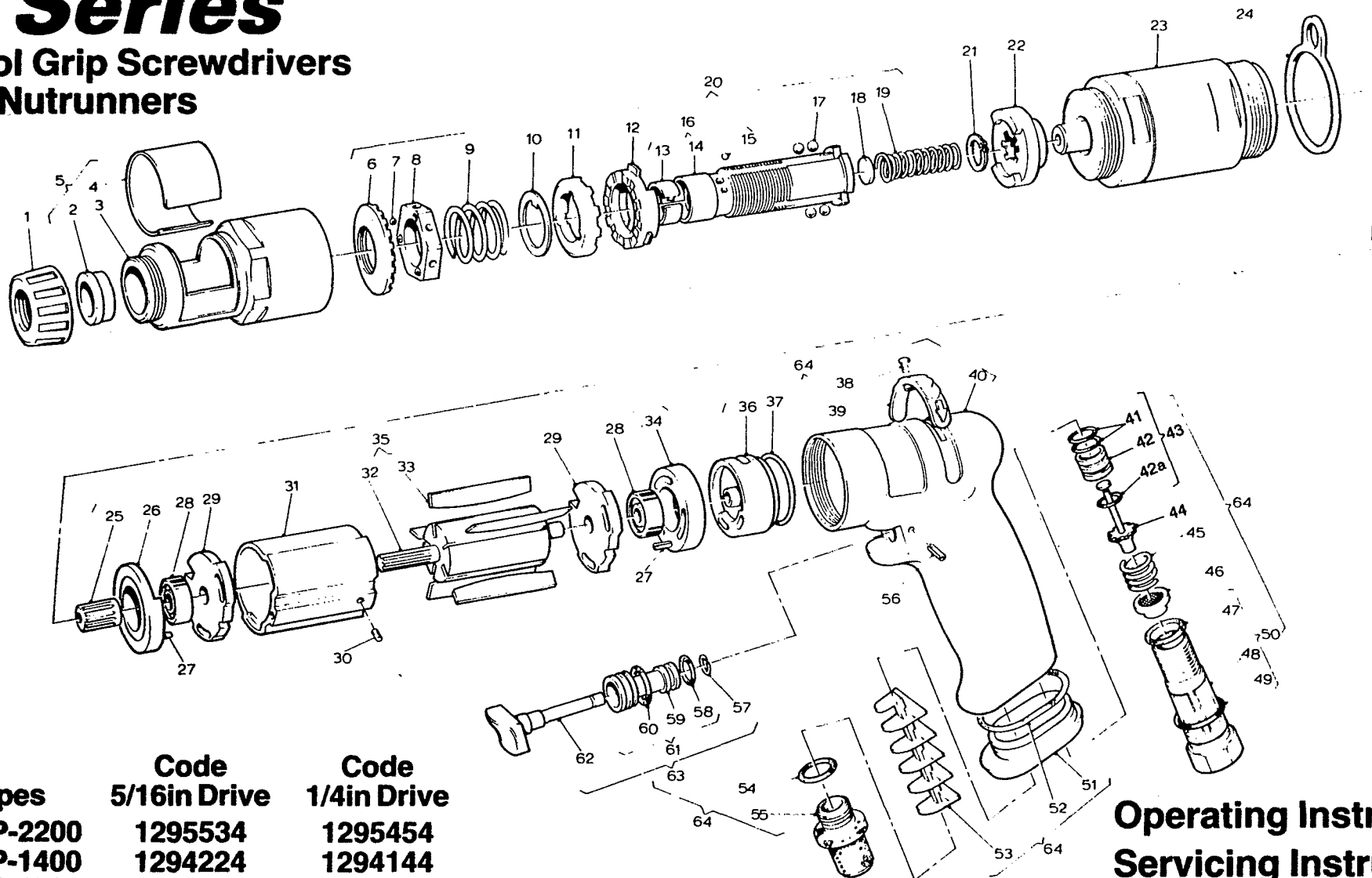


# Desoutter D Series

**Pistol Grip Screwdrivers  
and Nutrunners**



Types	Code 5/16in Drive	Code 1/4in Drive
2D8-P-2200	1295534	1295454
2D8-P-1400	1294224	1294144
2D8-P-850	1294484	1294304
2D8-P-600	1294644	1294564

**Operating Instructions  
Servicing Instructions  
Parts List**

## 2D8-P

## Operating/Service Instructions

## 2D8-P

## TO ASSEMBLE

## Sub-Assemblies

Using the illustration as a guide assemble the pistol grip, planet cages and if dismantled the clutch.

The following instructions for the motor complete (35) must be followed.

Take the rotor (32) and place the rear bearing plate (29), with grooves to rotor, into position. Press bearing (28) onto the rotor so that there is a 0.038mm (0.0015in.) gap between the rotor and the rear bearing plate. Holding the rotor and rear bearing plate assembly with the gear end of the rotor uppermost, slide the cylinder (31) over the rotor.

NOTE: The cylinder must be located with the motor alignment pin (30) biased to the rear bearing plate.

Locate the rotor blades (33) and lubricate, place the front bearing plate (29) in position, with grooves to rotor. Place this sub-assembly, gear end of rotor uppermost, onto a fixture which locates only on the rotor rear spigot. Align the location slots in both bearing plates with the pin holes in the cylinder and push on bearing (28). Press home until the bearing bottoms on the front bearing plate BUT do not preload the bearing. Locate the rear bearing housing, with its spring pin, onto the motor then press on the front bearing housing making sure that the spring pins are correctly located. Check for free rotation of the rotor.

## Final Assembly

Enter the motor complete (35) into the pistol grip body (40) taking care that the rear bearing housing (34) remains in position and the motor is located by the motor alignment pin (30).

Engage the gearbox (23) with the rotor (32) and screw into position, before final tightening check that the drive is free to rotate.

Replace the dog clutch (22) and retain with circlip (21), locate the clutch (20) making sure that seating (18) and spring (19) are in place. Screw the clutch case (5) into position.

Connect the tool to the air supply and test for correct operation.

## Main Assembly Parts List

Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
*1	74088	Thread Protecting Cap	1	—	295833	Clutch Complete — Green —	1	*49	99853	'O' Ring	1
2	73798	Bearing Bush	1			5/16in. Hex Drive	1	50	501193	Air Inlet Bolt Assembly —	As reqd
3	251533	Clutch Case	1	*21	42353	Circlip	1			1/4in. BSP	
4	76713	Spring Ring	1	22	260023	Dog Clutch	1	—	501213	Air Inlet Bolt Assembly —	As reqd
5	251543	Clutch Case Complete	1	23	See later					1/4in. NPT	
6	76003	Adjusting Nut	1			section	1	51	501383	Exhaust Cap	1
7	72228	Ball	3	24	61413	Suspension Ring	1	*52	52663	'O' Ring	1
8	76013	Locking Washer	1	25	65373	Pinion — 850 & 600rpm	1	53	501683	Exhaust Helix	1
9	71378	Clutch Spring — Yellow	1	26	254893	Front Bearing Housing	1	*54	40533	'O' Ring	1
—	67428	Clutch Spring — Red	1	27	256123	Spring Pin	2	55	256433	Silencer — Sintered	1
—	68448	Clutch Spring — Green	1	*28	33433	Bearing	2	*56	500913	Spring Pin	1
10	67148	Retaining Washer	1	29	254873	Bearing Plate	2	*57	500783	Circlip	1
11	67138	Sliding Clutch	1	30	291603	Motor Alignment Pin	1	*58	500953	'O' Ring	1
12	76683	Fixed Clutch	1	31	291593	Cylinder with Pin 30	1	*59	500963	'O' Ring	1
13	86053	Spring Ring — 1/4in. Hex Drive	1	32	257063	Rotor — 2200rpm	1	60	500363	Valve Body	1
—	67458	Spring Ring — 5/16in. Hex Drive	1	—	36663	Rotor — 1400rpm	1	61	501173	Valve Body Assembly	1
14	76723	Clutch Spindle — 1/4in. Hex Drive	1	—	98223	Rotor — 850 & 600rpm	1	62	501873	Valve Stem/Button Assembly	1
—	76703	Clutch Spindle — 5/16in. Hex Drive	1	*33	36613	Rotor Blade	5	63	501963	Valve Assembly	1
15	66863	Ball — 1/4in. Hex Drive	1	34	291583	Rear Bearing Housing with Pin 27	1	64	291503	Pistol Grip Complete 1/4in. BSP	As reqd
—	72408	Ball — 5/16in. Hex Drive	1	35	291623	Motor Complete — 2200rpm	1	—	291513	Pistol Grip Complete 1/4in. NPT	As reqd
16	87163	Clutch Spindle Complete —	1	—	291613	Motor Complete — 1400rpm	1				
—		1/4in. Hex Drive	1	—	291643	Motor Complete — 850 & 600rpm	1				
—	87153	Clutch Spindle Complete —	1	36	291533	Valve	1				
—		5/16in. Hex Drive	1	*37	291553	'O' Ring	1				
17	72408	Ball	6	38	291563	Screw	1	—	29932	Clutch Adjusting Key	1
18	69853	Seating	1	39	291543	Valve Slide	1	9	67428	Clutch Spring — Red for 2200rpm	1
19	67448	Spring	1	40	291523	Pistol Grip	1	—	71378	Clutch Spring — Yellow for	1
20	295853	Clutch Complete — Yellow —	1	*41	202373	'O' Ring	2	—	68448	Clutch Spring — Green for	1
—		1/4in. Hex Drive	1	42	292403	Valve Seat	1	—		850rpm	1
—	295813	Clutch Complete — Yellow —	1	42a	302373	'O' Ring	1	—	73318	Clutch Spring — Blue for	1
—		5/16in. Hex Drive	1	43	501203	Valve Seat Assembly	1			600rpm	1
—	295863	Clutch Complete — Red —	1	44	501093	Valve Assembly	1				
—		1/4in. Hex Drive	1	45	501103	Spring	1				
—	295823	Clutch Complete — Red —	1	46	500933	Air Strainer	1				
—		5/16in. Hex Drive	1	*47	500973	'O' Ring	1				
—	295873	Clutch Complete — Green —	1	48	500353	Air Inlet Bolt — 1/4in. BSP	As reqd				
—		1/4in. Hex Drive	1	—	500343	Air Inlet Bolt — 1/4in. NPT	As reqd				

## Supplied Accessories

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

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

## 2D8-P

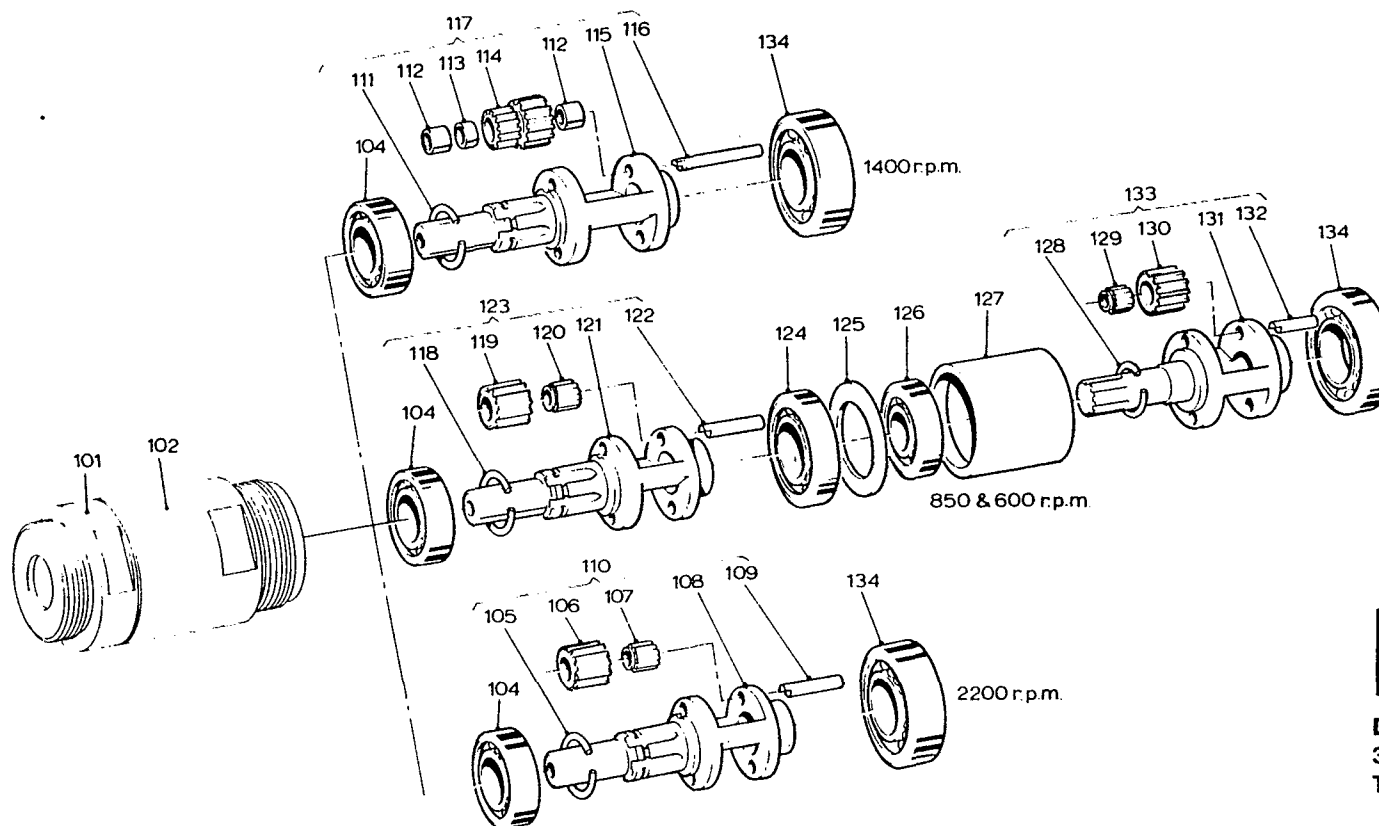
## Gear Boxes and Parts List

## 2D8-P

Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
101	291773	Gear & Nose — 2200rpm	1	114	238713	Planet Wheel	2	127	36713	Gear Ring	1
—	274093	Gear & Nose — 1400rpm	1	115	76753	Planet Cage	1	*128	25563	Circlip — 850rpm	1
—	274103	Gear & Nose — 850 & 600rpm	1	*116	41693	Planet Pin	2	—	25573	Circlip — 600rpm	1
102	291783	Clamp Sleeve — 2200rpm	1	117	76773	Planet Cage Complete — 1400rpm	1	*129	502093	Needle Bearing	2
—	291653	Clamp Sleeve — 1400rpm	1					130	65383	Planet Wheel — 850 & 600rpm	2
—	291663	Clamp Sleeve — 850 & 600rpm	1	*118	25573	Circlip — 850rpm	1	131	83123	Planet Cage — 850rpm	1
103	Number not used			—	37423	Circlip — 600rpm	1	—	81473	Planet Cage — 600rpm	1
*104	178543	Bearing	1	119	65383	Planet Wheel — 850rpm	2	*132	1453	Planet Pin	2
*105	25563	Circlip	1	—	36703	Planet Wheel — 600rpm	2	133	78053	Planet Cage Complete — 850rpm	1
106	150813	Planet Wheel	2	*120	502093	Needle Bearing	2	—	81483	Planet Cage Complete — 600rpm	1
*107	502093	Needle Bearing	2	121	83343	Planet Cage — 850rpm	1	*134	2413	Bearing	1
108	268903	Planet Cage	1	—	42243	Planet Cage — 600rpm	1				
*109	1453	Planet Pin	2	*122	1453	Planet Pin	2				
110	268893	Planet Cage Complete — 2200rpm	1	123	83353	Planet Cage Complete — 850rpm	1				
				—	42473	Planet Cage Complete — 600rpm	1				
*111	63323	Circlip	1	*124	2413	Bearing	1				
*112	502093	Needle Bearing	4	125	37623	Washer	1				
113	238343	Spacer	2	*126	2423	Bearing	1				

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

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



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

## 2D8-P

## Operating/Service Instructions

## 2D8-P

## REQUIREMENTS

## Air Supply

A water free and filtered air supply is required, at a pressure of 6 bar (87 lbf.in<sup>2</sup>), with a flow of 8.5 l/s (18 cu.ft/min); controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

## Lubrication

Correct lubrication is vital for the maximum performance of the tool and an airline lubricator should be fitted into the system down stream of the filter.

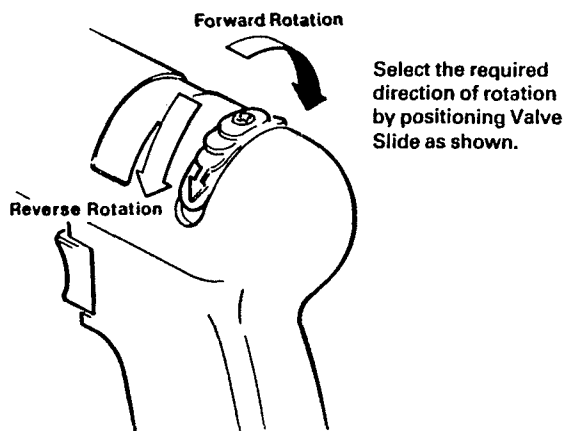
Desoutter recommend the use of an ISO Viscosity Classified Oil, grade number ISO VG 15, in the lubricator.

## Optional Accessories

A wide range of screwdriving bits and nutrunning sockets are available and a suitable item should be selected from the Desoutter Accessories Catalogue.

The retention of these items is by spring loaded ball, they require a sharp pull to release.

## OPERATING



With the correct accessory fitted into the tool connect the air supply. Hold the tool around the pistol grip and operate the button control. The motor will run but the bit/socket will remain stationary until the tool is pressed onto the fixing that is to be tightened. When the required torque, set by adjusting the clutch spring, is reached the clutch will ratchet; at this point the tool should be withdrawn from the fixing and the button released.

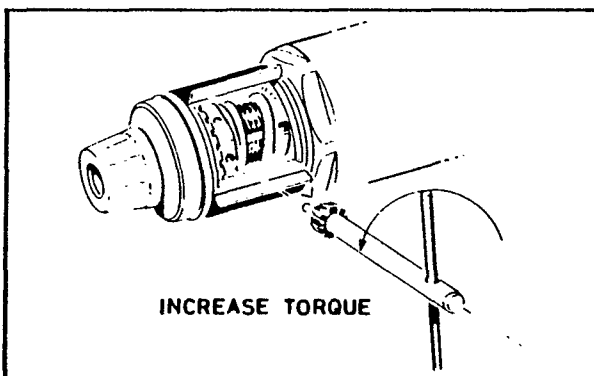
## WARNING

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

## INITIAL SETTING

When received the torque output of the tool will require setting to match the job requirement.

It is recommended that a trial tightening operation is carried out to determine the amount of adjustment required. The ideal instrument for checking the torque is an electronic peak meter (request information from Desoutter); failing this a dial indicating torque wrench is adequate.



## Clutch Adjustment

Rotate spring clip to uncover access hole in clutch case, insert clutch key, supplied with tool, and rotate to obtain the required torque (see illustration).

## SERVICE REQUIREMENTS

## General Notes

Use the following lubricants:

Oil — ISO Viscosity Classified — ISO VG15, for motors.  
Grease — BP FG00-EP, for motor bearings.  
Grease — Duckhams Type Q5618, for gears and other bearings.  
Silicone Grease — Molykote 33, for 'O' rings.

The following tools will be required:

Spanner — 34mm  
Spanner — 32mm  
Spanner — 19mm  
Screwdriver — No. 1 Posidriv

The following torque values MUST be used:

Item 1 to Item 5: Hand tighten  
Item 5 to Item 23: 24.4Nm (18 lbf.ft)  
Item 50 to Item 40: 13.5Nm (10 lbf.ft)  
Item 101 to Item 102: 34Nm (25 lbf.ft)  
Item 102 to Item 40: 34Nm (25 lbf.ft)

Replace as necessary all 'O' rings, gaskets, bearings and rotor blades.

Bearings that have a retainer holding the balls in place must be assembled into the tool with the blank face of the retainer to the air flow: in the case of the motor the blank faces must face each other across the rotor.

The following components have left hand threads:— item 1, item 5 and the front thread of item 101. All other threads are right hand.

## TO DISMANTLE

Clamp the pistol grip body (40) in a soft jawed vice and unscrew the clutch case (5), remove the clutch complete (20), release circlip (21) and pull off dog clutch (22).

Unscrew the gearbox (23) from the pistol grip and pull out the motor complete (35).

Remove screw (38) and lift off valve slide (39); withdraw valve (36) with its 'O' ring (37).

Remove the pistol grip body from the vice, unscrew air inlet bolt (50) remove the exhaust cap (51) the internal components can now be withdrawn out of the base of the pistol grip.

To release valve assembly (63) drive out spring pin (56) and pull the valve stem/button assembly (62).

The remainder of the dismantling follow normal engineering practice with reference to the illustration.