Leadscrew

Part number	350713	350833
	350723	350853
	350733	350873
	350743	350893
	350753	350903
	350763	350943
	350773	350993
	350783	359293
	350793	369933
	350803	380373
	350823	

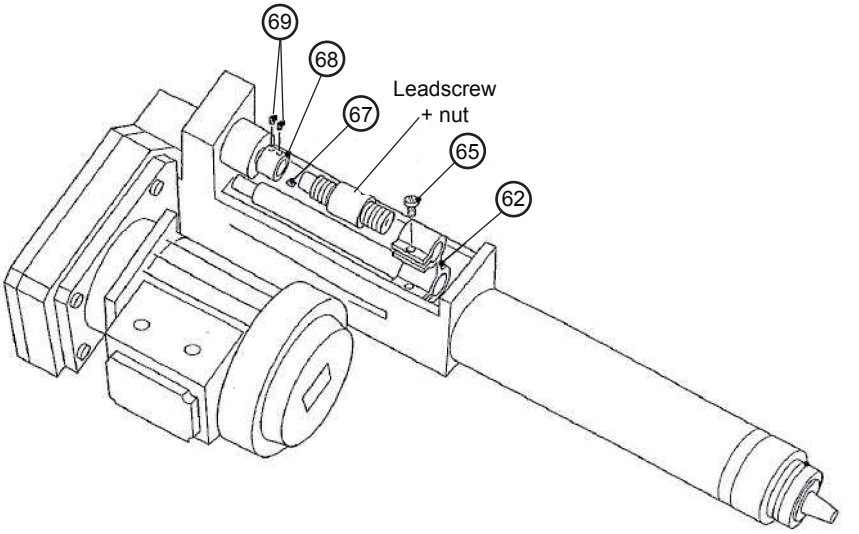
Original instructions.

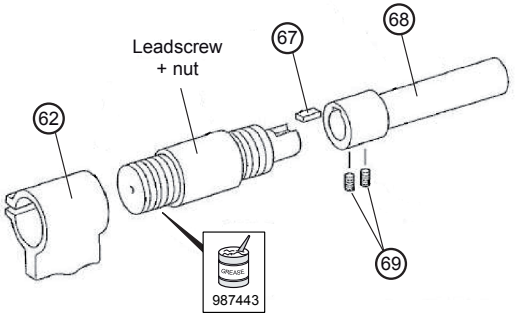
Software and documentation available at:

http://cadfiles.desouttertools.com

No login/password required.

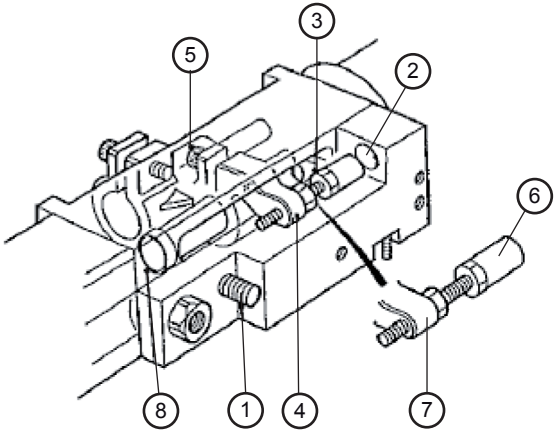
SPARE PARTS





Item	Description	Part no.	Qty
62	Cross head	355883	1
65	Screw M6	228003	2
-	Leadscrew + nut	-	1
67	Key	370723	1
68	Screw M4	370713	2
69	Output shaft	370703	1
-	Quill	-	1
-	Circlip	397163	1

STROKE ADJUSTMENT



Set the gap between (2) and (3) to equal depth of tapping required PLUS the distance the bit is above the work piece, by sliding (4).

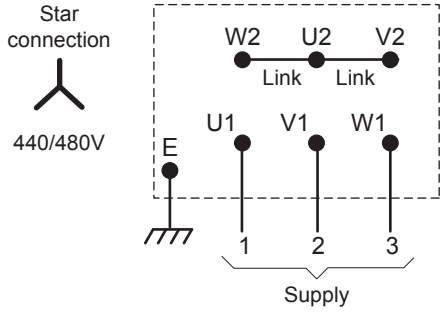
Make sure (8) is under (1) (LED will illuminate) and lock into position with (5) to the recommended torque.

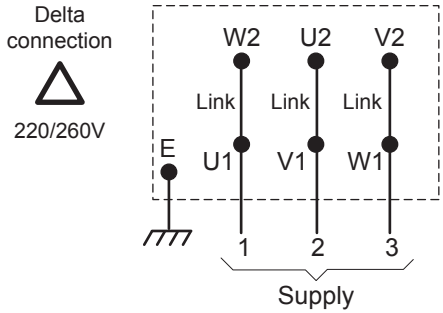
Loosen (7) and turn (6) for fine adjustment.

Ensure that covers are refitted.

ELECTRIC MOTOR CONNECTION

The electric motor used on the AFTE's are 3 phase mechanical brake motors and can be connected to into both 440-480 volts or 220-240 volts at 60Hz by changing the connections to the motor as shown below.

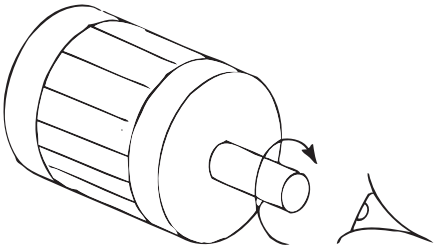




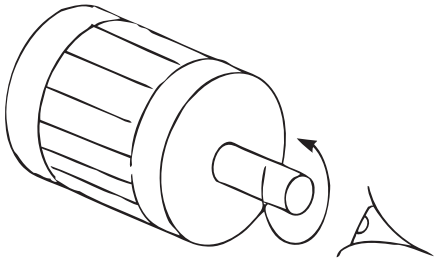
The motors must be connected to a 3 phase supply in accordance to the Voltage Charts in the relevant service sheet and provided with a starter fitted with an overload protection.

Recommended starters, overload settings and the connection type are given in the AFD Service Sheet.

When connecting the motor ensure that the motor rotation is correct. Remove the belt from the pulley's and view the motor from the shaft end of the motor. For right hand threads the rotation should be clockwise and anti clockwise for left hand threads.



Right Hand Thread
Clockwise Rotation



Left Hand Thread
Anti Clockwise Rotation

To reverse the motor interchange U1 and V1 connections.

Before cycling a leadscrew tapper check the following:

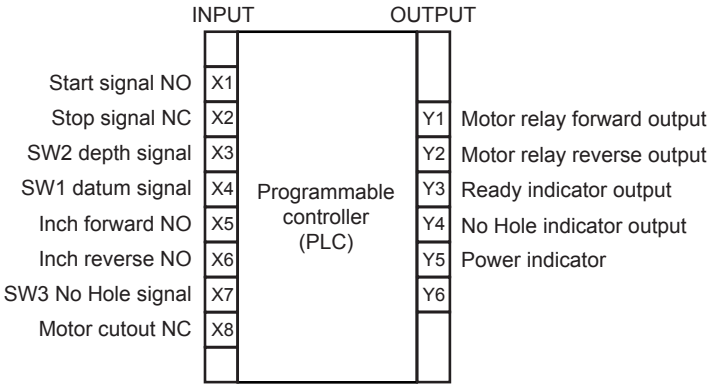
1. Electric Motor is running in the correct direction.
2. Proximity switches are fitted correctly i.e. are sensing datum and depth and that the logic of the control circuitry is functioning correctly:
   i.e. Depth reverses the direction of the electric motor.
   Datum stops the electric motor.

OPERATION OF AFTE TAPPER USING A PROGRAMMABLE CONTROLLER

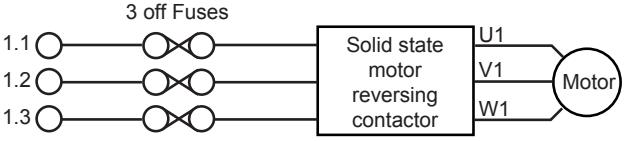
Electrical connections to AFTE270/470/480:

Consult tool service sheet for correct wiring of motor and proximity switches.

Control circuit:



Motor Switching Circuit:



Ultra-fast fuses must be used. The fuses must have an I^2T rating lower than the contactor.

Fuse size Ø10 x 38mm.

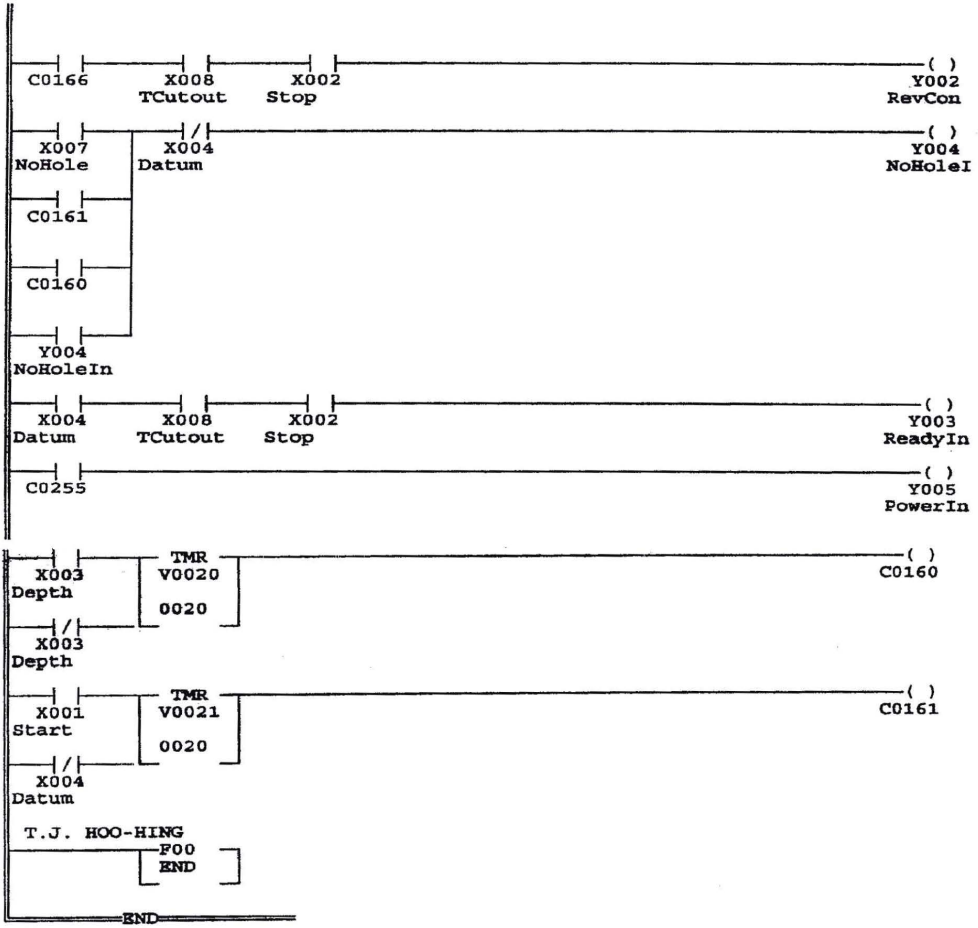
Motor rotation test must be carried out as described in AFTE service sheet before operating the tool.

Desoutter recommends that the SRC3D Solid State Relay from Intercable Danmark is used in the circuit.

Warning

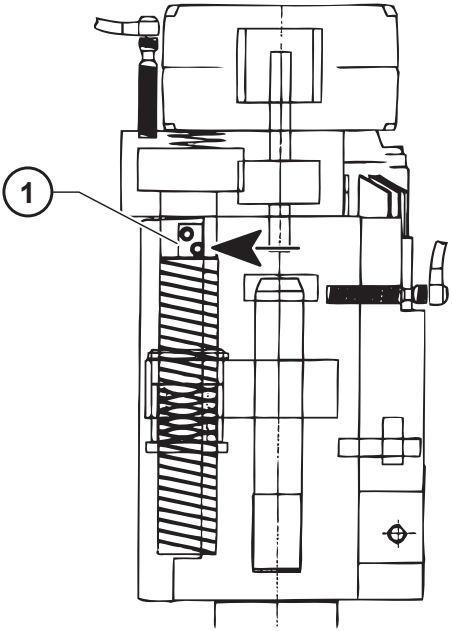
Customer is responsible for ensuring the safe installation and operation of the control equipment.

Ladder Diagram



CHANGING THE LEADSCREW

NOTE diagrams show Electric Leadscrew Tapper.



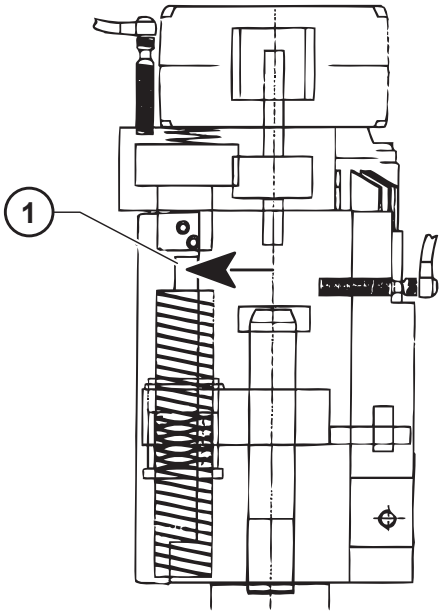
1 Set screws.

The leadscrew is held in place by two set screws, the drive is supplied by a key.

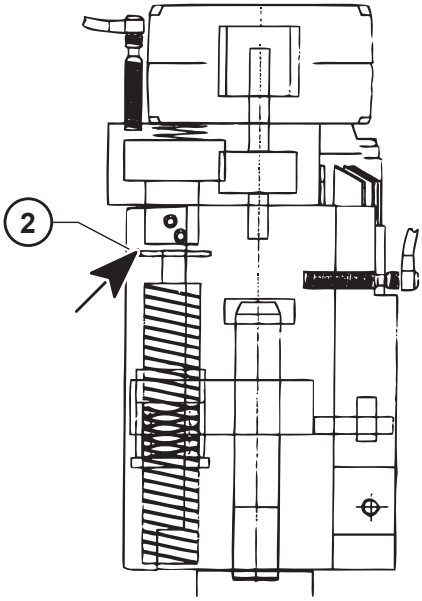
To get access to the leadscrew and set screws remove the plastic cover and either jog the or manually turn the drive.

Position the leadscrew nut approximately half way down the leadscrew - this will aid removal.

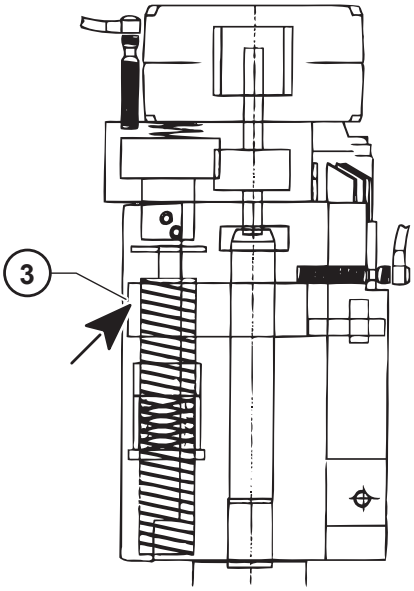
REMOVAL OF LEADSCREW



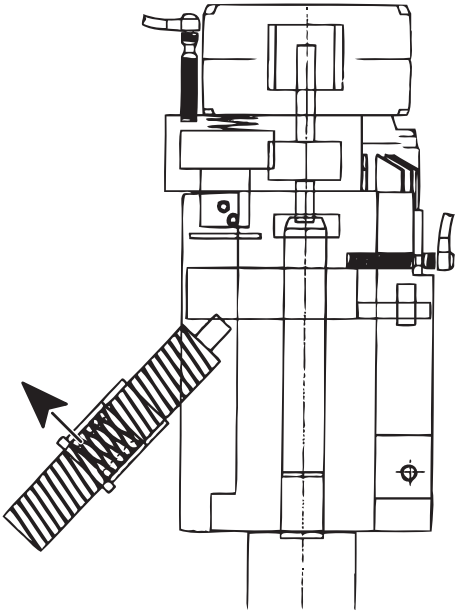
1 Loosen the set screws and pull down of the quill. This should disengage the leasdscrew.



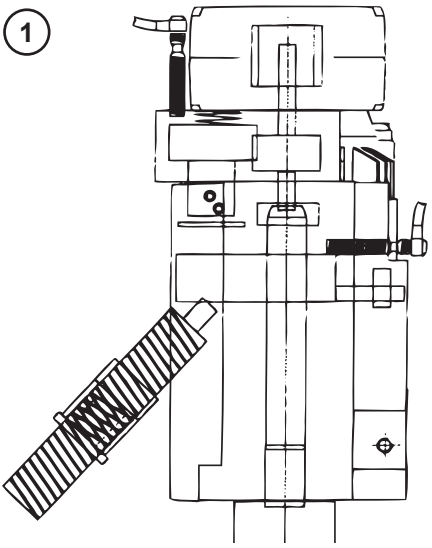
2 With pliers remove the external snap ring on the leadscrew nut.



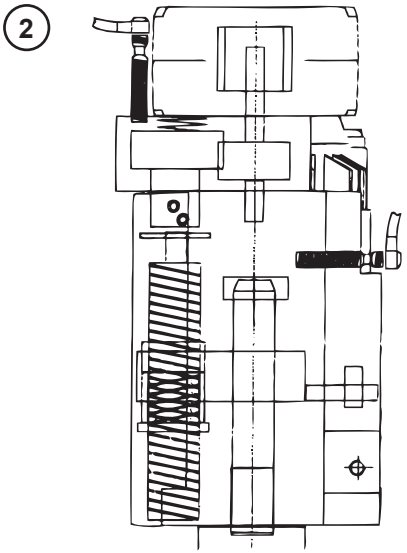
3 Loosen crosshead on both the leascrew nut and the extension tube slide the crosshead back to allow the leadscrew to be removed.



FITTING THE LEADSCREW

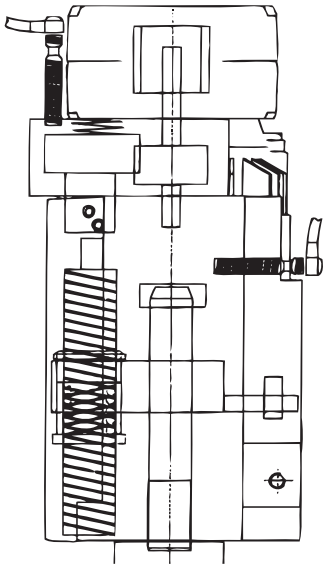


1 Position the leads crew nut approximately half way on the leads crew.
The leadscrew nut has a flat on it which need to be located with a flat on the cross head when you slide the assembly in.
The snap ring has to go over the nut after it has been put in the cross head.



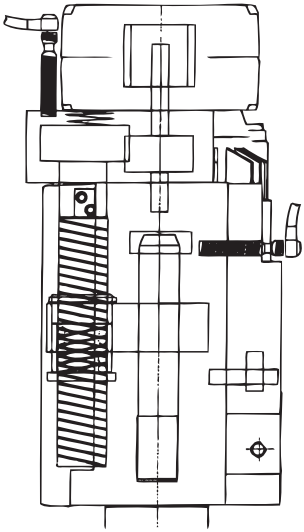
2 With both crosshead screws loose slide the leadscrew nut assembly into the crosshead.

3



3 Fit the snap ring on the leads crew nut and slide the crosshead such that it butts up against the snap ring.
Tighten both crosshead screws.

4

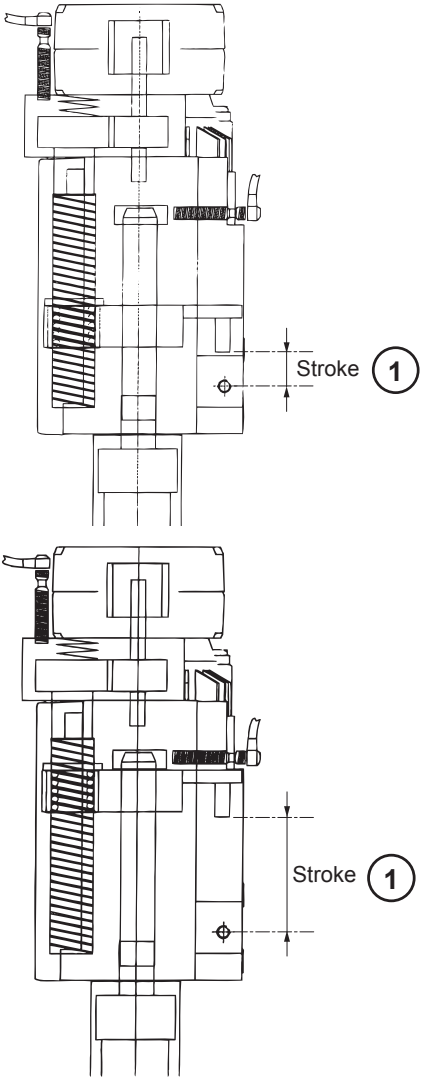


4 Fit the drive key on the leadscrew and orientate the key with the mating key way.
Push on the quill/output spindle to push the leadscrew assembly into the drive shaft.
Lock in place with the two set screws.

SETTING THE STROKE

This can only be done with the leadscrew fitted.

With the "crosshead" loosened on the "extension tube" rotate the leadscrew manually or through a jog function in the controls until the "crosshead screw" to "depth proximity switch" distance is the stroke required.



1 Example Strokes

OPTIONAL - THE NO HOLE SENSOR

This will give a signal if there is no hole to be tapped or if excess torque is required to tap the hole.

The leadscrew is spring loaded through "belleville" washers such that if it can not drive forward the leadscrew will be driven backwards.

To set the no hole sensor screw the proximity switch in until it bottoms out.

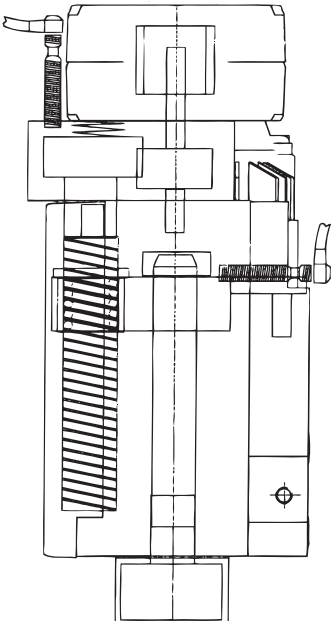
Unscrew the proximity switch until it no longer senses - this will guarantee a signal in a no hole condition and give the finest setting for an "over torque" condition.

"Over torque" will occur when the tap wears and will indicate that the tap should be changed.

The greater the distance the "no hole proximity switch" is backed out the more "over torque" it will cope with.

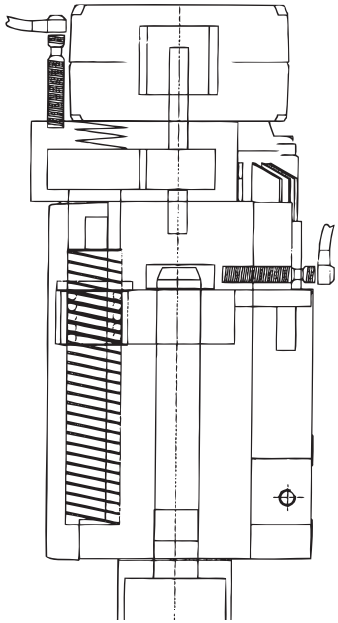
The two drawings below show the standard condition and with the leadscrew pushed back to give the "no hole" signal.

1



1 No Hole Signal

2



2 Standard Condition

More Than Productivity