

Aurotek®

γ -330M

2-Slide PCB Separator

Maintenance Manual

2011 05

Maintenance Intervals

Unit name Inspection and	Lubrication point	Details on inspection and lubrication	Specifications and specified oil	Cycle	Reference
Main body	MR unit (Pressure gauge)	Check air pressure. (Before operation)	0.49 MPa to 0.54 MPa	24h (1D)	
	Scrap material collection box	Clean (After operation)		24h (1D)	
	Jig box	Clean (After operation)		24h (1D)	
	Stage table	Clean (After operation)		24h (1D)	
	Area sensor	Clean		120h (1W)	
Static eraser	Pin point	Clean		560h (1M)	
CCD Camera	lens	Clean		560h (1M)	
Spindle	Chuck and chuck holder	Clean		120h (1W)	
	Return to AuroTek	maintenance	3,000 hours of service by the spindle	3000h(1Y)	
XYZ unit	X-axis Ball screw & LM guide	Inject grease.	Shell Oil: Albanian Grease NO.2	560h (1M)	
	Y-axis Ball screw & LM guide	Inject grease.	Mobil Oil: Mobilux NO.2	560h (1M)	
	Z-axis Ball screw & LM guide	Inject grease.		560h (1M)	
	Cable bearer	Inspect		6000h (1Y)	
Vacuum Cleaner	Dust box	Clean		120h (1W)	
	Bag filters	Clean		24h (1D)	
	Vacuum piping	Clean		560h (1M)	

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γ -330M X-Axis Ball Screw Maintenance Procedure




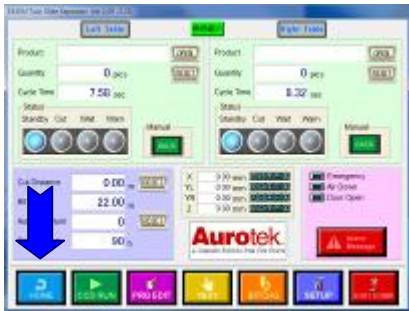





Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.







Series: γ -330M

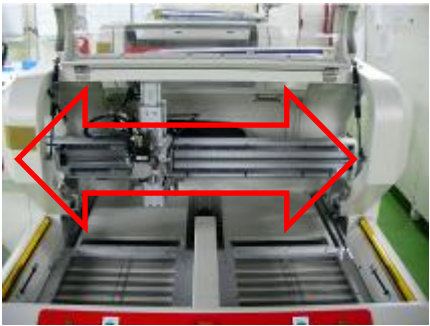


Maintenance period: Monthly






Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves
	Maintenance oil

Grease Recommendation	
	Albania Grease NO.2
	Mobilux NO.2

Step	Item
<div data-bbox="252 275 528 353">  DANGER </div> <div data-bbox="252 371 528 450">  CAUTION </div> <div data-bbox="252 468 528 546">  PROHIBITION </div>	
1.	<div data-bbox="384 566 794 875">  </div> <p data-bbox="384 898 831 1077">In the main screen select  return to home position then turn off computer.</p> <div data-bbox="903 707 1129 880">  </div> <p data-bbox="903 898 1198 931">Turn off main power.</p>
2.	<div data-bbox="384 1081 815 1417">  </div> <p data-bbox="384 1429 863 1507">Remove the screws and cover on the left side.</p> <div data-bbox="384 1514 810 1850">  </div> <p data-bbox="384 1861 863 1939">Remove the screws and cover on the right side.</p> <div data-bbox="903 1346 1342 1585">  </div> <p data-bbox="903 1619 1310 1697">Remove X axis motor power cable.</p>

<p>3.</p>	 <p>Remove the screws of the X axis's cover on the left side.</p>	 <p>Remove the screws of the X axis's cover on the right side.</p>
<p>4.</p>	 <p>Remove the cover of the X axis.</p>	 <p>Remove the cover of the X axis.</p>
<p>5.</p>		<p>Wipe clean the old grease of the screw.</p>
<p>6.</p>		<p>Averagely smear new grease on the ball screw.</p>

7.		<p>Move around ball screw by hand, indeed to grease on the screw, and check for abnormalities or not smooth.</p>
8.		<p>Move around ball screw by hand, indeed to grease on the screw, and check for abnormalities or not smooth.</p>
9.		<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>

<p>10</p>	 <p>Turn on main power.</p>	<p>Press </p>  <p>In the main screen select  return to home position.</p>
<p>11.</p>		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>





γ -330M X-Axis Slide Sifter


Maintenance Procedure


Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.




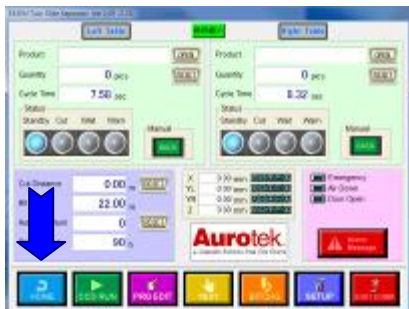




Series: γ -330M







Maintenance period: Monthly






Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Grease gun
	Gloves
	Maintenance oil




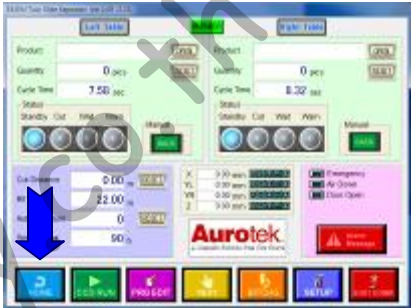


Grease Recommendation	
	Albania Grease NO.2

	Mobilux NO.2
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Step	Item	
<div><div> DANGER</div><div> CAUTION</div><div> PROHIBITION</div></div>		
1.	<div></div> <p>In the main screen select  return to home position then turn off computer.</p>	<div></div> <p>Turn off main power.</p>
2.	<div></div> <p>Remove the screws and cover on the left side.</p>	<div></div> <p>Remove X axis motor power cable.</p>

		
	Remove the screws and cover on the right side.	
3.		
	Remove the screws of the X axis's cover on the left side.	Remove the screws of the X axis's cover on the right side.
4.		
	Remove the cover of the X axis.	Remove the cover of the X axis.
5.		Wipe clean the old grease.

<p>6.</p>		 <p>Put the grease gun into filling hole. When filling grease into filling hole, please make sure the old grease have been pushed out from slide sifter.</p>
<p>7.</p>		<p>Move around Z-axis by hand, indeed to grease on the screw, and check for abnormalities or not smooth.</p>
<p>8.</p>	 <p>Wipe clean excess grease to prevent dust adhesion. Then covered with cover and lock screws on both sides.</p>	 <p>Connect X axis motor power cable.</p>

9.		<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>
10.	 <p>Turn on main power.</p>	<p>Press </p> <p>Press</p>  <p>In the main screen</p> <p>select  return to home position.</p>
11.		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>



γ -330M Y-Axis Ball Screw Maintenance Procedure




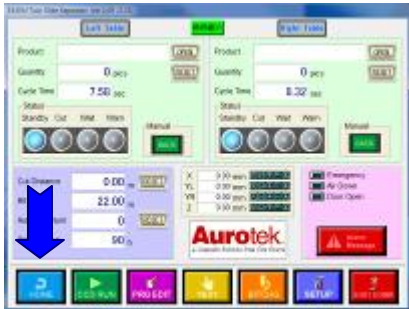






Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.

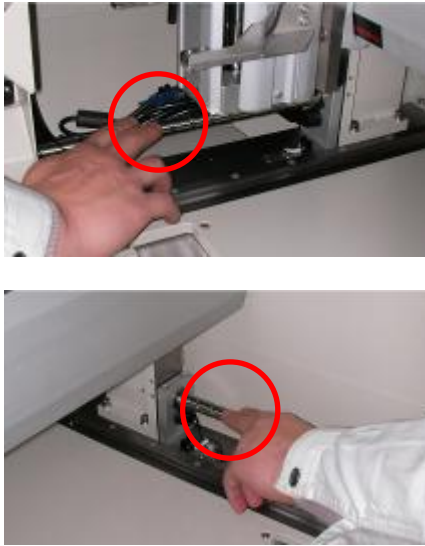


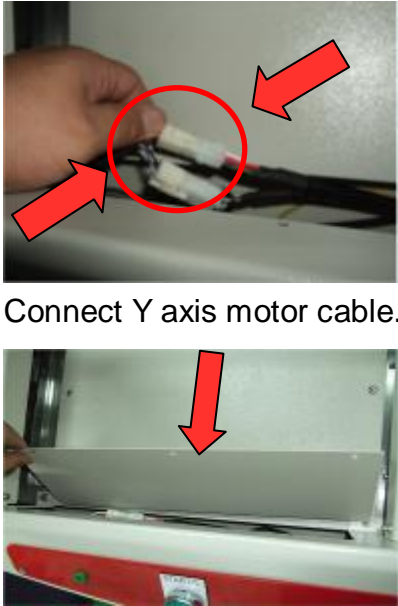
Series: γ -330M




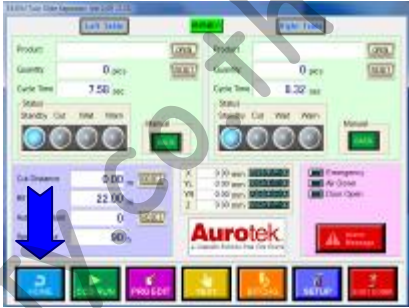

Maintenance period: Monthly

Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves
	Maintenance oil

Grease Recommendation	
	Albania Grease NO.2
	Mobilux NO.2

Step	Item
<div data-bbox="256 277 528 353">  DANGER </div> <div data-bbox="256 376 528 452">  CAUTION </div> <div data-bbox="256 474 528 551">  PROHIBITION </div>	
1.	<div data-bbox="384 568 794 875">  </div> <p data-bbox="384 898 794 1081">In the main screen select  return to home position.</p> <div data-bbox="831 685 1058 857">  </div> <p data-bbox="831 875 1125 909">Turn off main power.</p>
2.	<div data-bbox="384 1088 759 1323">  </div> <p data-bbox="384 1335 655 1368">Remove the cover.</p> <div data-bbox="831 1088 1169 1323">  </div> <p data-bbox="831 1335 1334 1368">Remove Y axis motor power cable.</p>
3.	<div data-bbox="384 1451 815 1709">  </div> <div data-bbox="384 1742 815 2000">  </div> <p data-bbox="831 1704 1214 1738">Wipe clean the old grease.</p>

<p>4.</p>		<p>Averagely smear new grease on the ball screw.</p>
<p>5.</p>		<p>Move around ball screw by hand, indeed to grease on the screw, and check for abnormalities or not smooth.</p>
<p>6.</p>	 <p>Wipe clean excess grease to prevent dust adhesion.</p>	 <p>Connect Y axis motor cable.</p> <p>Replace the cover.</p>

7.		<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>
8.	 <p>Turn on main power.</p>	<p>Press </p>  <p>In the main screen select  return to home position.</p>
10.		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>

γ -330M Y-Axis Slide Sifter



Maintenance Procedure




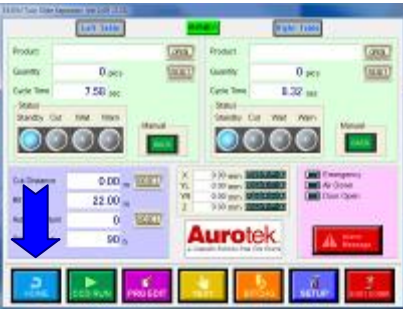



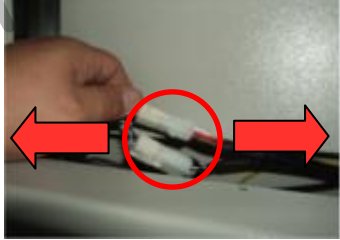


Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.


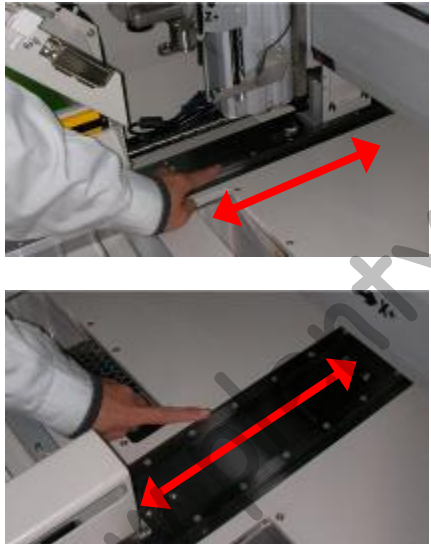
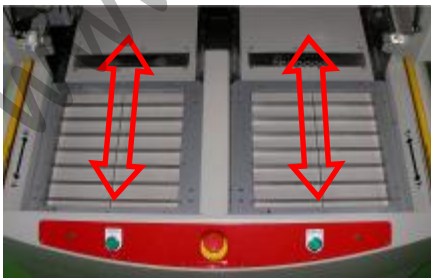


Series: γ -330M






Maintenance period: Monthly

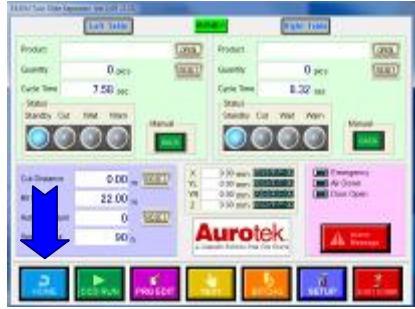


Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves
	Maintenance oil

Grease Recommendation	
	Albania Grease NO.2
	Mobilux NO.2

Step	Item	
<div><div> DANGER</div><div> CAUTION</div><div> PROHIBITION</div></div>		
1.	<div><p>In the main screen select  return to home position.</p></div>	<div><p>Turn off main power.</p></div>
2.	<div><p>Remove the cover.</p></div>	<div><p>Remove Y axis motor power cable.</p></div>
3.	<div></div>	<div><p>Wipe clean the old grease.</p></div>

		
4.		<p>Smear new grease.</p>
5.		<p>Move around Y-axis by hand, indeed to grease on the screw, and check for abnormalities or not smooth.</p>
6.	 	<p>Connect Y axis motor cable.</p>

	 <p>Wipe clean excess grease to prevent dust adhesion. Then covered with cover and lock screws on both sides.</p>	 <p>Replace the cover.</p>
7.		<p>Check working area to see if there is any tools, dustless cloth etc. left behind.</p>
8.	 <p>Turn on main power.</p>	 <p>Press</p>

		 <p>In the main screen</p> <p>select  return to home position.</p>
9.		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>



γ -330M Z-Axis Ball Screw Maintenance Procedure









Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.




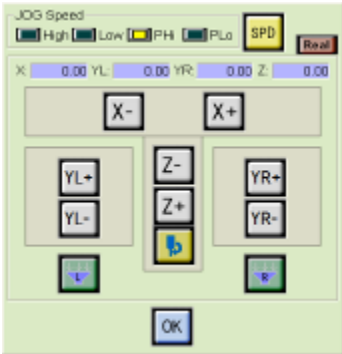
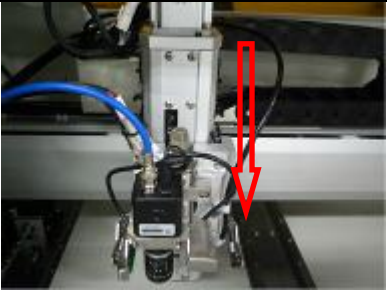

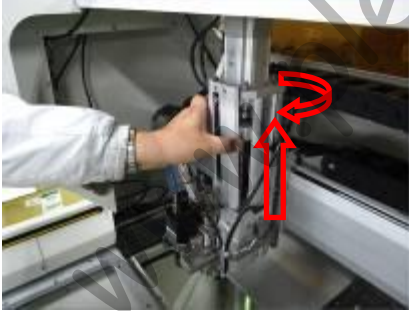

Series: γ -330M







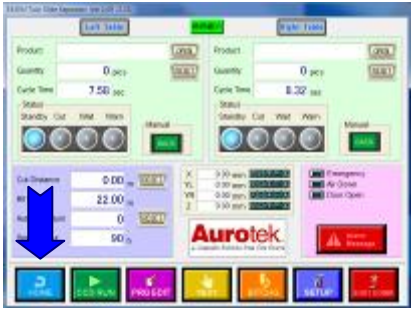

Maintenance period: Monthly

Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves
	Maintenance oil

Grease Recommendation	
	Albania Grease NO.2
	Mobilux NO.2




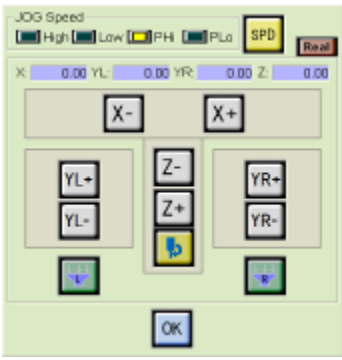





Step	Item
	<div data-bbox="252 275 528 353">  DANGER </div> <div data-bbox="252 371 528 450">  CAUTION </div> <div data-bbox="252 468 528 546">  PROHIBITION </div>
1.	<div data-bbox="365 566 778 875">  </div> <p data-bbox="365 898 778 1077">In the main screen  return to home position.</p>
2.	<div data-bbox="365 1093 778 1357">  </div> <div data-bbox="863 1093 1246 1357">  </div> <p data-bbox="365 1379 831 1458">Remove the top cover screws of the Z axis and remove the cover.</p>
3.	<div data-bbox="365 1473 730 1794">  </div> <p data-bbox="365 1809 798 1888">Remove the second top cover screws of the Z axis.</p>




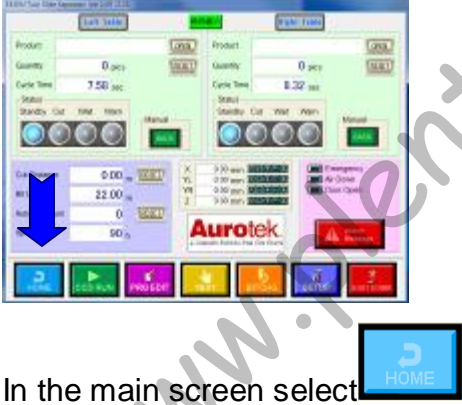

<p>4.</p>	 <p>In the main screen</p> <p>select  then select  to teach Z-axis move to the bottom position.</p> 	 <p>Teach Z-axis move to the bottom position.</p>  <p>Remove the second top cover screws of the Z axis.</p>
<p>5.</p>		 <p>After remove the cover then allow to turn off the machine for maintenance procedure.</p>

6.		 <p>Turn off main power.</p>
7.		<p>Wipe clean the old grease.</p>
8.		<p>The average of smear new grease on the slide sifter.</p>
9.	 <p>Turn on main power.</p>	<p>Press</p>   <p>In the main screen select</p> 

		return to home position.
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<p>10.</p>	 <p>In the main screen</p> <p>select  then select  to teach Z-axis move to the bottom position.</p> 	 <p>In the JOG test mode, teach Z-axis move up and down use for wipe clean excess grease to prevent dust adhesion.</p>
<p>11.</p>	 <p>In the JOG test mode teach Z-axis move to the bottom position.</p>	 <p>Covered the cover.</p>
<p>12.</p>		 <p>Lock screws of the cover.</p>

13.	 <p>Covered the cover.</p>	 <p>Lock screws of the cover.</p>
14.		<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>
15.	 <p>In the main screen select return to home position.</p>	
16.		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>

γ -330M Z-Axis Slide Sifter



Maintenance Procedure








Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.




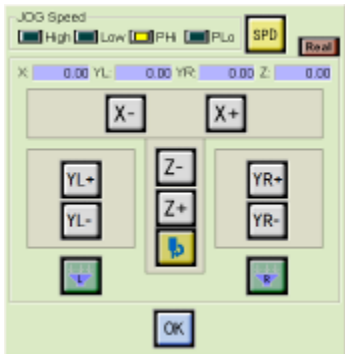




Series: γ -330M







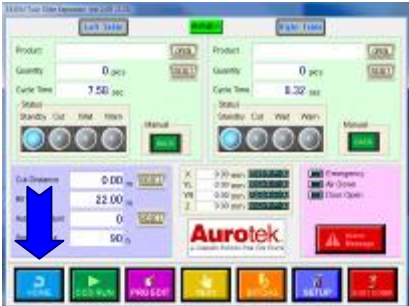

Maintenance period: Monthly

Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves
	Maintenance oil

Grease Recommendation	
	Albania Grease NO.2
	Mobilux NO.2




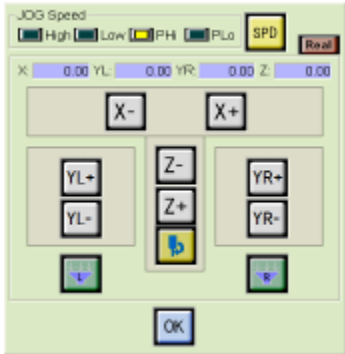



Step	Item
	<div data-bbox="256 277 528 349">  DANGER </div> <div data-bbox="256 371 528 443">  CAUTION </div> <div data-bbox="256 465 528 537">  PROHIBITION </div>
1.	<div data-bbox="384 566 794 875">  </div> <p data-bbox="384 898 794 1081">In the main screen select  return to home position.</p>
2.	<div data-bbox="384 1093 798 1357">  </div> <p data-bbox="384 1379 798 1514">Remove the top cover screws of the Z axis and remove the cover.</p>
3.	<div data-bbox="384 1525 751 1839">  </div> <p data-bbox="384 1861 751 1944">Remove the second top cover screws of the Z axis.</p>






<p>4.</p>	 <p>In the main screen</p> <p>select  then</p> <p>select  to teach Z-axis</p> <p>move to the bottom position.</p> 	 <p>Teach Z-axis move to the bottom position.</p>  <p>Remove the second top cover screws of the Z axis.</p>
<p>5.</p>		 <p>After remove the cover then allow to turn off the machine for maintenance procedure.</p>

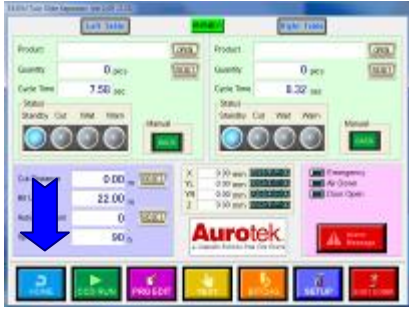


6.		 <p>Turn off main power.</p>
7.		<p>Wipe clean the old oil.</p>
8.		<p>The average of smear new grease on the slide sifter.</p>
9.	 <p>Turn on main power.</p>	<p>Press</p>   <p>In the main screen select</p> 

		return to home position.
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<p>10.</p>	 <p>In the main screen</p> <p>select  then</p> <p>select  to teach Z-axis move to the bottom position.</p> 	 <p>In the JOG test mode, teach Z-axis move up and down use for wipe clean excess grease to prevent dust adhesion.</p>
<p>11.</p>	 <p>In the JOG test mode teach Z-axis move to the bottom position.</p>	 <p>Covered the cover.</p>

12.		 Lock screws of the cover.
13.	 Covered the cover.	 Lock screws of the cover.
14.		Check working area to see if there is any tools, dustlessness cloth etc. left behind.

<p>15.</p>	 <p>In the main screen select  return to home position.</p>	
<p>16.</p>		<p>Run the trial program. If there is not any error message show up during running program, then maintenance procedure is completed.</p>










Dust Collector Maintenance Procedure




Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.



Series: Dust collector



Maintenance period: Weekly

Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Vacuum cleaner
	Gloves
	Mask

Step	Item
	<div data-bbox="256 255 528 327">  DANGER </div> <div data-bbox="256 349 528 421">  CAUTION </div> <div data-bbox="256 443 528 515">  PROHIBITION </div>
<p>1.</p>	<div data-bbox="368 544 780 851">  </div> <p>In the main screen</p> <div data-bbox="451 920 568 992">  </div> <p>select return to home position.</p> <div data-bbox="451 1061 651 1238">  </div> <p>Press EMERGENCY STOP.</p> <div data-bbox="831 544 1058 712">  </div> <p>Turn off main power.</p> <div data-bbox="831 835 1189 1187">  </div> <p>Turn off regulator.</p>
<p>2.</p>	<div data-bbox="375 1308 798 1624">  </div> <p>Turn off dust collector main power(red button).</p>

3.	 <p>Release the red knob and open the door.</p>	
4.	 <p>Use hand to shake the dust out of dust tube.</p>	
5.	 <p>Repeat pulling the handle, ensuring dust falling into the dust box.</p>	

<p>6.</p>	 <p>Pull out the dust box, use the vacuum cleaner to clean the dust box.</p>	
<p>7.</p>	 <p>Turn on regulator.</p>  <p>Turn on main power.</p>	 <p>Press</p>  <p>Loosen EMERGENCY STOP.</p>  <p>In the main screen select  return to home position.</p>

<p>8.</p>	 <p>Turn on dust collector main power(black button).</p>	
<p>9.</p>	 <p>Run the trial program.</p>	<p>If there is not any error message show up during running program, then maintenance procedure is completed.</p>




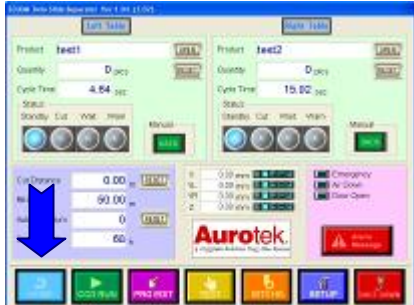





Area Sensor Maintenance Procedure




Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.









Series: γ -330M

Maintenance period: Weekly

Maintenance tools	
	Non-woven cloth , Dustlessness cloth
	Gloves

Step	Item	
<div><div> DANGER</div><div> CAUTION</div><div> PROHIBITION</div></div>		
1.	<div><p>In the main screen select</p><p>return to home position.</p><p>Press EMERGENCY STOP.</p></div>	<div><p>Turn off main power.</p><p>Turn off regulator.</p></div>
2.	<div><p>Left side</p></div>	<div><p>Use the Dustlessness cloth to clean the sensor on the left side.</p><p>Do not use water, oil and organic solvent to clean sensors and keep sensors in dry condition.</p></div>

<p>3.</p>	 <p>Middle left</p>	<p>Use the Dustlessness cloth to clean the sensor on the middle left side.</p> <p>Do not use water, oil and organic solvent to clean sensors and keep sensors in dry condition.</p>
<p>4.</p>	 <p>Middle right</p>	<p>Use the Dustlessness cloth to clean the sensor on the middle right side.</p> <p>Do not use water, oil and organic solvent to clean sensors and keep sensors in dry condition.</p>
<p>5.</p>	 <p>Right</p>	<p>Use the Dustlessness cloth to clean the sensor on the right side.</p> <p>Do not use water, oil and organic solvent to clean sensors and keep sensors in dry condition.</p>

6.	 <p>Check working area.</p>	<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>
7.	 <p>Turn on regulator.</p>  <p>Turn on main power.</p>	<p>Press </p> <p>Loosen  EMERGENCY STOP.</p> <p>In the main screen  select  return to home position.</p>
8.	 <p>Run the trial program.</p>	<p>If there is not any error message show up during running program, then maintenance procedure is completed.</p>

Ionizer Maintenance Procedure

Purpose: This maintenance manual for the regular maintenance activity, may prevent malfunction of equipment in the first place, also improve equipment reliability and stability for increases equipment's service life and the efficiency improvement.

Series: γ -330M

Maintenance period: Monthly

Maintenance tools











Alcohol









Cotton swab











Gloves

Step	Item
<div style="display: flex; flex-direction: column; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">  DANGER </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">  CAUTION </div> <div style="border: 1px solid black; padding: 5px;">  PROHIBITION </div> </div>	
1.	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>In the main screen select</p>  <p>return to home position.</p> <p>Press</p>  <p>EMERGENCY STOP.</p> </div> <div style="width: 50%;">  <p>Turn off main power.</p>  <p>Turn off regulator.</p> </div> </div>
2.	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  </div> <div style="width: 50%;"> <p>Switch off power.</p> </div> </div>

3.		Close the valve and make sure that the valve is completely closed.
4.		Uninstall the nozzle.
5.		Apply alcohol on a cotton swab to clean the nozzle.
6.		Apply alcohol on a cotton swab to clean the needle.
7.		Use brush to clean the needle.

<p>8.</p>		<p>Reinstall the nozzle and open the valve then switch on ionizer(Green light on).</p>
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9.	 <p>Check working area.</p>	<p>Check working area to see if there is any tools, dustlessness cloth etc. left behind.</p>
10.	 <p>Turn on regulator.</p>  <p>Turn on main power.</p>	<p>Press </p> <p>Loosen  EMERGENCY STOP.</p>  <p>In the main screen select  return to home position.</p>
11.	 <p>Run the trial program.</p>	<p>If there is not any error message show up during running program, then maintenance procedure is completed.</p>