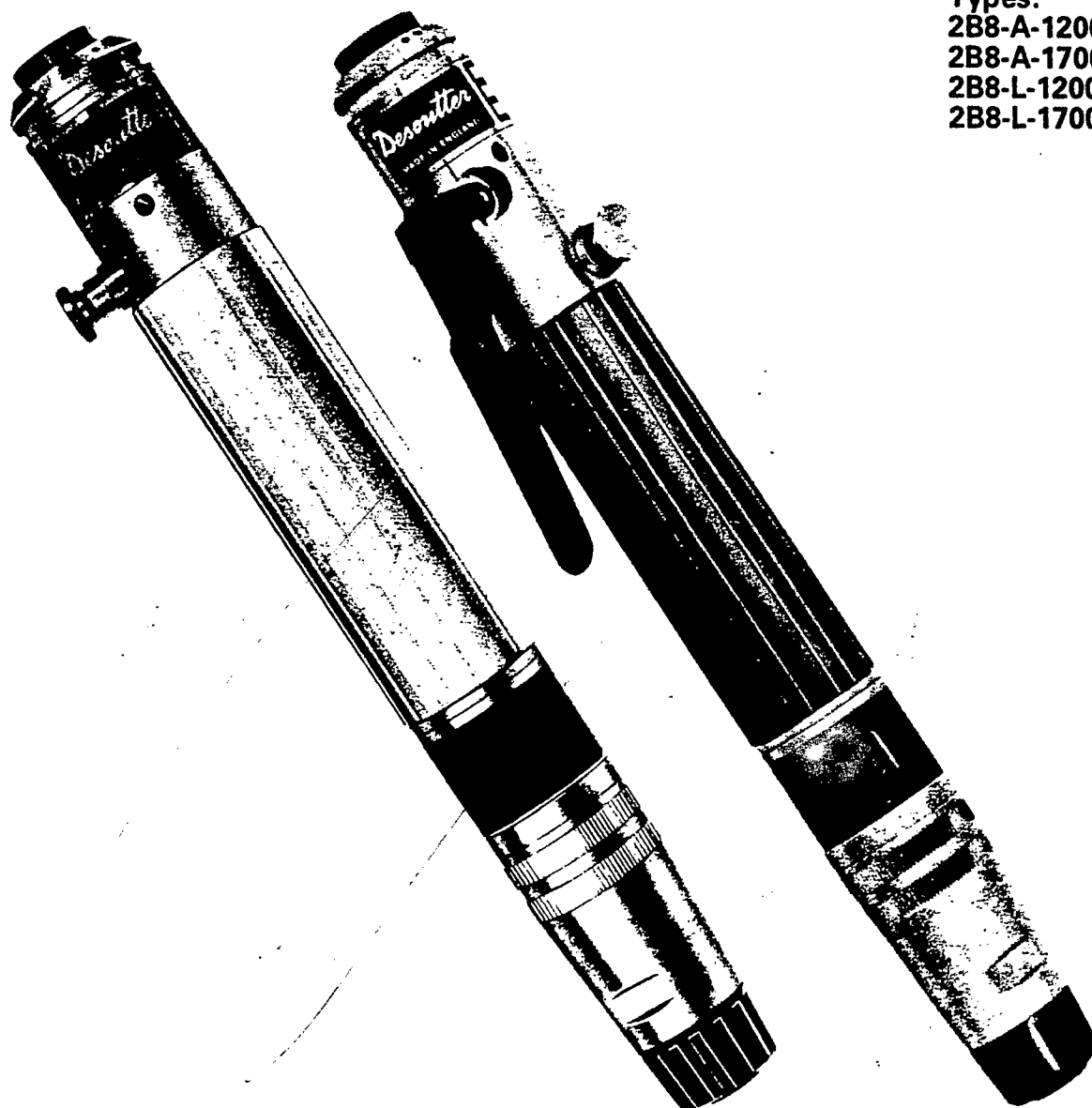


**Desoutter**

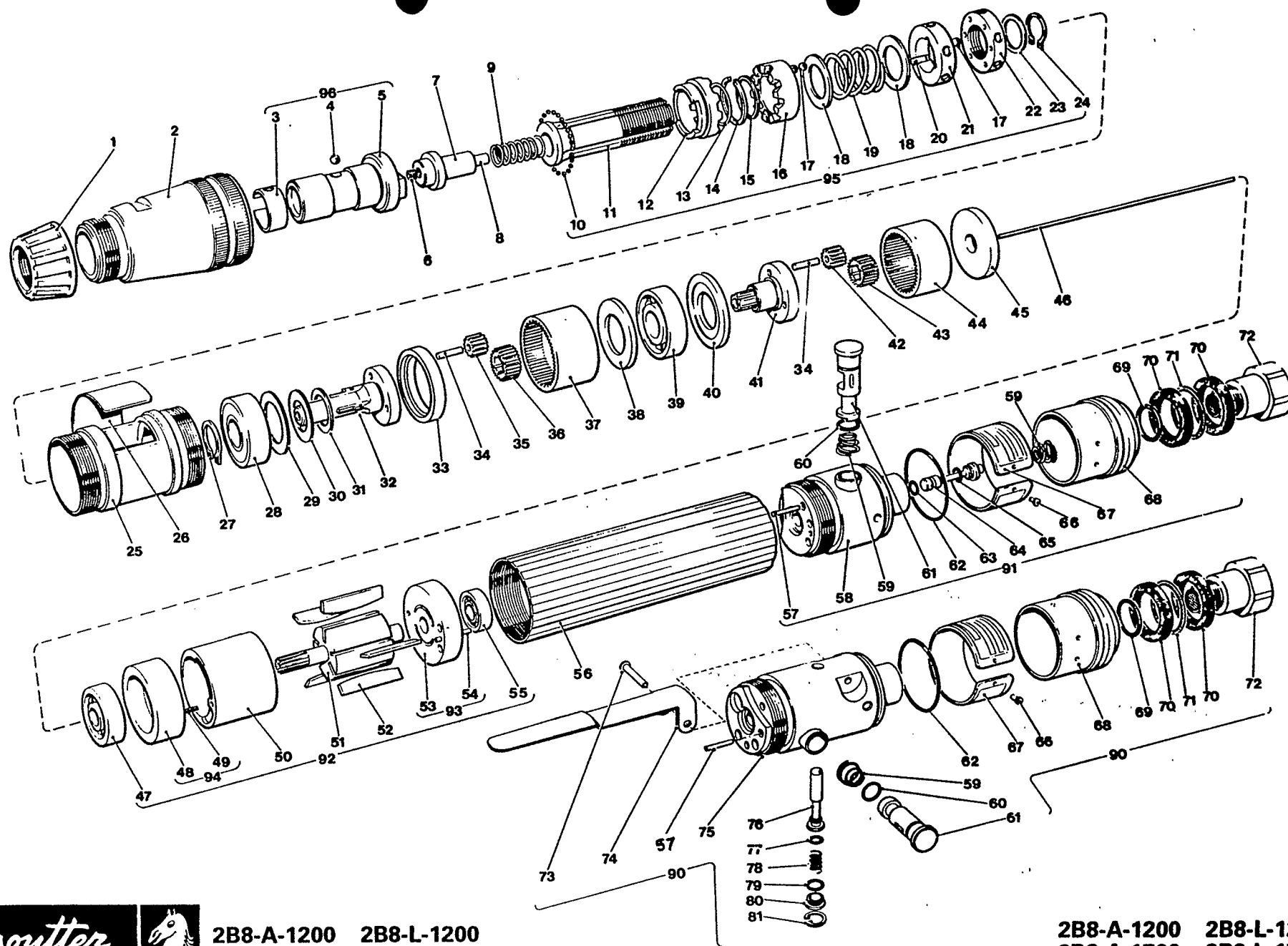
## Miniature Reversible Screwdrivers

Types:  
2B8-A-1200  
2B8-A-1700  
2B8-L-1200  
2B8-L-1700



1/4 in.	5/16 in.	5 mm
6284	7254	5474
6364	7334	5554
9614	9534	
9874	9794	

## Operating and Service Instructions



**Desoutter**



2B8-A-1200 2B8-L-1200  
2B8-A-1700 2B8-L-1700

2B8-A-1200 2B8-L-1200  
2B8-A-1700 2B8-L-1700

2B8-A-1700 2B8-L-1700

2B8-A-1700 2B8-L-1700

Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty	Item No.	Part No.	Description	Qty
1	177163	Thread Protection Cap	1	57	203903	Pin	1		65092	Pistol Grip Kit Model A Only	1
2	170473	Bearing Housing and Bush Assembly	1	58	176233	Control Top and Bush	1		64592	Hush Silencing Kit	1
3	86058	Spring Clip 1/4in. Hex Drive	1	59	96843	Spring	2		50602	Vacuum Pick-up Kit 1/4in. BSP Inlet	1
	67458	Spring Clip 1/4in. Hex Drive	1	*60	216463	'O' Ring	1			1/4in. Hex. Drive	1
4	66868	Ball 1/4in. Hex Drive	1	61	203913	Reverse Valve and Button	1		50632	Vacuum Pick-up Kit 1/4in. NPT Inlet	1
	72408	Ball 1/4in. Hex Drive	2	*62	177923	'O' Ring	1			1/4in. Hex. Drive	1
5	170503	Bit Holder 1/4in. Hex Drive	1	*63	216473	'O' Ring	1				
	201103	Bit Holder 1/4in. Hex Drive	1	64	217713	Valve Stem	1				
6	205943	Self Locking Set Screw - Type A Only	1	*65	176273	'O' Ring	1				
7	270143	Bearing Pin	1	66	54853	Drive Screw	2				
8	20553	Roller - Type A Only	1	67	209303	Nameplate	1				
9	170433	Spring	1	68	223363	Silencer Housing	1				
10	4023	Ball	24	*69	203713	'O' Ring	1				
11	170343	Clutch Spindle	1	70	223353	Silencer	2				
12	170353	Fixed Clutch	1	71	64093	'O' Ring	1				
13	68943	Circlip - Round Section	1	72	176283	Adaptor 1/4in. BSP	1				
14	170663	Circlip - Square Section	1		177123	Adaptor 1/4in. NPT	1				
15	170653	Washer	1								
16	170363	Sliding Clutch	1								
17	72228	Ball	9								
18	170393	Washer	2	73	201043	Lever Control Top (Difference)	1				
19	179913	Spring - Grey	1	74	201033	Pin	1				
	202413	Spring - Orange	1	75	200973	Lever	1				
20	170403	Roller	3	76	200993	Control Top and Bush	1				
21	170413	Lock Washer	1	*77	176273	Lever Valve Spindle	1				
22	170423	Adjusting Nut	1	78	201013	'O' Ring	1				
23	203943	Washer	1	*79	43493	Spring	1				
24	42353	Circlip	1	80	201003	'O' Ring	1				
25	170453	Clutch Case	1	81	215613	Lever Valve Cap	1				
26	170463	Spring Ring	1								
27	200083	Circlip	1								
*28	178543	Bearing	1	90	226993	Complete Assemblies	1				
29	216493	Shim 0.005in. (0.13mm)	1		227003	Control Top Complete 1/4in. BSP	1				
30	206633	Shim 0.005in. (0.13mm)	1	91	224043	Control Top Complete 1/4in. NPT	1				
31	76640053	Shim 0.005in. (0.13mm)	1		224053	Control Top Complete 1/4in. BSP	1				
32	170283	Planet Cage	1	92	177183	Control Top Complete 1/4in. NPT	1				
33	216483	Shim Housing	1	93	177083	Motor Complete	1				
34	170233	Planet Pin	6	94	177093	Rear Bearing Housing and Pin	1				
35	170223	Planet Wheel	3	95	177093	Front Bearing Housing and Pin	1				
36	170213	Pinion	1	96	170333	Clutch Complete Grey Spring	1				
37	170273	Internal Gear	1		177153	Bit Holder Complete 1/4in. Hex	1				
38	170253	Washer	1		201093	Bit Holder 1/4in. Hex Complete	1				
*39	2423	Bearing	1		223233	Bit Holder 5mm Complete	1				
40	170243	Washer	1								
41	174243	Planet Cage and Bush 1200 RPM	1								
	174313	Planet Cage and Bush 1700 RPM	1								
42	170763	Planet Wheel 1200 RPM	1	13963	1.5mm Hexagon Wrench	1					
	170223	Planet Wheel 1700 RPM	1	178973	Clamp Block	(pair) 1					
43	170213	Pinion 1700 RPM Only	1	178883	Spanner for Item 2	1					
44	174253	Internal Gear 1200 RPM	1	178893	Key Clutch Case	1					
	174303	Internal Gear 1700 RPM	1		Key Control Top	1					
45	177173	Washer	1								
46	177213	Push Rod Type A	1	39433	Supplied Accessories	1					
	226013	Push Rod Type L	1	178963	Suspension Bail	1					
*47	64396	Bearing	1	215513	Clutch Adjusting Rods	2					
48	174353	Front Bearing Housing	1	202413	Exhaust Hose	1					
49	154543	Pin	1	39862	Clutch Spring - Orange	1					
50	174323	Cylinder	1		Plastic Hose Complete 1/4in. BSP	1					
51	174373	Rotor 1200 RPM	1		(2 metres long)						
	235943	Rotor 1700 RPM	1								
*52	174363	Rotor Blades	5	36822	Optional Accessories	1					
53	174343	Rear Bearing Housing	1		Plastic Hose Complete 1/4in. NPT	1					
54	203903	Pin	1	64102	(2 metres long)	1					
*55	8843	Bearing	1		Plastic Hose Complete 1/4in. BSP	1					
56	174583	Motor Case C/W Sleeve	1	64122	(3 metres long)	1					
					Plastic Hose Complete 1/4in. NPT	1					
					(3 metres long)						

NOTE: Information on the complete range of slotted and cruciform screwdriver bits and nutrunners are available on request.

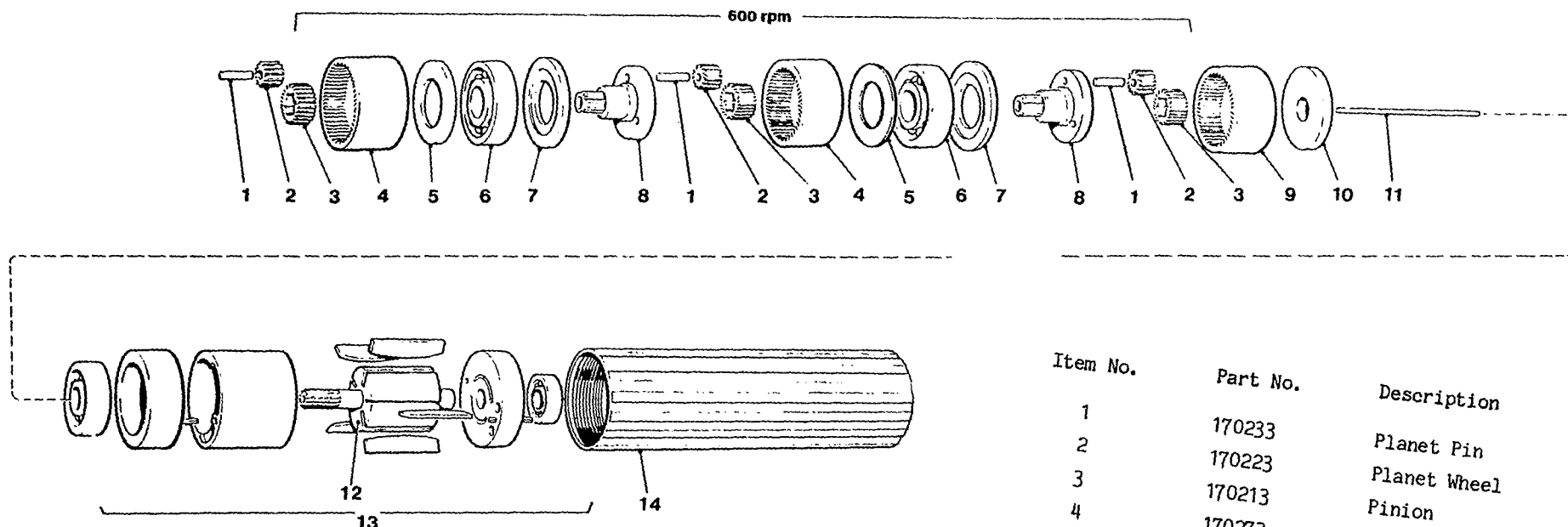
Always quote tool model number, serial number and spare part number when ordering spares.

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



Desoutter Limited, 319 Edgware Road,  
Colindale, London NW9 6ND  
Telephone 01-205 7050 Telex 21392

Printed in England



Item No.	Part No.	Description	Qty
1	170233	Planet Pin	9
2	170223	Planet Wheel	9
3	170213	Pinion	3
4	170273	Internal Gear	2
5	170253	Washer	2
6	2423	Bearing	2
7	170243	Washer	2
8	174313	Planet Cage	2
9	174303	Internal Gear	1
10	177173	Washer	1
11	223643	Push Rod-Type A	1
---	223643	Push Rod-Type L	1
12	235943	Rotor	1
13	235983	Motor Complete	1
14	223633	Motor Case	1



**2 B8-A-600**  
**2 B8-L-600**

**Desoutter Limited,**  
319 Edgware Road, Colindale, London NW9 6ND.  
Telephone: 01-205 7050  
Telex: 21392

Printed in England

All other details as service sheet for 1200-1700 RPM tools.



2B8-A-1200 2B8-L-1200  
2B8-A-1700 2B8-L-1700

## Servicing Instructions

2B8-A-1200 2B8-L-1200  
2B8-A-1700 2B8-L-1700

### TO DISMANTLE

All threads are L.H. unless otherwise stated.

Use spanner 178973 to unscrew the bearing housing (2) and remove the bearing pin (7) with roller (8) and set screw (6). (Note the latter two components only fitted in Type A tools), then spring (9). Withdraw clutch assembly (95) and pull out the push rod (46). Use a 1/4 in. A/F spanner to remove the adaptor (72) and remove the two silencers (70) and 'O' ring (71).

To dismantle the clutch assembly (95) remove the circlip (24) and washer (23) then unscrew the adjusting nut (22) R.H. thread. Slide off the lock washer (21) washers (18) spring (19) clutch (16) rollers (20) bearings (16) and washer (15). Remove the circlips (14) and (13), slide off the fixed clutch (12) taking care to catch the bearings (10).

Clamp the control top key 178893 in a vice with the pins upward. Engage the control top (58) holes with the key pins and insert the hexagon of key 178883 into the clutch case (25) and unscrew. The control top (58) should also be released, if not use clamp blocks and secure the case (56) in a vice and use the pin key to unscrew the control top.

Push the motor and gearbox assemblies out of the case, remove the circlip (27). It may be necessary to use a soft-faced hammer on the spindles of planet cages (32) and (41) and the rotor (51) to separate the component.

### TO ASSEMBLE

NOTE: It is recommended that all 'O' rings and circlips are changed on overhaul.

#### Motor:

Pack bearing (55) with grease and press into the rear housing (53), check that the pin (54) is fitted to the housing. Fit the short end of the rotor (51) through the rear bearing housing into the bearing. Slide the cylinder over the rotor ensuring that the pin hole engages on the pin in the rear bearing housing and the air holes are aligned. Fit five rotor blades flat side to cylinder and liberally oil.

Fit the front bearing housing flat side to the cylinder, check that the pin (49) is fitted and engages in the location hole in the cylinder. Pack bearing (47) with grease and press onto the rotor and into its seat in the housing.

#### Gearboxes:

Fit three planet wheels (42) to the primary planet cage (41) held in by planet pins (34). Grease the wheels and the internal gear and fit together. Fit the flat side of washer (45) to the rear of the internal gear and the flat side of washer (40) to the front. Pack bearing (39) with grease and fit over the primary planet cage spindle.

Fit three planet wheels to the final planet cage (32) with planet pins (34). Grease the planet wheels and internal gear (37) and fit together. Slide the shim housing onto the front of the planet cage cut-out to the front followed by the shims (31), (30) and (29). Pack bearing (28) with grease and press onto the planet gear shaft with the bearing shield to the front of the tool. Secure by fitting the circlip (27).

#### Control Top:

Fit a new 'O' ring (60) to the reverse valve (61). Insert one of the conical springs (59) into the bushed hole in the control top (58) large end to the bottom of the hole, fit the reverse valve and secure with pin (57).

#### Clutch:

Grease the bearing channel at the front of fixed clutch (12), insert the clutch spindle (11) approximately three quarters of its travel. Fit the twenty four balls (10) into the ball channel of the fixed clutch, push the clutch spindle to the end to secure the balls. Fit the round circlip (13)

up to the fixed clutch followed by the square section circlip (14) and washer (15). Grease the three channels of the clutch spindle and fit two balls (17) in each channel. Fit the sliding clutch (16) to the spindle with the dogs engaging and over the balls in the channels. Slide one washer (18) followed by the spring (19) and second washer (18). Grease the inside channels of the lock washer (21) and fit three rollers (20) and fit to the clutch spindle. Fit three balls (17) to the indentations on the face of the lock washer and screw the adjusting nut (22) onto the clutch spindle. Secure with the washer (23) and circlip (24).

#### Final Assembly:

Fit the motor assembly into the rear of the motor case (56) leaving it slightly protruding. Engage the control top location hole (central between the air holes) and screw the control top into the motor case maintaining a light pressure on the motor spindle to ensure alignment. Clamp the motor case in clamp blocks held in a vice and use service key 178893 in the control top, tighten to a torque of 14 Nm (10.5 lbf ft) ensuring that the control top is flush against the motor case.

Fit the pinion (43) (1700 RPM Models only) to the motor rotor and slide the primary planet cage assembly down the motor case checking that the gears mesh.

Fit pinion (36) to the primary planet cage pinion and slide the secondary planet cage assembly down the motor case checking that the gears mesh, secure by screwing into the front of the motor case the clutch case (25).

Clamp key 178893 in a vice and hold the control top down onto the pins, use key 178883 tighten the clutch case to 13.56 to 16.27 Nm (10 to 12 lbf ft).

Insert the push rod through the centre hole of the secondary planet cage and fit the clutch assembly.

NOTE: On the Type A Models fit the set screw (6) and roller (8) to the bearing pin. Fit the spring (9) inside the clutch spindle followed by the bearing pin assembly and bit holder (96) secured by screwing on the bearing housing and bush assembly (2). Fit the thread protection cap (1).

#### Model A Series Only:

Fit a new 'O' ring (62) to the control top and 'O' rings (63) and (65) to the valve stem (64), lightly smear the 'O' rings on the valve stem with silicone grease. Fit the small end of the conical spring (59) to the end of the valve stem and insert the valve into the control top.

#### All Models:

Fit the silencer case (68) followed by the two silencers (70 either side of 'O' ring (71) and secured with the adaptor (72) with a new 'O' ring (69) fitted. Tighten the adaptor to 11.25 to 12.47 Nm (8.3 to 9.2 lbf ft) R.H. thread.

#### Model A Only:

Adjustment after assembly:

Insert a 1.5mm hexagon wrench through the end of the bit holder (96) and engage with the set screw (6) and unscrew R.H. thread a couple of turns to ensure that the push rod (46) is clear of valve (64). Position a piece of cloth over the air inlet as a moisture trap. Blow into the inlet where considerable resistance will be felt and at the same time screw up the set screw until the valve just opens, denoted by no resistance to air pressure. Then slowly unscrew the set screw until resistance to blowing is felt, i.e. valve closed. This indicates that all play between the roller (8) push rod (46) and valve (64) is taken up. Unscrew the set screw one full turn to give the operating setting.

In service the tool should require a slight forward pressure to start, a further small forward movement for the bit to rotate and when lifted from the job should stop immediately. Slight adjustment to the set screw setting may be necessary to produce the operational sequence.

#### All Models:

##### Clutch Adjustment:

Insert one clutch adjusting rod into a hole in lock washer (22) and the other in the adjusting nut (21). Turn the adjusting nut R.H. thread in the required direction, tighten to increase torque setting. The adjusting nut is locked by the three spring-loaded balls (17) and a definite click should be heard every one sixth of a revolution of the nut.

- (1) Always disconnect tool from the air supply before attempting any replacement, adjustment, servicing or dismantling.
- (2) Ensure no loose articles of clothing or cleaning materials can be caught by the rotating parts of the tool.
- (3) Adjustable spring tension clutches are fitted to most models and can be set to ratchet (or cut-out on one shot models) at a pre-determined torque. A second clutch spring is supplied with each torque controlled screwdriver to extend the range of torque settings available within the power rating of the tool.
- (4) Automatic start screwdrivers operate when a light pressure is applied to the fastener. Though a steady pressure must be applied throughout the operating cycle to keep the screwdriver and fastener in engagement.
- (5) Release the screwdriver as soon as the clutch ratchets, as continued engagement will increase the torque loading on the fastener.

### AIRLINE MAINTENANCE AND LUBRICATION

To obtain maximum efficiency and minimise maintenance of your air tools the following points should be observed.

The air supply should be clean, dry and filtered.

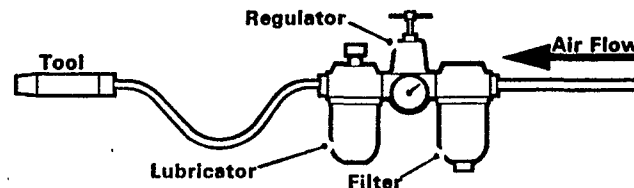
Select a filter of correct size for the pressure and air flow.

Maintain the recommended supply pressure of 6 bar (87 lbf ins) selecting a pressure regulator with flow and pressure range to suit application.

An automatic airline lubricator adjusted to deliver the correct quantity of oil and selected to suit the required airflow should be included in the tool installation.

When an automatic lubricator is not fitted the tool must be lubricated at least twice a day by pouring a small quantity (5 cc) through the air inlet.

Site the filter and lubricator in the supply line as near as possible to the tool.



Desoutter recommend

Oil - Duckhams 'ZeroFlo 2' to BS 2626/1965 for rotor blades.

Grease - Duckhams Type Q5618 for gearboxes and bearings.

Silicone grease - Molykote 33 for 'O' rings.