

# X & Z Series Ironer Error Codes

## ST-147.R2 X20 & Z20 Series Ironer Alarm Codes



### Summary

The information listed below is provided as general guidelines to assist in troubleshooting. It is ultimately the owner's/ distributor's/ technician's responsibility to properly troubleshoot the piece of equipment down to the failed component(s). Girbau North America's will not be held liable for any part replacement and/or labor associated with the misdiagnosed troubleshooting of the equipment.

It is recommended to run the Test Mode to assist in troubleshooting any error codes. There are Test Mode videos located on our website [www.gnalaundry.com](http://www.gnalaundry.com). Click on Services and Support. Click on Technical Service.

Alarm/ Error Code	Description/ Possible Causes	Action
1	<b>Emergency stop alarm-</b> Emergency stop switch is activated	<ol style="list-style-type: none"> <li>1. Verify the E-stop switch is not activated. If so turn the knob slightly and it should reset.</li> <li>2. Verify wiring on the A2 board to the E-stop. X12-1 to X12-2 and X12-5 to X12-6</li> <li>3. Possible bad E-stop switch or A2 board</li> </ol>
2	<b>A2 board communication alarm</b> A2 board is not communicating with the A1 (microprocessor)	<ol style="list-style-type: none"> <li>1. Verify plug connections (X7-14 on A1 to X2-3 on A2) and clean with contact cleaner</li> <li>2. Possible bad A1 or A2 board</li> </ol>
3	<b>Hand guard activation alarm</b> Hand guard safety switch has been activated	<ol style="list-style-type: none"> <li>1. Press the stop button to reset the alarm.</li> <li>2. Adjust the hand guard switches by loosening up the 2 flat tip screws on the hand guard switches. One switch should sit in the center of the concave and the other switch will be on the tip of the rocker arm.</li> <li>3. Verify circuits through X6-4 to X6-3 and X6-2 to X6-1 on A2 board to hand guard switches</li> <li>4. Possible bad switch or A2 board</li> </ol>
4	<b>A2 board reset</b> Faulty operation of the A2 board	<ol style="list-style-type: none"> <li>1. Cycle power</li> <li>2. Verify plug connections</li> <li>3. Possible bad A2 board</li> </ol>
5	<b>Inverter communication alarm</b> Failure of the communication circuit between the inverter and the microprocessor	<ol style="list-style-type: none"> <li>1. Cycle power</li> <li>2. Verify parameters have been downloaded.</li> <li>3. Verify line voltage at the inverter at L and N</li> <li>4. Verify the wire connection between the inverter and microprocessor. (68 (+) to X10-1 DX+, 60 (-) to X10-2 DX-, and 61 COM to X10-7.) Clean connections with contact cleaner</li> <li>5. Verify position of the dip Replace the inverter</li> <li>6. Possible bad A2 board or inverter.</li> </ol>
6	<b>General inverter alarm</b>	<ol style="list-style-type: none"> <li>1. Cycle power</li> </ol>

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	Failure of the communication circuit between the inverter and the microprocessor	<ol style="list-style-type: none"> <li>Verify line voltage at the inverter at L and N</li> <li>Verify the wire connection between the inverter and A2 board. (68 (+) to X10-1 DX+, 60 (-) to X10-2 DX-, and 61 COM to X10-7.) Clean connections with contact cleaner</li> <li>Possible bad inverter or A2 board</li> </ol>
7	<b>Inverter configuration error</b> Inverter parameters do not match up to the microprocessor parameters	<ol style="list-style-type: none"> <li>Cycle power</li> <li>Verify the connections on the X7 plug on the inverter</li> <li>Possible bad inverter or A2 board</li> </ol>
8	<b>Non-resettable burner alarm</b> The burner will not automatically reset due to a failure in the burner system. Usually associated with an alarm 10.  To reset the burner alarm wait for the counter to count down to zero. Press start and within 3 seconds press the reset button (left side of the red ignition control module).	<ol style="list-style-type: none"> <li>Verify voltage to the secondary side of the tapped transformer. Voltage should be 115 VAC +/- 5%</li> <li>Verify the static exhaust pressure is 0.3 to 0.69 in. w.c</li> <li>Verify dynamic gas pressure is 7.0 in. w.c. (while running)</li> <li>Verify the spark electrode is 3 mm from the top of the burner. Clean the probe with Emory cloth.</li> <li>Verify the heat sense electrode is parallel with the burner tube. Clean the probe with Emory cloth.</li> <li>If there is no spark, verify the over temp sensor circuit is a closed circuit.</li> <li>If there is no spark, the gas blower assembly could be at fault. This is a PWM signal, so it cannot be accurately measured, the blower might need to get replaced.</li> </ol>
9	<b>Safety thermostat alarm</b> Drum high limit switch (S5) is 50 degrees above the programmed value or 392 degrees	<ol style="list-style-type: none"> <li>Verify that there is good contact from the probe to the heated roll (no lint or debris build-up).</li> <li>Clean the heated roll if discolored</li> <li>Verify circuit on the ignition control module (A5) from X3-4 to X3- 12</li> <li>Possible bad probe or ignition control module</li> </ol>
11	<b>Heating control alarm</b> The alarm is triggered when the probe does not detect a temperature rise after 20 minutes of the heating system connection.	<ol style="list-style-type: none"> <li>Press and hold the two arrows on the display board for 10-15 seconds to verify the value of the temperature probes.</li> <li>Verify wiring is correct and not damaged</li> <li>Verify the integrity of the contactors. Ohm across the contactors, resistance should be near zero.</li> </ol>
12	<b>Heating configuration alarm</b> Inconsistent configuration of the machine and between the signals received by the microprocessor	<ol style="list-style-type: none"> <li>Cycle power</li> <li>Verify the configuration of the board</li> <li>Possible bad A2 board</li> </ol>
13	<b>Overheating roll</b>	<ol style="list-style-type: none"> <li>Feed wet linen in the ironer to see if the temperature will decrease.</li> </ol>

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	<p>Ironing temperature is greater than what the unit is programmed for. Alarm will happen if the ironer is turned on for extended periods of time and not getting used.</p>	<ol style="list-style-type: none"> <li>Press the left and right arrows on the display at the same time for about 10-15 seconds. The temperature on all three probes will appear.</li> <li>Verify the probes are making good contact with the heated roll.</li> <li>Verify static exhaust pressure.</li> <li>Possible bad probes</li> </ol>
14 15 16	<p><b>Temperature probe alarm</b> Open in the temperature probe circuit</p>	<ol style="list-style-type: none"> <li>Press the left and right arrows on the display at the same time for about 10-15 seconds. The temperature on all three probes will appear.</li> <li>Verify probe is riding on the heated roll properly.</li> <li>Verify static exhaust pressure</li> <li>Ohm through each temperature probe. When cooled down the resistance of each probe should be about the same.</li> <li>Inspect wiring</li> <li>Possible bad probes</li> </ol>
17	<p><b>Temperature failure alarm or Temperature fails to reach programmed temp</b> Heating system fails to reach programmed temperature after a certain period of time</p>	<ol style="list-style-type: none"> <li>Press the left and right arrows on the display at the same time for about 10-15 seconds. The temperature on all three temp probes will appear. The temperature should read about the same when the ironer is powered down</li> <li>Center left probe controls temp shut off <b>unless</b> the far left or far right probe are 4°C (39°F) above control probe. The center right temp probe is the high limit</li> <li>Verify the dynamic (operating) gas pressure</li> <li>Verify static exhaust pressure</li> </ol>
18	<p><b>Speed sensor (encoder) error</b> Microprocessor does not receive info that the [drum is rotating</p>	<ol style="list-style-type: none"> <li>Verify the heated roll is rotating</li> <li>Verify encoder and wiring is not damaged. X11 plug on A2 board.</li> <li>Verify LED H18 on A2 is blinking continuously when rotating. This is an input signal to the A2 board</li> </ol>
19	<p><b>Exhaust motor thermal circuit open</b> Exhaust motor has overheated</p>	<ol style="list-style-type: none"> <li>Let motor cool down. The circuit should close.</li> <li>Verify the circuit from X10-5 to X10-6 is closed</li> <li>Verify the static exhaust pressure</li> <li>Verify air ducts are clear of debris.</li> </ol>
20	<p><b>Lack of exhaust duct pressure</b> Alarm is triggered when the exhaust pressure switch detects too high or too low exhaust pressure</p>	<ol style="list-style-type: none"> <li>Verify exhaust motor's operation. Reset circuit breakers if needed</li> <li>Verify the static exhaust pressure.</li> <li>Verify exhaust ducts are clear of debris.</li> <li>If pressure is too low install a damper.</li> <li>If pressure is too high clean ducts, replace 90° elbows with 45° elbows, increase duct sizing, and install an exhaust fan.</li> </ol>

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21	<b>Folder control alarm</b> Alarm is triggered when the folder arm does not move when powered On and Off	<ol style="list-style-type: none"> <li>1. Turn off power and manually move folder arm to the rear position. Turn on power, folder arm should move forward.</li> <li>2. Verify the feed bed LED light is shining directly (top center) on the reflector below the feed bed. In some cases you might need a piece of paper to locate the LED. Adjust if necessary.</li> <li>3. Verify the folder arms are making contact with the folder forward and folder back switches. Adjust if necessary.</li> </ol>
23	<b>Disconnection of drive motor overloads</b> Alarm is triggered when F6 thermal overload circuit opens	<ol style="list-style-type: none"> <li>1. Verify the drive motor thermal switch closes by safely turning off power. Once the motor cools the switch should close</li> <li>2. Verify the circuit by checking for continuity between terminals 27 (wire 127) and 12 (wire 112) on the wires coning into the inverter.</li> </ol>
24	<b>KM1 relay alarm</b> Alarm is triggered when A1 board recognizes movement of the drive motor before command	<ol style="list-style-type: none"> <li>1. Verify KM1 relay contacts are open with the power off.</li> <li>2. Verify if the KM1 relay is energizing when it is not supposed to.</li> </ol>
25	<b>A4 board communication alarm</b> Alarm is triggered when there is a fault in the LED feed lighting (Optifeed)	<ol style="list-style-type: none"> <li>1. Verify the Optifeed lights are connected/ wired properly</li> <li>2. Check that the probes are correct and centered on the heated roll surface</li> <li>3. Verify the A4 board is properly configured in the settings menu.</li> </ol>
Err0	<b>Identification machine model</b> Alarm is triggered when there is an incompatible part installed on the ironer	<ol style="list-style-type: none"> <li>1. Verify control board part numbers</li> <li>2. Verify the X7 connector is correct</li> </ol>

### Problems with the ironer not associated with an alarm

Problem	Possible Cause	Possible Solution
Ironer not coming up to temperature/ inconsistent heating/ slow to reach temperature	Insufficient gas pressure or low volume of gas supply	<ol style="list-style-type: none"> <li>1. Verify dynamic gas pressure to ironer with all other gas consuming equipment running.</li> <li>2. Verify static exhaust pressure</li> <li>3. Inspect for build-up of lint on the filters</li> <li>4. Verify temp probes are reading accurately and are riding on the heated roll properly.</li> <li>5. Verify gas volume is correct</li> </ol>
Heated roll and straps are discolored	Incorrect pH or excess chemical in the linen. Possible transfer of color from the linen to the ironer	<ol style="list-style-type: none"> <li>1. Verify chemical is not present on the linen prior to being processed on ironer. Place linen in a bucket of hot water. Ring out linen, if suds appears there is probably excess chemical in the linen.</li> <li>2. Verify pH of linen (typically 6.5- 7.0)</li> <li>3. Change chemical formula</li> <li>4. Add an extra rinse (chemical free) prior to final extract</li> </ol>
Premature failure of lateral bearings located at the bottom	Improper leveling of the ironer. Faulty drum bearings	<ol style="list-style-type: none"> <li>1. Verify the leveling legs are installed and that the ironer is properly leveled</li> </ol>

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of the drive sprocket	or compression padding worn	<ol style="list-style-type: none"> <li>2. Verify that linen is processed on the whole ironer, not just one side</li> <li>3. Verify the main straps and padding is correct and not worn.</li> </ol>
Inconsistent drum temperature from end to end	Faulty probes, drum surface dirty or air flow blocked	<ol style="list-style-type: none"> <li>1. Verify dynamic gas pressure</li> <li>2. Verify static exhaust pressure</li> <li>3. Verify the probe condition and that it is riding on the drum surface correctly.</li> <li>4. Verify ironer is cleaned per maintenance instructions</li> </ol>
Folder extract roll bounces/ Folding inconsistent	Incorrect feeding of the linen. Folder straps not set correctly	<ol style="list-style-type: none"> <li>1. Verify operators are correctly feeding the linen into the ironer.</li> <li>2. Check folder straps to make sure they all have about the same amount of slack. They should not be tight.</li> <li>3. Ensure the folder straps are riding on the extraction roll properly.</li> </ol>
Ironed linen damp	Linen has high moisture level	<ol style="list-style-type: none"> <li>1. Verify moisture level of linen coming into the ironer. Increase the extract speed or condition linen prior to ironing linen.</li> <li>2. Decrease speed of the ironer to allow it to dry during the ironing process.</li> <li>3. Raise ironing temperature.</li> </ol>
Linen sticking to the drum surface	Ironer dirty/ linen too wet/ linen to dry (static electricity)	<ol style="list-style-type: none"> <li>1. Verify linen condition prior to pressing</li> <li>2. Dirty heated roll surface. Verify condition of linen. (See heated roll and straps are discolored)</li> <li>3. Verify ironer temperature is correct.</li> <li>4. Ensure the ironer has a proper Earth ground to dissipate static charge.</li> </ol>
Lines on linen  *Note* All ironers require break in time. The lines should decrease as they get broken in	Moisture level of linen too high. New straps not properly worn in.	<ol style="list-style-type: none"> <li>1. Verify the ironer has had a break in time in order for the straps to get conditioned.</li> <li>2. Linen moisture too high</li> <li>3. Verify the linen is being properly processed</li> </ol>

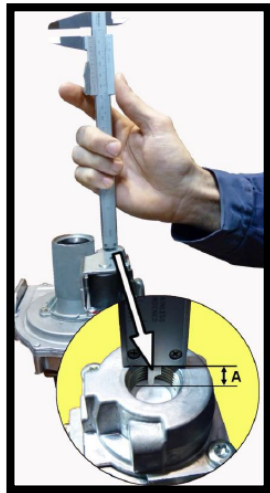
### Installation/ Utility Requirements for ETL Natural Gas Radiant Heat Ironers

Parameter	X20075	X20100	X20125	Notes
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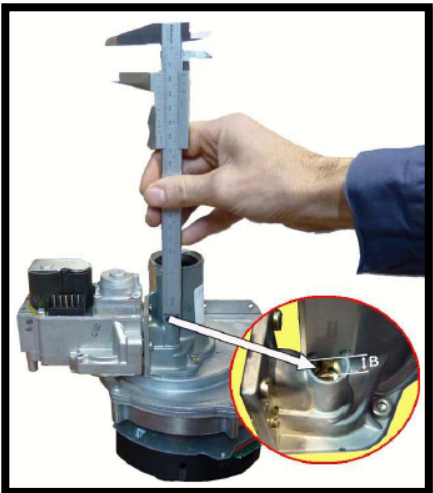
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Use leveling legs/ level ironer	Required	Required	Required	Level ironer on lower frame (side to side and front to back)
Secondary voltage on tapped transformer	115 VAC +/- 5%	115 VAC +/- 5%	115 VAC +/- 5%	Move taps or plugs to get the correct voltage
Static exhaust pressure	0.3 to 0.69 inches water column	0.3 to 0.69 inches water column	0.3 to 0.69 inches water column	20" from top of the ironer on exhaust duct
Dynamic gas pressure (natural gas)	7 inches water column	7 inches water column	7 inches water column	Gas pressure when the ironer is running
Injector diameter (orifice)	27.5 mm	29.0 mm	52.0 mm/ *	* before 2210031 was 37 mm
Venturi	10.6 mm	10.6 mm	10.6 mm	Refer to dimension B below
Solenoid valve adjustment	6 mm	7 mm	4.5 mm	Refer to dimension A below



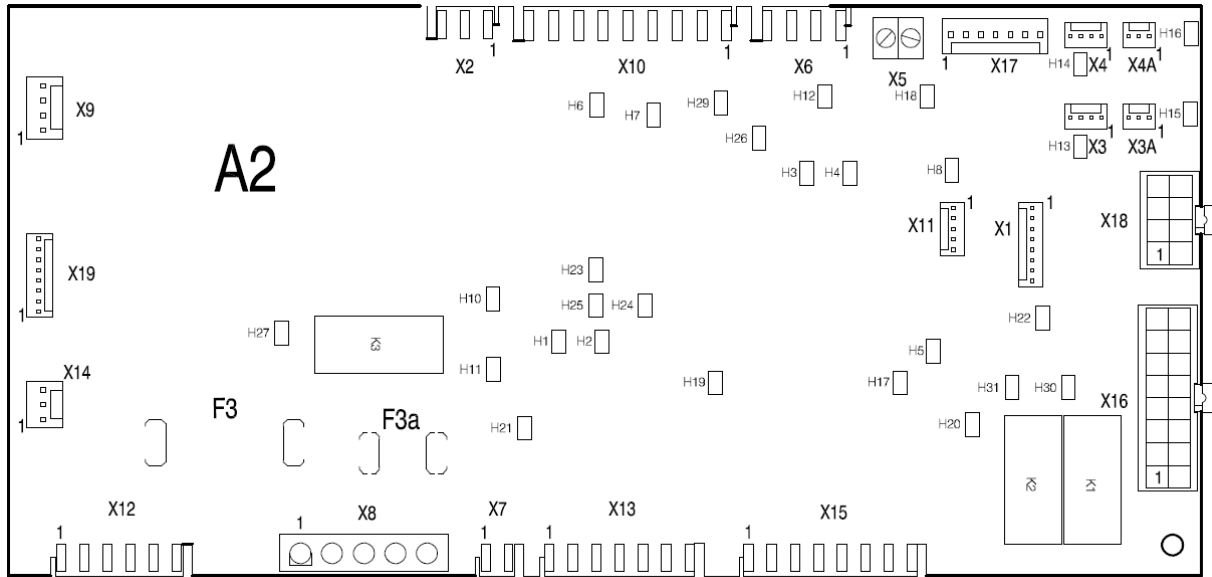
Solenoid adjustment



Venturi adjustment

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Plug	Input	Output	LED	Circuit	Plug	Input	Output	LED	Circuit
X1-4		X		Input power to hand guard	X11-2				+12 VDC
X1-5	X			+A3 DC Bus	X11-3	X		H8	Rotation encoder
X1-6		X		+A2 DC Bus	X11-4				Rotation encoder common
X1-7		X		Hand guard signal	X12-1				+A1 DC buss
X1-8				Ground	X12-2	X		H10	E-stop 12V S1
X2-1		X		+A1 DC Bus	X12-5				208-240 VAC to E- Stop S1
X2-2				GND	X12-6	X		H11	208-240 VAC from E- Stop S1
X2-3				BUS LIN	X13-1		X	H1	Heating relay KM3
X3-1				GND	X13-2				AC common
X3-2	X		H13	B1 photocell	X13-3		X	H2	Heating relay KM4
X3-3				B1 photocell power supply	X13-4				AC Common
X3A-1				GND	X13-6	X		H9	KM3-KM4 security relays
X3A-2	X		H15	B3 photocell power supply	X13-7				AC common
X4-1				GND	X14-1				208-240 to power rectifier board
X4-2	X		H14	B2 photocell	X14-3				AC common
X4-3				B2 photocell power supply	X15-1	X		H19	Actuator motor reverse detector s7
X4A-1				GND	X15-2		X	H3	Actuator motor reverse
X4A-2	X		H16	B4 photocell	X15-3		X	H4	Actuator motor forward

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X4A-3				B4 photocell power supply	X15-4	X		H17	Actuator motor forward detector S8
X5-1	X		H18	PEDAL	X15-5				AC common
X5-2				GND	X15-6				Power supply to actuator switches S7 and S8
X6-1	X		H12	Hand guard switch S4	X15-7		X	H5	Power supply to folder clutch
X6-2				Hand guard switch S4	X15-8				AC common
X6-3	X			Hand guard switch S3	X16-1		X		Burner on relay signal K2
X6-4		X		Hand guard switch S3	X16-2		X	H30	Heat on relay signal K1
X7-1		X		Power to overheat switch	X16-5	X			V24
X7-2	X		H21	Over heat switch signal (non gas heated units)	X16-6		X		PWM
X8-1				230 VAC	X16-7	X		H32	Reset
X8-2				115 VAC	X16-8	X			Open therm RX
X8-3				Burner bridge	X16-9				AC common
X8-4				Burner L1	X16-10		X	H20	Alarm output
X8-5				AC Common	X16-12	X		H22	Non-Utilities
X9-1				DC common	X16-13				GND
X9-4				+A1 DC bus	X16-14				PWM
X10-1				+A3 DC bus	X16-15	X			0-10V CNT Quemador
X10-2		X	H28	Motor cylinder relay KM1	X16-16		X		Open therm TX
X10-3		X	H29	Motor exhaust relay KM2					
X10-4				+A2 DC buss					
X10-5	X		H7	Exhaust motor klixon F1					
X10-6				Exhaust motor klixon F1					
X10-7				Exhaust pressure switch S2					
X10-8	X		H6	Exhaust pressure switch S2					



Always follow proper safety procedures and to the appropriate manuals.