
4. INSTALLATION

INTRODUCTION

This section describes the correct procedures for installing your STARTURN PC. Lathe.

These procedures should be followed precisely to ensure your STARTURN PC. is not damaged in any way during the installation period.

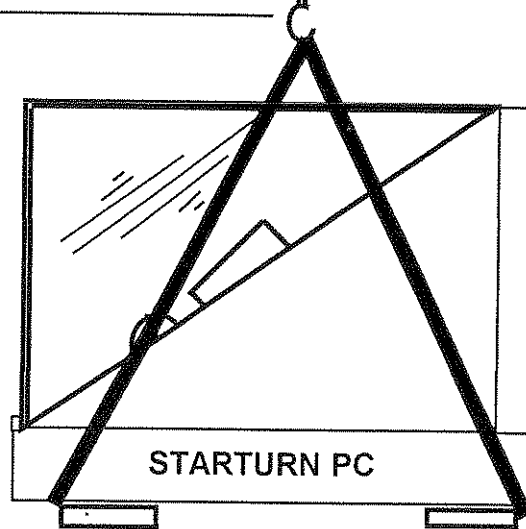
During the installation period the protective coats and coverings applied prior to despatch should NOT be removed.

All installation work should be carried out by qualified personnel.

STARTURN PC. is a Bench Top Lathe, hence it is important to ensure that the bench to be used is level and sturdy and of a suitable working height.

If in doubt contact DENFORD's Service Department for further details.

LIFTING A STARTURN PC



WEIGHT 69 KILOS

STARTURN PC is lifted using two equal length slings.

The slings are passed beneath the cabinet base at the front and rear of the machine-see diagram.

LEVELING PROCEDURE

STARTURN 5's machine bed is levelled to the cabinet during manufacture, hence it is only necessary to level the cabinet during installation.

The STARTURN PC should be placed on a suitable work bench that is of sufficient strength to withstand the weight of the machine, and at a comfortable working height.

Denford MachineTools recommend the use of anti-vibration mats to protect the work bench and reduce vibration. These mats are available as an optional extra.

MACHINE PREPARATION

NB. THE ELECTRICAL CONTROL BOX IS INSPECTED THEN SEALED WITH A YELLOW SEAL, IF THIS SEAL IS BROKEN ON DELIVERY INFORM THE SUPPLIERS IMMEDIATELY. THE SEAL SHOULD ONLY BE BROKEN FOR THE INITIAL MAINS POWER CONNECTION.

Once the machine has been sited and connected electrically, the protective coatings must be removed to prepare the machine for running.

The protective coating applied to the slideways and bright surfaces can be removed using a kerosene based solvent. The coating must be removed from the slideways before any attempt is made to move them, or operate the machine.

Once the protective coat is removed, all untreated surfaces should be coated with a light smear of machine oil (i.e. BP. : CS 68).

The protective plastic sheet on the windows should be removed and the glass and perspex should then be cleaned with an anti-static cleaner.

ELECTRICAL CONNECTION

Cable Required:- 2 Core & Earth, 2.5mm per phase.

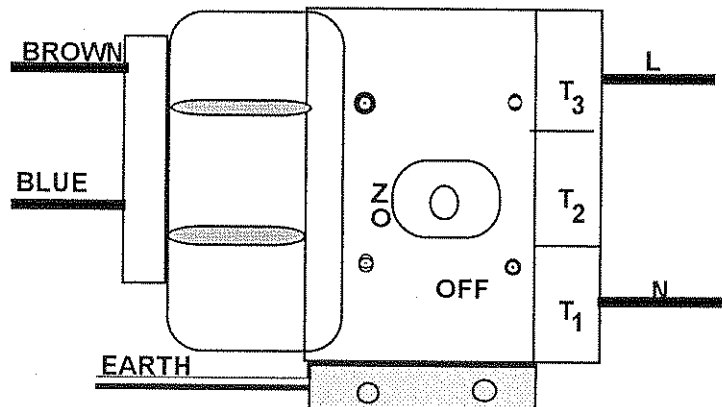
For U.K Market:- Single phase 240V Current Taken 10 Amps.

For Export Market:- Contact Denford Service Department.

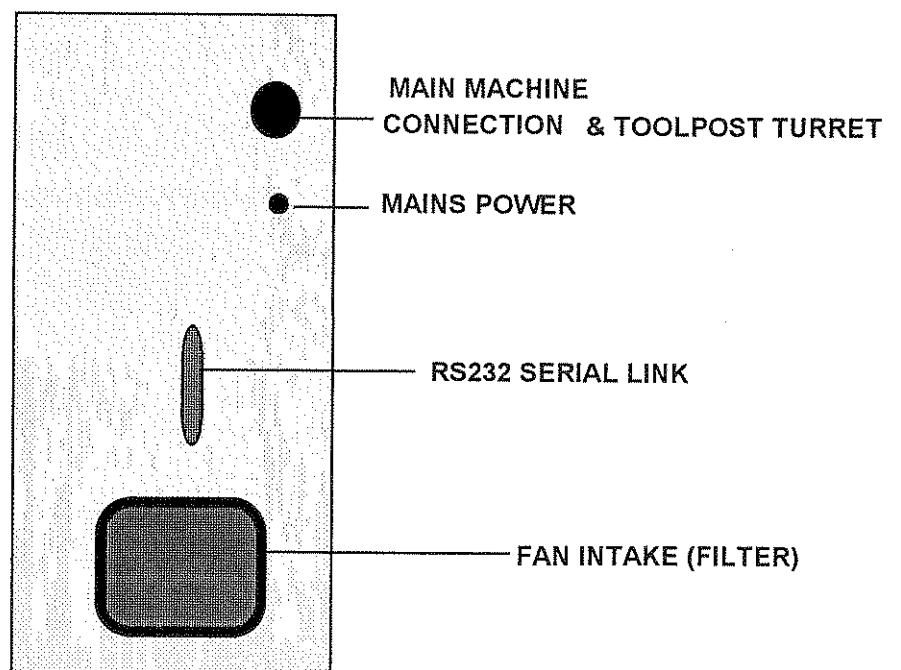
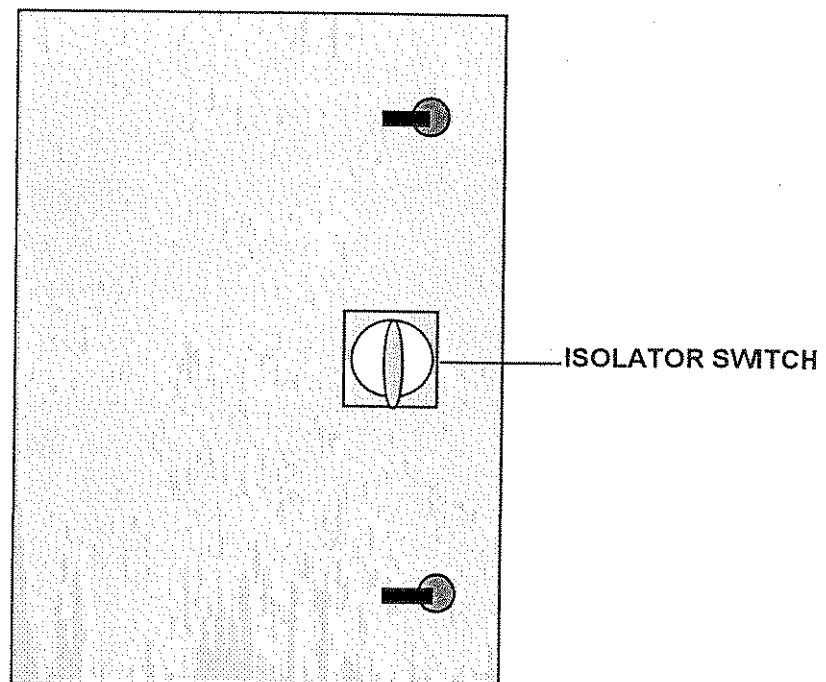
Tools Required:- Small Phillips Head Screwdriver and Crimping Pliers.

CONNECTION PROCEDURE:-

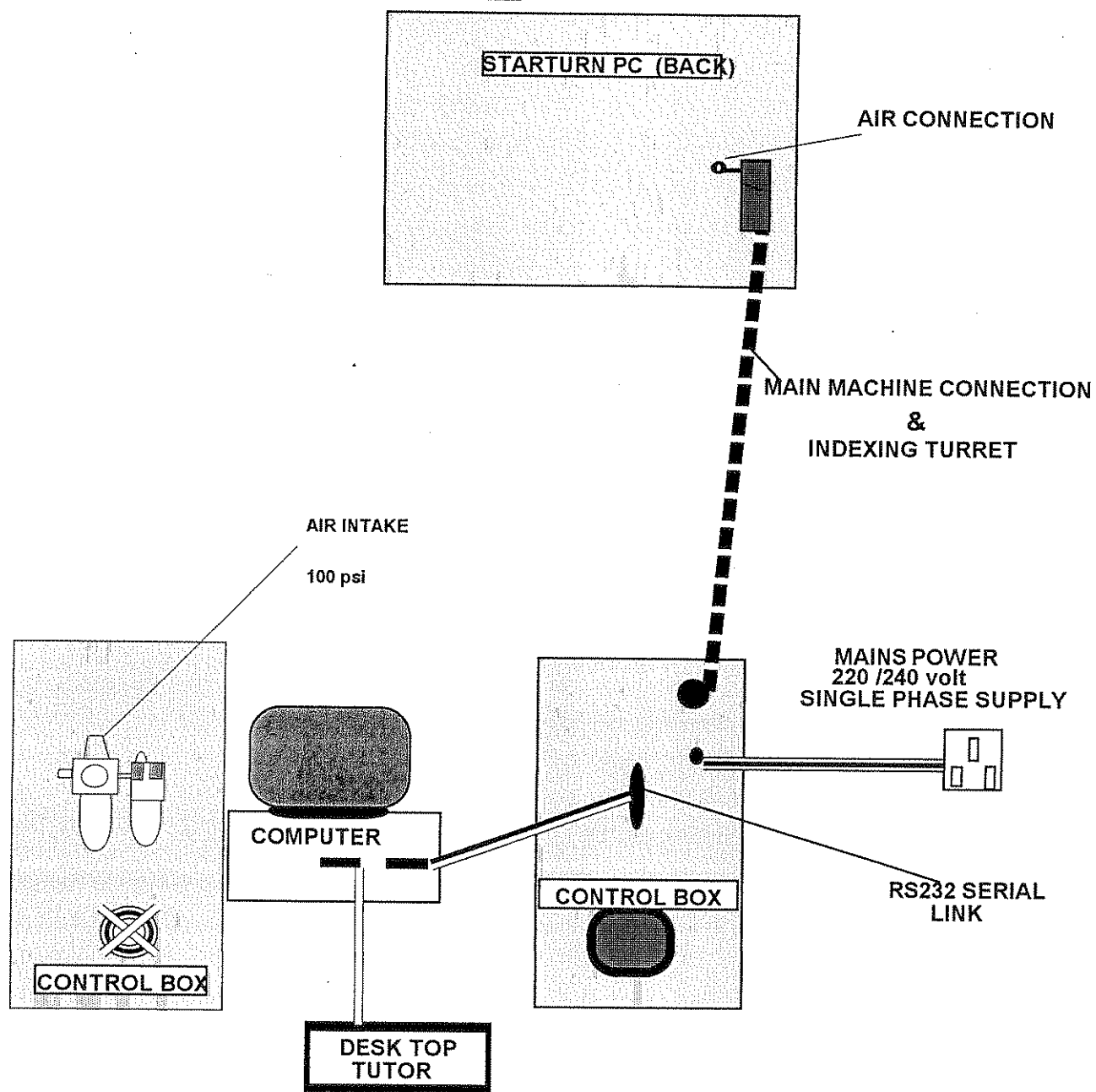
- Unlock and open electrical control box.
- Isolator is found on the right hand side near the top.
- The machine is usually delivered with the mains cable connected with 3 metres of cable to which a 13 amp plug should be fitted.
- The connection to the isolator should be as in diagram below.



ELECTRICAL CONTROL BOX



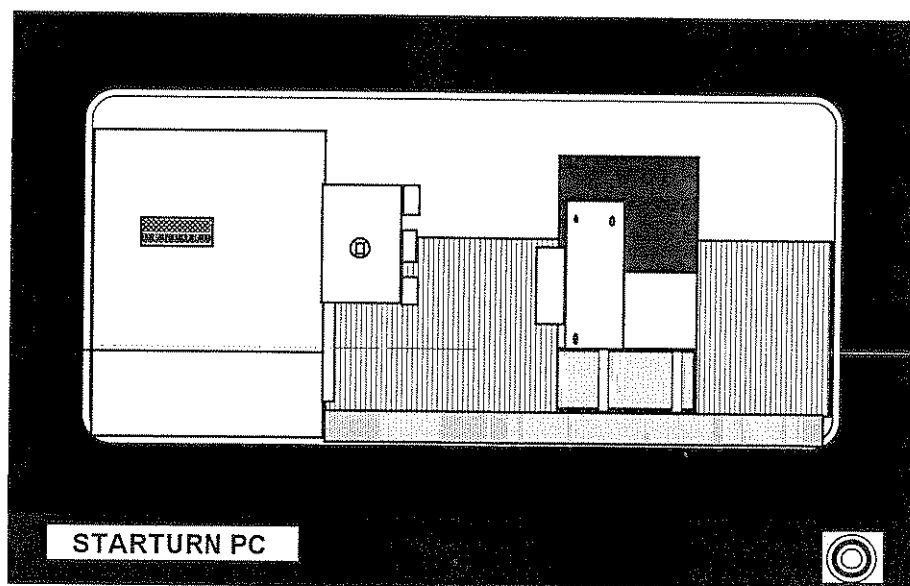
MACHINE CONNECTIONS



NOTE :-

It is essential to the smooth running of the system that the mains power supply be stable and constant.

EMERGENCY STOP

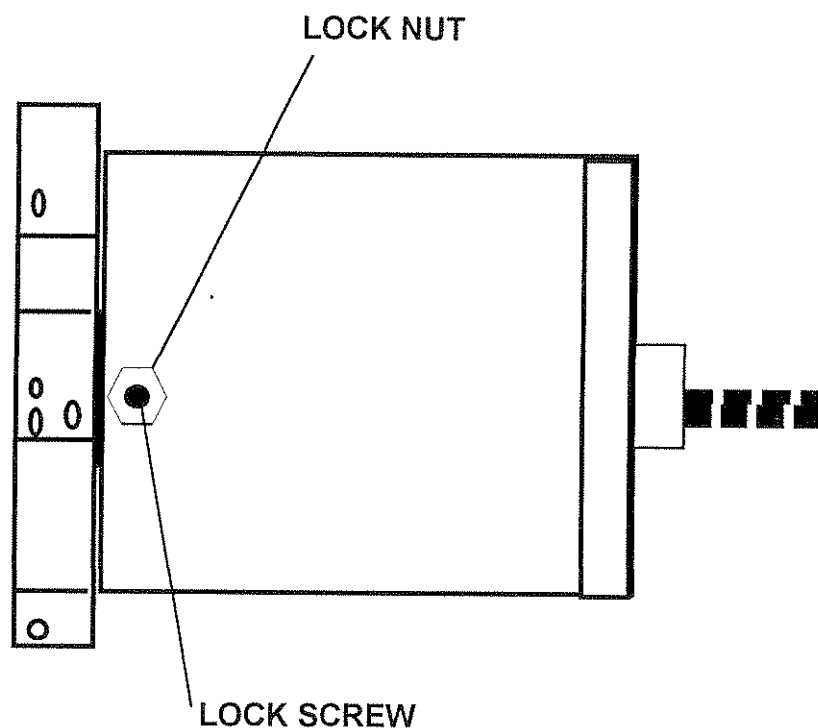


EMERGENCY STOP

EMERGENCY STOP

Cuts power to the spindle, drives and indexing toolpost if fitted. Error message on screen DRIVES OFF. To switch the drives on again insert the key in the emergency stop button and turn clockwise.

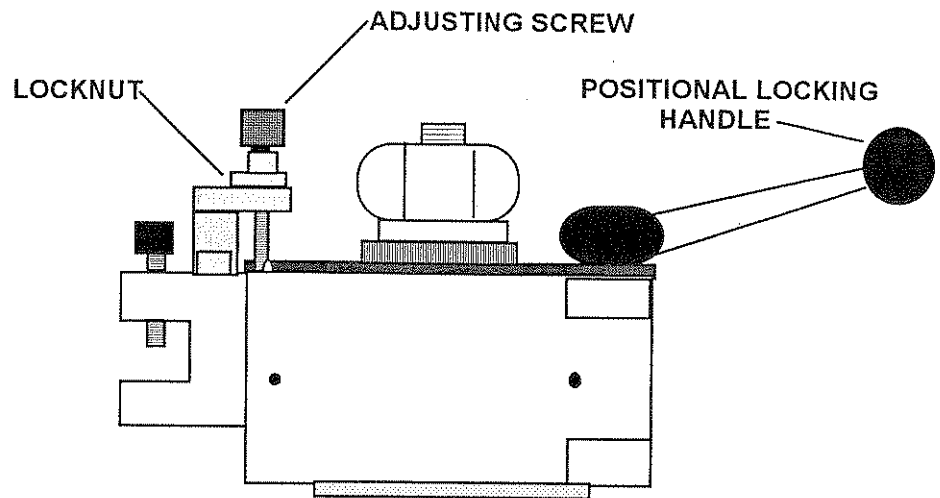
AUTOMATIC INDEXING TURRET



To adjust the height of the tool in the indexing toolpost, first unlock the lock nut. Then place allen key into lock screw. Key in the tool number of the tool to be adjusted, followed by EOB. The turret will start to revolve, so whilst the turret is in motion adjust the height of the tool by turning the lockscrew. Turn CCW to increase tool height, and CW to decrease height. Relock locknut once the correct tool height has been established.

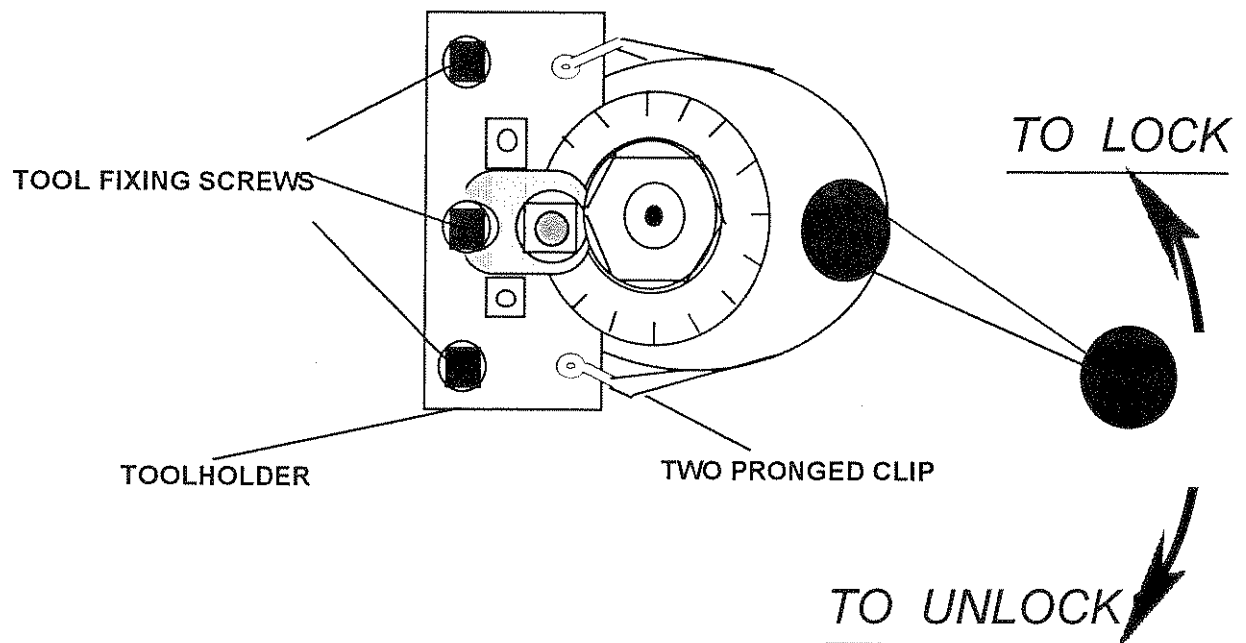
WARNING: DO NOT ATTEMPT TO ADJUST THE TOOL WHEN THE TURRET IS AT REST, THIS COULD RESULT IN SERIOUS DAMAGE TO THE LOCKING PLATE INSIDE THE TOOLPOST BODY.

MULTI-POSITIONAL TOOLPOST



TO ADJUST TOOL HEIGHT

For adjustment, tighten locknut and positional locking handle.



TO ADJUST THE POSITION OF THE TOOLHOLDER

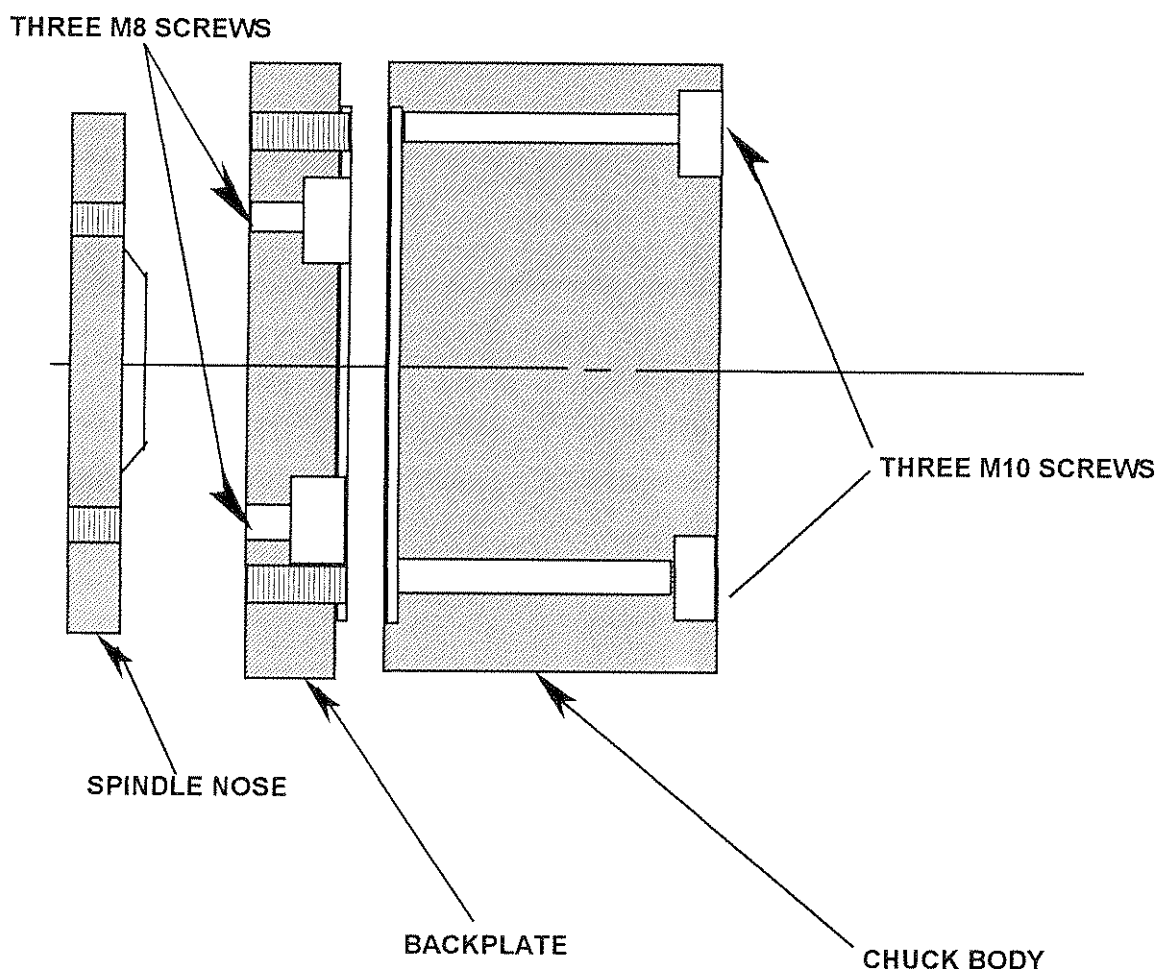
Unlock the POSITIONAL LOCKING HANDLE and remove the toolholder. Move the TWO PRONGED CLIP to the new position, replace the toolholder and lock with the POSITIONAL LOCKING HANDLE. There are 40 different positions available.

MANUAL CHUCK MOUNTING AND REMOVAL

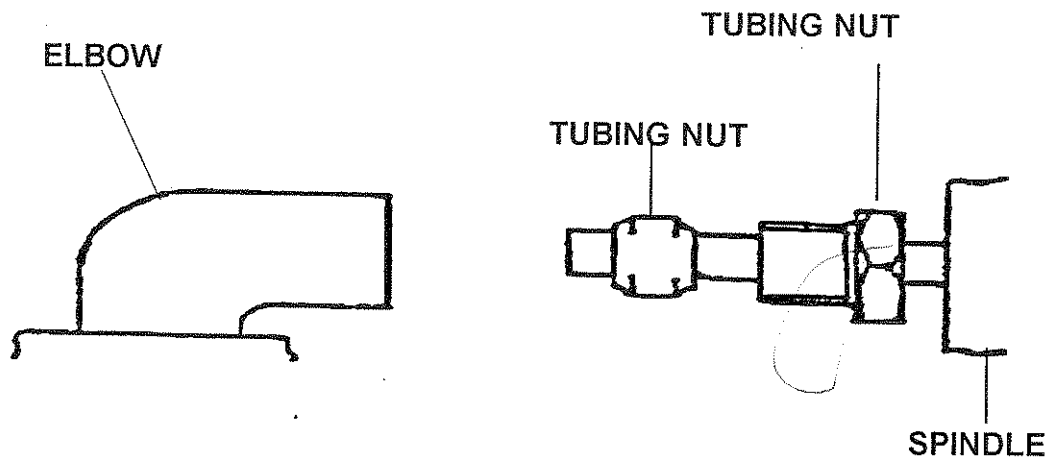
The backplate has a mounting taper of 42mm dia x 7° 7', with a register to suit the chuck. To mount a manual chuck, thoroughly clean the spindle nose, backplate and chuck register before assembly.

The backplate is mounted to the spindle nose and secured with three M8 cap head screws.

Mount the chuck to the backplate and secure with the three M10 screws through the front of the chuck. To remove the chuck is a direct reversal of the above procedure. Care must be taken when removing the chuck from the spindle ie., a firm hold must be taken on the chuck when removing the screws.



MOUNTING PNEUMATIC CHUCK



Ensure back plate is an A2-3 type with front fitting to suit chuck.

Thoroughly clean spindle nose, chuck mounting register and back plate before assembly.

The back plate is mounted to the spindle and secured by three UNC cap head screws.

Before mounting chuck to back plate, ensure that the air pipe supplied is fitted to the rear of the chuck. This pipe is passed down the spindle as the chuck is mounted.

The chuck is secured by six cap head screws. Screw in through front of chuck.

To fit air pipe, first remove headstock end cover - found at left hand side of machine. This is secured by twelve button head screws.

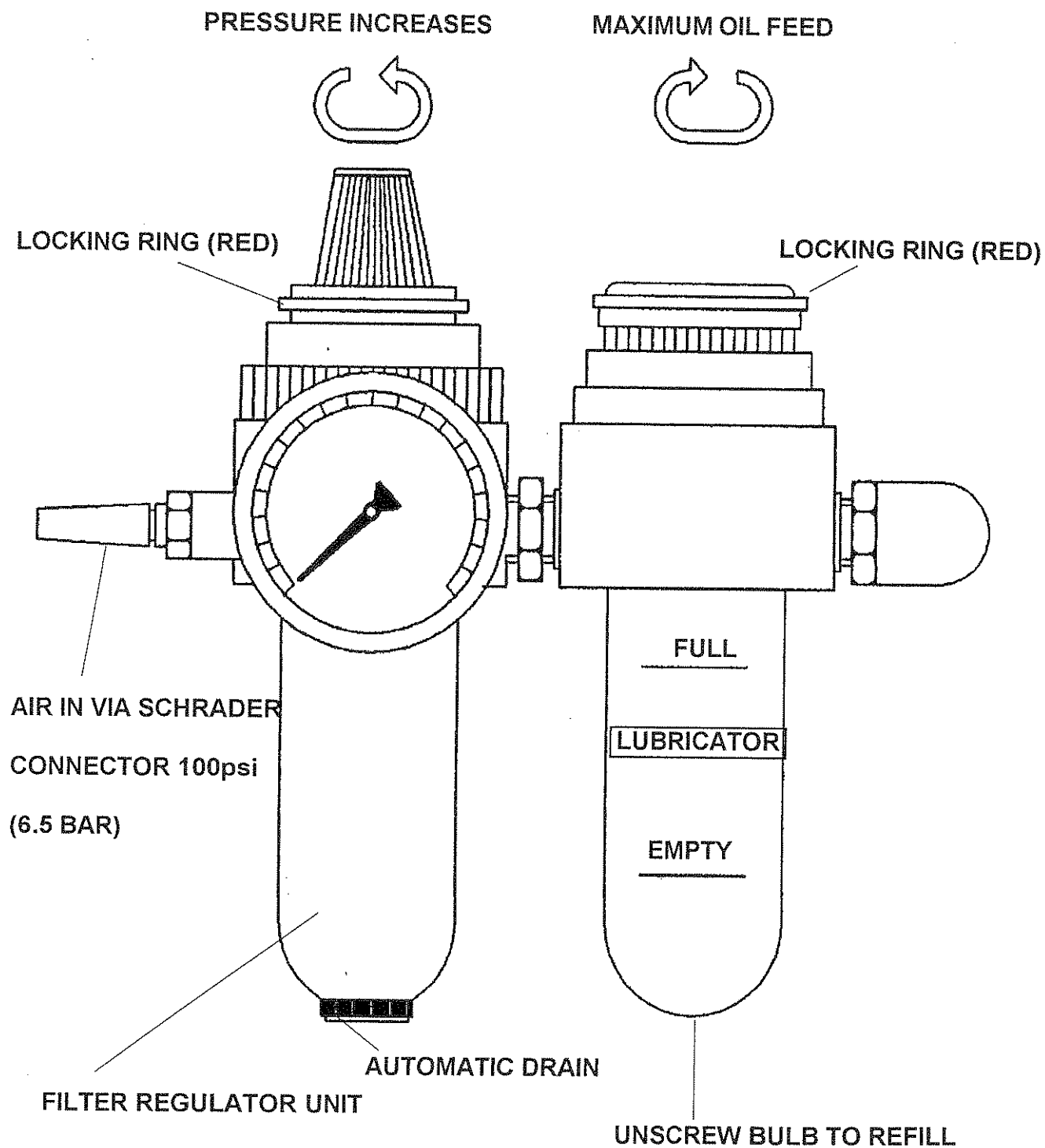
Once removed, the pipe will be seen at the end of the spindle.

Remove the tubing nut from elbow and also remove tubing cone from within elbow. Slide tubing nut on to pipe followed by tubing cone, as shown in diagram. Screw this assembly into the elbow.

DO NOT over- tighten.

Replace headstock end cover.

AIR SUPPLY UNIT



The air supply should be terminated with a female Schrader connector REF :- 9793C - 12

The lubricator has a maximum oil flow rate of $5\text{dm}^3/\text{s}$