

## EcoMaster Errors and Alerts List

Error Name	Explanation	Possibilities
1 Turret Position	Turret Position Sensor (C13a) doesn't detect the next position even if it tried three times	<ul style="list-style-type: none"> <li>- C13a sensor failure (always staying OFF)</li> <li>- Gear failure of the Turret</li> <li>- Turret Motor failure</li> <li>- Turret Motor connectors failure</li> <li>- No clearance between Turret Motor Gear and Turret</li> <li>- Turret is not parallel with the Unit Base (C29h)</li> </ul>
2 Grabs Position	Origin Sensor (B10a) detects nothing	<ul style="list-style-type: none"> <li>- No grease for Rack (B09a)</li> <li>- Grab Arms are bending in vertical</li> <li>- B10a sensor failure</li> <li>- Loading Motor failure</li> <li>- Connectors failure for the sensor and motor by corrosion</li> </ul>
3 Disc Out Changer [Cartridge]	Disc Sensor (D02b) detects something while the Changer or Loading is moving	<ul style="list-style-type: none"> <li>- Dust or something disturb the sensor beam</li> <li>- D02b sensor failure</li> <li>- Connector failure for this sensor by corrosion</li> <li>- Remove metal cover from the receiver sensor if the sensor detects something after the cleaning</li> </ul>
4 Disc Loading	When Grab Arms with a disc return to origin from Changer, the Disc Sensor (D02b) holds ON	<ul style="list-style-type: none"> <li>- Dust or something disturb the sensor beam</li> <li>- Grab Arms are bending in vertical</li> <li>- D02b sensor failure</li> <li>- Connector failure for this sensor by corrosion</li> <li>- Loading Motor failure</li> <li>- Adjust [Disc In] parameter</li> <li>- Adjust [Release Changer] parameter</li> <li>- Vacuum Pad wearing</li> </ul>
5 Disc Release	Splash Cover Sensor (A35a) is OFF when the Platen Lift is at Turret Turn Height	<ul style="list-style-type: none"> <li>- Disc is not sitting on Platen Table, need to adjust [Disc In] and/or [Release Changer] parameter</li> <li>- Dust or something is inside of Under Splash Cover</li> <li>- Splash Cover is broken or damaged</li> <li>- A35a sensor failure</li> <li>- Loading Motor failure</li> <li>- Disc is caught by three of Grab Arms rollers, need to adjust [Disc In] and/or [Release Changer] parameter</li> </ul>
6 Splash Cover	Splash Cover Sensor (A35a) is OFF even if the Platen Lift is at [Turret Turn Height] + 1000 pulses height	<ul style="list-style-type: none"> <li>- Splash Cover is not sitting on the Under Splash Cover properly</li> <li>- Platen Lift Motor failure</li> </ul>
	After the repairing, the Splash Cover Sensor is ON when the Platen Lift goes down than [Turret Turn Height]	<ul style="list-style-type: none"> <li>- A35a sensor failure</li> <li>- Splash Cover is caught by a Pad Holder, the Splash Cover cannot descend</li> </ul>
7 Sanding Motor	AD from the Sanding Motor is less than 20	<ul style="list-style-type: none"> <li>- End of motor life</li> <li>- Connectors failure for the motor</li> </ul>
8 Platen Lift Position	Lift Origin Sensor (A34a) is OFF when the Platen Lift reach the origin position	<ul style="list-style-type: none"> <li>- A34a sensor failure</li> <li>- Platen Lift Motor failure</li> <li>- Lifting Shaft (A22a) is hard to move up and down because of corrosion by water leaks</li> <li>- Center Pin is engaging to the Hexagonal Drive Pin</li> </ul>
9 Changer [Cartridge] Position	Pickup Origin Sensor (D45a) is OFF when the Pickup module reaches the origin position	<ul style="list-style-type: none"> <li>- Roller Chain (D22a) is outside of Idler (D29b)</li> <li>- Roller Chain has a high tension</li> <li>- Roller Chain has a low tension</li> <li>- Slide Pack (D25) is hard to slide smoothly</li> </ul>
	Pickup Bottom Sensor (D20b)	<ul style="list-style-type: none"> <li>- Need to adjust [Pick Up Lower] parameter</li> </ul>

	is OFF when the Pickup reaches the bottom position	<ul style="list-style-type: none"> <li>- D20b sensor failure</li> <li>- Changer Motor (D01b) and the connector failure because of corrosion by water leaks</li> </ul>
10 Disc Unstoring	Disc Sensor (D02b) detects something after Grab Arms returns repaired disc to Spindle (D503a)	<ul style="list-style-type: none"> <li>- No Spindle</li> <li>- Pickup height failure, need to adjust [Disc Out Before] and/or [Disc Out After] parameters</li> <li>- Grab Arms position failure, need to adjust [Release Changer] parameter</li> <li>- D02b sensor failure if the disc is stored on Spindle</li> <li>- Changer Motor misstep to achieve the control signal</li> <li>- Loading Motor misstep to achieve the control signal</li> </ul>
11 Any Disc Release	Sanding Motor detects a high load at minus 2000 pulses height from [Contact Adjustment] height	<ul style="list-style-type: none"> <li>- No error occurrence by the parameter settings</li> </ul>
12 No Sanding Pad	Sanding Motor detects pressure change nothing even if the Lift goes up to plus 2000 pulses height from [Contact Adjustment] height	<ul style="list-style-type: none"> <li>- No Pad Holder and/or Sanding Pad</li> <li>- Turret is out of position</li> <li>- Platen Lift doesn't ascend because of corrosion by water leaks</li> <li>- Lift Gear (A46) and/or Lift Rack (A47a) failure</li> </ul>
13 Disc Unloading	Disc Sensor (D02b) is keeping ON when Grab Arms returns the repaired disc from the Platen Table to Spindle	<ul style="list-style-type: none"> <li>- Repaired disc is dropped during Grab Arms are traveling, need to adjust [Disc Grab Height] and/or [Release Platen] parameters</li> <li>- Grab Arms are bending in vertical direction</li> <li>- Loading Motor failure</li> <li>- D02b sensor is unstable to detect disc</li> <li>- Pickup loaded two discs at the same time</li> </ul>
14 Turret Sensor	Turret Position Sensor (C13a) and Turret Origin Sensor (C14a) don't turn ON at the same time when the Turret turns one round	<ul style="list-style-type: none"> <li>- Either C13a or C14a sensor failure</li> <li>- Grease disturbs the sensor detection</li> <li>- Turret is not parallel with the Unit Base (C29h)</li> </ul>
15 Sanding Pressure Lack	AD from the Sanding Motor doesn't reach the target pressure but start AD was detected	<ul style="list-style-type: none"> <li>- Replace the Sanding Pad</li> <li>- The Pad Holder is broken</li> <li>- Solution D mixture ratio is high</li> </ul>
16 Water Leaking	Water Leak Sensor (B502) is ON	<ul style="list-style-type: none"> <li>- Dust or something is in the drain hole of Under Splash Cover (A26c)</li> <li>- Terminals of the B502 sensor are getting corrosion</li> </ul>
17 SYSTEM ERROR	There is no signal inside of the CPU	<ul style="list-style-type: none"> <li>- Mainboard replacement</li> </ul>
18 Sanding Motor Over Load	AD from the Sanding Motor exceeds 900 for 5 seconds	<ul style="list-style-type: none"> <li>- No water during the disc repair</li> <li>- Worn Center Pin to drive the Platen Table</li> </ul>
19 Sanding Motor Wire Down	No AD from the Sanding Motor	<ul style="list-style-type: none"> <li>- Sanding Motor is end of life</li> <li>- Motor connector failure</li> </ul>
20 Sanding Motor Non Stop	Sanding Motor keeps spinning when it is stopped	<ul style="list-style-type: none"> <li>- Motor failure</li> <li>- Mainboard replacement</li> </ul>
21 Sanding Motor Not Ready	Sanding Motor controller is not ready to receive signal	<ul style="list-style-type: none"> <li>- PIC device replacement</li> </ul>
22 Sanding Motor Ready	Sanding Motor controller doesn't respond Busy signal after the motor turns ON	<ul style="list-style-type: none"> <li>- PIC device replacement</li> </ul>
23 Platen Motor Over Load	AD from the Platen Motor exceeds 900 for 5 seconds	<ul style="list-style-type: none"> <li>- No error occurrence</li> </ul>
24 Platen Motor Wire Down	No AD from the Platen Motor	<ul style="list-style-type: none"> <li>- No error occurrence</li> </ul>

25	Platen Motor Non Stop	Platen Motor keeps spinning when it is stopped	- No error occurrence
26	Platen Motor Not Ready	Platen Motor controller is not ready to receive signal	- No error occurrence
27	Platen Motor Ready	Platen Motor controller doesn't respond Busy signal after the motor turns ON	- No error occurrence
28	Platen Motor Turn Lock	Platen Motor Sensor (A82a) keeps ON or OFF even if the motor is spinning	- Platen Table Bearing failure - Center Pin doesn't engage the hexagonal drive pin - No Solution D in the water - No water during the disc repair - A Sanding Pad is sticking to the disc - Platen Lift doesn't descend
29	A/D READ	Communication error between CPU and A/D converter device	- Mainboard replacement
30	Water Flow Sensor	An optional sensor to detect water flow	- Cancel this feature in the [Mode] screen
31	Changer Origin	(This is not an error alert, this is indicated in the 4th page of [Maintenance] - [Statistics] - [Errors] screens	
32	EEPROM Initialize	EEPROM fails initializing	- EEPROM replacement
33	EEPROM Load	EEPROM fails data loading	- EEPROM replacement
34	EEPROM Verify	EEPROM fails data verifying	- EEPROM replacement
35	EEPROM Write	EEPROM fails data writing	- EEPROM replacement
36	EEPROM Reload	EEPROM fails data reloading	- EEPROM replacement
37	EEPROM Over Writing	EEPROM gets limit to write data	- EEPROM replacement
38	WATER FLOW ALERT!	An optional sensor to detect water flow	- Cancel this feature in the [Mode] screen
39	WATER RECYCLE ALERT!	No current appears between the WRS Terminals	- No connection at the terminals - No water in the inner pipe - No White Rubber Cap for the Outer Reactive Pipe - End of life for the Outer Reactive Pipe - LCD board replacement if voltage indicates 0.0 volt
40	CHANGER DISC ALERT!	An optional sensor to detect double discs pickup	- Cancel this feature in the [Changer] screen

## EcoMaster Troubleshooting for troubles without error alert

Error Name	Explanation	Possibilities
1 Black Pad	Getting worn in a short period	<ul style="list-style-type: none"> <li>- No water in Pad#1-2 process</li> <li>- No polish compound in Pad#1-1 process</li> <li>- Air gaps inside the polish compound tube</li> <li>- Adopt latest program parameters for Pad#1-2 and 1-2</li> </ul>
2 Center Pin	Getting worn	<ul style="list-style-type: none"> <li>- Hatch position failure for X axis direction</li> <li>- Sanding Unit Base (C29h) position failure for Y axis direction</li> <li>- Drive hexagonal shaft is getting worn</li> <li>- Adopt Plastic Center Pin to achieve a long life</li> </ul>
3 Platen Table Bearing	Heavy load to spin	<ul style="list-style-type: none"> <li>- Platen Table Bearing failure because of water leaking</li> <li>- Too much torque to tighten Nut of Platen Table Bearing (A17)</li> </ul>
4 Splash Cover	Cracks, transformation	<ul style="list-style-type: none"> <li>- Hatch was opened when the Splash Cover captured a Pad Holder</li> <li>- Hatch was closed when the Splash Cover captured a Pad Holder</li> <li>- Getting damages by daily cleaning</li> <li>- End of life for the Splash Cover</li> </ul>
5 Center Seal	Water and Polish Compound are remaining in the center area of the repaired disc	<ul style="list-style-type: none"> <li>- Getting worn at circumference of the Center Seal</li> </ul>
6 Hatch	Hatch opens during disc repairs	<ul style="list-style-type: none"> <li>- The Hatch isn't closed properly</li> <li>- Lock (E50b) is idle for Hook (E20c)</li> </ul>
7 Grab Arms	Grab Arms engage to Pickup module when it is in disc unloading	<ul style="list-style-type: none"> <li>- Changer Motor failure to drive Pickup module</li> <li>- Roller Chain (D22a) is outside of Idler (D29b)</li> <li>- Roller Chain has a high tension</li> <li>- Roller Chain has a low tension</li> <li>- Slide Pack (D25) is hard to slide smoothly</li> <li>- Install latest software version (1.73 and the later)</li> </ul>
8 Grab Arms	Grabs Spring (B20) breaks its hook	<ul style="list-style-type: none"> <li>- A high stress happens at the hook when the Grab Arms are opened</li> <li>- Adopt a new Grabs Sping (B20a) having a large hook</li> </ul>
9 Changer Door Handle	Cannot close the door Cannot clear PAUSE even if it closed	<ul style="list-style-type: none"> <li>- Put lubricant to the hinge</li> <li>- Changer Door Sensor (D44a) failure</li> </ul>
10 Changer Door	Cannot reset the PAUSE even if the Changer Door is closed	<ul style="list-style-type: none"> <li>- Sensor (D44a) failure</li> </ul>
11 Changer Slide Pack	Slide units of Slide Pack (D25) drop down from the rail during the transportation	<ul style="list-style-type: none"> <li>- Clamp the slide units by the metal part before the transportation</li> </ul>
12 Pickup Vacuum Pressure	Cannot pick up a disc	<ul style="list-style-type: none"> <li>- Check Vacuum Tube line whether it is bent</li> <li>- Check the fittings for the Vacuum Tube line</li> <li>- Vacuum Switch (D81) is always ON</li> <li>- Vacuum Filter (D59) is clogging up</li> <li>- Vacuum Pads are getting worn or cracks</li> </ul>
13 Pickup Vacuum Pressure	Disc drops down while the Pickup's traveling	<ul style="list-style-type: none"> <li>- End of life for the Vacuum Pump (D58)</li> <li>- Vacuum Filter (D59) is clogging up</li> </ul>
14 Double Disc Pickup	Pickup catches 2 discs at a time	<ul style="list-style-type: none"> <li>- Remove static electricity from the discs of the stocker</li> <li>- Adopt DDD sensor (optional part)</li> </ul>
15 Compound Pump	Polish Compound is not fed	<ul style="list-style-type: none"> <li>- Inner tube is flat partly</li> <li>- End of life for the geared motor</li> </ul>
16 WRS	Clean water changes to milky	<ul style="list-style-type: none"> <li>- Clean Water Tube is stuffed</li> <li>- Drain outlet of 1st Tank is stuffed</li> </ul>

		<ul style="list-style-type: none"> <li>- No Bar Nut Cover (F46)</li> <li>- No Base of Pipe (F17f)</li> <li>- No Solution D in the water</li> <li>- Solution D mixture ratio failure</li> <li>- End of life for the Outer Reactive Pipe</li> </ul>
17 WRS Door	Cannot reset the PAUSE even if the WRS Door is closed	<ul style="list-style-type: none"> <li>- Sensor (E16a) failure</li> </ul>
18 Grease	Cause of noise and error alert	<p>Grease is necessary for;</p> <ul style="list-style-type: none"> <li>- Grab Arms fulcrum shaft / bush (molybdenum type)</li> <li>- Rack Gear of Loading (silicon type)</li> <li>- Platen Lift Gear (molybdenum)</li> <li>- Pad Gear if it is new (silicon type)</li> <li>- Turret Gear if it is new (molybdenum type)</li> </ul>
19 Noise	Noises during disc repairs	<ul style="list-style-type: none"> <li>- Broken Splash Cover</li> <li>- Pad Gear (C25b) failure</li> <li>- Sanding Motor Gear (C26b) failure</li> <li>- No clearance between C25b and C26b</li> <li>- Hatch position failure for X axis direction</li> <li>- Sanding Unit Base (C29h) position failure for Y axis direction</li> <li>- Vibration by Platen Motor Turn Lock error</li> <li>- Brush behind Platen Table is not fixed to the Platen Table</li> <li>- Brush behind Platen Table is transforming</li> </ul>
20 Swirl Marks	Disc results are bad quality	<ul style="list-style-type: none"> <li>- End of life for Sanding Pads</li> <li>- Dust or something is on Sanding Pads or Black Pad surface</li> <li>- No water or a little of water during disc repair</li> <li>- Pad Holder has cracks</li> <li>- Velcro is peeling off partly</li> <li>- Water drops on the repaired disc if the Spash Cover is damaged</li> <li>- Turret is not parallel with the Unit Base (C29h)</li> <li>- Replace the Paten Table Rubber if projections of the surface is getting worn for a half</li> </ul>
21 Main Power	Doesn't turn ON the main power	<ul style="list-style-type: none"> <li>- Replace Mainboard or</li> <li>- Replace LCD board or</li> <li>- Replace Power Supply module</li> </ul>
22 LCD Touch Panel	Cannot operate touch panel feature	<ul style="list-style-type: none"> <li>- Calibration failure for the Touch Panel</li> <li>- Replace the LCD Touch Panel</li> </ul>
23 LCD Touch Panel	Back light of LCD Touch Panel is dark	<ul style="list-style-type: none"> <li>- Replace the LCD Touch Panel</li> </ul>
24 LCD Touch Panel	Initialization sequence stops at "ECOMaster" logo mark	<ul style="list-style-type: none"> <li>- Connectors failure</li> <li>- Replace Mainboard or</li> <li>- Replace LCD board</li> </ul>
25 Sanding Motor	Sanding Motor runs after main power turns ON	<ul style="list-style-type: none"> <li>- Replace Mainboard</li> </ul>
26 WTerm	Connection failure with a computer	<ul style="list-style-type: none"> <li>- Computer settings failure</li> <li>- Connection Cable is not Cross Cable type</li> <li>** Try next setting if you couldn't succeed to connect</li> <li>- Ethernet Adopter Property - Link Speed/Duplex Mode &gt; 10 Full Mode</li> </ul>