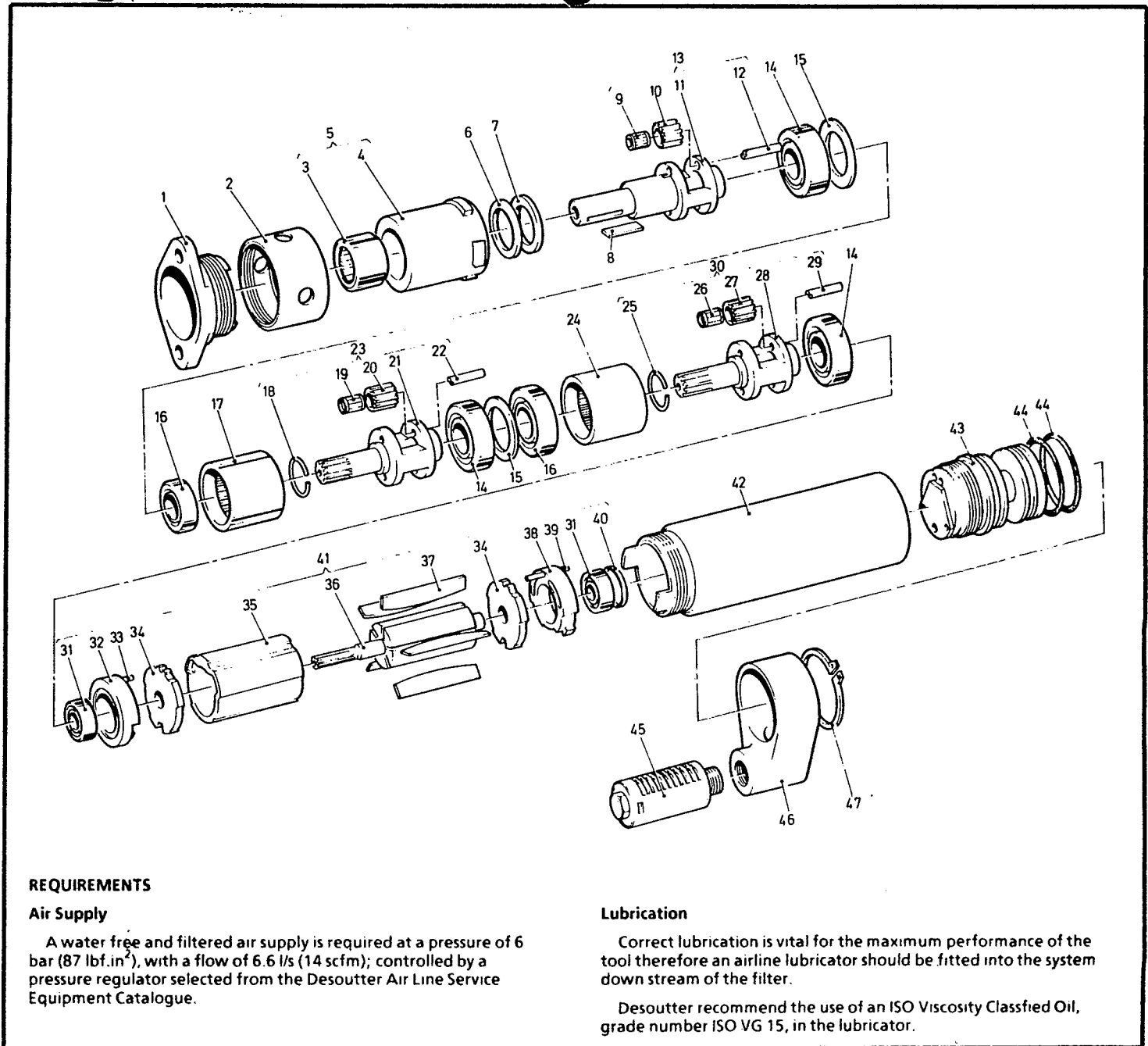


# Desoutter

## DM5 Series Air Motors

Type	Code
DM5 - 100	1320774
DM5 - 65	1320854
DM5 - 40	1320934

### Servicing Instructions Parts List



#### 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 6.6 l/s (14 scfm); 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 therefore 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.



**Desoutter Limited,**  
**319 Edgware Road, Colindale, London NW9 6ND.**  
**Telephone: 01-205 7050**      **Telex: 21392**  
**Fax: 01-205 5167**

## SERVICING REQUIREMENTS

## General Notes

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

Use the following lubricants:

Oil - ISO Viscosity Classified - ISO VG 15, for motor.

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 torque values MUST be used:

Item No.	Description	Torque	Thread
2	Clamp Ring	40Nm(29.5lbf.ft)	R.H.
43	Air Inlet Cap	Finger Tight	L.H.

The following service tools are required:

Item No.	Part No.	Description	Qty.
-	305333	Flange Holding Plate	1
-	305313	Clamp Blocks	1pr

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 motor

## TO DISMANTLE

Remove the Circlip (47) securing the Exhaust Collector (46); remove the Exhaust Collector complete with Silencer (45). Place the Motor into the Flange Holding Plate (305333) and grip the plate in a vice. Scribe a line on the Motor Case (42) in line with a flange hole to aid re-assembly. Place the Clamp Blocks (305313) around the Clamp Ring (2) and unscrew with a 46mm spanner, R.H. thread. The assembly (items 3-44) can now be lifted from the Flange (1) and Clamp Ring (2). Unscrew the Air Inlet Cap (43), L.H. thread, which is finger tight, and remove the Motor Case (42). Separate the Motor Complete (41) from the Planet Cages Complete (13) (23) (30), Gear Rings (17) (24) and Gear and Nose Sub-assembly (5). Separate the Planet Cages Complete from the Gear Rings by holding the Assembly in one hand and tapping the Planet Cage Spindle with a Hide Mallet. This method is used when separating the Motor Assembly.

## TO RE-ASSEMBLE

The following instructions for the motor complete (41) must be followed.

Take the rotor (36) and place the rear bearing plate (34) with grooves to rotor, into position. Press bearing (31) 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 (35) over the rotor.

Locate the rotor blades (37) and lubricate, place the front bearing plate (34) 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 (31). Press home until the bearing bottoms on the front bearing plate BUT do not preload the bearing. Locate the rear bearing housing (38) with its spring pin onto the motor then press on the front bearing housing (32) making sure that the spring pins are correctly located. Check for free rotation of the rotor.

Assemble the Planet Cages (13) (23) (30), Gear Rings (17) (24) and Gear and Nose Sub-assembly (5) and insert the whole assembly into the Motor Case (42) from the front ensuring the lugs on the Internal Gear and Nose (4) and Motor Case (42) mesh correctly. Screw in the Air Inlet Cap (43), L.H. thread, finger tight ensuring the Rear Bearing Housing Pin (39) is located in the correct hole for the desired direction of rotation. Viewing on the front face of the Air Inlet Cap the R.H. hole for Normal (clockwise) direction and L.H. hole for Reverse (anticlockwise) direction.

With the Flange Holding Plate (305333) gripped in a vice, and the Flange (1) mounted on it, place the Clamp Ring (2) R.H. thread towards the Flange and insert the assembled Motor and Gears into the Flange. Start the threads by hand and then line up the mark, made on the Motor Case (42) when dismantling, with either flange hole, place the Clamp Blocks (305313) around the Clamp Ring (2) and tighten. Fit the Exhaust Collector (46) over the Air Inlet Cap (43) and fit the circlip (47).

Item No.	Part No.	Description	Qty.
1	295003	Flange	1
2	294993	Clamp Ring	1
*3	293273	Needle Bearing	1
4	295053	Internal Gear & Nose 100 rpm	1
-	295063	Internal Gear & Nose 65 rpm	1
-	296343	Internal Gear & Nose 40 rpm	1
5	298423	Gear & Nose Sub-assy 100 rpm	1
-	298413	Gear & Nose Sub-assy 65 rpm	1
-	298433	Gear & Nose Sub-assy 40 rpm	1
6	255463	Thrust Washer	1
7	255473	Washer	1
8	296863	Key	1
*9	502093	Needle Bearing 65 & 40 rpm	2
10	36723	Planet Wheel 100 rpm	2
-	36703	Planet Wheel 65 rpm	2
-	150813	Planet Wheel 40 rpm	2
11	294943	Planet Cage 100 rpm	1
-	294963	Planet Cage 65 rpm	1
-	294983	Planet Cage 40 rpm	1
12	80013	Planet Pin 100 rpm	2
-	1453	Planet Pin 65 & 40 rpm	2

Item No.	Part No.	Description	Qty.
13	294883	Planet Cage Complete 100 rpm	1
-	294903	Planet Cage Complete 65 rpm	1
-	294923	Planet Cage Complete 40 rpm	1
*14	2413	Bearing	3
15	37623	Distance Piece	2
*16	2423	Bearing	2
17	36713	Gear Ring 100 & 65 rpm	1
-	153603	Gear Ring 40 rpm	1
*18	37423	Circlip 100 & 65 rpm	1
*19	502093	Needle Bearing	2
20	36703	Planet Wheel 100 & 65 rpm	2
-	150813	Planet Wheel 40 rpm	2
21	36673	Planet Cage 100 rpm	1
-	42273	Planet Cage 65 rpm	1
-	296323	Planet Cage 40 rpm	1
22	1453	Planet Pin	2
23	36803	Planet Cage Complete 100 rpm	1
-	42283	Planet Cage Complete 65 rpm	1
-	296333	Planet Cage Complete 40 rpm	1
24	36713	Gear Ring 100 rpm	1
-	153603	Gear Ring 65 & 40 rpm	1
*25	37423	Circlip 100 rpm	1
* -	25563	Circlip 65 rpm	1
*26	502093	Needle Bearing	2
27	36703	Planet Wheel 100 rpm	2
-	150813	Planet Wheel 65 & 40 rpm	2
28	42273	Planet Cage 100 rpm	1
-	81443	Planet Cage 65 rpm	1
-	296323	Planet Cage 40 rpm	1
29	1453	Planet Pin	2
30	42283	Planet Cage 100 rpm	1
-	153593	Planet Cage 65 rpm	1
-	296333	Planet Cage 40 rpm	1
*31	33433	Bearing	2
32	254893	Front Bearing Housing	1
33	256123	Spring Pin	1
34	254873	Bearing Plate	2
35	254853	Cylinder	1
36	37163	Rotor 100 rpm	1
-	257063	Rotor 65 & 40 rpm	1
*37	36613	Rotor Blade	5
38	254883	Rear Bearing Housing	1
39	256113	Pin	1
40	254903	End Cap	1
41	268583	Motor Complete 100 rpm	1
-	268573	Motor Complete 65 & 40 rpm	1
42	295013	Motor Case	1
43	298153	Air Inlet Cap	1
*44	203423	'O' Ring	2
45	206823	Silencer	1
46	295223	Exhaust Collector	1
*47	295233	Circlip	1

\* Indicates normal replacement items. It is recommended that adequate stocks are held for servicing requirements. Always quote tool model number, tool serial number and spare part number when ordering spares.