THE TOOL COMPANY

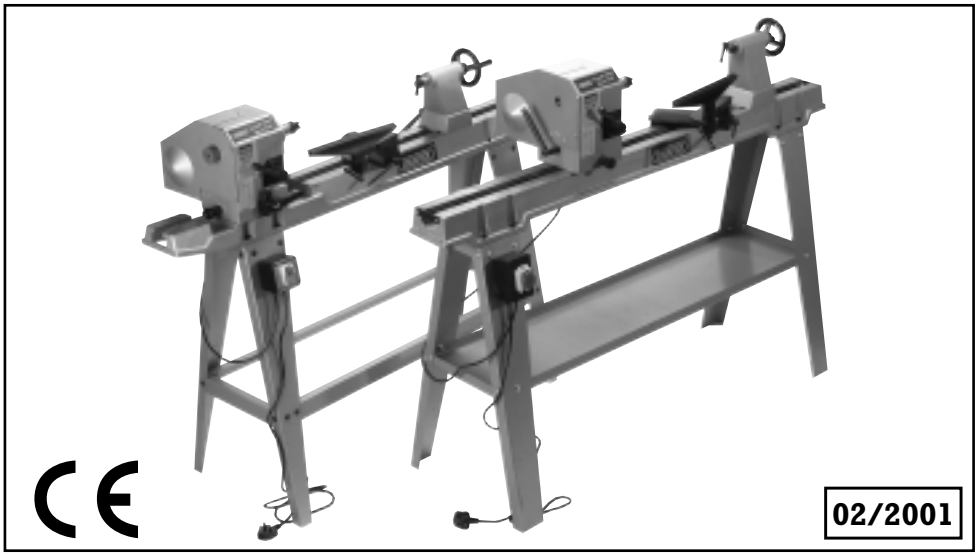
# VARIABLE SPEED WOOD LATHES

■ STOCK No.39042
63938

■ PART No.WTL90
WTL95

## • INSTRUCTIONS •

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS TOOL.



02/2001

## GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the power tool equipment, which should be kept with the machine.

This manual describes the purpose for which this tool has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation of the machine, before performing any kind of adjustment to the machine, and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both machine and operator safety, together with longer life of the tool itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the machine.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tool policy of continuous improvement determines the right to make modifications without prior warning.

# VARIABLE SPEED WOOD LATHES

■ STOCK No.39042 63939 ■ PART No.WTL90 WTL95

## CONTENTS:



## DECLARATION OF CONFORMITY

We
Draper Tools Ltd. Hursley Road, Chandler's Ford, Eastleigh, Hampshire.
SO53 1YF. England.

Declare under our sole responsibility that the product:

**Stock No:-** 39042 & 63938.

**Part No:-** WTL90 & WTL95.

**Description:-** Variable Speed Wood Lathe.

To which this declaration relates is in conformity with the following directive(s)
98/37/EEC & 89/336/EEC.

With reference to: BS EN 61029-1

JOHN DRAPER
Managing Director

13/12/2000

# SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

| | | |
|---|---|---|
| Part No. | WTL90 | WTL95 |
| Stock No. | 39042 | 63938 |
| Woodturning capacity: | | |
| Diameter | 300mm | 360mm |
| Length | 815mm | 1000mm |
| Motor | 350W | 550W |
| Voltage | 230/50Hz | 230/50Hz |
| Speeds | (10) 500, 650, 750, 950, 1150, 1350, 1500, 1750, 2050, 2400rpm | (10) 500, 620, 760, 900, 1050, 1210, 1400, 1590, 1790, 2000rpm |
| Spindle thread | ¾"x16TPI | ¾"x16TPI |
| Spindle taper | MT1 | MT1 |
| Overall length | 1450mm | 1560mm |
| Weight (nett/gross) | 80/85kg | 92/97kg |

**ALWAYS WEAR EAR AND EYE PROTECTION**

# GUARANTEE

Draper machine tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the machine develop any fault, please return the complete tool to your nearest authorized

warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone: (023) 8026 6355.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited

# POWER SUPPLY

## CONNECTING YOUR MACHINE TO THE POWER SUPPLY: (230V)

To eliminate the possibility of an electric shock your machine has been fitted with a BS approved, non rewireable moulded plug and cable which incorporates a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced an ASTA approved BS1362 fuse must be used of the same rating, marked thus ASTA.

The fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is of the same colour as that visible on the pin face of the plug (i.e. red). Fuse covers are available from your Draper Tools stockist.
If the fitted plug is not suitable, it should be cut off and destroyed. *The end of the cable should now be suitably prepared and the correct type of plug fitted. See below.

## *WARNING:

A plug with bare flexible wires exposed is hazardous if engaged in a live power socket outlet.

## WARNING: THIS APPLIANCE MUST BE EARTHED.

Green & Yellow - Earth, Blue - Neutral, Brown - Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green& yellow must be connected to the terminal in the plug which is marked with the letter 'E' or by the earth symbol ⏚ or coloured green or green and yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.

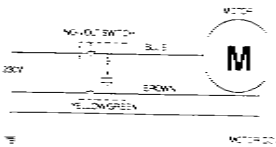
The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

**N.B.** Three phase machines must be connected by a qualified electrician.

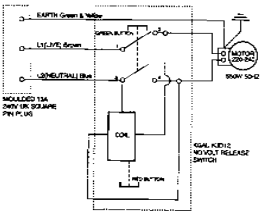
| Ampere rating (on Name plate) | 3 | 6 | 10 | 13 |
|---|---|---|---|---|
| Extension cable length | | | | |
| 7.5M | 0.75 | 0.75 | 1.0 | 1.25 |
| 15M | 0.75 | 0.75 | 1.0 | 1.5 |
| 22.5M | 0.75 | 0.75 | 1.0 | 1.5 |
| 30M | 0.75 | 0.75 | 1.25 | 1.5 |
| 45M | 0.75 | 1.25 | 1.5 | 2.5 |

# WIRING DIAGRAM

*WTL 90*




*WTL 95*



# GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

**WARNING**
Please read the following instructions carefully, failure to do so could lead to serious personal injury.

**IMPORTANT**
Draper Tools Limited recommends that this machine should not be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us in writing and we will advise you.

1. **KNOW YOUR POWER TOOL**
   Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.
2. **KEEP WORK AREA CLEAN**
   Cluttered areas and benches invite accidents. Floors must not be slippery due to oil or sawdust.
3. **AVOID DANGEROUS ENVIRONMENTS**
   Do not use power tools in damp or wet locations, or expose them to rain. Keep work area well lit. Provide adequate space surrounding the work area. Do not use in environments with a potentially explosive atmosphere.
4. **KEEP CHILDREN AWAY**
   All visitors should be kept a safe distance from work area.
5. **STORED TOOLS**
   When not being used, all tools should be stored in a dry, locked cupboard or out of the reach of children.
6. **WEAR PROPER CLOTHING**
   Do not wear loose clothing, neckties or jewellery (rings, wristwatches) to catch in moving parts. NONSLIP footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.
7. **USE SAFETY GOGGLES (Head Protection)**
   Wear CE approved safety goggles at all times. Normal spectacles only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if application is dusty and ear protectors (plugs or muffs) during extended periods of operation.
8. **NOISE LEVELS**
   Some types of machines may have high noise levels when working. In such cases ear protection must be worn.
9. **VIBRATION LEVELS**
   Hand held power tools produce different vibration levels. You should always refer to the specifications and relevant Health and Safety guide.
10. **DUST EXTRACTION**
    If your tool is fitted with a dust extraction fitting, always ensure that it is connected and being used with a dust extractor. Vacuum cleaners can be used if suitable for the material being extracted.
11. **PROTECT YOURSELF FROM ELECTRIC SHOCK**
    When working with power tools, avoid contact with any earthed items (e.g. pipes, radiators, hobs and refrigerators, etc.). If you are using a power tool in extreme conditions (e.g. high humidity or generating metal dust), always use an RCD (residual current device) at the power socket.
12. **STAY ALERT**
    Always watch what you are doing and use common sense. Do not operate a power tool when you are tired or under the influence of alcohol or drugs.
13. **WHEN WORKING OUT OF DOORS**
    Only use extension leads designed for that purpose.
14. **ACCESS TO MAINS SOCKET**
    If a stationary machine is fitted with a moulded plug and cable, the machine should not be positioned so that access to the mains socket is restricted.
15. **DISCONNECT POWER TO THE TOOL**
    When not in use, before servicing and when changing accessories such as cutters, etc.
16. **AVOID ACCIDENTAL STARTING**
    Make sure the switch is in the OFF position before plugging the machine into the power supply.
17. **NEVER LEAVE MACHINE RUNNING UNATTENDED**
    Turn power off. Do not leave machine until it comes to a complete stop.
18. **DO NOT ABUSE THE CORD**
    Never carry the tool by the power cable or pull it from the socket. Keep the power cable away from heat, oil and sharp edges.
19. **NEVER STAND ON TOOL**
    Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted. Do not store materials above or near the tool, so that it is necessary to stand on the tool to reach them.
20. **CHECK DAMAGED PARTS**
    Check for damage to parts, breakage of parts, mountings and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
21. **KEEP GUARDS IN PLACE**
    And in working order.
22. **MAINTAIN TOOLS WITH CARE**
    Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories. All extension cables must be checked at regular intervals and replaced if damaged. Always keep the hand grips on the tool clean, dry and free of oil and grease.
23. **USE RECOMMENDED ACCESSORIES**
    Consult the owners manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.
24. **REMOVE ADJUSTING KEYS AND WRENCHES**
    Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.
25. **SECURE WORK**
    Use clamps or a vice to hold work. This frees both hands to operate the tool.
26. **DO NOT OVERREACH**
    Keep proper footing and balance at all times.
27. **USE RIGHT TOOL**
    Do not force the tool or attachment to do a job for which it was not designed.
28. **DO NOT FORCE TOOL**
    It will do the job better and safer at the rate for which it was designed.
29. **DIRECTION OF FEED**
    Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
30. **WHEN DRILLING OR SCREWING INTO WALLS**
    Always make sure there is no danger of hitting any hidden power cables, water or gas pipes in the wall.

**IMPORTANT NOTE**
**Residual Risk.** Although the safety instructions and operating manuals for our tools contain extensive instructions on safe working with power tools, every power tool involves a certain residual risk which can not be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution !

# ADDITIONAL SAFETY RULES FOR WOOD LATHES

**FOR YOUR OWN SAFETY:**

**Read and understand the instruction manual before operation.**

1. Always wear eye protection which complies to a recognized standard.
2. Wear a mask or respirator when dust is generated.
3. Keep hands clear of moving parts.
4. Only use Draper approved accessories and spares.
5. Keep turning chisels sharp.
6. Keep pulley cover guards in place when working.
7. Never reach behind or beneath the workpiece.
8. Unplug from power supply before adjusting or servicing.
9. To avoid electric shock do not use in damp conditions or expose to rain.

# GETTING TO KNOW YOUR WOOD LATHE

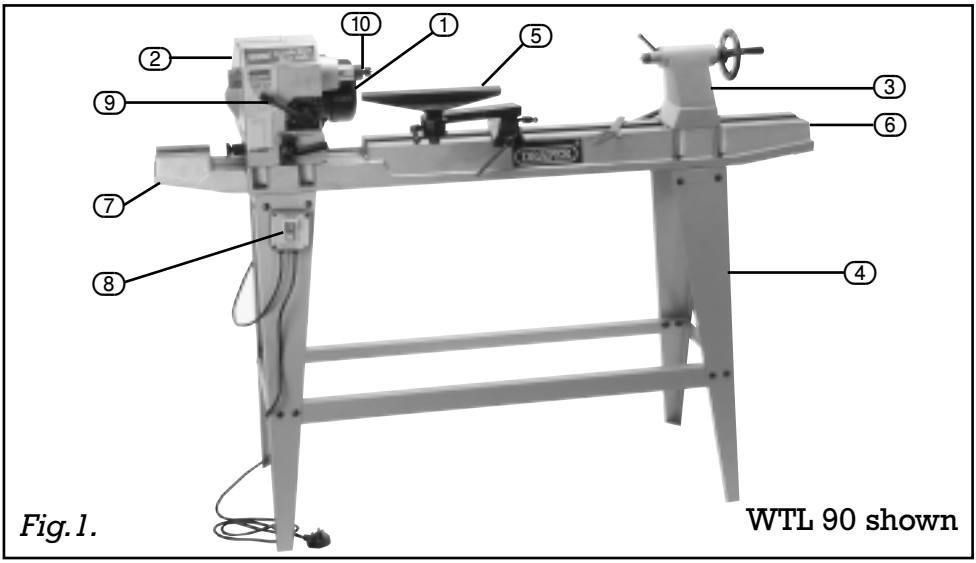


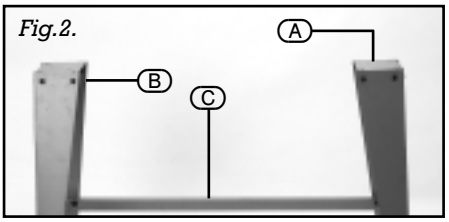

*Fig.1.* WTL 90 shown

*Fig.1.*

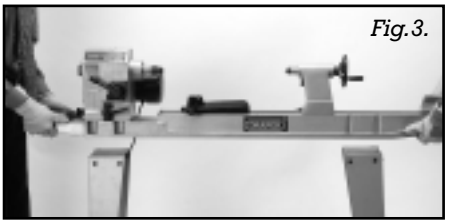
1. Motor
2. Head Stock
3. Tail Stock
4. Stand
5. Tool Rest
6. Bed
7. Bed extension (WTL90)
8. No-Volt On/Off Switch
9. Speed Change Lever
10. Drive Spindle

# ASSEMBLY

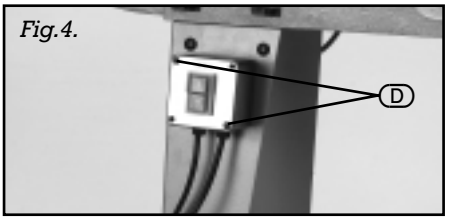
**Wood Lathe Stand**
Using the nuts and bolts supplied, fix together both the top plates (A) with the four legs (B). Bolt on the shelf (WTL95) or four supports (WTL90) (C) and tighten all the fixings. *Fig.2.*
**Note: The Wood Lathe stand should always be fastened down securely to the floor using four suitable fixings (not supplied).**



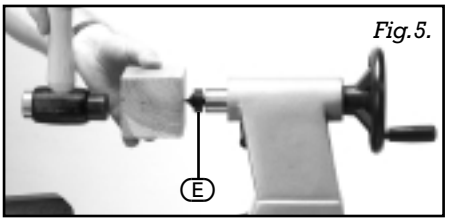

**Mounting the Wood Lathe to the Stand**
Lift the lathe onto the stands top plates (seek assistance as this is very heavy). Align the holes in the bed with the stand and bolt in place using the 8 fixings supplied. *Fig.3.*



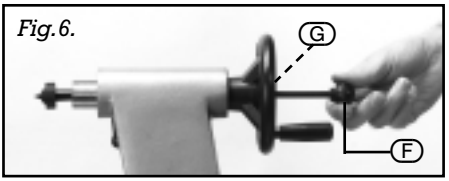

**No-Volt On/Off Switch**
The no-volt switch is recommended to be fixed into place on the leg of the stand using the two bolts (D) which are longer, coming through the rear of the switch box. *Fig.4*.
**Note: Make sure the cable from the switch to the motor will allow the rotation of the headstock. Ensure the lead never passes between bed and workpiece.**



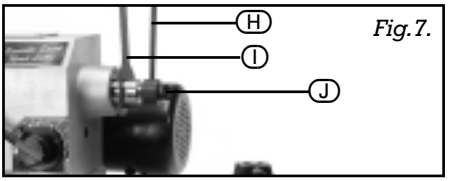

**Drive Spur and Live Centre**
Locate the drive spur (with prongs) and the live centre (with bearing) from the packaging. Insert the live centre (E) into the barrel of the tail stock and with a piece of scrap timber and a hammer, tap the spur in until secure. Carry out the same procedure for the drive spur into the headstock spindle. *Fig.5*.




**Removal**
When the need arises to remove the spurs, use the ejection pin (F) to push out the live centre from the tailstock by inserting it down the centre of the tailstock handwheel hole (G). *Fig.6*.




The drive spur is removed using the ejection pin (H) and the spindle holding wrench (I). Using the wrench to hold the spindle on the flats, insert the ejection pin into the hole in the side of the thread protection cap (J). Undo the cap which will force the spur out of the spindle. *Fig.7*.



# ASSEMBLY

Fitting Bed Extension (WTL90 only)

Using the fixings supplied, bolt the extension (K) to the headstock end of the bed.

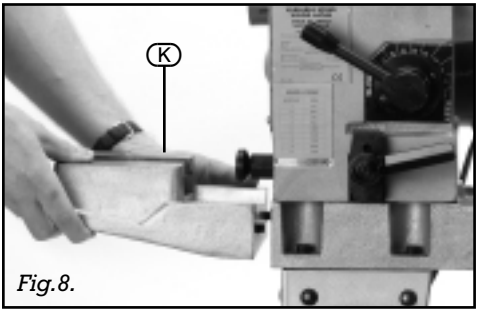


*Fig.8.*

# OPERATION & USE

**NO-VOLT ON/OFF SWITCH**

Note: The WTL95 is fitted with an additional emergency shut off cover.
In the event of an emergency, closing the cover firmly will cause the stop button to be triggered, thus stopping the machine. To re-open the cover, the red button requires sliding which in turn will release the cover and stop button.

In the event of a power failure the machine will have to be manually restarted.
To switch the machine on, lift up the sprung cover and push the button marked (I).
To switch the machine off, lift up the sprung cover and push the button marked (0).
To switch the machine off in an emergency strike the cover (L) firmly which will trigger the (0) button. *Fig.9.*

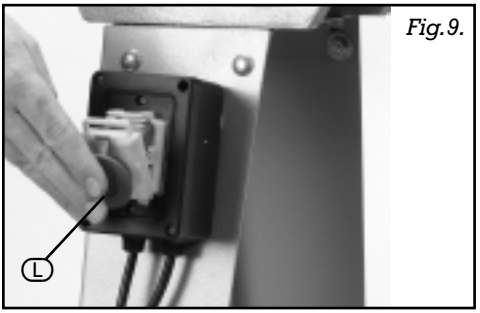


*Fig.9.*

**CHANGING SPEED**

The machine has to be running for the speed change to move.
With the machine running, pull the lever (M) away from the headstock then move it around to the desired speed. The handle indicates the speed. For example, Fig.10 is set on speed 1. The Lathe should be in speed 1 (the slowest) before turning off to aid ease of start up. *Fig.10.*

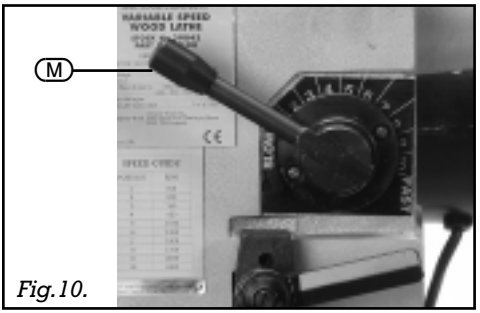


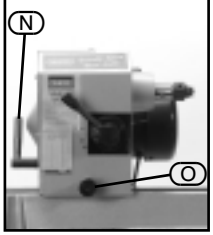
*Fig.10.*

# OPERATION & USE

**ROTATING THE HEADSTOCK**
The headstock can be rotated 45, 90, 135 and 180°. Loosen handle (N) and pull the release pin (O). When pin (O) is pulled out, the head can be rotated. Once the head is rotated to the desired angle, release the pin and it will lock into place. Once setup, retighten handle (N). *Fig.11A & B.*
Note: This operation may be necessary for turning bowls, etc.

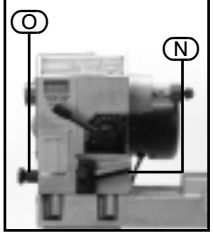
*WTL 95*

*Fig.11A.*




*WTL90*

*Fig.11B.*

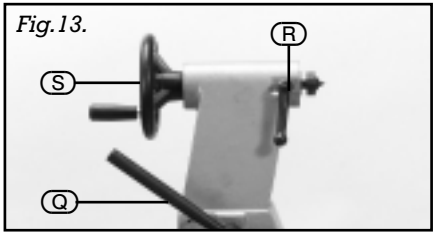



**SLIDING THE HEADSTOCK (WTL95 only)**
By loosening handle (P) you can slide the headstock along the bed. Once set in position, lock in place using handle (P). *Fig.12.*


*Fig.12.*

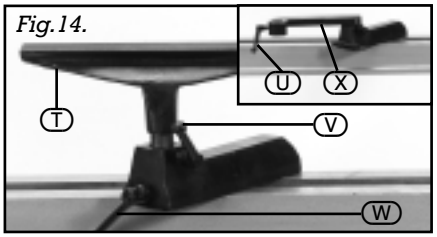
**MOVING THE TAILSTOCK**
To slide the tailstock along the bed, loosen lever (Q). Once set in position, lock in place by tightening lever (Q). To move live spur in and out with the barrel, loosen locking lever (R) and rotate wheel (S). Once the position is set, lock in place using lever (R). *Fig.13.*

*Fig.13.*




**ADJUSTING THE TOOL REST**
To move the tool rest along the bed, slide it back and forth or rotate loosen handle (W). To angle or change the height, of the tool rest (T), loosen handle (V). This set up with the tool rest will provide for most of your needs. However, should it be required for bowl turning etc, there is an extension (X) provided. This fits by loosening handle (V). Remove the tool rest and replace with the extension. Loosen handle (U) on the extension and slide in tool rest. When fully adjusted, make sure all of the locking handles are secured. *Fig.14.*

*Fig.14.*




**CHANGING THE BELT**
Make sure the lathe is in speed position 1. Switch off power supply and remove the plug. Remove the pulley cover. Insert a disc (the size of a two pence piece) between the two halves of the motor pulley and between the belt runs (*Fig.15*). Slowly rotate the drive spindle back and forth by hand while turning the speed lever slowly to a higher speed. When maximum speed has been reached on the lever, the belt can be removed easily. Fit a new belt over both pulleys. Slowly rotate the drive spindle back and forth by hand while turning the speed lever slowly to the slowest speed. When speed 1 is reached, the disc may be removed and pulley cover replaced.

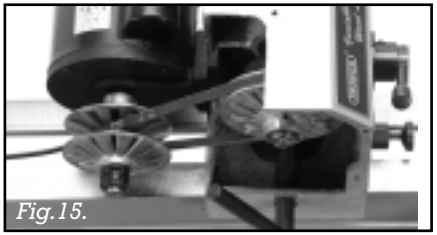


*Fig.15.*

# BASIC WOODTURNING

The following pages of this manual explain and illustrate the correct use of the turning tools, the tool rest and other information to help you.

If you are new to woodturning, we suggest that you practice using various woodturning chisels following the operations listed below.

**SPINDLE TURNING:**

Select a piece of wood 50x50x300mm (approx). Draw diagonal lines on each end of the piece of wood to locate the centres. *Fig.16.*

In both ends of the piece of wood, drill a 1.5mm hole, 7mm deep into the centre. Now secure the workpiece in a soft jaw vice. Put the point of the drive spur into the drilled hole and tap the spur in securely (*Fig.17*). Now remove the spur and check the prongs have left an imprint.

Ensure that both the drive spur and live centre are clean and insert them into the lathe (see Page 6). Place the workpiece between the centres and close up the tailstock (*Fig.18*) making sure the marked end goes the headstock end.

Select the required tool rest position approx 3mm away from the corners of the wood and 3mm above the centre line (*Fig.19*) and lock the tool rest into position. Now select the appropriate speed (see Page 7), rotate the workpiece to check the corners do not foul the tool rest.

*Fig.16.*

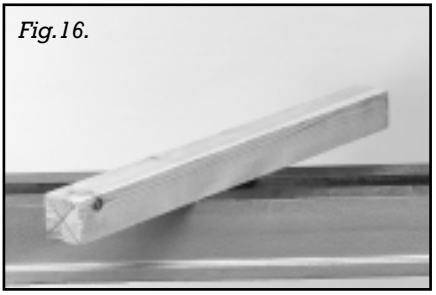


*Fig.17.*

*Fig.18.*

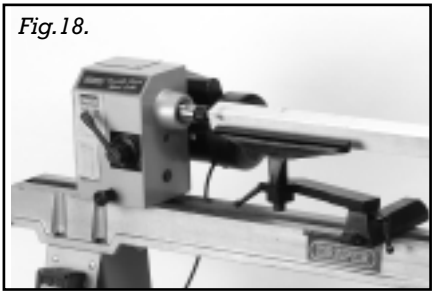
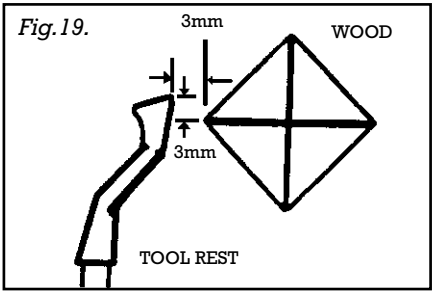


*Fig.19.*



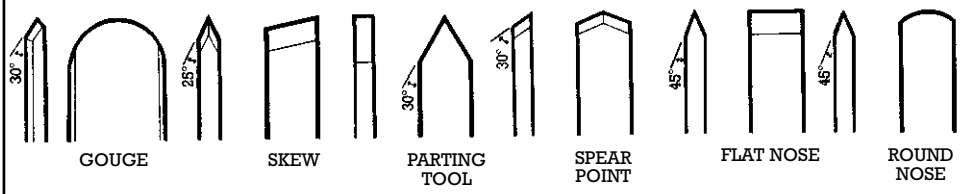
DRAPER
THE TOOL COMPANY

# BASIC WOODTURNING

**USING WOODWORKING CHISELS:**

Professional woodturning chisels have handles approximately 250mm long. This provides the operator with good grip and leverage. A sharp chisel will be much easier to work with and will give the job a cleaner finish. Fig. 20 shows the six most commonly used types of turning chisel.

*Fig.20.*




**THE THEORY OF TURNING:**

There are two types of turning chisel. These are:

1. Those intended primarily for cutting,
2. Those used only for scraping.

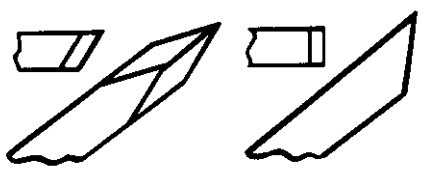
The cutting chisels are the gouge, skew and parting type. These are sharpened to a razor edge by honing on both sides.

The scraping chisels are the flat nose, round nose and spear point. These are not honed on the flat sides - the wire edges produced by scraping are left on to aid in the scraping process. *Fig.21*. Shows the two types of chisel.

**CUTTING AND SCRAPING:**

To make a cut, the chisel should be held so that the sharp edge actually digs into the revolving workpiece, shavings should now peel off. To scrape, the chisel should be held at a right angle to the surface of the workpiece, fine pieces of wood will be produced when scraping instead of shavings. See *Fig.22*.

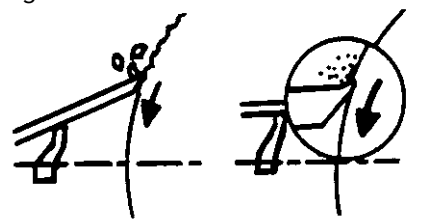
*Fig.21.*



Many operations require the cutting chisel to be used for scraping but scraping chisels are very rarely used for cutting. Scraping will blunt/dull a chisel much faster especially when using razor sharp cutting chisels.

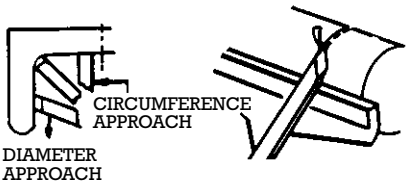
Cutting is much faster than scraping and produces a much smoother finish. Cutting is more difficult than scraping, but scraping is more precise and easier to control.

*Fig.22.*



## KNOWING WHEN TO CUT AND WHEN TO SCRAPE

*Fig.23.*




There are two different approaches to the work when turning. The first is towards a circumference of the workpiece (eg. When turning down the outer surface of a cylinder or the inner wall of a hollow round box). Using this method, the surface being turned travels under the edge of the chisel like an endless belt. The second approach is towards the diameter of the workpiece (as when turning the face when faceplate turning, or the side of a large shoulder when spindle turning) using this method the surface being turned rotates like a disc under the chisel edge. Some jobs will require both methods being used. See *Fig. 23*.

Either a cutting or scraping action may be used when the method used is towards the circumference – the shaving will come off like the peel from a potato.

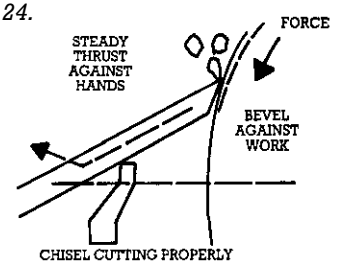
Only scraping can be used when the method used is towards the diameter. The reason for this is obvious when you consider that faceplate turning nearly always requires the removal of wood across the grain. Wood does not peel easily when turning across the grain and any attempt made to use cutting methods will probably result in damage to the workpiece and the chisel being thrown by the workpiece.

It therefore follows that a cutting action is used for general spindle turning operations, while the majority of faceplate turning is carried out by the scraping method. when both methods are to be used, you will have to judge by the feel of the workpiece when to stop cutting and start scraping. NEVER try to cut when it becomes difficult to hold the chisel against the wood grain.

## POSITIONING THE TOOL REST FOR CIRCUMFERENCE TURNING

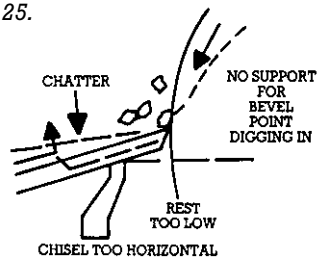
When turning, the object is to pierce the outer surface of the wood to a desired depth, then to hold the chisel steady with the bevel edge parallel to the work circumference, so that the chisel will peel off a shaving at this desired depth. The only sure method of holding the chisel steady is to rest the bevel against the workpiece, the tool rest will act as a fulcrum to support the chisel against the downward force of the revolving workpiece. *Fig.24*.

*Fig.24.*



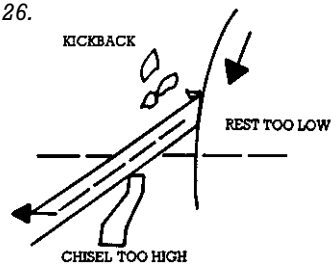

If the tool rest is positioned too low, so that the chisel bevel is held out from the workpiece, (*Fig.25*) the cutting edge of the chisel will continue to dig deeper into the workpiece until the "bite" becomes so deep that you have difficulty holding the chisel, then the chisel will begin to bounce or chatter against the workpiece.

*Fig.25.*



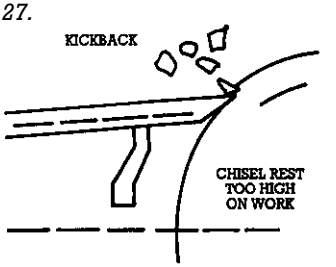

If the tool rest is positioned too low, the chisel will be held extremely high to position the bevel of the chisel against the workpiece (*Fig.26*) then the tool rest will lose its value as a fulcrum and the downward force of the revolving workpiece will kick the chisel back and possibly out of your hands.

*Fig.26.*




If the tool rest is positioned too high and the chisel is correctly positioned for cutting it will strike near the top of the workpiece where the direction of the force exerted by the workpiece is almost horizontal and will again result in kickback. *Fig.27*.

*Fig.27.*



If the tool rest is positioned too far away from the workpiece as shown in *Fig.28*, the chisel, when correctly held will again be too high on the workpiece. You will also find that you have less leverage on your side of the tool rest and it will be very difficult to hold the chisel.

With a large diameter workpiece, the tool rest can be above the workpiece centreline and further out from the surface of the workpiece than normal. *Fig.29*.

With a small diameter workpiece, the tool rest should be closer to the surface workpiece than normal. As the workpiece gets smaller the rest should be repositioned. *Fig.30*.

*Fig.28.*

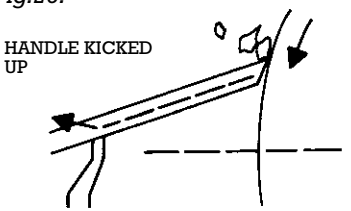
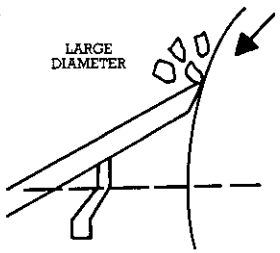



*Fig.29.*




**POSITIONING THE TOOL REST FOR CIRCUMFERENCE SCRAPING**

When scraping, the position of the tool is not as critical as it is for cutting operations. The chisel is normally held horizontally, although it can be held at an angle to reach difficult places. The wire edge of the chisel does the scraping. *Fig.33* and *31* show the result of a chisel being too low or too high. *Fig.32* shows the chisel positioned correctly on the tool rest.

*Fig.30.*

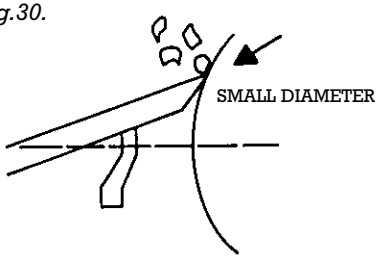



*Fig.31.*

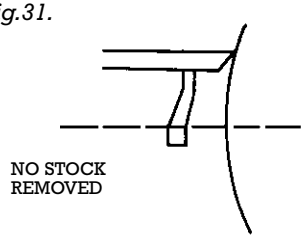



*Fig.32.*

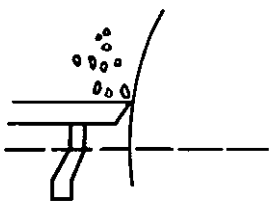
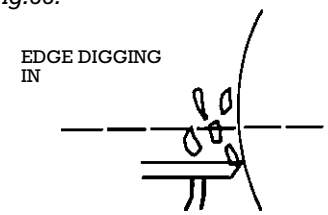


*Fig.33.*



# BASIC WOODTURNING

**POSITIONING CHISEL AND TOOL REST FOR DIAMETER SCRAPING**

When diameter scraping, the area to the right of the centre is moving upward (*Fig.34*). If the chisel is placed in this area it will simply be carried up and off the tool rest, possibly out of your hands. So all diameter approach operations MUST be done at the left of the centre.

Three different chisel contact points are shown (*Fig.35*). Note that when the chisel is positioned above or below the workpiece centre, the work surface sweeps past the chisel edge at an angle and will tend to carry the chisel in one direction along the tool rest.

Only when the chisel contacts the workpiece centre line does the workpiece pass squarely under the edge of the chisel. This then is the position in which it is easiest to hold the chisel steady. To obtain the position place the rest approximately 3mm below the centre.

USING THE GOUGE CHISEL

Three gouges 6, 12, 18mm sizes are usually sufficient for home workshop turning, but other sizes are available (refer to Draper Catalogue). A gouge chisel is normally used for rough circumference turning or turning raw stock down to a cylinder of workable size. It is best used for rapid removal of the workpiece, but will not produce such a smooth finish, but with practice it can be used for cutting coves, for shaping long cuts and is also useful for scraping.

When used for cutting, the gouge is always held with the convex side down and should be rolled approximately 30° to 45° in the direction in which it is being advanced along the rest, the cutting edge would be a little in advance of the handle, *Figs. 36* & *37*.

*Fig.34.*

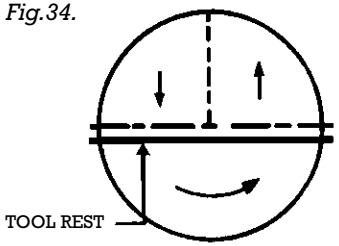



*Fig.35.*

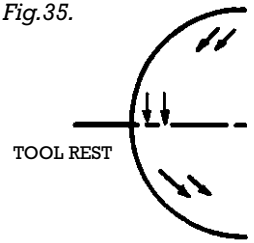



*Fig.36.*

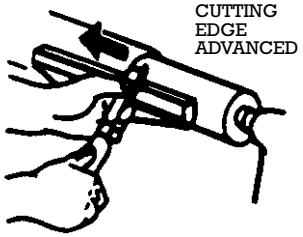
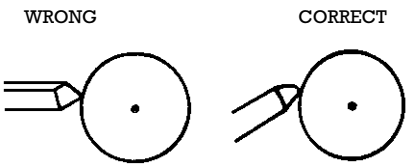



*Fig.37.*



# BASIC WOODTURNING

## USING A SKEW CHISEL

Two skew chisels 12, 25mm are all that are required for general use although other sizes are available (refer to Draper Catalogue). This chisel is used mostly for making finished cuts, to cut vees and beads and square shoulders. When correctly used, it will produce the best finish that can be obtained with a chisel. It should not be used for scraping as this will quickly dull it.

For finish cutting, the skew should be held with the cutting edge considerably in advance of the handle and should be bevel against the work. Good practice is to place the skew well over the workpiece and pull it back until the edge begins to cut; then swing the handle into position to advance the cut. Both the toe and the heel of the skew can be used for making light cuts; but do not penetrate the wood too deeply without cutting clearances as you may burn the tip of the tool. Refer to *Figs.38, 39, 40, 41 & 42*.

*Fig.38.*

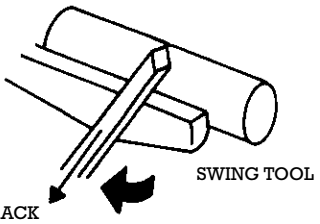



*Fig.39.*

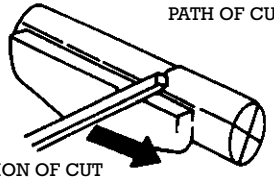



*Fig.40.*

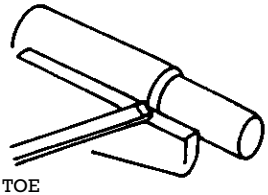



*Fig.41.*

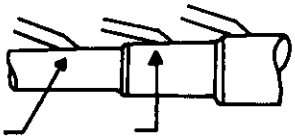
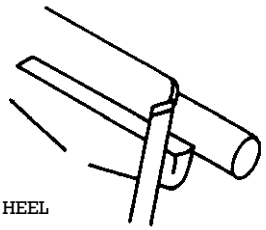


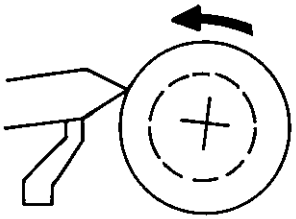

*Fig.42.*



## USING A PARTING CHISEL

A parting chisel has one primary purpose - to cut straight into the workpiece as deep as desired, or all the way through the workpiece to make a cut off. This is a very narrow chisel, approximately 3mm wide and is shaped to cut its own clearance, so the cutting edge will not burn. But when used as a scraper, it should be backed off at regular intervals to prevent overheating. See *Fig.43, 44*.

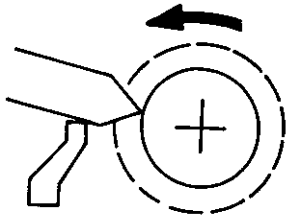
*Fig.43.*



USING SCRAPING CHISELS

Finally, three more types of chisel should complete the list of chisels for the average craftsman, these are 12mm spear point, 12mm round nose and 26mm flat nose. Each of these chisels may be purchased in various sizes, (refer to the Draper Catalogue) for special jobs. All of these are very useful for diameter scraping (see Figs.45, 46, 47) operations and for circumference scraping when cutting methods cannot be employed.

*Fig.44.*



The spear point chisel is used for fine scraping and delicate operations such as the forming of beads, parallel grooves and shallow vees. Edges and bowl contours can be rounded with the round nose chisel. Any flat surface can be scraped with the flat nose chisel.

*Fig.45.*

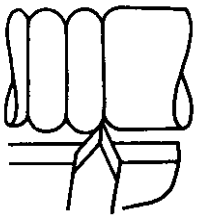


*Fig.46.*

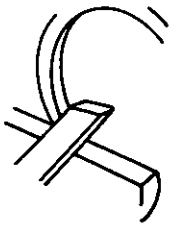
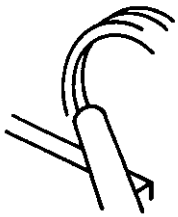


*Fig.47.*



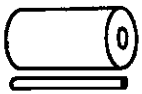
# OPTIONAL ACCESSORIES

**Wood lathe Accessories**

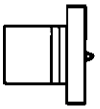
The following accessories are available from your local Draper Stockist.

Tailstock Chuck
and Arbour Set
Part No.AWL1
Stock No.29422

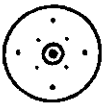
Cup Turning
Chuck
Part No.AWL2
Stock No.29423



Screw Chuck
Part No.AWL3
Stock No.29424



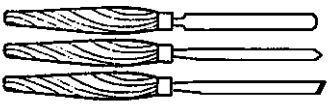
Right Hand
Thread Face Plate
Part No.AWL8
Stock No.29429



Combination
Chuck
Part No.AWL40
Stock No.37168

Face Shield
Part No.FS8
Stock No.33831

HSS Wood
Turning Chisels
Part No.AWL44
Stock No.58697



For a comprehensive range of wood lathe accessories refer to the Draper Catalogue

# TROUBLESHOOTING

**NOTE: Repairs should only be carried out by a qualified person.**

| TROUBLE | PROBABLE CAUSE | REMEDY |
|---|---|---|
| Motor will not run | 1. Fuse blown<br>2. Defective on/off switch Defective switch cord<br>3. Burned out motor | 1. Remove plug from power supply and replace fuse<br>2. Replace defective parts before using lathe again<br>3. Any attempt to repair this motor may cause a Hazard unless the repair is done by a qualified service technician |
| Headstock loose on bed | 1. Locking handle not tight | 1. Tighten locking handle |
| Wood burns at tailstock end | 1. Live centre too tight or not lubricated | 1. Back of tailstock barrel and lubricate live centre. See Basic Lathe Operation "Spindle Turning" |

**DRAPER HELPLINE (023) 8049 4344**


**DRAPER TOOLS LIMITED,**
Hursley Road, Chandler's Ford, Eastleigh, Hants. SO53 1YF. U.K.
Helpline: (023) 8049 4344.
Sales Desk: (023) 8049 4333.
General Enquiries: (023) 8026 6355.
Fax: (023) 8026 0784.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