

Error Code	Description/Action	Probable Cause	Remedy
MAIN COMM	<p>The Main P.C. Board has stopped receiving messages from the User Interface</p> <p>Action: System shut down completely.</p> <p>Reset Method: Auto, once condition is rectified.</p>	<p>1. Faulty Wire Connection</p> <p>2. Programming Issue</p> <p>3. Defective Board</p>	<p>1. Check Communication cable between Main P.C. board and U.I. board. (Contact Electro Freeze Factory Tech Support)</p> <p>2. Ensure U.I. Program version and Main P.C. Program Version are compatible. (Contact Electro Freeze Factory Tech Support Software version compatibility)</p> <p>3. If the program versions are compatible, and using the test cable does not resolve the issue then the main control board is not functioning properly and needs to be replaced. (Contact Electro Freeze Factory Tech Support)</p>
NO COMM	<p>The U.I. Board is not receiving messages from the main board</p> <p>Action: System shut down completely.</p> <p>Reset Method: Auto, once condition is rectified.</p>	<p>1. Faulty Wire Connection</p> <p>2. Programming Issue</p> <p>3. Defective Board</p>	<p>1. Check Communication cable between Main P.C. board and U.I. board. (Contact Electro Freeze Factory Tech Support)</p> <p>2. Ensure U.I. Program version and Main P.C. Program Version are compatible. (Contact Electro Freeze Factory Tech Support)</p> <p>3. If the program versions are compatible, and using the test cable does not resolve the issue then the U.I. board is not functioning properly and needs to be replaced. (Contact</p>

			Electro Freeze Factory Tech Support)
CYL RFG	<p>This error occurs when cylinder system run time exceeds 90 minutes. Cylinder switches to STBY mode and locks out.</p> <p>Action: Cylinder Refrigeration off, cabinet refrigeration continues to operate.</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p>	<ol style="list-style-type: none"> 1. Dirty Condenser 2. Shortage of Refrigerant 3. Faulty wire connection 4. Compressor starting components failure (1 Phase Only) 5. Compressor Contactor Failure 6. Compressor Contactor Control Relay not activating 7. System lacks efficiency 8. Faulty Thermistor 	<ol style="list-style-type: none"> 1. Clean Condenser 2. Locate Source of refrigerant leak and repair. 3. Locate faulty connection (Wire rubbed through, cut) and repair as needed. 4. Check Compressor Starting components and replace as needed. 5. Check contactor coil for proper resistance, check for voltage drop across contact points. Replace as needed 6. Check to see if Relay is receiving power from Main P.C. board (12VDC), Ohm relay control coil for proper resistance. Replace relay as needed. If no 12VDC is detected Contact Electro Freeze Factory Tech Support. 7. Check for worn blades, AXV pressure settings, Check water regulating valve setting (Water Cooled), check refrigerant level, compressor efficiency. 8. Remove thermistor, check in ice water and compare to thermistor curve chart. If faulty replace, if thermistor

<p>CYL RFG Cont.</p>			<p>tests o.k. check wire harness connections. If all connections are sound possibility of control board issue. (Contact Electro Freeze for proper compressor oil charge)</p>
	<p>9. Condenser Fan Motor Failure (Air Cooled Only)</p>	<p>9. Replace Condenser fan motor</p>	
	<p>10. Water Flow Restriction (Water Cooled Only)</p>	<p>10. Locate and remove restriction, re-start system to check for further issues</p>	
	<p>11. AXV not set properly/not responding</p>	<p>11. Check System refrigerant level, attempt to re-set AXV valve pressure. If valve is not responsive, it may need to be replaced</p>	
	<p>12. Compressor Failure/Reduced Capacity</p>	<p>12. Check Voltage to the unit to ensure it is within specification, Check wire connections to the unit and compressor, Check compressor contactor for loose wire connections and proper operation, and possible voltage drop, ohm compressor windings to check for a short and proper winding resistance, check compressor starting components for failure, allow compressor protector to reset and check for proper amp draw.</p>	
<p>13. Moisture in system</p>	<p>13. Recover refrigerant, change filter drier, change</p>		

		<p>14. Compressor Control Relay not activating</p>	<p>compressor oil (Contact Electro Freeze for proper compressor oil charge), Evacuate system to a minimum of 200 microns or less. Repeat if necessary</p> <p>14. Check to see if Relay is receiving power from Main P.C. board (12VDC), Ohm relay control coil for proper resistance. Replace relay as needed. If no 12VDC is detected Contact Electro Freeze Factory Tech Support.</p>
<p>CABINET RFG</p>	<p>Occurs when cabinet refrigeration system run time exceeds 90 minutes</p> <p>Action: Cylinder refrigeration switches to standby mode, cabinet refrigeration is turned off.</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p>	<p>1. Dirty Condenser</p> <p>2. Shortage of Refrigerant.</p> <p>3. Evaporator coil Froze up</p> <p>4. Cabinet TXV superheat not set properly</p> <p>5. Faulty wire connection</p> <p>6. Restriction in System i.e. Capillary tube, Filter Drier</p>	<p>1. Clean Condenser</p> <p>2. Locate Source of refrigerant leak and repair.</p> <p>3. Check door gasket for wear, check evaporator fan motor for proper operation, check spring loaded door closer for proper operation.</p> <p>4. Ensure the Cabinet TXV Superheat is at 10 to 12 degrees once the system is close to set point. Adjust if necessary</p> <p>5. Locate faulty connection (Wire rubbed through, cut) and repair as needed.</p> <p>6. Locate restriction and repair as needed.</p>

		<p>7.Faulty Thermistor</p>	<p>7. Remove thermistor, check in ice water and compare to thermistor curve chart. If faulty replace, if thermistor tests o.k. check wire harness connections. If all connections are sound possibility of control board issue. (Contact Electro Freeze Factory Tech Support)</p>
		<p>8. Compressor Control Relay not activating</p>	<p>8. Check to see if Relay is receiving power from Main P.C. board (12VDC), Ohm relay control coil for proper resistance. Replace relay as needed. If no 12VDC is detected Contact Electro Freeze Factory Tech Support.</p>
		<p>9. Compressor starting components failure</p>	<p>9. Check Compressor Starting components and replace as needed.</p>
		<p>10. Compressor failure/reduced capacity</p>	<p>10. Check Voltage to the unit to ensure it is within specification, Check wire connections to the unit and compressor, Check compressor contactor for proper operation, and possible voltage drop, ohm compressor windings to check for a short and proper winding resistance, check compressor starting components for failure, allow compressor protector to reset and check for proper amp draw.</p>
		<p>11. Moisture in System</p>	<p>11. Recover refrigerant, change filter drier, change compressor oil (Contact Electro Freeze for proper</p>

			compressor oil charge), Evacuate system to a minimum of 200 microns or less. Repeat if necessary
CYL. TEMP/BULB TEMP.	Occurs when barrel thermistor is above or below temp. limit for 1 minute without change Action: Affected barrel is in STBY time cycle mode (1min on and 40 min. off), Cabinet refrigeration remains on	1. Faulty wire connection 2. Faulty Thermistor	1. Locate faulty connection (Wire rubbed through, cut) and repair as needed. 2. Remove thermistor, check in ice water and compare to thermistor curve chart. If thermistor does not ohm correctly, replace thermistor.
CABINET TEMP	Occurs when cabinet thermistor is above or below temp. limit for 1 minute without change Action: Cabinet is in time cycle mode (5 min. on and 30 min. off) both cylinders are in standby mode. If unit is in cabinet only mode: Cabinet is in time cycle mode and both cylinders remain off	1. Faulty wire connection 2. Faulty Thermistor 3. Program Issue	1. Locate faulty connection (Wire rubbed through, cut) and repair as needed. 2. Remove thermistor, check in ice water and compare to thermistor curve chart. If thermistor does not ohm correctly, replace thermistor. 3. Ensure U.I. Program version and Main P.C. Program Version are compatible. (Contact Electro Freeze Factory Tech Support)
HEAD SW (Head Switch)	Occurs when head switch is open with power applied to unit Action: Affected cylinder is turned off. Reset Method: Auto, once condition has been rectified	1. Head Assembly Not installed 2. Faulty Head switch (1 per cylinder) 3. Faulty wire connection 4. Magnet removed from Head assy.	1. Install Head assembly 2. Test head switch to see if circuit remains open with magnet in place, remove and replace head switch as needed 3. Locate Faulty wire connection and repair as needed 4. Replace the head assy.

<p>MOTOR OVLD</p>	<p>Occurs when motor current is 0, and the computer is calling for the motor to operate.</p> <p>Action: Affected barrel is off, hopper refrigeration continues to operate.</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p>	<p>1. Motor internal overload open</p> <p>2. Faulty wire connection</p> <p>3. Motor Contactor Failure</p> <p>4. Motor control relay not activating</p>	<p>1. Allow motor to cool and overload to reset, Check motor start components, product temperature (Too cold, low overrun), and gear reducer operation.</p> <p>2. Locate Faulty wire connection and repair as needed</p> <p>3. Check contactor coil for proper resistance, check for voltage drop across contact points. Replace as needed</p> <p>4. Check to see if Relay is receiving power from Main P.C. board (12VDC), Ohm relay control coil for proper resistance. Replace relay as needed. If 12 VDC is not detected Contact Electro Freeze Factory Tech Support</p>
<p>MOTOR OVLD Cont.</p>		<p>5. Motor Failure</p> <p>6. Current Sense board/function failure</p> <p>7. One line of power loss</p>	<p>5. Check motor starting components, check motor for shorts to ground, check for proper winding resistance. Replace Motor as needed</p> <p>6. Check current sense board wire connections, check max current setting in control system. (Contact Electro Freeze Factory Tech Support)</p> <p>7. Check main power supply, and main wire connections and correct as needed</p>

		8. Program Issue	8. Ensure U.I. Program version and Main P.C. Program Version are compatible. (Contact Electro Freeze Factory Tech Support)
COMP LO PSI	Occurs when low pressure control is activated. Action: Cylinder refrigeration is off, Cabinet refrigeration Continues to operate. Reset Method: Main Power Switch, once the condition has been rectified.	1. System is Short on refrigerant 2. Solenoid valve not activating	1. Locate refrigerant leak and repair as needed. Ensure refrigeration system is evacuated to at least 200 microns. 2. Determine if Solenoid coil is receiving proper voltage (208/230 Volts), If coil is receiving voltage, ohm out coil windings. If coil is not receiving voltage, check relay responsible for activating coil and repair as needed.
COMP LO PSI cont.		3. Low pressure control is Faulty. 4. Restriction is refrigeration system. 5. Faulty wire connection. 6. System component failure	3. Confirm Low pressure control is faulty by installing manifold gauges to confirm suction pressure is above cut-in set point of control. Replace control as needed 4. Locate and remove restriction i.e. restricted drier, AXV closed down, Solenoid valve not opening etc. 5. Repair connection as needed i.e. faulty connection on LPCO, etc. 6. Locate failed component (Diagnostics Mode in Technician Menu will aid in locating) i.e. solenoid coil, AXV valve not opening, control relay, Compressor contactor staying energized causing unit

			to pump down, etc. and repair as needed.
COMP HIGH PSI	<p>Occurs when the High pressure control is activated.</p> <p>Action: Cylinder refrigeration is off, Cabinet refrigeration Continues to operate</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p>	<p>1. Dirty Condenser Air Cooled</p> <p>2. Bad Condenser Fan Motor (A/C Only)</p> <p>3. Dirty Condenser (Water Cooled)</p> <p>4. High Pressure control is Faulty.</p> <p>5. Faulty Wire Connection</p> <p>6. Non-Condensables in refrigeration system.</p>	<p>1. Blow out and clean Air cooled condenser re-start system and check unit operation.</p> <p>2. Replace Condenser motor as needed. Check system operation</p> <p>3. Check inlet and outlet water temperature on condenser, it should be at least 20°F difference from inlet to outlet. If there is no temperature change, condenser is fouled out and will need to be cleaned, or changed. If this condition is present, contact the Electro Freeze Technical Support Line.</p> <p>4. Confirm High pressure control is faulty by installing manifold gauges to confirm high side pressure is below cut-out set point of control. Replace control as needed.</p> <p>5. Repair connection as needed i.e. faulty connection on HPCO, etc.</p> <p>6. Fully recover refrigerant from system, change the refrigerant filter/drier, evacuate system to at least 200 microns and weigh in Factory refrigerant charge (Contact Electro Freeze in</p>
COMP HIGH PSI Cont.			

		7. Refrigeration System over charged.	<p>charge amount is not stated on machine data Plate). Ensure while evacuating system a manual activation magnet is placed on each solenoid to ensure they are open for a full system evacuation. Start system and check operation</p> <p>7. Fully recover refrigerant from system, change the refrigerant filter/drier, evacuate system to at least 200 microns and weigh in Factory refrigerant charge (Contact Electro Freeze if charge amount is not stated on machine data Plate). Start system and check operation</p>
CLOCK ERROR	<p>CLOCK ERROR</p> <p>Action: All timer functions use default data/time</p>	Contact Electro Freeze Technical Support Line if this Problem exists	Contact Electro Freeze Technical Support Line if this Problem exists.
POWER FAIL	<p>Displays Power Fail if main power to system has failed</p> <p>Action: If unit is in Freeze or STBY mode, unit will restore in STBY Mode. If unit is in Clean or Off Mode, unit will restore in Off Mode.</p> <p>Reset Method: Auto, once the condition has been rectified. Power Fail will be displayed on screen until user presses enter button to acknowledge loss of main power.</p>	1. Main Incoming power to unit was disrupted	<p>1. Check all main power connections, Transformer switch to 208 Volt for 220Volt and below and 230 Volt for 220 Volt and above.</p> <p>2. Check 24VAC connections to control board, ensure all 24VAC connections are secure.</p>

<p>SPIGOT</p>	<p>Displays Spigot if the Left or Right Side Spigot switch is engaged for more than 5 minutes.</p> <p>Action: Affected side compressor and beater motor are off.</p> <p>Reset Method: Auto, once the condition has been rectified.</p>	<ol style="list-style-type: none"> 1. Spigot Push rod not installed 2. Spigot switch has failed in the closed position 3. Spigot Switch is out of adjustment 4. Plunger is sticking open 	<ol style="list-style-type: none"> 1. Install Spigot Push Rod and start system to see if error is eliminated. 2. Replace defective spigot switch and ensure new switch is adjusted properly. 3. Re-adjust Spigot switch to operate properly with Push Rod. 4. Check for proper lubrication, o-ring wear, switch tower spring worn causing plunger to not close, etc.
<p>C SPIGOT</p>	<p>Displays C Spigot if the Center spigot switch is engaged for more than 5 minutes</p> <p>Action: Affected side compressor and beater motor are off.</p> <p>Reset Method: Auto, once the condition has been rectified.</p>	<ol style="list-style-type: none"> 1. Spigot Push rod not installed 2. Spigot switch has failed in the closed position 3. Spigot Switch is out of adjustment 4. Plunger is sticking open 	<ol style="list-style-type: none"> 1. Install Spigot Push Rod and start system to see if error is eliminated. 2. Replace defective spigot switch and ensure new switch is adjusted properly. 3. Re-adjust Spigot switch to operate properly with Push Rod. 4. Check for proper lubrication, o-ring wear, switch tower spring worn causing plunger to not close, etc.

<p>L PWR OFF</p> <p>(This error only applies to Dual Power supply units)</p>	<p>Displays L POWER OFF if the Power good relay is not energized, for the A/Left side of dual power supply machines.</p> <p>Action: Left side of unit is off, and the right side is operational</p> <p>Reset Method: Auto, once the condition has been rectified.</p>	<ol style="list-style-type: none"> 1. Main power to left side is off 2. Power good relay has failed 3. Faulty wire connection to power good relay. 4. Control board issue. 	<ol style="list-style-type: none"> 1. Check to see if main circuit breaker is tripped or unit's main power cord is not installed properly. 2. Check coil on power good relay with ohm meter. If open electrically replace relay. 3. Check high voltage wire connections to power good relay. Check low voltage connections going from relay to main control board. Check continuity through relay contacts to ensure proper operation. Repair any connections as needed. 4. Contact Electro Freeze Technical Support
<p>PUMP HIGH PSI</p>	<p>Displays Pump Hi PSI if the pump pressure is greater than 40 PSI for 10 seconds while pump is on.</p> <p>Action: Affected pump is turned off</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p> <p>Note: If unit trips this error and Pressure relief has not opened, check to ensure relief is functioning properly.</p>	<ol style="list-style-type: none"> 1. Pump control relay is stuck closed causing pump motor to stay energized. 2. Faulty Pressure transducer/out of calibration. 3. Faulty Control Board 	<ol style="list-style-type: none"> 1. Test to see if coil voltage is present at pump control relay, If it is not and pump is still running, the control relay is stuck and needs to be replaced. If coil voltage is present then control board or Transducer may be malfunctioning. 2. Attempt to calibrate the Transducer to 0 psi and re-test unit. If unit continues to malfunction contact Electro Freeze Technical Support. 3. Contact Electro Freeze Technical Support.

<p>PUMP ERROR (Formerly PUMP LO PSI)</p>	<p>Displays Pump Error if the pump has ran for 2 minutes continually while in freeze mode.</p> <p>Action: Affected pump is turned off, along with the affected cylinder being turned to standby</p> <p>Reset Method: Main Power Switch, once the condition has been rectified.</p>	<p>1. Mix Bag has been siphoned out completely without being changed</p> <p>2. Duck bill check valve is not installed in the bag connector</p> <p>3. Pump transfer hose is worn out.</p> <p>4. Leaking Pressure Relief System</p> <p>5. Pump control relay not closing preventing pump motor from running</p> <p>6. Pump motor Starting components Faulty</p> <p>7. Faulty wire connection</p>	<p>1. Ensure the mix bag is changed and using the main power switch, reset the machine to return it to normal operation. Please Note: If the mix bag is not checked when the machine shows a mix out condition the Pump Error will occur frequently.</p> <p>2. Install the Duck bill check valve</p> <p>3. Replace pump transfer hose (Should be replaced minimally every 30 days)</p> <p>4. Check to ensure swing arm is tightened properly. Also check to ensure spring has not become compressed.</p> <p>5. Test to see if coil voltage is present at pump control relay, If it is present but the pump will not start, check to see if the relay contacts are closing. If so move on to troubleshooting the pump motor. If not replace the relay and check operation.</p> <p>6. Remove and test pump Start capacitor and starting relay, Replace faulty parts as needed. Check motor windings to ensure no electrical shorts are present. Start unit and check operation.</p>
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SHORT	<p>Displays SHORT when a thermistor has failed in a shorted state.</p> <p>Action: Affected System is cycled off.</p> <p>Reset Method: Auto once issue is corrected.</p>	<p>1. Faulty wire connection</p> <p>2. Faulty Thermistor</p>	<p>1. Check to ensure wires have not rubbed through and shorted out together or the wire harness is not resting in water.</p> <p>2. Change thermistor</p>
OPEN	<p>Displays OPEN when a thermistor has failed in an open state.</p> <p>Action: Affected system is cycled off</p> <p>Reset method: Auto once issue is corrected</p>	<p>1. Faulty wire connection</p> <p>2. Faulty Thermistor</p>	<p>1. Check to ensure Molex connectors are connected fully and that no wiring from the control board to the sensor has been severed.</p> <p>2. Change Thermistor</p>
CYL. T ALARM	<p>Displays CYL T ALARM when the cylinder temperature has reached 36 degrees for over 2 minutes.</p> <p>Action: Alarm is displayed only and will not change the state of the machine.</p> <p>Reset Method: The main power switch must be cycled to reset error.</p>	<p>Please refer to the error CYL RFG for troubleshooting.</p>	<p>Please refer to the error CYL RFG for troubleshooting.</p>

CAB T ALARM	<p>Displays CAB T ALARM when the cabinet temperature has exceeded 41 degrees for 15 minutes.</p> <p>Action: Alarm is displayed only and will not change the state of the machine.</p> <p>Reset Method: The main power switch must be cycled to reset error.</p>	Please refer to the error CAB RFG for troubleshooting	Please refer to the error CAB RFG for troubleshooting
CLEAN FINISHED	<p>Displayed when the 4 parameters have been met for the machine to log a Last clean.</p> <p>Action: Displayed on the screen once the head is re-installed.</p> <p>Reset Method: Pressing the ENTER button will clear the display.</p>		<p>The 4 parameters to display Clean Finished are as follows:</p> <ol style="list-style-type: none"> 1. Head assy. removed for 10 minutes. 2. Main Power switch needs to be turned off 3. Cylinder temperature have to rise above 55 degrees. 4. Both Mix transfer system pump covers need to be removed. <p>If unit is a Gravity machine then the computer has to see a mix out condition.</p>
PUMP COVER	<p>Occurs if the RMT pump cover is removed or the cover switch is open.</p> <p>Action: If unit is in Freeze, the affected side will be turned to standby and the affected pump will be turned off. If unit is in clean</p>	<ol style="list-style-type: none"> 1. Pump cover is not installed 2. Pump cover magnet has been removed or fallen out 3. Pump Cover safety switch is Faulty 	<ol style="list-style-type: none"> 1. Install Pump Cover 2. Replace pump cover 3. Test switch to confirm and replace as needed.

	<p>or Standby mode the affected pump will be turned off and unit will not be allowed to be put into freeze, and will remain in standby or off.</p> <p>Reset Method: Auto, once the condition has been rectified.</p>	<p>4. Faulty Wire Connection</p> <p>5. Program issue</p>	<p>4. Locate and repair faulty wire connections as needed.</p> <p>5. Contact Electro Freeze Technical Support</p>
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If a Power Failure Occurs unit will log the change of state i.e. switching to night mode on re-start, when the unit is powered back up. The Power Failure error will be displayed on the screen until the SELECT button is pressed acknowledging the Failure. Once the SELECT button is pressed error will reset.

The Head Switch, Spigot Switch, Center Spigot Switch, Mix Low, and Mix Out Errors will all Auto Reset after the problem has been rectified.