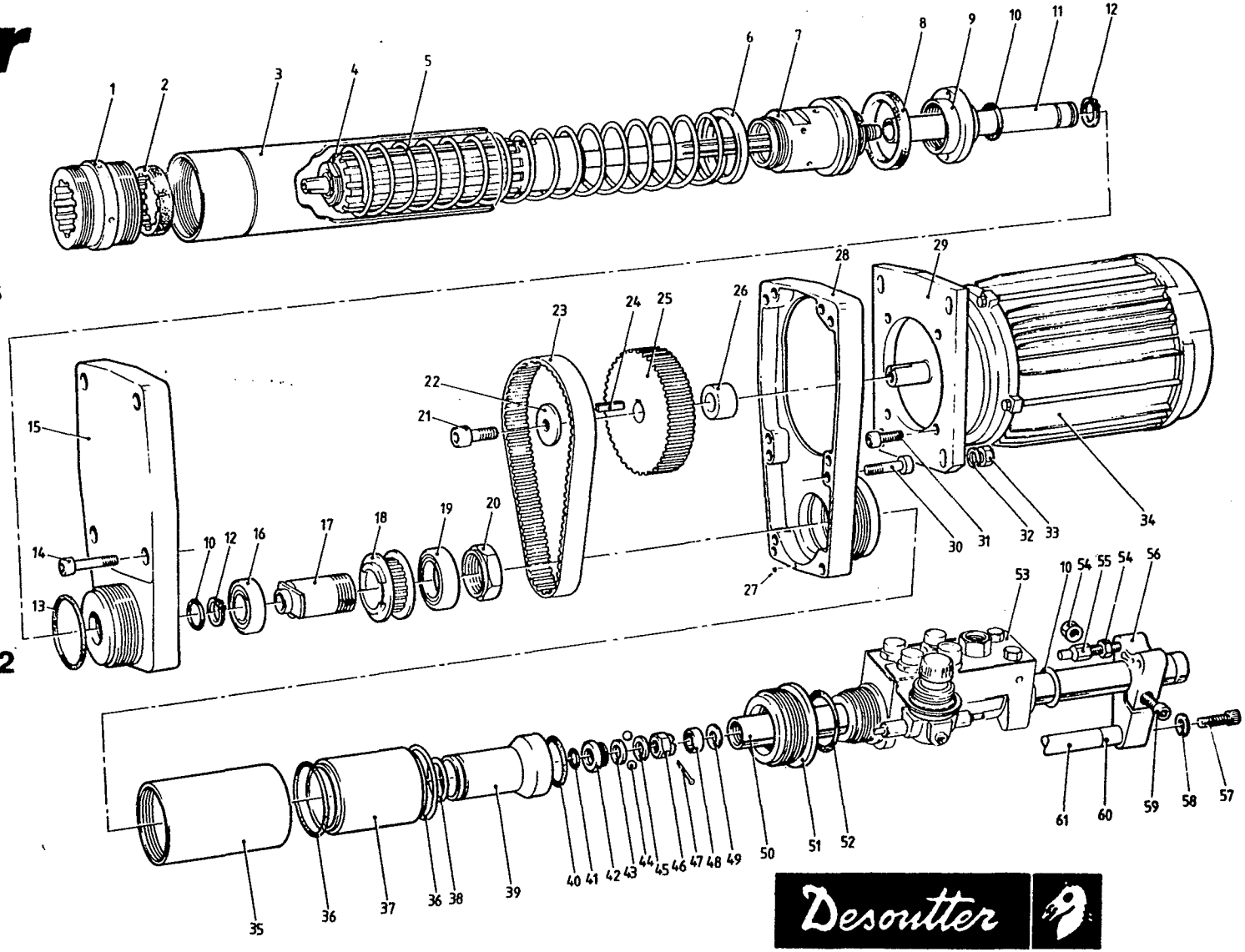
Desoutter AFTE – 45 AFTE – 46

Automatic Feed Tappers

Types	Codes
AFTE – 45 – 1400	1252404
AFTE – 45 – 1150	1251854
AFTE – 45 – 900	1251934
AFTE – 45 – 700	1252084
AFTE – 45 – 400	1252164
AFTE – 45 – 250	1252244
AFTE – 45 – 150	1252324
AFTE – 45 – Control box	74922

Non-Rapid Advance

Types	Code
AFTE – 46 – 1400	1271374
AFTE – 46 – 1150	1271454
AFTE – 46 – 900	1271534
AFTE – 46 – 700	1271614
AFTE – 46 – 400	1271794
AFTE – 46 – 250	1271874
AFTE – 46 – 150	1271954
AFTE – 46 – Control box	79522



Operating Instructions
Servicing Instructions
Parts List

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Telephone: 01-205 7050 Telex: 21392

Printed in England 4.89

Parts List - Main Assembly

AFTE – 45/46

Item No.	Part No.	Description	Qty.
1	263433	Bearing Sleeve with spring pin	1
	256113	Spring Pin	
2	53263	Silencer Ring	1
3	50093	Outer Case	1
4		See later section Gearbox Assembly	1
5	49483	Return Spring *(not fitted to AFTE 46)*	1
6	157033	Wear Ring	1
7	261973	Piston	1
8	257383	Piston Seal *(not fitted to AFTE 46)*	1
9	261963	Clamp Nut	1
10	37223	'O' Ring	3
11	222663	Spindle Tube	1
12	47553	Circlip	2
13	50783	'O' Ring	
14	223193	Cap Head Screw, M6X50	4
15	225103	Pulley Housing, Bottom	1
16	25863	Front Bearing	1
17	223043	Pulley Spindle – 1400, 1150, 900, 400, 250, 150rpm	1
18	223003	Pulley 20T – 700rpm	1
	302313	Pulley 26T – 1400, 1150, 900, 400, 250, 150rpm	1
			1
19	222673	Rear Bearing	1
20	222773	Nut – 1400, 1150, 900, 400, 250, 150rpm	1
21	223113	Cap. Head. Screw, M5X16	1
22	222823	Washer	1
23	227693	Belt 73T – 700	1
	301943	Belt 71T – 400	1
	301953	Belt 66T – 1400, 1150 & 250	1
	301963	Belt 61T – 900 & 150	1
24	222883	Key	1
25	222903	Pulley (Motor) 46T– 900, 150	1
	301843	Pulley (Motor) 33T – 400	1
	222923	Pulley (Motor) 26T – 1400, 250	1
	301933	Pulley (Motor) 21T – 1150	1
	301863	Pulley (Motor) 16T – 700	1
26	222803	Spacer	1
27	157303	'O' Ring	1

Item No.	Part No.	Description	Qty.
28	222723	Pulley Housing Top	1
29	222893	Motor Mounting Plate	1
30	223133	Cap Head Screw, M6X25	6
31	236383	Cap Head Screw, M5X40	4
32	223183	Washer	4
33	223203	Nut	4
34	268833	Electric Motor	1
35	222873	Outer Locking Case	1
36	55833	'O' Ring	2
37	277863	Spacer	1
38	44673	'O' Ring	1
39	277853	Inner Spacer	1
40	39913	'O' Ring	1
41	238973	Retainer	1
42	224173	Seal	1
43	224683	Thrust Washer	1
44	33393	Ball	5
45	222843	Thrust Washer	1
46	222853	Nut	1
47	84373	Spring Pin	1
48	33433	Bearing	1
49	22554/	Shim	
	0023		
	0053	Shim	As
	0103	Shim	Req'd
	0153	Shim	
50	261203	Motor Tube	1
51	255783	Adaptor	1
52	225553	'O' Ring	1
53	261993	Control Top 1/4"BSP	1
	262003	Control Top 1/4"NPT	
54	52473	Locknut	2
55	283033	Stroke Adjusting Screw (Cushioned)	1
56	262053	Crosshead	1
57	55913	Screw	1
58	153133	Washer	1
59	56053	Screw	1
60	283063	Spacer	1
61	250463	Camrod	1

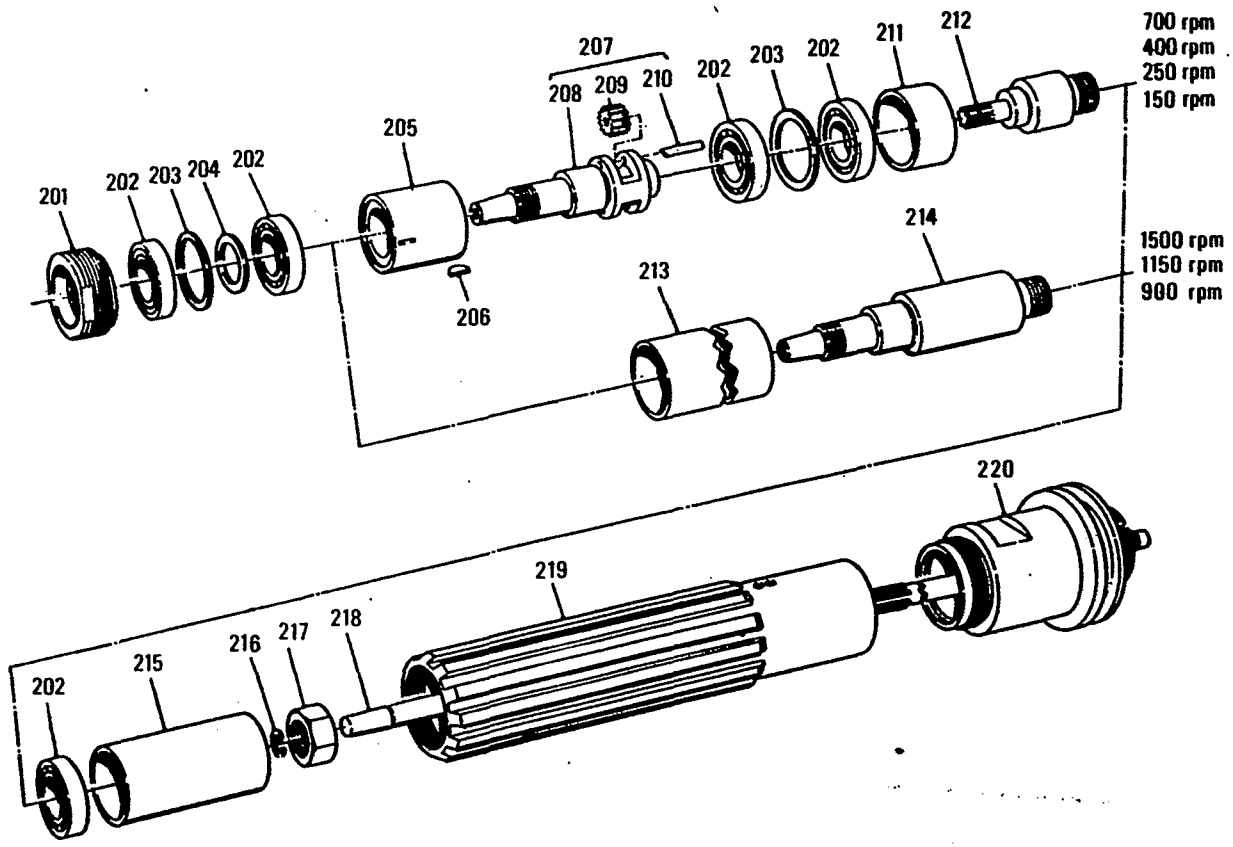
Parts List - Gear Case

AFTE – 45/46

Item No.	Part No.	Description	Qty.
201	49393	Clamp Nut	1
*202	2413	Bearing (1400, 1150, 900)	3
	2413	Bearing (700, 400, 250, 150)	5
203	2633	Distance Washer – Outer (1400, 1150, 900)	1
	2633	Distance Washer – Outer (700, 400, 250, 150)	2
204	49023	Distance Washer – Inner	1
205	49433	Internal Gear	1
206	25568	Key	1
207	49413	Planet Cage Complete (700, 400)	1
	49453	Planet Cage Complete (250, 150)	1
208	49423	Planet Cage (700, 400)	1
	49443	Planet Cage (250, 150)	1
209	36723	Planet Wheel (700, 400)	2
	40363	Planet Wheel (250, 150)	2
210	80013	Planet Pin	2
211	223083	Spacer	1
212	223073	Drive Coupling (700, 400)	1
	223103	Drive Coupling (250, 150)	1
213	222633	Spacer (1400, 1150, 900)	1
214	222623	Chuck Spindle	1
215	261983	Spacer	1
*216	91723	Circlip	1
217	222793	Nut	1
218	222703	Drive Spindle	1
219	267663	Motor Case (238853 may be used until stocks of 267663 are available)	1
220	261973	Piston	1

* Indicates normal replacement items. It is recommended that adequate stocks are held for servicing requirements.

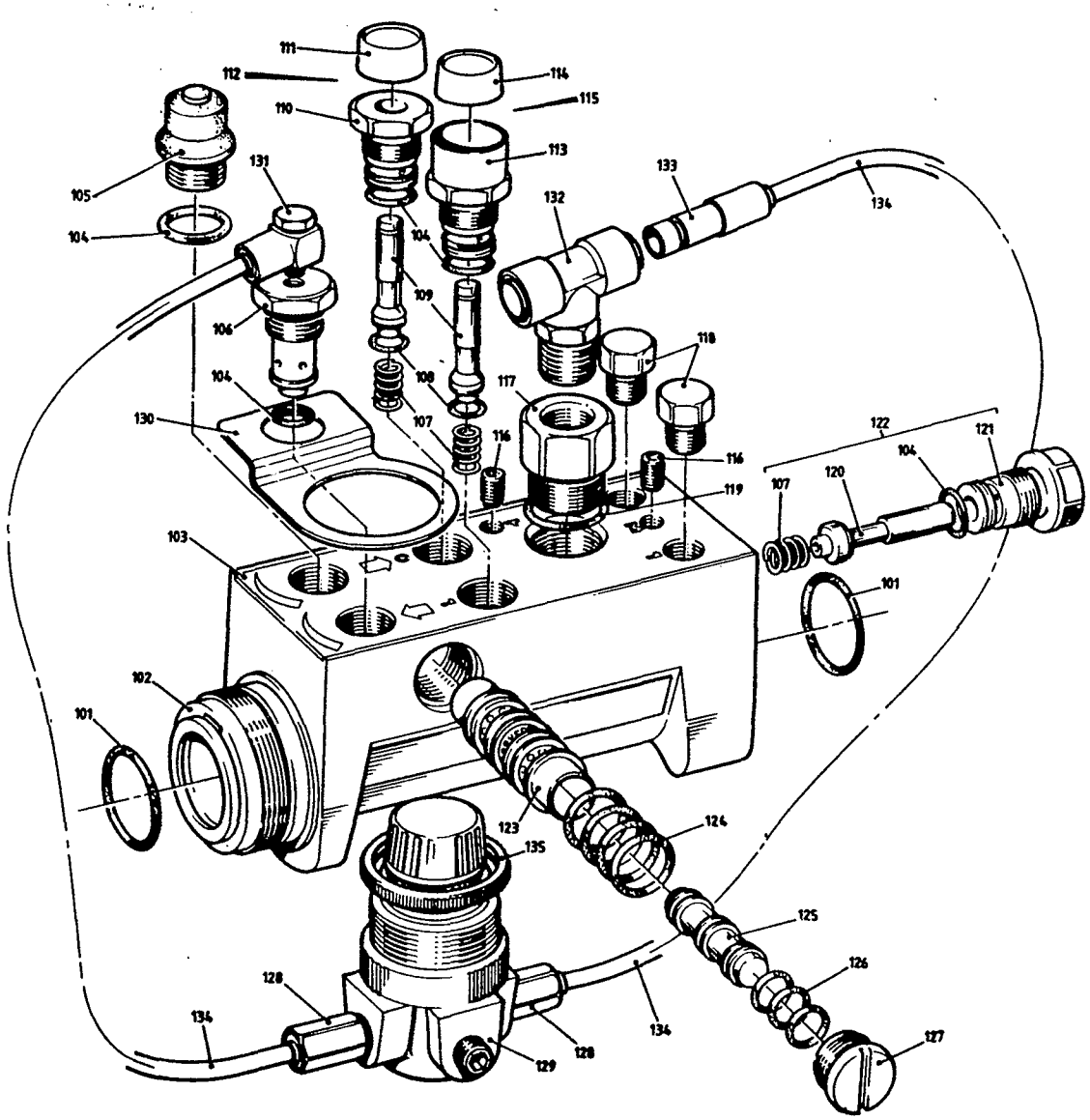
Always quote tool model number, serial number and spare part number when ordering spares.



Parts List - Control Top

AFTE – 45/46

Item No.	Part No.	Description	Qty.
101	41523	'O' Ring	2
102	255763	Control Top with Bushes	1
103	256903	Control Panel	1
104	40503	'O' Ring	6
105	203033	Silencer	1
106	279103	Adaptor	1
107	39783	Spring	3
108	43583	'O' Ring	2
109	202773	Valve Spindle	2
110	51793	Valve Body	1
111	202833	Button–Red	1
112	203763	Stop Valve Complete	1
113	256923	Valve Body Shrouded	1
114	202843	Button Green	1
115	256913	Start Valve Complete	1
116	236693	Plug M5	2
117	42953	Inlet Adaptor – 1/4in BSP	1
	47133	Inlet Adaptor – 1/4in NPT	1
118	51873	Plug	2
119	99853	'O' Ring	1
120	51743	Valve Spindle Complete	1
121	172013	Valve Body	1
122	172003	Stroke Control Valve	1
123	257003	Valve Bush	1
124	43463	'O' Ring	4
125	202763	Piston Control Valve	1
126	41513	'O' Ring	3
127	202803	End Cap	1
128	62402	Male Stud	2
129	86593	Regulator	1
130	282873	Bracket	1
131	72102	Banjo – 4mm Nylon Tubing	1
132	62582	Branch Tee	1
133	62832	Reducer	1
134	62862	4mm Nylon Tubing	As Req'd
135	86613	Panel Mounting Ring	1

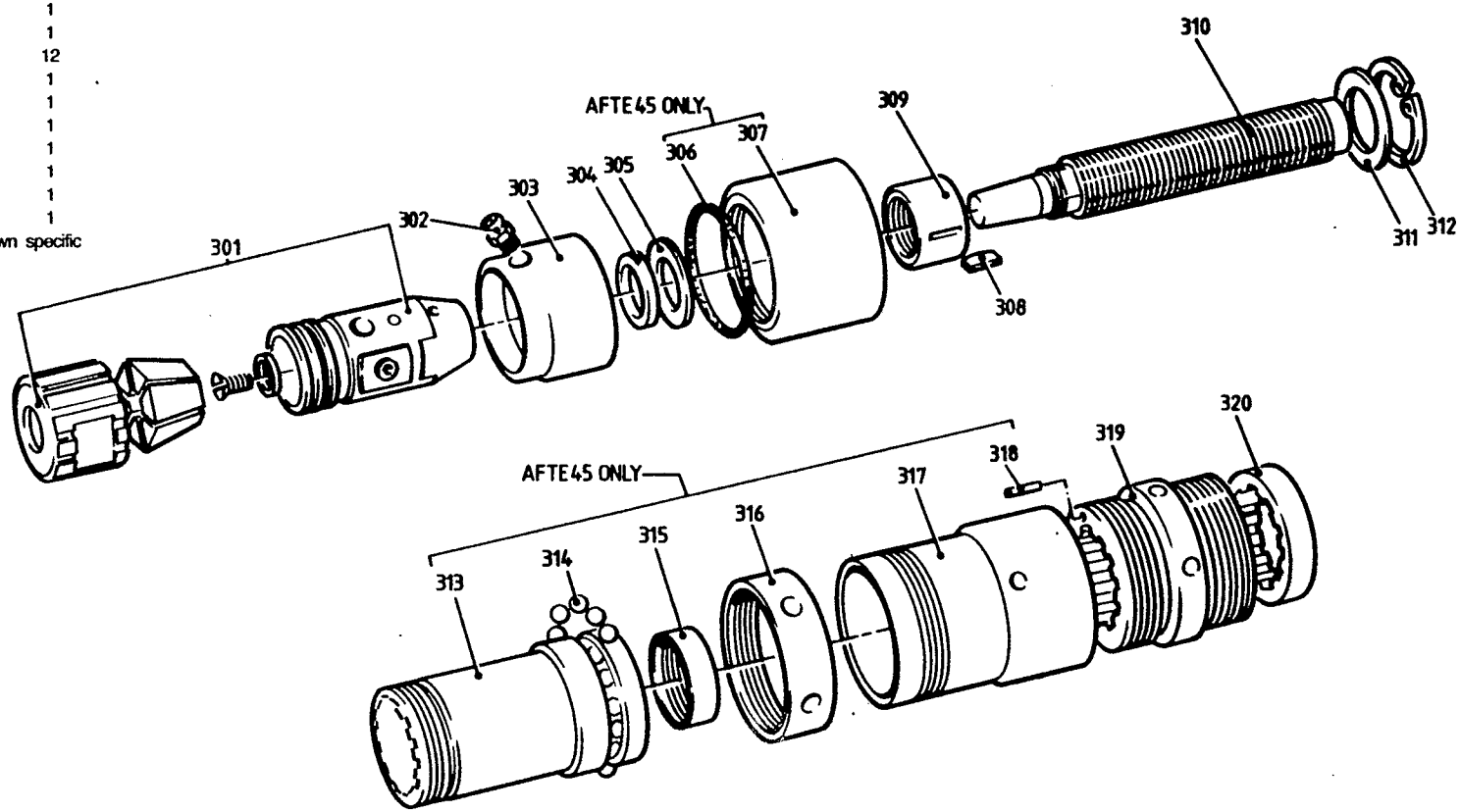


Parts List - Tapping Head

AFTE – 45/46

Item No.	Part No.	Description	Qty.
+301		Tapping Chuck Complete	1
302	201133	Grease Nipple	1
303	250383	Lead Nut Cap	1
304	250413	Felt Washer	1
305	2633	Washer	1
306	267713	'O' Ring *(not fitted to AFTE 46)*	1
307	250353	Adjusting Ring *(not fitted to AFTE 46)*	1
308	277603	Key	1
+309		Lead Screw Nut } matched pair	1
+310		Lead Screw } matched pair	1
311	250433	Washer	1
312	255273	Circlip	1
313	250373	Ball Cage *(not fitted to AFTE 46)*	1
314	33393	Ball *(not fitted to AFTE 46)*	12
315	250363	Ball Retainer *(not fitted to AFTE 46)*	1
316	250343	Locking Ring *(not fitted to AFTE 46)*	1
317	250333	Extension Case	1
	275163	Extension Case – *AFTE 46 only*	1
318	256113	Spring Pin *(not fitted to AFTE 46)*	1
319	49333	Bearing Sleeve	1
320	53263	Silencer Ring	1

+ Denotes parts to be ordered by the customer for their own specific requirements. Further details are available from Desoutter.



General

It is recommended that all 'O' rings, seals and bearings are replaced whenever the tool is serviced.

The following lubricants are recommended for servicing the tool as indicated.
Oil – ISO VG 15 or equivalent for the motor.
Grease – ROCOL BRB 1200 or equivalent for the bearings
Grease – ROCOL MTS 1000 for the leadscrew and nuts.
Grease – Duckhams Q5618 or equivalent
Silicone Grease – Molycote 33 or equivalent for 'O' rings..

The majority of threads in the tool are right hand (R.H.), but some left hand (L.H.) threads will be found. All L.H. threads will be noted in the text.

Cleaning

To ensure thorough cleaning, a tank to immerse the components and a supply of good quality clean parrafin, will be required. Soak the components in the tank ensuring full immersion, agitate each component to ensure that any air passages are flushed through. After soaking, remove from the tank and dry thoroughly. Blow through all air passages to remove any moisture. Keep all cleaned components in an airtight container until required.

Lubrication

Inspect the leadscrew/nut assembly regularly. If necessary, using a grease gun, pump one or two strokes of ROCOL MTS 1000 grease into the assembly via the nipple on the front of the tool.

Adjustment AFTE 45 only

After an initial running-in period, the anti-retract mechanism may require adjustment to eliminate any bedding-in play.

Stop the tool after the leadscrew has advanced 25mm, hold the lead nut firmly and pull the leadscrew/nut assembly forward. If any axial play can be detected, then adjustment is required. Use the 'C' spanner 60073 to loosen the locking ring. By hand, screw up the adjusting ring until a slight resistance is felt.

DO NOT OVERTIGHTEN

NOTE – Over-tightening will lead to excessive wear. Tighten the locking ring onto the adjusting ring and re-check the extent of axial play.

GENERAL ASSEMBLY

Disassembly

Remove any guards fitted to the tool, then using clamp blocks mount the tool vertically, with the motor uppermost, in a bench vice. Remove the four screws (14), nuts (33), and washers (32) securing the motor (34). Remove the motor (34) complete with the mounting plate (29) and driving pulley (25).

If it is necessary to remove the pulley (25), first remove the screw (21) and washer (22), leaving the key (24) in position, unless it is to be renewed. To remove the spacer (26) the key (24) must be removed.

Slacken the crosshead locking screw (59) and slide the crosshead assembly, complete with the camrod, from the motor tube (50).

Turn the tool to the horizontal position.

Using the 'C' spanner unscrew the outer locking case (35) (L.H.). Withdraw the control top (53) complete with the adaptor (51), spacer (37) and outer locking case (35). Unscrew the outer locking case (35) from the control top (53) and remove the spacer (37). Remove and discard the 'O' rings (36) (38) and (40).

Unscrew the retainer (42) from the motor tube (50).

CAUTION: Do not apply any strain to the drive spindle.

While unscrewing the retainer (42), draw the motor tube (50) away, keeping the retainer hard against the thrust washer (43). When the motor tube is clear, release the retainer and catch balls (44). Discard the balls. Remove and discard the bearing (48), and the shim (49) if fitted, from inside the motor tube.

Remove the tool from the vice and lay it on a clean workbench.

Remove the spring pin (47) from the drive spindle and discard.

CAUTION: Care MUST be exercised to avoid damaging the drive spindle when extracting the spring pin.

Unscrew the nut (46) and remove the thrust washers (43) and (45), the seal (41) from the retainer (42). Discard the thrust washers (43) and (45) and the seal (41).

Remove the tapper head or chuck as fitted.

Tapper Head Removal

Remove the tapper head nut, withdraw the collett and unscrew the tapper head retaining screw and the retaining washer. Remove the tapper head body from the leadscrew.

NOTE: The tapper head should be removed from the leadscrew with care, so as not to damage the leadscrew or the leadscrew nut.

Replace the tool in the vice in the vertical position with the motor mounting orifice uppermost. Remove the six pulley housing screws (30) and then remove the top pulley housing (28). remove and discard the small 'O' ring (27). Remove the belt (23) and slide the driven pulley assembly complete with the bearings, off the drive spindle. Reset the tool in the vice in the horizontal position.

AFTE 45

Using the 'C' spanner slowly unscrew the bearing sleeve (1), ABOUT THREE TURNS.

CAUTION: The bearing sleeve encloses the return spring, which is loaded to approximately 6.8kg (15lb), exercise extreme care during removal.

Continue slowly unscrewing the bearing sleeve (1), as soon as it is clear of the outer case (3), allow the spring to expand. Remove the bearing sleeve (1) complete with the silencer ring (2) and the return spring (5).

AFTE 46

Using the 'C' spanner unscrew the bearing sleeve (1). Remove the bearing sleeve (1) complete with the silencer ring (2). Remove the gearbox assembly (4). Unscrew the bottom pulley housing (15) from the outer case (3). Remove and discard the 'O' ring (13). Remove the outer case from the vice and clamps.

Remove the gearbox assembly (4). Unscrew the bottom pulley housing (15) from the outer case (3). Remove and discard the 'O' ring (13). Remove the outer case from the vice and clamps.
Remove one circlip (12) and the 'O' ring (10) from the spindle tube on the belt side of the bottom pulley housing (15). Remove the spindle tube (11) and then remove the second circlip (12). Remove and discard the 'O' rings (10). Remove the clamp nut (9), *piston seal (8) (AFTE 45 only)* and wear ring (6). *Discard the piston seal (8) (AFTE 45 only)* and wear ring (6).

NOTE: Dissassembly of the control top and the gearbox assembly are detailed later in the text.

Pulley Disassembly

Mount the pulley in the pulley clamp blocks (225423) and secure in a vice. Remove the clamp nut (20) and remove the rear bearing (19). Slide the pulley (18) off the spindle (17) and remove the front bearing (16) from the spindle (17).

Pulley Assembly

Pack the bearings (16) and (19) with grease and then assemble the pulleys as follows:
Slide the pulley (18), followed by the rear bearing (19) onto the spindle (17). Screw the clamp nut (20), and tighten. Push the front bearing (16) onto the spindle.

Assembly

NOTE: It is recommended that all 'O' rings are renewed on assembly.

Fit a new wear ring (6) to the piston (7).

AFTE 45 only Lubricate the piston seal (8) with grease and fit it to the clamp nut (9).

Screw the clamp nut (9) onto the piston (7) and tighten with a spanner. Coat the 'O' rings (10) with grease and insert one into the bore of the bottom pulley housing (15) and the other into the bore of the clamp nut (9). Fit a circlip (12) to the lower groove of the spindle tube (11), and coat with grease. Insert the spindle tube (11) into the bore of the bottom pulley housing (15) until the circlip (12) rests against the flange. Fit the second circlip (12) to the top spindle tube groove, securing the tube firmly in the housing.

Protect the machined surfaces of the bottom pulley housing (15) and mount it in a vice with its driven pulley housing clear. Carefully introduce the gearbox's splined shaft into the spindle tube (11), and push the gearbox (4) in so that the clamp nut (9) seats in the pulley housing recess. Coat the 'O' ring (13) with grease and fit to the pulley housing. Screw the outer case (3) onto the pulley housing (15) and tighten.

AFTE 45

Grease the return spring (5) and insert it into the outer case. Fit a new silencer ring (2) into the bearing sleeve (1) and fit the bearing sleeve (1) to the outer case (3).

CAUTION: The bearing sleeve (1) encloses and tensions the return spring (5) to a loading of approximately 6.8Kg (15lb). Extreme care MUST be exercised when fitting the bearing sleeve.

AFTE 46

Fit a new silencer ring (2) into the bearing sleeve (1) and fit the bearing sleeve (1) to the outer case (3).

Fit the assembled pulley onto the gearbox drive spindle and then fit the belt (23) to the pulley. Coat the 'O' ring (27) with grease and insert it into the top pulley housing (28), ensuring the bearing (19) is correctly seated. Secure the pulley housing together using the six screws (30). Fit the new bearing (48) to the motor tube (50) ensuring that it seats hard up against its outer race. Fit a new seal (41), Steel shell first, to the retainer (42) and slide them onto the gearbox drive spindle. Slide the new thrust washers (43) and (45) onto the drive spindle and then screw on the nut (46).

Reposition the tool vertically in the vice.

Insert the two balls (44) between the thrust washers (43) and (45), 180 degrees apart, push up the retainer (42), to hold the thrust washers (43) and (45) against the nut (46). Site the balls (44) between the thrust washers (43) and (45), the balls should be central in the shaft groove, adjust by turning the nut (46) as necessary. align the slots in the top of the nut (46) with the shaft pin hole, release the retainer (42) and remove the balls (44).

Remove the tool from the vice and lay it on a bench.

Insert the spring pin (47) into the shaft pin hole, drive the pin in until the protusion is equal. on each side.

Position the clamps and mount the tool vertically in the vice.

Assemble the five balls (44) into their seatings between the thrust washers (43) and (45), and hold them in position with the retainer (42). Introduce the assembly into the motor tube (50) and whilst keeping the pressure on the thrust washers, screw in the retainer as tight as possible by hand.

Hold the motor tube flats with a spanner and using an 18mm spanner tighten the retainer. Reposition the tool to the horizontal.

Set a dial test indicator against the end of the motor tube (50), apply pressure to the motor tube, taking up all the play between the motor tube and the drive spindle, then set the gauge to zero. Restrain the drive spindle and check the movement between the drive spindle and the motor tube. This should be 0.003". If the movement is incorrect unscrew the motor tube assembly and catch the balls (44) as they come free from the thrust washers (43) and (45). Remove the motor tube and withdraw the bearing (48) from the bore. Fit a shim, or shims (49) of the required value and immediately refit the bearing (48) ensuring that the outer race seats hard up against the shim.

Recheck the movement and adjust as necessary.

Turn the tool to the vertical position in the vice.

Grease the two 'O' rings (38) and (40) and fit them to the inner spacer (39), then fit the inner spacer into its recess in the top pulley housing (28). Grease the two 'O' rings (36) and fit them to the ends of the spacer (37), insert the assembled 'O' rings and spacer into the outer locking case (35). fit the assembled outer locking case to the top pulley housing, and screw on (L.H.) ensuring that the spacer (37) contacts with the pulley housing . Coat the 'O' ring (10) and fit it to the motor tube (50). Apply a light coating of grease to the motor tube (50) and slide onto it the adaptor (51) and the control top (53) until the threads contact the outer locking case (35). Holding the locking case (35), screw in the control top (53) and the adaptor (51) with a 'C' spanner until it locks. Remove the tool from the vice and clamps with the top of the motor tube (50) held against a firm surface, push against the spring pressure to check that the full stroke of the tool can be obtained manually.

Refit the clamps to the tool and mount it vertically in the vice.

Slide the crosshead assembly, complete with locking screw (59), the stroke adjusting screw (55), the camrod assembly (57, 58, 60, 61) and the locknuts (54), onto the motor tube (50) and tighten the locking screw (59).

Refer to the Operating Section for adjustments.

Locate the spacer (26) over the motor spindle and then fit the key (24). Assemble the pulley (25) onto the motor spindle, ensuring that the key and keyway are lined up. Secure the pulley (25) to the motor spindle using the screw (21) and the washer (22). Carefully fit the motor assembly to the tool, ensuring that the pulley locates in the belt correctly.

Refer to the Belt Tensioning section.

CONTROL TOP

Disassembly

Disconnect all airlines (134) from the control top, then remove the tee branch (132) complete with the reducer (133) and the banjo (131). Unscrew the adaptor (106) and remove the regulator (129). Unscrew and remove the inlet adaptor (117), then unscrew the end cap (127) to expose the valve bush (123). Using a thin wire hook withdraw the valve bush (123) and the piston control valve (125). Disassemble the valve from the bush and discard all the 'O' rings (124) and (126).

The remainder of the disassembly is straightforward with reference to the illustration. As each valve is removed it should be placed in a separate container and identified for assembly.

Assembly

Assemble 'O' rings (126) to the piston control valve (125) and slide the piston control valve into the valve bush (123). Fit the 'O' rings (124) to the valve/bush assembly into the control top. Screw in the end cap (127) and tighten to a torque of 10.8 to 13.5 Nm (8 to 10lbf/ft).

Refer to the illustration for locating the remaining valves and components noting the following points:–

Position a spring (107) on the spigot of each button assembly (112) and (115), and the stroke control valve (122) before assembling the control top.

Tighten the adaptor (106) to a torque of 2.3Nm (20lb/in) and all other valves and plugs to a torque of 8.5–9.0Nm (75 – 80lbf/in).

Tighten the inlet adaptor (117) to a torque of 31.0–36.0Nm (23–27lbf/ft). Ensure that the 'O' rings (101) are greased before locating them into the control top bore. The assembled control top should be stored in an airtight container until required. Refer to the the General Assembly For details.

GEARBOX ASSEMBLY

Disassembly

With the tool stripped down, (Refer to the General Assembly), unscrew and remove the piston (220) and the clamp nut (201), then push the internal components out of the motor case (219).

The gearbox assemblies can then be dismantled using normal workshop practice. Identify your gearbox from the illustration, and refer to it for the order of disassembly.

NOTE: All threads in the gearbox assembly are L.H.

Assembly

Refer to the illustration to identify the components in the gearbox and their order of assembly. Grease all the bearings and gears on assembly.

Belt Tensioning

Fit the clamp blocks to the tool and mount vertically in a vice, with the motor uppermost and the pulley housing outward. Loosen the four motor clamping screws, using a ring spanner on the nut and a hexagon key on the screw head.

Hold the belt adjusting tool and push the knurled knob to the top of the slot away form the location pins. Engage the knurled knob's threaded spindle with the threaded hole in the end of the motor plate.

Screw the spindle into the motor plate until the location pins are aligned with the two mating holes in the bottom of the lower pulley housing. Push the adjuster up to engage the pins in mating holes Turn the knurled knob until the locking pins engage with the tool lug preventing any further rotation of the knob. Tighten the four motor clamping screws fully to lock the motor in position. Release the knurled knob by two or three turns and push the belt adjusting tool downwards to disengage the locating pins. Unscrew and remove the belt adjusting tool. Remove the tool from the vice and clamps.

Changing the Drive Belt

NOTE: Refer to the General Assembly for dismantling procedures.

Mount the tool in the clamps and arrange horizontally in a bench vice. Remove the motor, the crosshead assembly, and the control top. Remove the top pulley housing by releasing the six screws. Remove the old belt.

Ensure the new belt is the correct replacement, and fit it to the tool, ensuring that it seats on the driven pulley correctly. Remount the tool vertically in the vice and refit all the removed parts, refer to the General Assembly. Refer to the Belt Tensioning and tension the belt as detailed.

Setting the Pressure Regulator:

Turn regulator control fully 'anti-clockwise' connect the air supply and press the manual start button. Turn the regulator control slowly 'clockwise' until the tool fully fast advances with the minimum turns of the regulator.

NOTE: If a pressure gauge is available the ideal pressure reading is 1.9 to 2.2 bar (28 to 32lbs in^2).

Testing after Assembly

Refer to the Cycle Check section in the Operating Requirements. Electric motor testing and checking should be carried out by a competent electrician in accordance with the relevant section of the Health and Safety Act.

Cycle Check AFTE 46

After completion of the airline connection check and the motor rotation test, it is then preferable to carry out a complete cycle check. With the tool mounted in a suitable clamp, ensure the emergency stop button is released by pulling the button out. Press the Start button, the tool will then start, turning the leadscrew.

The leadscrew will advance until the stroke adjusting screw actuates the stroke control valve, the motor will then reverse and the leadscrew retract.

When the leadscrew has retracted fully, the motor will switch off completing the cycle.

Accessories

Mountings – A range of clamps, bases and columns are available.

Further details are available from Desoutter.

Multi Spindle Tapping Attachments

A series of 2, 3, 4 and 5 spindle heads are available.

Further details are available from Desoutter.

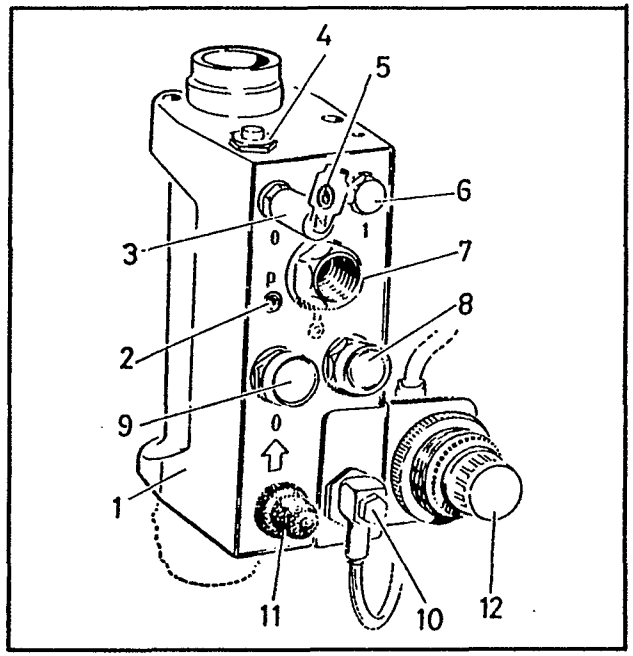
OPERATION

WARNING: THIS TOOL SHOULD NOT BE OPERATED WITHOUT ADEQUATE GUARDING CONTROLS

CONTROL TOP

The control top contains all the control functions and signal originations for external control. The controls and signal origin locations are listed below

Location
1. Control Top
2. 'P' port, tapped M5, retract port
3. 'O' port, tapped ⅛" BSP Remote retract port
4. Stroke Control Valve
5. 'M' port, tapped M5, the Work Cycle Operation signal produced by this port, when the motor is running, is used for sequence control. The signal will commence after the tool has advanced 6.5mm (¼") and cut 6.5mm (¼") before the tool returns to the datum position.
6. 'I' port, tapped ⅛" BSP. Start port which receives the external signal to start the tool cycle.
7. Main Air Inlet Port, tapped ¼" BSP or NPT.
8. Manual Start Button – Green
9. Manual Retract Button – Red
10. Advance Rate Regulating port
11. Air Exhaust port. NOTE – This port must NOT be covered.
12. Regulator



CONTROL BOX

Emergency Stop Button

Pressing this button cuts the electrical supply to the motor: pulling it out restores the supply.

Inch Button

With the emergency Stop button depressed electrical power can be directed to the motor by pressing the shrouded Inch Button.

NOTE – The motor will rotate in the direction last input by the spool valve in the tool control top.

e.g. If the start signal last operated the spool valve, the motor will rotate for advance but if the retract signal last operated the spool valve, the motor will rotate for retract.

Mounting the Tool

The tool must be clamped only in the area indicated on the outer case. the tap must be at least 6.5mm (¼") above the workpiece.

WARNING
1. Always disconnect the tool from the power supply before attempting any replacement, adjustment, servicing or dismantling.
2. Ensure that no loose articles of clothing or material can be caught by the rotating parts of the tool.
3. Always ensure that the workpiece is securley clamped before commencement of operation – clear all loose items from vicinity.
4. Always allow the tool to stop before removing work or resting the tool.

Setting the Operation

Set the gap between the stroke control valve and the stroke adjusting screw to equal the depth of operation required PLUS the distance the bit is above the workpiece.

Stroke Adjustment AFTE 45

The stroke length, set by the distance between the stroke adjusting screw and the stroke control valve, must not be less than 58mm (2.28") and not more than 100mm (4.75") The stroke always includes the 45mm (1,75") rapid advance stroke which is fixed and cannot be adjusted. Any adjustment should be made using the stroke adjusting screw.

Stroke Adjustment AFTE 46

The stroke length, set by the distance between the stroke adjusting screw and the stroke control valve, must not exceed 55mm (2.15"). Any adjustment should be made using the stroke adjusting screw.

SERVICING REQUIREMENTS

Servicing Tools

In addition to the normal range of workshop tools the following tools will be required.

Part No.	Description	Qty.
59213	Clamp Blocks	1 pr.
59233	Gearcase Spanner	1
75938	Wedges	1 pr.
60073	'C' Spanner	1
178993	Spanner for End Cap	1
60113	Spanner for Clamp Nut	1
204943	Hexagonal Key 5mm A/F	1
204973	Hexagonal Key 3mm A/F	1
69773	Hexagonal Key ¼" A/F	1
46343	Spanner O.J. 18mm A/F	1
225423	Pulley Clamp Blocks	1 pr.
46353	Spanner O.J. ⅝" A/F	1
60063	Clamp Nut Spanner	1

Refer to the Parts Lists for Illustrations and Item References.