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Part Strength Issues (Continued)	PC is pausing in between layers.	-	Check your Printer or PC configuration. See Computer Requirements and Specifications for all current system requirements.
	Part is not dry.	+	Allow more time for drying before handling.
	Wash Fluid is empty or not the correct type.	-	Check the Wash Fluid level. If needed, add Wash Fluid. If the Wash Fluid is the incorrect type (should be zc5 for the Z510) you must replace with the correct type.
	Service Station Squeegee is worn.	+	Call Service and replace 06873 Service Station.
	Dirty Pogo contacts.	+	Remove the Printheads and clean the Pogo Pins with an alcohol swab.
	Expired/Incorrect Binder.	+	Call Service. If the binder is expired or incorrect, it must be removed from the printer and the lines sanitized before replacing with new or correct Binder.
	The Printer is short spreading, rough spreading, or spreading powder unevenly.	-	See Powder Spreading Issues.
	Parking Cap is damaged.	-	Call Service to replace/repair the 06873 Parking Caps.
	Heater is not coming up to temperature.	-	The Heater Module is damaged. Call Service to replace the Heater Module.
	Parts are not printing well.	-	Check the Saturation values for the powder/printer type you are using in the ZPrint Powder Settings dialog. For example, if you import a .zbd file into ZPrint, ZPrint will use the Saturation values saved for that file, which may not be the correct settings for the printer/powder type you are using. Check/change the Saturation settings in ZPrint after you load the file to ensure they agree with the printer/powder type you are currently using to print with.
Surface Finish Issues	Old Printheads.		Replace the Printheads. Refer to the maintenance section of the users manual for instructions.
	Service Station is dirty.		Clean the Service Station. Refer to the maintenance section of the users manual for instructions.
	Parking Caps are dirty.		Clean the Parking Caps. Refer to the maintenance section of the users manual for instructions.
	Incorrect Saturation Levels		Check and correct the Saturation level in the ZPrint Powder Settings dialog. Check or change the Shell and/or Core Saturation settings in the Powder Settings dialog.
	PC is pausing in between layers.		Check your Printer or PC configuration. See Computer Requirements and Specifications for all current system requirements.
	Printheads are not aligned.		Run an Alignment pattern to realign the Printheads. If the pattern is stripy, the Printhead(s) may have failed. Change the Printhead(s) and rerun the auto alignment pattern.
	Wash Fluid is empty or not the correct type.		Check the Wash Fluid level. If needed, add Wash Fluid. If the Wash Fluid is the incorrect type (should be zc5 for the Z510) you must replace with the correct type. Call Service for complete instructions on how to change the Wash Fluid.
	Service Station Squeegee is worn.		Call Service and replace the 06873 Service Station.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Surface Finish Issues (Continued)	Expired/Incorrect Binder.		Call Service. If the binder is expired or incorrect, it must be removed from the printer and the lines sanitized before replacing with new or correct Binder.
	The Printer is short spreading, rough spreading, or spreading powder unevenly.		See Powder Spreading Issues.
	Dirty Pogo contacts		Remove the Printheads and clean the Pogo Pins with an alcohol swab.
	Fast Axis Rails are dirty.		Check for powder buildup or residue on the rails. To clean the rails, take a paper towel and dampen it with distilled water. Wipe off the rails and then thoroughly dry with a paper towel. See also 2303 (1).
	Fast Axis Bearing needs grease.		ZPrint will prompt you if the Fast Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Fast Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
	Slow Axis Bearing needs grease.		ZPrint will prompt you if the Slow Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Slow Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Fluid leaks / puddles	Check the cap of the binder bottle	+	Tighten cap
			Replace binder bottle
	Fluid connections on the binder bottle	+	Replace the binder bottle
	At carriage	-	Replace Fast Axis Module
	Under service station	-	Replace Service Station
	Service station overflowing	+	See service station troubleshooting
Rough or uneven spreading	Spreader roller not connected	+	Check connections for spreader roller motor
	Powder is contaminated with debris or over-recycled	+	Discard old powder and replace with fresh powder
	Spread roller dirty	+	Scrape clean spread roller
	Powder build-up on edges of boxes	-	Scrape clean edges of piston boxes
	Scraper blade worn	-	Replace Fast Axis Module
	Spread motor failure	-	Replace Fast Axis Module

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Pistons not traveling to top of travel	Piston position incorrect	+	Rezero pistons (must be done after installation of new Ebox)
	Piston motor cables disconnected	-	Reconnect piston motor cables

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
Excessive powder in front and behind build and feed boxes	Snowplows mis-seated	+	Reposition snowplows
	Snowplows worn	-	Swap snowplows front to back if not worn on opposite side as well
			Replace Fast Axis Module (for full refurb)
	Fast Axis is not level	-	Check Fast axis is level

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
1001	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
PRINTHEAD POWER FAIL	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
CAN'T TURN ON HEAD 5 + 12 V (Not Head Specific)	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module
1003	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
PRINTHEAD *x* ERROR	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
I2C READ FAILED FOR HEAD *x*	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
0 = W | 1 = Y | 2 = M | 3 = C	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module
1004	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
PRINTHEAD POWER FAIL	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
HEAD *x* FIRE VOLTAGE FAILED	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
0 = W | 1 = Y | 2 = M | 3 = C	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
1006 **PRINTHEAD *x* OVERTEMP** HEAD *x* TEMPERATURE TOO HIGH 0 = W | 1 = Y | 2 = M | 3 = C	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Service Station is not clean or is damaged.	+	Clean the Service Station. Refer to the maintenance section of the users manual for instructions. If damaged, call Service.
	The Printhead contacts are dirty.	+	Remove the Printhead and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printhead. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	The Printhead is not seated Properly	+	Remove the Printhead and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printhead. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	Printer is out of zc5 (Wash Fluid)	+	Add zc5 to the Printer. Refer to the Quick Start Guide section of the users manual for instructions.
	Binder is past expiration date.	+	Check the expiration date on the Binder and Binder Cartridge. If it has expired, call Service.
	Service Station Squeegee is worn.	+	Call Service to replace the Service Station.
	Binder System is leaking.	+	See Fluid Leaks/Puddles.
	Air is in the Binder line.	+	Bleed air our of the binder line. Refer to the maintenance section of the users manual for instructions.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
1010 **INVALID HEAD TEMP** HEAD *x* INVALID HEAD TEMPERATURE 0 = W | 1 = Y | 2 = M | 3 = C	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Service Station is not clean or is damaged/Clogged	+	Clean the Service Station. Refer to the maintenance section of the users manual for instructions. If damaged/Clogged, call Service.
	The Printhead contacts are dirty.	+	Remove the Printhead and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printhead. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	The Printhead is not seated Properly	+	Remove the Printhead and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printhead. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	Printer is out of zc5 (Wash Fluid)	+	Add zc5 to the Printer. Refer to the Quick Start Guide section of the users manual for instructions.
	ZC5 is past expiration date or from a bad batch.	+	Check the expiration date on the ZC5 and compare batch against Service Bulletin 68. If it is bad call Service.
	Service Station Squeegee or Squirter Block is plugged or worn	+	Call Service to replace the Service Station.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
1905	File Layer is too large for the printer buffer.	-	Reduce the size of the file in your third party software. Rotate the part in ZPrint on the X-Z or Y-Z Axes. For flat parts (such as a GIS file that has a flat base), rotate the part in ZPrint 1° in the Z-X or Z-Y directions.
LAYER TOO BIG LAYERS: layer is too big, *x* Kbytes	MAX_LAYER_BYTES set incorrectly	-	Check the INI file and delete the entry for MAX_LAYER_BYTES (this will restore it to the default 38,000,000 bytes)
2301 **MOVER: axis *X* destination out of range**	SKIP_REZERO in the ini is set to 1	+	Change SKIP_REZERO 1 to SKIP_REZERO 0
230x **AXIS 0 ERROR**	SA motor cable disconnected	-	Check and connect cable at motor
	Rails are dirty	+	Clean rails
ALL 230x errors on axis 0	Bearings need grease	+	ZPrint will prompt you if the Slow Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Slow Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
	SA belt not tensioned properly	+	Loosen slow axis belt tensioner and retension
	The Fast Axis Bumpers are dirty.	+	Grease buildup on the Fast Axis bumpers can cause the Fast Axis to rezero on the wrong location and throw a multitude of errors. Clean the Fast Axis bumpers and restart the print.
AXIS 0 = SLOW AXIS	The Slow Axis Bearings are Worn	-	Replace Slow Axis Bearings
	Does the slow axis move	No	Replace the Ebox
	Does the slow axis move	Yes	Replace the slow axis motor
230x **AXIS 1 ERROR**	FA motor cable disconnected	-	Check and connect cable at motor
	The Gantry is obstructed.	+	Check there is nothing obstructing the travel path of the Gantry. If there is, remove the obstruction.
ALL 230x errors on axis 1	The Fast Axis Rails are dirty.	+	Check for powder buildup or residue on the rails. To clean the rails, take a paper towel and dampen it with distilled water. Wipe off the rails and then thoroughly dry with a dry paper towel.
AXIS 1 = FAST AXIS	The Fast Axis Bearing needs grease.	+	ZPrint will prompt you if the Fast Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Fast Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
230x Cont.	The Fast Axis Bumpers are dirty.	-	Grease buildup on the Fast Axis bumpers can cause the Fast Axis to rezero on the wrong location and throw a multitude of errors. Clean the Fast Axis bumpers and restart the print.
AXIS 1 = FAST AXIS	The Fast Axis motor pulley belt is dirty or worn.	-	Clean the pulley teeth with the Pick included in the Accessories Kit.
	Fast Axis Drive Failure	-	Replace Fast Axis

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
240x	SA motor cable disconnected	-	Check and connect cable at motor
AXIS 0 REZERO ERROR	Rails are dirty	+	Clean rails
REZERO: axis *x* can't find end of travel	Bearings need grease	+	ZPrint will prompt you if the Slow Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Slow Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
	SA belt not tensioned properly	+	Loosen slow axis belt tensioner and retension
	The Fast Axis Bumpers are dirty.	+	Grease buildup on the Fast Axis bumpers can cause the Fast Axis to rezero on the wrong location and throw a multitude of errors. Clean the Fast Axis bumpers and restart the print.
AXIS 0 = SLOW AXIS	The Slow Axis Bearings are Worn	-	Replace Slow Axis Bearings
	Does the slow axis move	No	Replace the Ebox
	Does the slow axis move	Yes	Replace the slow axis motor
240x	FA motor cable disconnected	-	Check and connect cable at motor
AXIS 1 REZERO ERROR	The Gantry is obstructed.	+	Check there is nothing obstructing the travel path of the Gantry. If there is, remove the obstruction.
REZERO: axis *x* can't find end of travel	The Fast Axis Rails are dirty.	+	Check for powder buildup or residue on the rails. To clean the rails, take a paper towel and dampen it with distilled water. Wipe off the rails and then thoroughly dry with a dry paper towel.
	The Fast Axis Bearing needs grease.	+	ZPrint will prompt you if the Fast Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Fast Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
AXIS 1 = FAST AXIS	The Fast Axis Bumpers are dirty.	-	Grease buildup on the Fast Axis bumpers can cause the Fast Axis to rezero on the wrong location and throw a multitude of errors. Clean the Fast Axis bumpers and restart the print.
	The Fast Axis motor pulley belt is dirty or worn.	-	Clean the pulley teeth with the Pick included in the Accessories Kit.
	Fast Axis Drive Failure	-	Replace Fast Axis
3202	Axis rails are dirty	-	Clean and lubricate the fast and slow axis bearing and rails.
THREAD PROCESSING	Heatsink in the EBox clogged with powder.	+	Remove the Ebox and clean with compressed or canned air
Monitor: Thread took too long	Fan for the heatsink is dead.	+	Replace the processor fan and heatsink.
3900	Network Initialization failed	+	Machine will enter set up mode - (See 08605 Network Setup Procedure)
CAN'T INITIALIZE WINSOCK INTERFACE			
40006	The Sensor Window is dirty.	+	Clean the Sensor Window and run an auto alignment in ZPrint.
CLEAN SENSOR WINDOW AUTOALIGN: weak sensor reading	Inside of sensor window is dirty	-	Replace Fast Axis Module
40007	The Sensor Window is dirty.		Clean the Sensor Window and run an auto alignment
ALIGNMENT FAILED	Build Bed surface is not smooth.	+	Perform a Fill Bed operation from the Printer LCD. It
Autoalignement: Alignment failed on axis x	Stripy printing.	+	See Part Color Issues.
	Poor powder spreading.	+	See Rough or Uneven Spreading Issues.

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
AXIS 1 = FAST | AXIS 2 = SLOW	Heads too far out of alignment	+	Restore default alignment by deleting the alignment sections from the ini file and retry
	Inside of sensor window is dirty	-	Replace Fast Axis Module
40008	The Sensor Window is dirty.		Clean the Sensor Window and run an auto alignment in ZPrint.
ALIGNMENT FAILED	Build Bed surface is not smooth.	+	Perform a Fill Bed operation from the Printer LCD. It may take two Fill Beds to properly prepare the Build Bed surface. Restart the print job. If you have to select Fill Bed more than twice to prepare the bed, call Service. They will adjust the amount of powder that is spread during a Fill Bed command.
	Stripy printing.	+	See Part Color Issues.
AUTOALIGN: can't pick reference head	Poor powder spreading.	+	See Rough or Uneven Spreading Issues.
	Heads too far out of alignment	+	Restore default alignment by deleting the alignment sections from the ini file and retry
	Inside of sensor window is dirty	-	Replace Fast Axis Module
40800	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
PRINTHEAD x ERROR	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
Head x check failed	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
0 = W | 1 = Y | 2 = M | 3 = C	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module
40801	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
PRINTHEAD POWER FAIL	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module

Symptom/Error Code	Cause / Problem	Likelihood + High/ - Low	Solution
40802 **PRINTHEAD x NOT HP11** Head x not HP11 type print head 0 = W | 1 = Y | 2 = M | 3 = C	Incorrect print head in position x	+	Replace print head with HP11 C4810a
41000 **HP11 INTERFACE** HP11 INTERFACE:communication timeout	Belt loose	+	Tighten belt clamp on carriage
	Dirt in pulleys	+	Clean teeth on pulleys
	Top cover switch	-	Replace top cover switch
41103 **MONITOR: U15/U26 error** Head x Monitor: U15/U26 error 0 = W | 1 = Y | 2 = M | 3 = C	The Printhead contacts are dirty.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	The Printhead is not seated properly.	+	Remove the Printheads and clean the Printhead contacts and Pogo Pins with an alcohol swab. Reinsert the Printheads. Press down firmly on the Printhead to properly seat in the Carriage. Refer to the maintenance section of the users manual for instructions.
	Printhead (one or more) is bad or old.	+	Replace the Printhead(s). Refer to the maintenance section of the users manual for instructions.
	Bad carriage cable	-	Replace Fast Axis Module
	Bad pogo card	-	Replace Fast Axis Module
	Bad head card	-	Replace Fast Axis Module
43000 **SEQUENCER: missed position, flags** Carriage is not in the correct place for print head servicing	The Gantry is obstructed.	+	Check there is nothing obstructing the travel path of the Gantry. If there is, remove the obstruction.
	The Fast Axis Rails are dirty.	+	Check for powder buildup or residue on the rails. To clean the rails, take a paper towel and dampen it with distilled water. Wipe off the rails and then thoroughly dry with a dry paper towel.
	The Fast Axis Bearing needs grease.	+	ZPrint will prompt you if the Fast Axis Bearing needs grease. When you see the prompt in ZPrint, grease the Fast Axis Bearing and then reset the Maintenance Reminder in ZPrint. Refer to the maintenance section of the users manual for instructions.
	The Fast Axis Bumpers are dirty.	-	Grease buildup on the Fast Axis bumpers can cause the Fast Axis to rezero on the wrong location and throw a multitude of errors. Clean the Fast Axis bumpers and restart the print.
	The Fast Axis motor pulley belt is dirty or worn.	-	Clean the pulley teeth with the Pick included in the Accessories Kit.
	Fast Axis Drive Failure	-	Replace Fast Axis