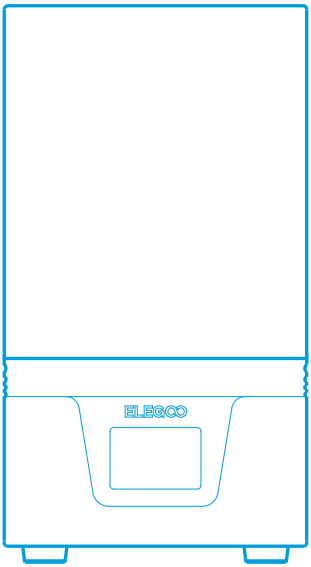
ELEGOO

Mars 4 Series
3D Printer



User Manual

Thank you for purchasing ELEGOO brand products.

V1

Upon receiving the product, please confirm that the device is intact and all accessories are included. If you encounter any issues during installation, operation, or maintenance, please contact the ELEGOO after-sales team for professional support through the official channels below:

1. Visit our dedicated support page: https://www.elegoo.com/pages/contact-support.(We recommend copying the link and opening it in your browser.)

2. Scan the QR code below for personalized, one-on-one assistance.

(Note: To ensure optimal performance, each ELEGOO product undergoes rigorous printing tests before shipping. You may notice minor surface scratches upon delivery; this is normal and does not affect functionality. Please use your product with confidence.)

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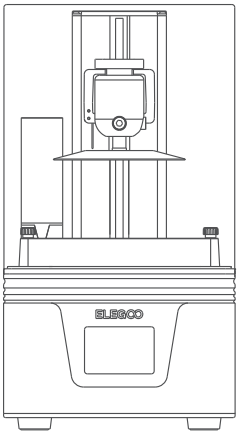
Notice:

- Please keep the 3D printer and its accessories out of the reach of children.
- Please fill the resin tank no less than 1/3 of its volume, but do not exceed the MAX line position.
- Please place the printer in a dry environment and protect it from rain and moisture.
- If you run into an emergency during use, please turn off the power supply of the 3D printerfirst.
- Please use the printer indoors and avoid direct sunlight and a dusty environment.
- Please keep the original packaging box for 30 days for return/exchange (only ELEGOO original packaging boxes are accepted).
- If the printing fails, you need to clean the excess cured resin in the resin tank and change the resin, otherwise, it may cause damage to your printer.
- When operating the 3D printer, please wear a mask and gloves to avoid direct skin contact with the photopolymer resin.
- If the release film in the resin tank is whitened, scratched, or has no elasticity, the printing failure rate is high, please replace the release film in time.
- Please use 95% (or higher) ethyl alcohol or isopropyl alcohol to wash your model unless you are using water washable resin.
- Please note that the Mylar tape surrounding the screen is not completely airtight. In case of resin drips during use, it is crucial to promptly clean them to prevent resin infiltration and potential screen damage.
- To maintain the cleanliness, durability, and protective performance of the LCD screen, it is necessary to timely replace parts under the following conditions: aged or damaged tape, corrosive damage, and damaged release film.
- If you have any problems with the printer, please contact us at 3dp@elegoo.com. Please do not disassemble or modify ELEGOO 3D printers by yourself, otherwise, the warranty will expire, and damage caused by personal operating errors need to pay for repairs.

Contents



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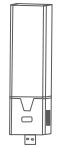
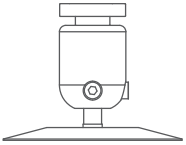
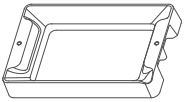


USB Air Purifier



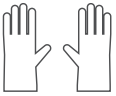
Build Plate



Resin Tank

U Disk

Mask



Gloves

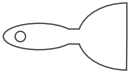
Funnel

Backup Screws

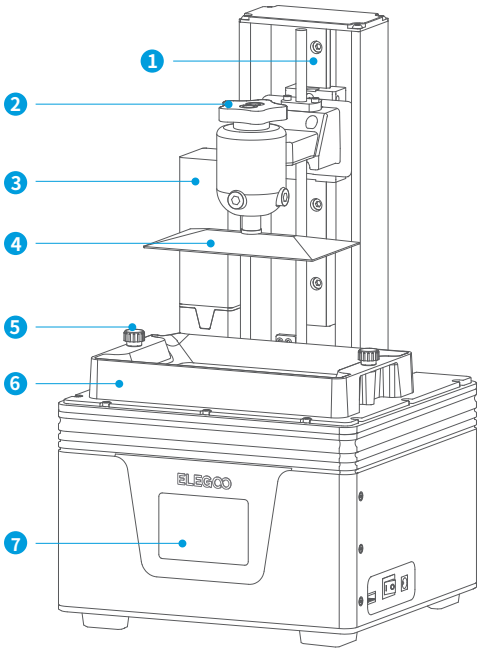
User Manual

Adapter

Tool Kit



Scraper



1 Z Axis

2 Screw Knob

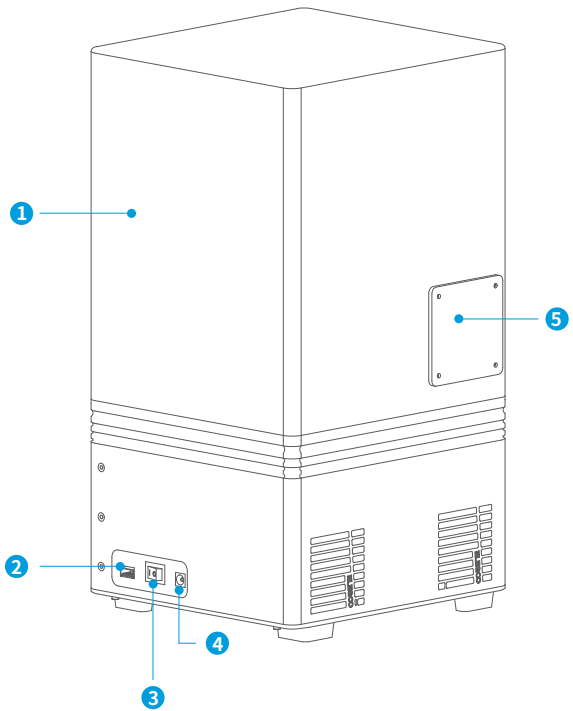
3 USB Air Purifier

4 Build Plate

5 Screw Knob

6 Resin Tank

7 Touch Screen



1 Anti-UV Cover

2 USB Interface

3 Switch

4 DC Socket

5 Extension Port (Connect peripherals, such as a mini heater and other compatible printer accessories)

Printing Parameter

- System: EL3D-3.0.2
- Operation: 3.5-inch Touch Screen
- Slicer Software: ELEGOO SatelLite
- Connectivity: USB Interface

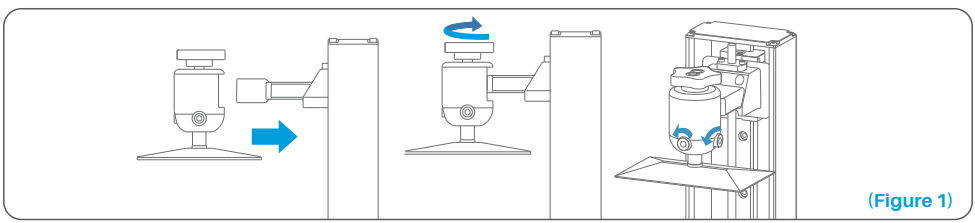
Hardware Specification

- Dimension: 24.6cm(L)*23cm(W)*45.3cm(H)
- Build Volume: 13.28cm(L)*7.47cm(W)*15cm(H)
- Net Weight: 6.8KG

Printing Specification

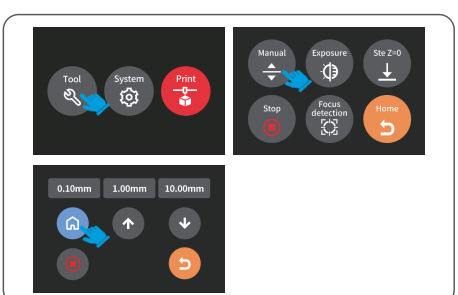
- Technology: DLP Photocuring
- Light Source: Imported wick (wavelength 405nm)
- XY Resolution: 0.05mm (2560*1440)
- Z-axis Accuracy: 0.00125mm
- Layer Thickness: 0.01-0.2mm
- Printing Speed: 30-70mm/H
- Power Requirements: 100-240V 50/60 Hz 12V 1.5A 18W

1. Take out the printer carefully and tear off the plastic film.
2. Power on the printer.
3. Please insert the build platform, fasten the screw knob and loosen the fixing screws.(See Figure 1)

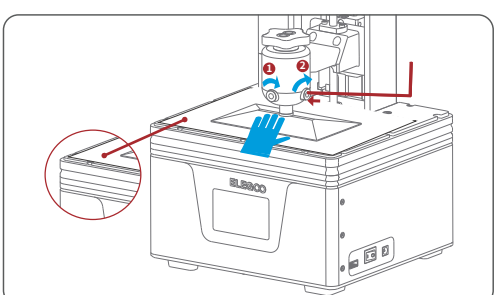


(Figure 1)

4. Remove the resin tank, place a leveling paper between the build platform and the tempered glass, and click "Move Z axis to zero" (See Figure 2). When the build platform stops, please press the top of the build platform with one hand, and ensure that the four corners of the build platform are evenly attached to the tempered glass, and then use the Allen wrench to tighten the fixing screws (❶❷) on both sides of the build platform. (See Figure 3)



(Figure 2)



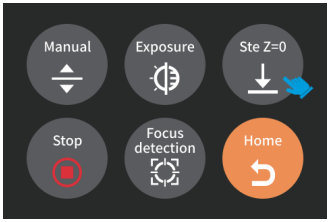
(Figure 3)

5. Since the distance between the printing platform and the tempered glass will change during the process of tightening the build platform screws, if you find that the MARS 4 DLP leveling paper can be pulled out without resistance, please click the "down" button (in steps of 0.1mm) until there is slight resistance to pull out the leveling paper. (See Figure 4) If there is too much resistance to pull out the Mars 4 DLP leveling paper, please click the "up" button (in steps of 0.1mm) until the leveling paper can be pulled out with slight resistance. (See Figure 5)

(Figure 4)

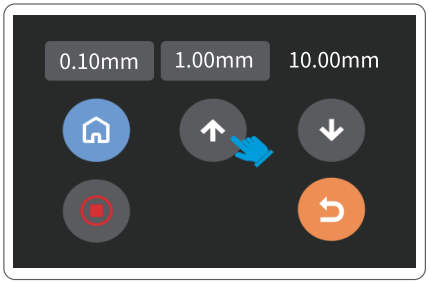
(Figure 5)

6. After completing the above leveling, set the current Z-axis position as the initial height of the first layer of printing. Operate as follows: return to the previous interface, and click "Set Z=0". At this time, a message will pop up on the touch screen, (as shown in Figure 6). Then click "Confirm" to complete. (Note: "Set Z=0" only works in print file mode.)



(Figure 6)

7. Press "10mm", then press "up" for 10 times, and the Z axis will go up about 100mm. (See Figure 7)



(Figure 7)

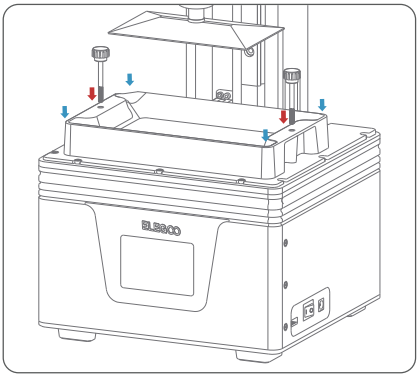
8. Press "Tool" - "Exposure" - "Select Image" - "Next" to test the projector.(See Figure 8)
On the tempered glass of the MARS 4 DLP printer, the first image, can fully expose the pattern of "ELEGOO TECHNOLOGY www.elegoo.com"; the second image, can fully expose the "square frame" pattern; the third image, can perform full-screen exposure (can be used to clean the resin tank). If the above image can be exposed normally, the projector is in normal working condition.

(Figure 8)

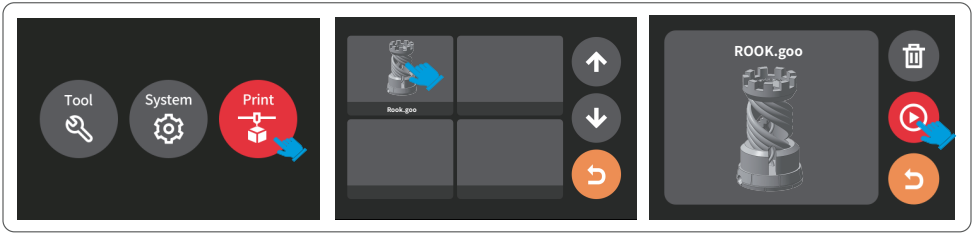
9. A slight difference in brightness at different positions during exposure is normal and will not affect the printing results.
Attention: Do not stare at the tempered glass or screen during exposure, so as not to affect your eyesight.

1. Model Printing

Install the resin tank back in place and tighten the screw knobs. Wear a mask and gloves (avoid direct contact of resin with your skin), then slowly add resin to the MAX line of the resin tank. Plug the USB air purifier into the USB port with the front side facing outwards, (the green light is on during printing, indicating that the air purifier is in normal working condition). Cover the anti-UV cover and make sure the printer is level and not wobble. Insert the U disk into the printer, select the model file "test model. goo" (See Figure 9) and start printing.



Install the resin tank back in place and tighten the screw knobs.

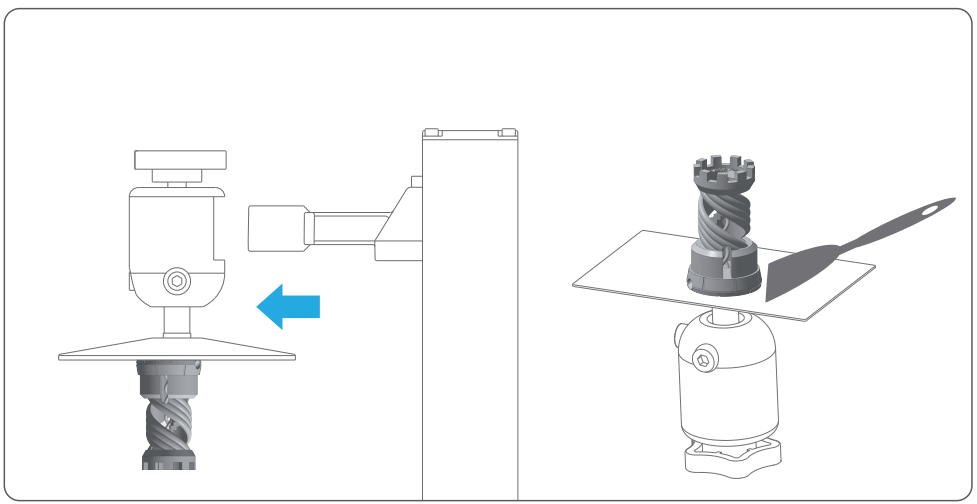


(Figure 9)

If you find that there is not enough resin in the resin tank to complete the model printing, you can press the "pause" button, add more resin to the resin tank after the build platform stops lifting, and then press "Print" to continue printing.

2. Wash Your Print and Clean the Tank

After the printing is completed, please wait until the residual resin on the build platform doesn't drip anymore. Loosen the screw knob and remove the build platform. Remove the model with the scraper, and wash it with 95% (or higher) ethyl alcohol if you are using standard resin or ABS-like resin. If you are using water washable resin, you can directly rinse it with water (the rinsed water should be stored in a container). (See Figure 10)



(Figure 10)

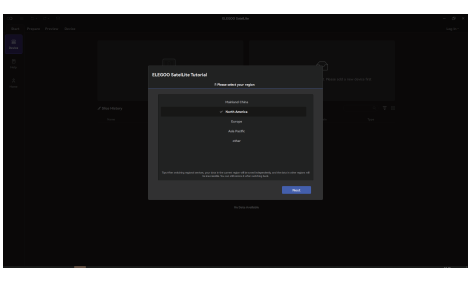
You can use the ELEGOO SatelLite installation package on the USB drive for the printer.

1. Installing ELEGOO SatelLite

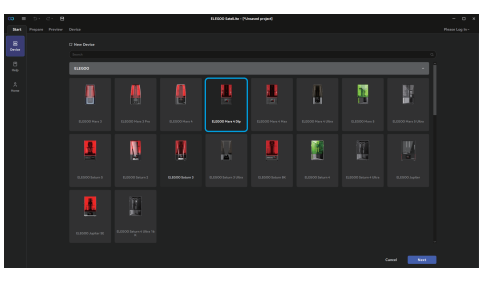
Select the appropriate slicer version from the USB drive or download it from the website (www.elegoo.com) and install it on your computer.When using the software for the first time, you need to select your language and region . If you want to switch regions, please restore the factory settings. After switching regional services, your data in the current region will be saved independently, and the data from other regions will not be accessible. You can still restore it after switching back. (See Figure 11)

2. How to use ELEGOO SatelLite

After installation is complete, run ELEGOO SatelLite. Select ELEGOO Mars 4 DLP as your default printer, and tap "Next" to enter the printer slice settings page. (See Figure 12)



(Figure 11)



(Figure 12)

3. ELEGOO SatelLite Settings

3.1 Device Configuration Parameters

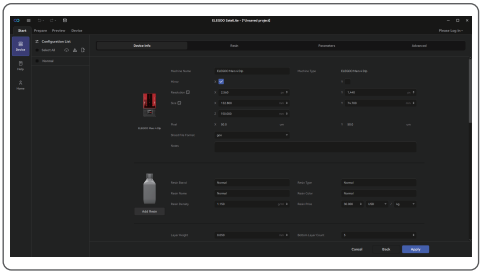
The default parameters do not need to be changed (see Figure 13). X indicates the maximum print size in the X-axis direction, and so on.

3.2 Resin Parameters

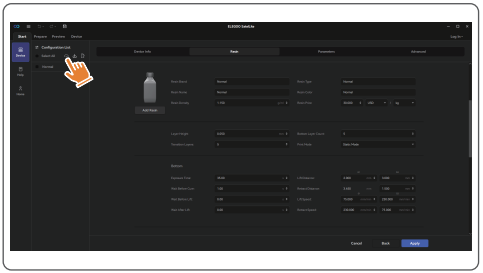
Resin Presets: In the upper-left Configuration List, Click to open the Official Resin Library (see Figure 14). Choose your resin, then click "Load Selected" to automatically apply its preset slicing parameters (see Figure 15). Presets

Resin Density: 1.15 g/ml

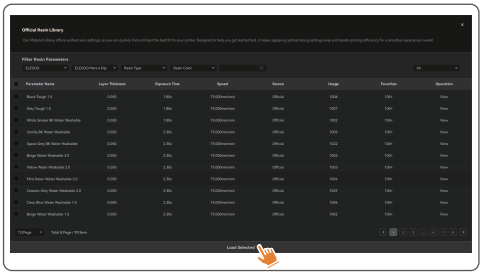
Resin Cost: You can input the real price of the resin you purchased, and the slicing software can estimate the resin costs for each model you print.



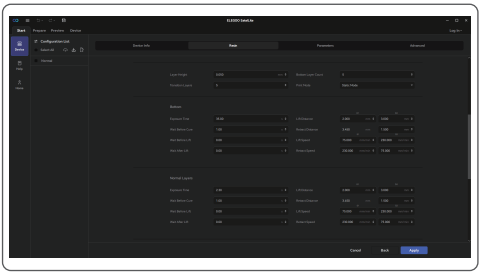
(Figure 13)



(Figure 14)



(Figure 15)



(Figure 16)

3.3 Parameters (See Figure 15)

Layer Height: The recommended height for each layer is 0.05 mm. However, you can set it between 0.01 mm and 0.2 mm. The higher the layer height you set, the longer the exposure time required for each layer.
Bottom Layer Count: Set the number of initial print layers. If the bottom layer count is n, the exposure time for the first n layers is the bottom layer exposure time. The default setting is 5 layers.
Transition Layers: The transition layers makes the bonding between the layers tighter. Except for the exposure time, other parameters of the transition layer are consistent with those of the normal layer.
Print Mode: The software presets three different print modes. Select a print mode according to the model and speed. The "Static Mode" is selected by default.
Bottom Layer Exposure Time: Set the bottom layer exposure time. Properly increasing the bottom layer exposure time helps to increase the bonding strength between the printed model and the build plate. The default setting is 35s.
Normal Layer Exposure Time: The exposure time of a normal print layer is set to 2.3s by default. The higher the print layer height is set, the longer the required time.
Wait Before Cure: The time interval between the start of coming to rest of the build plate after moving to the printing surface and the start of exposure. The default value is 1s.
Wait Before Lift: The time interval between the end of print exposure and the start of moving away from the exposure surface by the build plate. The default value is 0s.
Wait After Lift: The time difference between the start of coming to rest of the build plate after lift and the start of retraction. The default value is 0s.
Lift Distance: During the printing process, the distance that the build plate leaves the printing surface each time is set to 2+3 mm by default.
Retract Distance: During printing, the retract distance of the build plate should not be changed without sufficient reason.
Lift Speed: During printing, the default speed of the build plate moving away from the printing surface is 75+230 mm/min.
Retract Speed: During printing, the movement speed of the build plate when it approaches the printing surface is set to 230+75 mm/min by default.

Note: The printing parameter examples listed in this manual are for reference only. In actual applications, please contact the official after-sales support for parameter confirmation based on factors such as the device model and resin (including type and color) used.

1. Model doesn't stick to the build platform

The bottom layer exposure time is too short, please add more time.
The model bottom layer has very small contact with the build platform, please add a bottom raft.
Leveling is not well set and it will cause the first layer too thick, or one side is very thick while the other is very thin.

2. Model layer breakage

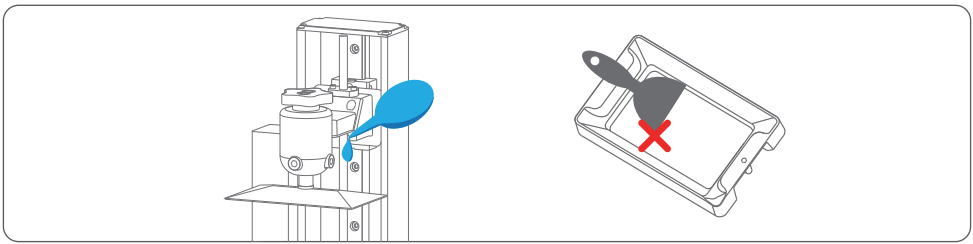
The printer is shaking during printing.
Release liner film is very loose due to long-time usage and needs to be replaced.
Build platform or resin tank is not fastened.

3. Printing failure

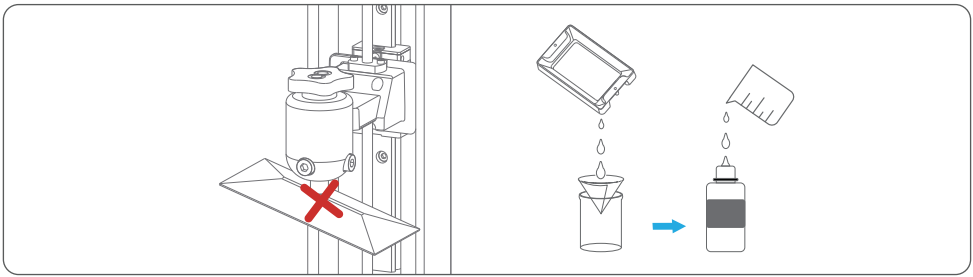
If the model was not completely printed or failed, there might be some residues left in the resin, which can be filtered out with a funnel when you save the rest resin back into its sealed bottle.
If you don't filter out the residues, the build platform may cause damage to the tempered glass or screen when you're printing next time.
As to the residual resin on the build platform, you can clean and wipe them up with tissues.

4. Maintenance

4.1 If the Z-axis keeps making friction noises, please add some lubricant to the lead screw.
4.2 Please do not use sharp or pointy tools to scrape the resin tank to avoid damaging the release liner film.



4.3 Be careful when you remove the build platform in case you may damage the tempered glass or screen.
4.4 Remember to pour the rest of resin from the resin tank back into the resin bottle and seal it well if you don't use the printer in the next 48 hours. And if there are any residues, please use a filter to filter them out.



4.5 Please clean up the build platform and the printer with tissues or ethyl alcohol once you complete printing.
4.6 Please clean up the resin tank before changing the resin to another color.

● ELEGOO printers are covered by a warranty starting from the date of receipt. The warranty periods for different components may vary. For detailed information, please visit our official website at https://www.elegoo.com/pages/refund-policy.

● The free warranty does NOT include problems caused by self-disassembly and improper use, and wear and tear of the machine housing, etc.

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