

July 2016 Meeting - Technical Evening

Our Secretary, John Woods chose to talk about equipment maintenance and picked the two of the more important pieces of equipment namely, the lathe and the bandsaw.

He started with the Lathe and said that there was a lot you learn just by listening and feeling the lathe, you can hear that bearings are not in good condition, you can hear if something is rattling. You can see and feel that the toolrest is not smooth and so on. It is easy to check that all bolts are tight so that the lathe is held steady. John then said that Mass = Stability and that by adding more weight to the lathe stand more stability is achieved. Sand bags, paving slabs, concrete and large metal weights can all be used as ballast.



He then talked about checking the drive belts for damage and wear and showed this on the Club's lathe.

He mentioned that some lathes use a manual variable speed employing a variable pitch pulley. Again the belt needs to be checked for wear and John showed how to do this on a motor that had been loaned for the demo. On the variable pitch pulley, the springs that operate it need checking as well, and can be replaced as necessary.



As part of a regular maintenance schedule the various surfaces should be checked and cleaned as often the metal surfaces may show signs of rust and pitting due to dampness in the workshop. Lathe beds, banjos and toolrests can all be given a clean using Webrax and a light oil. The oil should be wiped off after cleaning. If necessary, a fine abrasive or block sander such as Garryflex can be used on stubborn areas. The idea is to make the movement of the banjo, tailstock, etc. as smooth as possible.

The toolrest surface should also be kept smooth so that the tool will move smoothly along it in use. To achieve this the rest can be treated with a fine file and/or suitable abrasive wrapped around a solid support.



Finally, John demonstrated the Kiss Test to check that the lathe headstock and tailstock are correctly aligned. This involves a drive centre in the headstock and a pointed centre in the tailstock. These should meet point to point and remain so as the drive centre is rotated in the headstock. If they do not align then the position of the headstock must be adjusted.

John then moved on to talk about maintenance of bandsaws after first explaining the differences between two wheel and three wheel bandsaws. Again he stressed that looking, listening and feeling can tell you a lot about how the bandsaw is working and whether something needs attention. He used a small table top, two-wheeled bandsaw for demonstration purposes.

He stressed that it was very good practice to keep the bandsaw clean and free from accumulated dust. Use of a dusting brush regularly was



recommended. The table should be kept clean and corrosion free by using a similar procedure to that described above for the lathe.

John showed how to remove the blade and how to coil the blade (needs practice to get the twist right to get it to curl neatly). Gloves are recommended to be worn until one becomes more skilled. With the blade removed it was now possible to check the tyres on the wheels for any damage and to clean them of any accumulated dust with a stiff brush.

The blade guides, of which there are a number of variations depending on the make of bandsaw, should be checked for alignment and wear if they are solid blocks and replaced if necessary. If they have bearings these should be checked to ensure they are free running. If they are not, they should be replaced as most bearings are sealed and it is not possible to lubricate them.

Re-assemble the bandsaw, install the blade and check that it is tracking true in the middle of the wheels. Adjust if necessary to get it true and then tension the blade. The blade guides should be adjusted to just clear the blade, rotate the wheels by hand to check this is so for the whole length of the blade.

Close the covers and turn on the power and run the bandsaw, listening and watching for anything unusual. If necessary, make appropriate adjustments until everything is running satisfactorily. Finally check whether the table is square to the blade. If not there will be some means of adjustment below the table (most of the calibrated angle guides for the tables are not sufficiently accurate for setting angles, they are for approximation only).

John stressed that before any maintenance on either the lathe or the bandsaw was attempted the electric power to it should be switched off. The plug should be removed to avoid power being accidentally switched on again.

Most of the points covered by John are already carried out by most members but it was good to be reminded of them. Remember, “teaching is repeating”.