

# DETAILED SERVICE CHECKLIST

This document is to be completed for all site and service visits to provide evidence of tasks completed, identified issues and recommendations to the customer. This document should be made available to the customer on completion with a summary of the recommendations.



## CAUTION







Full services of the machine may only be performed by a Vekta trained and approved technician.











Site















Service Technician





Date






## Razer saw

- ☐ **1.1** Create backups before and after service. 
- ☐ **1.2** Clean the Drive Rollers and make sure they are secure (no lateral movement). 
- ☐ **1.3** Check tracking and tension of all Timing Belts (Feeders, Z-axis and Y-axis). 
- ☐ **1.4** Check that the Outfeed and Infeed Feeder Encoders are enabled (no Infeed Encoder if a Follower is fitted).
- ☐ **1.5** Check wear and clean the Feeder Encoder Wheels. 
- ☐ **1.6** Check actuation of the Feeder Encoder Wheels. 
- ☐ **1.7** Check actuation of the Side Clamp Rollers, state of the seals and adjust out wear on the Rodless Cylinder Slides. 




- ☐ **1.8** Check that the Top Rollers are coming down low enough to fully clamp timber properly. 
- ☐ **1.9** Check that the Locknuts on the Top Roller Cylinders are secure. 
- ☐ **1.10** Grease Y and Z-axes with EPL 2 lithium grease (Linear Bearings and Ball Screw Nuts). 
- ☐ **1.11** Remove all guards and thoroughly clean / inspect for damage. 
- ☐ **1.12** Clean and inspect Saw Chamber Door. 
- ☐ **1.13** Check Saw Blade and replace if necessary. 
- ☐ **1.14** On the Saw Head, make sure the centre bolt that holds the Saw Hub to the Motor Shaft is a tamper-proof bolt and is secure.
- ☐ **1.15** Wipe down Photoelectric Sensors on outfeed with damp cloth (remove ink overspray). 
- ☐ **1.16** Check that all Feeder Photoelectric Sensors are securely mounted, aligned and the beam is strong. 
- ☐ **1.17** Check that there is a mask fitted to the first Photoelectric Sensor on the Infeed Feeder. 
- ☐ **1.18** Check operation and condition of all safety devices. 
- ☐ **1.19** Check that the E-stop button on the operator console is secure.



- ☐ **1.20** Check that all Side and Top Roller Bearings spin freely. 
- ☐ **1.21** Check for excessive wear on Nylon Rollers. 
- ☐ **1.22** Perform a full recalibration:
  - a.** Tension Follower Belt (if needed) 
  - b.** Adjust Follower Friction Torque (if needed) 
  - c.** Adjust Follower Torque Settings (if needed) 
  - d.** Length Calibration 
  - e.** Calibrate Re-ref Sensors 
  - f.** Cut Calibrations 
- ☐ **1.23** Check height of Infeed and Outfeed relative to the Saw. Ensure pressure is not being removed from Drive Rollers. 
- ☐ **1.24** Check that all Electrical Cabinet Fans are operating and Filters are clean and flat. 
- ☐ **1.25** Blow dust out of Electrical Enclosures and ensure they are clean. 
- ☐ **1.26** Grease Feeders' Bearings as necessary. 
- ☐ **1.27** Check that the Y-axis Ball Screw Nut is secure. 
- ☐ **1.28** Check the Pneumatic Unit. Ensure the pressure is set to around 70-80 psi on the pneumatic filter regulators. 
- ☐ **1.29** Check that the four bottom screws on the interlock switch are tight and have been loctited.


- ☐ **1.30** Inspect the interlock switch for cracks. Pay particular attention to the junction between the main body and the lower part.
- ☐ **1.31** Check the position and security of the Proximity Sensors for the C and Y-axes.
- ☐ **1.32** Check software limits for Y-axis and Z-axis are correct and mechanical stops cannot be reached through manual operation.
- ☐ **1.33** Check and update Simple subscription database (please contact Vekta Automation).
- ☐ **1.34** Update software to latest version site is entitled to (Note the version installed and latest version available). If updating to Simple V12 or above, make sure to fill out the Vekta ID field with the country and job number.
- ☐ **1.35** Check the configuration of Vekta Rescue (from Simple V8 to V11). 
- ☐ **1.36** Check completeness of Spares Kit.
- ☐ **1.37** Make a note of any safety upgrades that might be worth considering.
- ☐ **1.38** Check hydraulic components for leaks or damage. Visually inspect condition of oil and note hydraulic filter age. 
- ☐ **1.39** Check that the Z-axis Ball Screw Nut is secure. 
- ☐ **1.40** Check condition of Z-axis Motor. 


- ☐ **1.41** Check condition of Rotary Coupling and Rubber Mounts. 
- ☐ **1.42** Check that the three bolts in the slotted holes of the retaining plate underneath the C-axis are tight and secure. If the flat washers are bent or squashed, replace them with high tensile ones.
- ☐ **1.43** Check condition of Cables connected to Saw Head Junction Box, Slip Ring, Z-axis Junction Box and Z-axis Motor. 
- ☐ **1.44** Check the position and security of the Proximity Sensors for the B-axis, Z-axis and blade speed.
- ☐ **1.45** Check operation of Sensors and condition of Sensor Cables on the saw head. 
- ☐ **1.46** Check operation of Clutch and Clutch Sensor. 
- ☐ **1.47** Inspect the dust seal on the hydraulic stem. Ensure the ring is not torn and is seated properly. (only applicable to the machines manufactured from late 2016 onwards) 


## Automatic Infeed Table

- ☐ **2.1** Check Re-referencing Sensors for security, masks on emitters, signal strength, alignment and beam "wobble" when cable is moved. 
- ☐ **2.2** Check tension of Roller Conveyor Chain. 
- ☐ **2.3** Check tension of Side Transfer Chains. 


- ☐ **2.4** Check that the Conveyor goes up and down evenly. 

- ☐ **2.5** Check that the Conveyor Reed Switch is working and secure. 


- ☐ **2.6** Check automation timing for loading new timber. 

- ☐ **2.7** Grease as necessary. 


## Follower


- ☐ **3.1** Check belt tracking. 

- ☐ **3.2** Check actuation of Paddle. 


- ☐ **3.3** Inspect for loose bolts or connections. 

- ☐ **3.4** Ensure Carriage is secure. 




- ☐ **3.5** Check operation and adjustment of the Sensor Array. 

- ☐ **3.6** Check the position and security of the Homing Proximity Sensor (including Locknut). 




- ☐ **3.7** Check Zero Offset. 












- ☐ **3.8** Clean any grime off the horizontal steel linear rail using a small amount of WD40 on a rag. (only applicable to pre-September 2016 non-Rexroth Followers)
- ☐ **3.9** Take the caps off the ends of the linear module and blow the dust out of it. (only applicable to post-September 2016 Rexroth Followers)
- ☐ **3.10** Grease as necessary. 

## Outfeed Kickoff Table


- ☐ **4.1** Check that the Reed Switches on the Kickoff Arm are secure. 
- ☐ **4.2** Check tracking and tension of Conveyor Belt. 
- ☐ **4.3** Grease as necessary. 


## P3 Printer

- ☐ **5.1** Check on-hand quantity of spare Ink Cartridges.
- ☐ **5.2** Clean Print Heads. 
- ☐ **5.3** Check Print Head Slots: look for ink on Pogo pins, dust, etc. 
- ☐ **5.4** Check distance between timber and Side Print Heads. 


- ☐ **5.5** Blow out dust from the Print Module Compartment. 
- ☐ **5.6** Check Print Head alignment. 
- ☐ **5.7** Check for loose bolts. Pay particular attention to the four screws holding the linear bearing of the Encoder.
- ☐ **5.8** Ensure Printer goes up and down smoothly and actuator clevises are aligned properly. 
- ☐ **5.9** Make sure Side Print Heads are secure. 
- ☐ **5.10** Check all printer height positions with clamped timber. 
- ☐ **5.11** Check that the Printer Cover Reed Switch is functioning and is aligning well with the magnet. 
- ☐ **5.12** Ensure all cables, including Encoder Cable, are secure and not prone to getting caught on anything. 
- ☐ **5.13** Look for chafing of the Ribbon Cables, particularly those going to the Side Print Heads. 
- ☐ **5.14** Check that there is a mask fitted to the middle Photoelectric Sensor on the Outfeed Feeder. 
- ☐ **5.15** Check wear and clean the Encoder Wheel. 
- ☐ **5.16** Check the operation of the Encoder. 





- ☐ **5.17** Grease as necessary. 


- ☐ **5.18** Check that the Printer Guard is secure. 


## Dust Extractor

- ☐ **6.1** Check that the Bags are filling roughly evenly. Adjust Baffles if necessary. 


- ☐ **6.2** Shake out Filter Bags. Check condition of Cartridge Filters and verify Cleaning Mechanism is working. 


## Width Detection

- ☐ **7.1** Check that the Width Detection System is picking up the timber width correctly. 


- ☐ **7.2** Confirm that the saw stops when an incorrect width is detected on a load cycle. 


## Height Detection

- ☐ **8.1** Check that the Height Detection System is picking up the timber thickness correctly. 

- ☐ **8.2** Confirm that the saw stops when an incorrect thickness is detected on a load cycle. 

## Waste and Extended Waste Conveyors

- ☐ **9.1** Check tracking and tension of Conveyor Belts. 

- ☐ **9.2** Grease as necessary. 



**Note:** do not forget to create a second backup of the saw once service is complete.

## Back in the office

- ☐ **10.1** Upload backups to Google Drive.

- ☐ **10.2** Email report to customer.

- ☐ **10.3** Update last service date in spreadsheet.

Notes and Recommendations

## Customer Feedback

### Wish List

*List below the top three features or improvements you would like to see on your Razer saw.*

### Glitch List

*List below the top three issues you recently experienced with your Razer saw (if any).*

I

II

III

# SPARES KIT FOR RAZER V5 WITH AIT

Site

Service Technician

Date

Part number	Description	Qty required	On hand
EL1022	Banner Cover Masks for Emitters, 0.5 mm	6	<input type="checkbox"/>
EL1023	Banner Laser Emitter with 150 mm Pigtail, Euro Connector	2	<input type="checkbox"/>
EL1024	Banner Receiver with 150 mm Pigtail, Euro Connector	2	<input type="checkbox"/>
EL1027	24 VDC Slim Relay	1	<input type="checkbox"/>
EL1134	IME08-1B5NSZT0S - M8, 1.5 mm, Flush, NPN, NO, Connector, 4000 Hz (Y, Z, B, C-Axis)	1	<input type="checkbox"/>
EL1135	7-08041-6200500 M8F 3PN ST 5M Black	1	<input type="checkbox"/>
EL1136	7-08081-6200500 M8F 3PN RA 5M Black	1	<input type="checkbox"/>
EL1137	IM05-IB5NSVT05 Induct. Proximity Sensor (Blade)	1	<input type="checkbox"/>
EL1138	IM04-0B6NS-ZU1 - M4, Flush, NPN, NO, 2 m Lead (Clutch Sensor)	1	<input type="checkbox"/>
EL1139	WTE15-B52411 Photoelectric Sensor - AIT ONLY	1	<input type="checkbox"/>
EL1165	OEM HP 45 Pen Stall	1	<input type="checkbox"/>
EL1166	OEM HP Pen Driver Board 2.5	1	<input type="checkbox"/>
EL1168 or EP013	BeagleBone Processor Unit (White or Black)	1	<input type="checkbox"/>
EP003 or EP012	MicroSD Card III BeagleBone (White or Black)	1	<input type="checkbox"/>
EL1175	450 mm Printer Ribbon Cable	2	<input type="checkbox"/>
EL1177	250 mm Printer Ribbon Cable	1	<input type="checkbox"/>
EL1179	200 mm Printer Ribbon Cable	1	<input type="checkbox"/>
EL1180	M12 4 Pin 5 mtr PVC Cordset Straight Connector	1	<input type="checkbox"/>
EL1196	Fuse 6.3 A Fast Acting 5x20 mm, 250 V	2	<input type="checkbox"/>
EL1197	Fuse 1 A Fast Acting 5x20 mm, 250 V	2	<input type="checkbox"/>
EL1198	Fuse 0.1 A Fast Acting 5x20 mm, 250 V	2	<input type="checkbox"/>
EL1216	OEM HP Stall Latch	2	<input type="checkbox"/>
EL1255	Printer Ribbon Cable Joining Connector, FPC, 1.0 mm, 14-way	2	<input type="checkbox"/>
EL1307	600 mm Printer Ribbon Cable	1	<input type="checkbox"/>
EL1336	CRS 3 V Lithium Camera Battery	2	<input type="checkbox"/>

Part number	Description	Qty required	On hand
ME1118	Saw Blade: 350 mm x 54T x 3.6 mm Kerf / 2.5 mm Plate x 50 mm Bore with 6 Pinholes (6.5 mm)	1	<input type="checkbox"/>
ME1122	450 Grease Gun 660A Trigger Gun	1	<input type="checkbox"/>
ME1123	Castrol EPL 2 Lithium Grease Cartridge	1	<input type="checkbox"/>
ME1142 or ME1312	Murrplastik Drag Chain (MP18 or MP26) - AIT ONLY	0.5	<input type="checkbox"/>
ME1143 or ME1313	Murrplastik Mt Bracket (MP18 or MP26) (Set) - AIT ONLY	1	<input type="checkbox"/>
ME1213	M6-M6 Long Grease Nipple Adaptor	2	<input type="checkbox"/>
PN1020	Auto Switch Reed 2 Wire 5 m	1	<input type="checkbox"/>