

Problem	Explanation	Action	
1. Size is not accurate			
1.1	The circumference ,that tracer measures, is not accurate.	The size is based on the circumference measured by tracer, the machine. Therefore, if tracer is not measuring , that results in inaccurate size.	Please perform Tracer "Auto Calibration".
1.2	Size Adjustment is not proper.	The diameter of the wheel has been changed due to wear of the wheel. Or if you have replaced with new wheel. New one has a diameter difference compared to old one. These would affect the size accuracy. There is a case that the machine cutting a lot of glass lenses, the finish wheel wears off faster than the machine cutting a lot of plastic lenses.	Please do size adjustment again or Enter the proper value to Size Preset parameter.
1.3	The diamond particles on the wheel are not in good condition.	If not in good condition, the wheel would not be able to grind good within the number of programmed lens rotation.	Please dress the wheel. If you do retouch and the size comes accurate, in this case, dressing would be effective for this issue.
1.4	Bevel Curve does not match Frame Curve.	If the bevel curve and frame curve does not match up, you feel the size is bigger and have a difficulty to fit a lens into a frame.	Please use Guide Mode then set bevel curve to match frame curve.
1.5	The temperature of the water has been changed.	If using hot or warm water, that would affect the size accuracy and the size would come smaller than it should be.	Adjust the water temperature (Replacing water) . Hot or warm water is not recommended to use.
1.6	Edge Sensor Voltage is fluctuating or is not stable.	Unstable sensor voltage would affect the size accuracy.	Check Edge Sensor Voltage and also check sensor to see if it is loose or fixed securely.
1.7	Groove angle of frame.	Groove angle of frame and the angle (110 degrees) of bevel apex that the machine creates, they do not match up.	For some of frames, their angle of grooves are sharper than the angle of bevel apex that the machine creates. In this case you feel that size is not good and have a difficulty when putting a lens into a frame. Please adjust "Size Preset" parameter in order for lens to fit OK.
2. Bevel position is not accurate			
2.1	Bevel position is not adjusted properly.		Please do Bevel Position adjustment.
2.2	The size is not adjusted properly.	If the size bigger, Bevel position would come to the front.	Please do finish size adjustment.
2.3	Bevel position is no good especially on nasal/temporal side or top/bottom side of shape.	Due to the distortion created by chuck pressure, The position of lens edge in finish cycle is shifted as compared to the position when lens measuring.	Please use a function "Measure after rough grind". In this way, the machine does lens measuring after rough cycle.
2.4	Ground a cataract lens.	If you do Auto mode for a cataract lens, the bevel profile follows the lens front curve.	Use Guide mode and set Curve to follow the lens rear curve. Or enable Tilt function and cut with Guide mode (Please specify Curve on Guide screen).

2.5	Feeler is lifted up.	If feeler is lifted up, it measures the different position in error. This would cause inaccurate Bevel position.	Please check the feeler lift up sensor. And there are some cases that the feeler lifts up caused by getting caught with Nidek adhesive patch. In this case, please cut the Nidek adhesive patch into proper size.
2.6	Lens measuring position is no good.	If the lens measuring position is no good, LMU can not measure the lens thickness accurately. This causes inaccurate bevel position.	Please adjust the feeler measuring height.
2.7	The movement of feeler is not smooth.	If there is a restriction in feeler movement or the feeler get caught with something, lens measuring data can not be generated accurately.	Manually move the feeler and find where is the restriction or where the feeler get stuck. Especially check guide rail. Then clean the guide rail and eliminate a restriction. If this does not resolve, please replace LMU unit.
2.8	The movement of X axis is no good.	If X axis movement get stuck or jammed due to a restriction. LMU can not measure the lens thickness accurately.	Turn power off. Manually move X axis and find where is the restriction or where X axis get stuck. Then eliminate a restriction and clean X axis.
2.9	Encoder is defective.	Due to defective encoder, lens measuring data is no good.	Check the number on the screen when doing LMU calibration. If the number is higher than 10 or it is inconsistent, In this case encoder is defective. Please replace LMU unit.
2.10	Software.	For the portion of lens where the edge is thin, the machine is programmed to place a bevel to the center.	This is what the machine is supposed to do.
2.11	Thin bevel.	There are some shapes which makes the bevel discontinuous caused by thin bevel.	Please try to cut in Passive Mode.

3.AXIS off

3.1	Axis is not adjusted properly.		Please do Axis Adjustment.
3.2	The movement of θ axis get stuck or jammed.	If θ axis does not move smoothly due to a restriction or something, this directly causes axis off problem.	Depending on the gear engagement or the wear of the steel ball, the restriction possibly is increased in θ axis movement. Please adjust the gear engagement and clean it. Also replace the steel ball if needed. If axis is off does not occur frequently and there is no evidence for the slippage of leap tape, in this case, θ axis probably gets jammed. Please check items mentioned above.
3.3	Super Hydrophobic lens.	Super Hydrophobic lens slips easily even chuck pressure is OK.	Use Nidek adhesive patches and Nidek leap tape. Depending how slippy, If lens slips a lot, put an adhesive patch and leap tape to the back side of lens as well.
3.4	Chuck Pressure.	Due to low chuck pressure, the machine can not hold a lens enough against the lens rotation.	Use the Chuck Pressure measurement jig and adjust the pressure properly (There is a parameter to adjust chuck pressure). If unable to get proper chuck pressure by parameter, clean the worm gear of chuck shaft and lubricate it.
3.5	The condition of rough wheel is no good.	Due to the wear of rough wheel, a lot of stresses apply to the portion where the lens is chucked.	Replace rough wheel if it worn out. If cutting glass lenses, please try dressing the wheel.
3.6	Differential is too big.	It too big, a lot of stress apply to rotation axis in finish cycle.	Please change differential to proper value.

4. Polish is poor.

4.1	The size is not adjusted properly.	If finish size is not accurate, lens probably get burned or unpolished area appears.	Please do finish size adjustment.
4.2	Polish level is not adjusted properly.	As polish wheel gets worn, how a lens touches polish wheel changes. Eventually, the machine would not be able to keep polish quality good.	Adjust Polish Level properly.
4.3	Bevel Polish Position is no good.	If bevel polish position is no good, You see that only on side (either front or rear) is polished. In some cases, Both lens burnt and unpolished areas exist on the lens.	Adjust bevel polish position.
4.4	Bad condition of polish wheel.	Bad condition of polish wheel directly affects polish quality.	Please do polish compound. If you see unpolished area consistently on either the front side or back side, this means the tapered angle between finishing and polishing wheel are not the same. So, please replace both wheels. Please note that Do not try to dress the polish wheel. Too much dressing changes the tapered angle easily.

5. Grooving Depth is no good

5.1	The size is not adjusted properly.	If the size prior to grooving cycle is not accurate, this affects groove	Please do finish size/polish size adjustment.
5.2	Axis is not adjusted properly.		Please do Axis adjustment.
5.3	The parameter "SFB Wheel height" is not adjusted properly.	If Not adjusted properly, the groove depth would be affected directly.	Please adjust the parameter SFB Wheel Height. If mechanically the height of SFB arm is not correct, Use a jig and mechanically set the height properly → Perform SFB calibration → Perform SFB/Groove adjustment.
5.4	Groove axis is not adjusted properly.		Please adjust groove axis.
5.5	Idle rotation of grooving is not adjusted properly.	If grooving a hard material lens, the machine tries to groove but has a difficulty in taking lens material out. In this case, you probably see that the depth is not consistent especially on top of the lens.	Please set idle rotation for grooving.

6. Groove Position is no good.

6.1	Groove Position is not adjusted properly.		Adjust Groove Position.
6.2	Size Adjustment is not proper.	If the size prior to grooving cycle is bigger, groove position would come to the front.	Please do finish size/polish size adjustment.
6.3	Groove position is no good especially on nasal/temporal side or top/bottom side of shape.	Due to the distortion created by chuck pressure, the position of lens edge in groove cycle is shifted as compared to the position when lens measuring.	Please use a function "Measure after rough grind". In this way, the machine does lens measuring after rough cycle.
6.4	Ground a cataract lens.	If you do Groove Auto, the groove profile would follow the lens front curve	Use Guide mode and set the curve to follow the lens rear curve. Or enable Tilt function and cut with Guide mode → Please specify the curve.

6.5	Lens measuring position is no good.	If the lens measuring position is no good, LMU can not measure the lens thickness accurately. This causes inaccurate groove position.	Please adjust the feeler measuring height.
6.6	Feeler is lifted up.	If feeler is lifted up, it measures the different position in error. This would cause inaccurate Groove position.	Please check the feeler lift up sensor. And there are some cases that the feeler lifts up caused by getting caught with Nidek adhesive patch. In this case, please cut the Nidek adhesive patch into proper size.
6.7	The movement of feeler is not smooth.	If there is a restriction in feeler movement or the feeler get caught with something, the accurate lens measuring data can not be generated.	Manually move the feeler and find where is the restriction or where the feeler get stuck. Especially check guide rail. Then clean the guide rail and eliminate a restriction. If this does not resolve, please replace LMU unit.
6.8	The movement of X axis is no good.	If X axis movement get stuck or jammed due to a restriction. LMU can not measure the lens thickness accurately.	Turn power off. Manually move X axis and find where is the restriction or where X axis get stuck. Then eliminate a restriction and clean X axis.
6.9	Encoder is defective.	Due to defective encoder, lens measuring data is no good.	Check the number on the screen when doing LMU calibration. If the number is higher than 10 or it is inconsistent, In this case encoder is defective. Please replace LMU unit.
6.10	Software.	For the portion of lens where the edge is thin, the machine is programmed to place a groove to the center.	This is what the machine is supposed to do.
6.11	Groove comes wider.	The groove width comes wider as groove curve goes higher. This might make you feel that groove position is wrong.	Please try to cut in Passive Mode.

7.SFB is no good.

7.1	SFB parameters (SFB Axis and SFB Wheel Position).		Please adjust SFB amount (SFB Wheel Position).
7.2	The size is not adjusted properly.	If the size is bigger prior to SFB process, the position of lens edge comes different than the calculated one.	Please do finish size/polish size adjustment.
7.3	Cylinder Axis is not adjusted properly.	If Cylinder Axis Off, SFB axis would come off.	Please do Cylinder Axis adjustment.
7.4	SFB amount is inconsistent especially on nasal/temporal side.	Due to the distortion created by chuck pressure, the position of lens edge in SFB cycle is shifted as compared to the position when lens measuring.	Please use a function "Measure after rough grind". In this way, the machine does lens measuring after rough cycle.
7.5	Lens measuring position is no good.	If the lens measuring position is no good, LMU can not measure the lens thickness accurately. This causes inaccurate SFB.	Please adjust the feeler measuring height.
7.6	The movement of feeler is not smooth.	If there is a restriction in feeler movement or the feeler get caught with something, the accurate lens measuring data can not be generated.	Manually move the feeler and find where is the restriction or where the feeler get stuck. Especially check guide rail. Then clean the guide rail and eliminate a restriction. If this does not resolve, please replace LMU unit.
7.7	The movement of X axis is no good.	If X axis movement get stuck or jammed due to a restriction. LMU can not measure the lens thickness accurately.	Turn power off. Manually move X axis and find where is the restriction or where X axis get stuck. Then eliminate a restriction and clean X axis.

7.8	Feeler is lifted up.	If feeler is lifted up, it measures the different position in error. This would cause inaccurate Bevel position.	Please check the feeler lift up sensor. And there are some cases that the feeler lifts up caused by getting caught with Nidek adhesive patch. In this case, please cut the Nidek adhesive patch into proper size.
7.9	Encoder is defective.	Due to defective encoder, lens measuring data is no good.	Check the number on the screen when doing LMU calibration. If the number is higher than 10 or it is inconsistent, In this case encoder is defective. Please replace LMU unit.
7.10	Software	For SFB in bevel grinding, the software is designed to avoid a interference between beveling and chamfering.	This is the specification that the machine is supposed to do.
8. Lens is cracked			
8.1	Lens cup is not proper.	Lens curve and the curve of lens cup do not match up, therefore, the lens is distorted by chuck pressure.	Please use half eye cup (white one) or wide cup.
8.2	The combination of the cup holder and lens clamp is not proper.	If the cup holder and the lens clamp are not a proper combination, lens gets distorted and eventually cracked. Also if you do not use an appropriate lens cup according to the cup holder, this also causes lens cracking.	If you use a half eye cup holder and half eye lens clamp then use full eye lens cup, the possibility of lens cracking is very high.
8.3	Chuck pressure is not proper.	Chuck pressure is too high.	Use the chuck pressure JIG and adjust the pressure 45 +/-10kg.
8.4	Grinding mode is wrong.	In normal grinding mode, a lot of stresses apply to the point where a lens is chucked.	Please try Glass soft grinding mode.
9. Crack or scratch on lens			
9.1	Cooling water is dirty.	Cooling water mixed with lens debris damages lens.	Replace cooling water. The dirty water could damage lens.
9.2	The surface of lens clamp is dirty.	If the surface of lens clamp is dirty, the rear side of lens would be damaged.	The dirty surface of lens clamp could damage lens.
9.3	The combination of the cup holder and lens clamp is not proper.	Cup holder and lens clamp do not match up. Or lens cup is not proper for cup holder (e.g. Full eye lens cup for half eye cup holder).	If using a improper combination of cup holder and lens clamp, the possibility of cracking a lens is very high. Or if you use half eye cup holder/lens clamp then use full eye lens cup, lens would be cracked especially area where a lens is chucked.
9.4	The way of removing lens cup is no good.	Pushing toward lens then removing the cup. This is wrong way.	Twist the deblocker then remove the cup.
10. Chipping on the edge of the lens			
10.1	Grinding Glass lens.	Rough size parameter is not proper. If it is too small value, the chip that occurs in roughing is not removed away. Oppositely, if it is too big, the stress of grinding gets high and this also causes chipping.	Please adjust Rough Size parameter (differential) properly.
		The characteristic of the lens. (Easy to be chipped).	Please try the soft grinding mode.
		The wheel is not in good condition.	Please dress the wheel.
10.2	Grinding Hi-index lens	Hi-index lens is easily cracked.	Please set the glass rough wheel as roughing wheel for hi-index lens in system setting mode.

11.PD is not accurate			
11.1	Passive mode.	"PD Correction for passive" is disabled.	Enable "PD Correction for passive".
11.2	Super Hydrophobic lens.	Blocking position could be shifted when blocking.	Due to a slippy lens, the blocking lens comes off easily.For grinding, please use Nidek adhesive patches and Nidek leap tape.
12.Measuring error in frame change mode.			
12.1	Lens measuring position is no good.	If the lens measuring position is not proper, the feeler can not touch an accurate point on a lens. Therefore, the feeler easily falls out of lens.	Please adjust the feeler measuring height.
13.Finish cycle does not end.			
13.1	Y axis assy and software.	The machine can not recognize the end of finish cycle.	Please try LE-10A MASTER V1.17 or higher. If the problem still occurs, Replace Y axis
14.The shape on top of the lens is caved			
14.1	Stylus pin.	The stylus pin does not touch the edge of a dummy lens.	Replace the holder base (40340-M314. Ref. TB:40340-123J/E).
15.Rough cycle does not end			
15.1	The motor not spinning.	Since the motor is not spinning, rough cycle does not proceed at all, then it eventually reaches the rotation limit.	Please check the inverter to see if it shows any error. Then manually try to move the wheel and check if it is locked or free.
15.2	The wear of diamond particles on rough-wheel for plastics.	Due to the wear of diamond particles,rough cycle does not proceed well, then it eventually reaches the rotation limit.	Please replace the rough wheel. In case of cutting Hi-index lenses, please change the setting to use a glass rough wheel for Hi-index.

NOTE :

LE-9000 consists of two major components. The one is tracer component and the other one edger component. If any problem occurs, the first step is to find which component (Edger or Tracer) is causing the problem. Cut internal 45 circle or 45 square then try to duplicate the problem and see how the problem occurs. By doing this process, you can probably find out which component (Edger or Tracer) is causing the problem.

Regarding Polish, Groove and SFB, The machine should be able to grind these properly as long as the cycle prior to each one of them is done accurately.For example, If finish size is not adjusted properly, Groove depth and SFB amount come inconsistent . If you adjust polish and Groove/SFB without adjusting the finish size properly, the quality of those (Polish and Groove/SFB) comes worse than it should be.Likewise if the feeler height when lens measuring is no good , the same thing occurs. Therefore, as long as the machine is adjusted step by step , the finish quality should be OK.

For chuck pressure, you can not know the accurate pressure unless you have the pressure measurement JIG. Please have the JIG to measure.

There are so many reports saying that Groove/SFB is inconsistent. In most of cases, the causes are a) the size is not adjusted accurately b) the height of SFB arm is mechanically wrong c) The feeler height when lens measuring is not adjusted properly. The basic adjustments are very important and they need to be done properly.