Teknatool International Ltd

65 The Concourse
Henderson Auckland New Zealand
Ph 0064 9 837 6900 Fax 0064 9 837 6901
Email sales@teknatool.com Website
www.teknatool.com

Frequently Asked Questions

How to Change the DVR Control Board

Date Raised: May 2003 Date Amended:	Safe practises should always be employed to ensure the Health and Safety of yourself, employees and customers (if applicable) Refer to product manuals, exploded drawings and our website if further assistance is required, or contact us on service@teknatool.com

Question: How do I change the control board in my DVR ?

Tools required:
- Allen Key 2.5mm (3mm on later version cover screws)
- Allen Key 4mm
- Long nose pliers
- Headstock Extraction Lever and Bush (Available from Teknatool)
- Phillips Screw Driver
- The New Control Board
- The New Interface Board
- Electrical safe glue or hot gun.

NOTE: The control board Version 12 are dedicated to the interface boards Version 12. These version numbers are physically etched on each board. These use a 10 pin ribbon cable to connect the two. Earlier versions used a 26 pin ribbon. If you are unsure please contact Teknatool.

1. Ensure the lathe is unplugged from mains power and has been for at least 2 minutes.

2. The headstock will need to be taken off the lathe bed. Use the headstock extraction lever and bush to help pry the unit upward and lift the headstock onto a wooden bench gently leaning it forward on the nose (see photo below) Try and protect the thread from bumps etc. Instructions for using the lever are supplied in its kit.

NOTE: The headstock weighs approx 40 KG so care and assistance may be required when lifting.

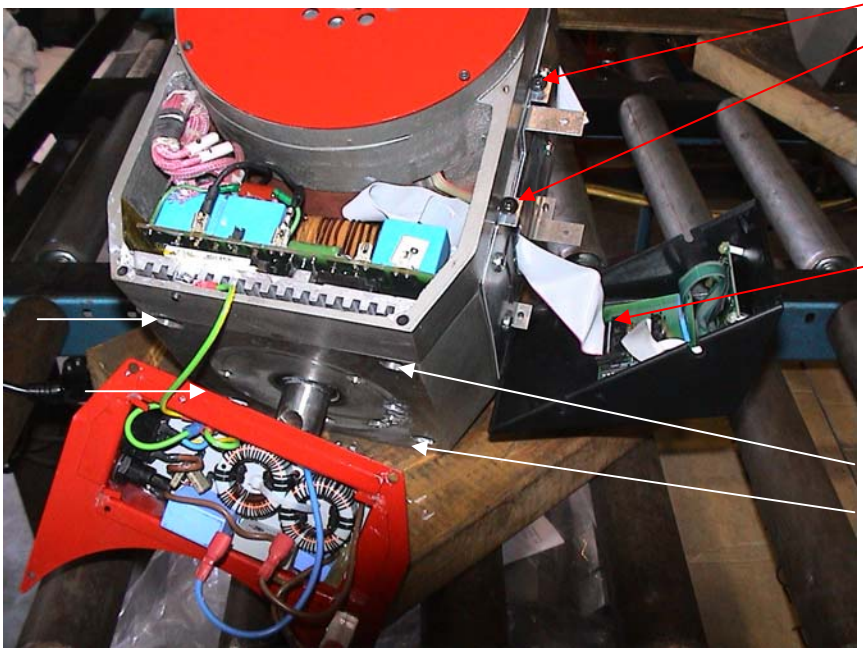
3. Unfasten the 4 Allan Head Cap Screws with a 2.5mm and 4mm Allen keys. Move the lower guard away from the headstock keeping in mind that the earth, phase and neutral wires are still attached.



Swivel Pin

We place the headstocks on 2 inch thick 300mm x 300mm wooden blocks. A 35mm hole is drilled through so if we want to sit the unit upright, the swivel pin does not obstruct. This is a benefit as we can run-test the headstock before lifting it back onto into lathe bed.

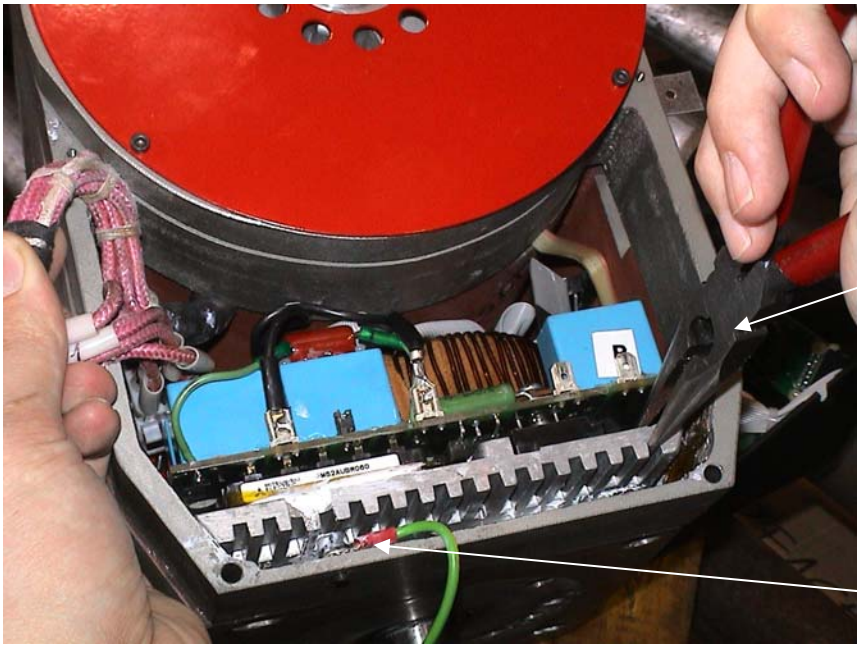
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Unfasten these a few turns to release the control cover. The ribbon will be connected and will have a blob of glue bonding the plug and receptacle together. The glue can be pulled off and the ribbon plug removed. Feed the ribbon plug back through the hole on the side avoiding any scraping on the ribbon.

4 x Allen screws fasten the heat-sink to the headstock.

4. Unfasten the 4 Allen screws (with a 4mm Allen Key) underneath the headstock. Carefully remove the Brown Phase wire and the Blue Neutral wire. Leave the earth connection in tact and position the lower guard underneath leaning on the swivel pin



Pliers to hold onto the heat sink.

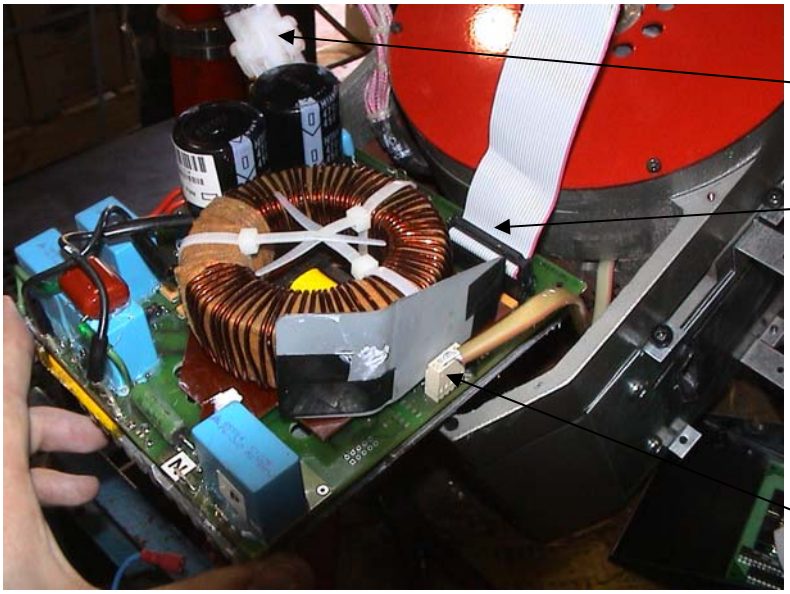
Earth Fastening

5. Carefully locate the stator wiring (6 wires) that connects to the control board. Pull this out giving a clear track for pulling the board out. Be sure to not pull on the wires too much as this may pull the wires from the sockets. There you will see a white male/female plug. This may need to be carefully manoeuvred around the black circular electrolytic capacitors as the control board is pulled out. With some long nose pliers hold onto the aluminium heat sink where no components lie (Be careful not to touch the above control board). Pull the heat sink up about 5mm then pull the heat sink towards you

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while keeping the 6 wires out of the way. You will need to move the heat sink over the earth fastening

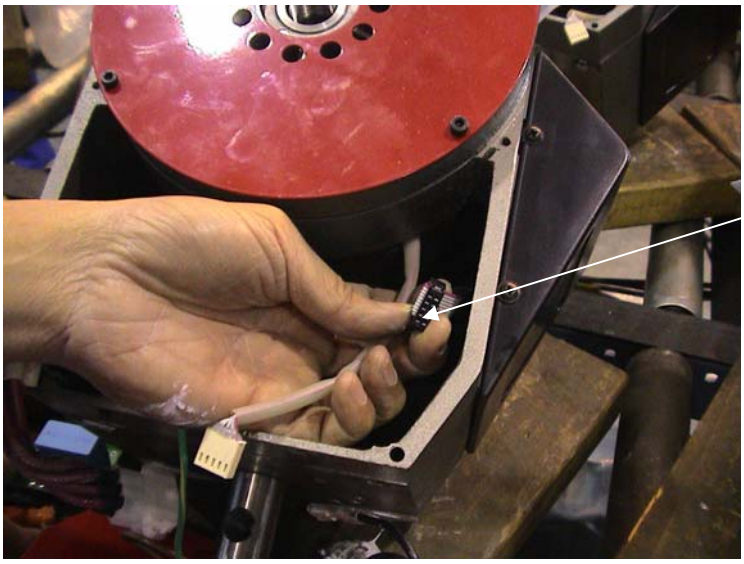
NOTE: You will probably get the white zinc oxide on your fingers, which is not dangerous but can make a mess when it goes everywhere. The purpose of this is to fill and gaps/voids between the underside of the heat sink and the inside base of the headstock to ensure maximum heat dissipation



Disconnect the 6 pin white plugs thus separating the stator wiring from the control board.

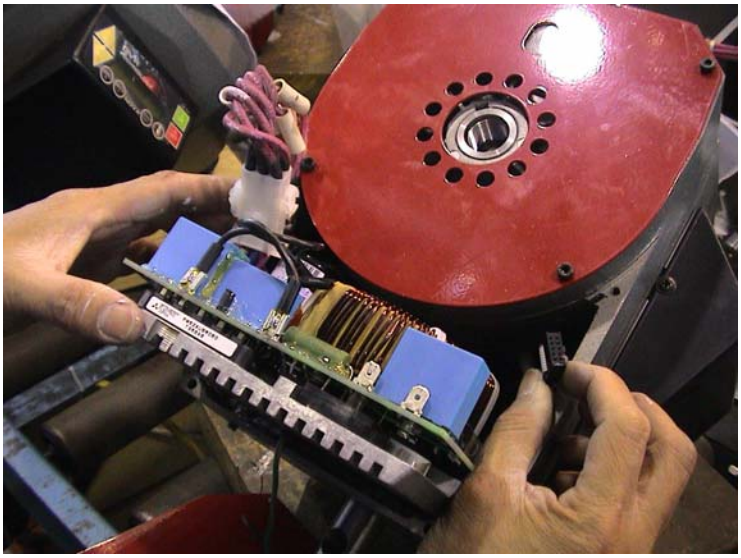
Hold the control board partially out and remove the 26 pin ribbon. Again some glue may need to be removed between the plug and receptor.

Also remove the sensor cable. Some glue may also need to be removed.

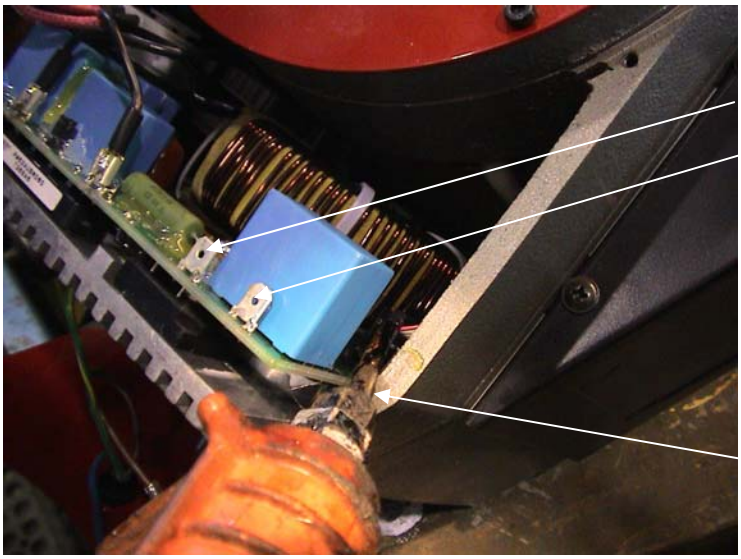


Feed the new ribbon from the new control panel through the hole on the side of the headstock. The ribbon may be 26 pin or 10 pin. Position the control board panel on its bracket and fasten the 4 screws on the sides.

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While holding on to the ribbon, feed the control board ¾ of the way in. Plug the 6 pin stator wiring plug into the corresponding plug on the control board. Attach the sensor lead back into position. While still holding onto the ribbon cable (if its dropped it can be difficult to get again) feed the control board all the way in. Then push the 6 stator wires back in place.



Reattach the Brown Phase wire onto the right terminal and the Blue Neutral wire onto the left terminal. **IMPT:** Ensure that the green earth is still firmly fastened into the inside of the headstock casting.

Attach the sensor cable and the ribbon cable into their corresponding sockets. **NOTE:** The 10 pin ribbon cable has a different socket on the control board from the 26 pin ribbon cable.
Glue the sides of the receptacles for both the ribbon and sensor lead preventing them from easing there way out with vibration etc later on. Be careful not to touch any other components in doing so.

6. Refasten the 4 screws underneath the headstock. Shorter fastenings may have been used at the holes at the end of the headstock.

7. Attach the lower guard and fasten the 4 Allen head cap screws.

QUALITY CHECK It is advisable to run the unit before putting it back on the bed so any loose connections don't involve more lifting on and off the lathe bed. Connect up the power plug and turn the DVR on. Check that all buttons on the keypad are functioning. Run the unit and try starting it from different positions of the spindle. Try numbers: 1,3,5,7,9,11,13 in the index window. The index lock should not be engaged. The numbers are just a guide to ensure each winding is firing.

8. Once you are satisfied with it working, it can be placed back on the bed. Check that the swivel pin hole is in the correct direction (facing back) so the headstock lock pin will engage.

END

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