McNaughton Center Saver

Assembling Your New Kel Mcnaughton Tool Post

1. Insert the turned down section of the column through the bottom of the bored out holed of the support arm and push it through so that the long base of the arm rest on the shoulder of the column.
2. This pushed through part of the column can now be inserted into bored hole of the 3 pinned gate.
3. Push through so that the bottom of the gate touches the top short flat of the support arm. For this to happen the small brass stop pin must clear the support arm. It can only do this if it is to the for or front arm. In doing so, it ensures the gate will face in the correct direction, i.e. that the elevated face/ level of the gate will always be in a forward position.
4. The gate fits over the column to give a suction fit. This can be further strengthened with a grease seal. To achieve this, pack the small machined groove at the top of the column roughly three quarters of the way around with grease before inserting the column into the gate. Leave ¼ clear for the air to escape when the column is inserted. Rotate gate to spread grease. Prevent rusting with oil or similar product.

A Brief Guide for Bowl Center Saving

1. Securely fasten blank to face plate or chuck.
2. With normal woodturning tools shape the exterior to final form and level face of bowl blank. Stop the lathe. It is recommended that the work be further secured by use of the tail stock. This is particularly necessary with a large or difficult blank. Only use chucks or faceplates that are adequately strong.
3. Replace the tool rest with The New Kel McNaughton tool post. Set close to but with adequate clearance from the bowl face.
4. Locate a handled Kelton Bowl Center saving parting tool in tool post by passing it under the cross brace and between the support gate/pins. With the handle fully raised so that the blade presses upon the cross brace. The post height should be set so that the cutting tip is at the same height or just slightly higher than the bowl center. (small, 26 x 6mm, blades are for the higher slot of the gate and the large, 32 x 7mm, blades are for the deeper slot)
5. Swivel tool around to give chosen approach angle for blank removal.
6. With lathe set at a safe speed, carefully advance blade into the work until the required distance for the blank removal has been achieved. Keep the tool released simply by turning the gate a degree or two by hand. Should it be necessary, small back and forth sideways movements of the handle (fishtailing) serve to widen the cut- so will cutting the tips trailing edge by withdrawing the blade and representing it. Stop the lathe before completion of the cut and tweak the saved center from the blank. “Practice makes perfect.”
7. Shavings build up along the blade during deep cuts can be removed by withdrawing the blade slightly and reinserting or by stopping the lathe and prizing out.
8. Friction reducing substances, e.g. Teflon, when applied to the face of the gate, between the pins and along the blade can serve to increase ease of blade travel.
9. Only use the blades when supported by a NEW KEL MCNAUGHTON tool post.
10. Only use the NEW KEL MCNAUGHTON SYSTEM on adequately strong lathes. Weak tool rest holders should be replaced with ones of sufficient strength.
11. As a safely measure, it is recommended that lathe drive belts be loosened to allow pulley slippage in the event of a “dig-in” or similar.
12. Vibration. The system works best when it is on lathe structures that are free of vibration. A lack of rigidity will markedly reduce its efficiency and effectiveness
13. Generally, for safety and ease of use it is recommended that the handle be held at its end with the right hand. As well as allowing for ease in raising the handle so that the blade is brought and kept in contact with the cross brace. It also has the added safety feature of distancing the turner from the work piece.
14. When learning to use the system, especially the correct aiming of the blade, choose simple less expensive wood blanks.
15. Do not rush. Remove shavings before they build up. This will prevent shaving build up along the blade and overloading. Take particular care towards the end of the cut. Here, there can be a lot of force and friction due to the length of the fibers, the reduced rate of travel and cut (surface feet per minute) and the length of overhang of the blade. Misuse in these conditions can result in a bent blade.

Think SAFETY. Observe all normal safety precautions.

Tool Sharpening

Tool sharpening should seek to retain original proportions and angles. Clearances are important. The extreme wear resistant cutting surface will not lose hardness. The tool cuts by way of the raised bar at the cutting edge. A few upward wipes with a good stone, e.g. an Arkansas diamond will maintain this fine burr. Avoid grinding until re-sharpening is necessary. Sharpen only the front surface of blades.

Relocating Released Centers

Released centers can be relocated on the lathe by turning a foot on them for gripping by chuck or attachment to a faceplate. A turned foot can be made in a number of ways- including having the face end of the bowl.

1. Held in a wide jaw chuck.
2. Held by a vacuum chuck.
3. Glued to a faceplate.
4. Inserted into the remaining bowl and held in position with a tail stock.

Released solid blanks can be held with tail stock and a strong screw chuck.

Always ensure that the work is evenly and securely held so that it runs true to the center and is SAFE.

Some Alternative Suggestions For Your System

Some turners are now using the New Kel McNaughton System to:

1. Release mirror or picture frames and rings for inlays etc.
2. Part off nests of dishes along a blank. The backside of one dish producing the inside of the next.
3. Save a ring from the base of a bowl blank. This can be glued to the rim of a saved bowl to produce a bowl of equal diameter to the main bowl from the blank. Also, a small saved solid center can when inverted act as a base. Thus, turners are able to produce a saved bowl which is as large or larger that the main bowl from the blank.
4. Multi walled and captive vessels. The curved radius blades are being used to produce multi walled or captive vessels. These walls can be carved to produce flower like forms, etc.

Accessories For Your Kel Mcnaughton System

Bowl centers may also be released by having the base of the bowl facing the tail stock and securing the bowl opening end to a faceplate. This approach requires left hand or reverse curve blades.

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