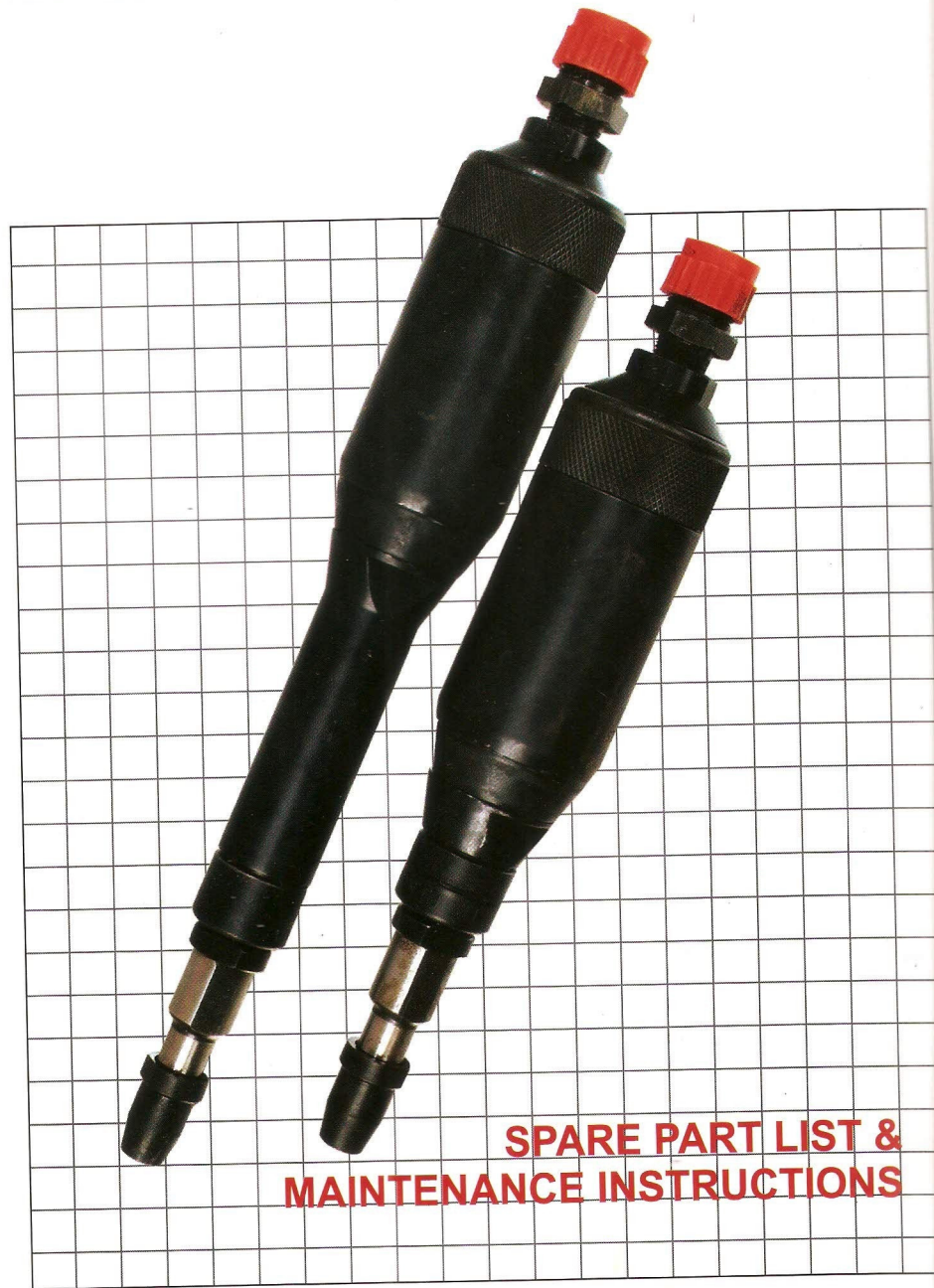


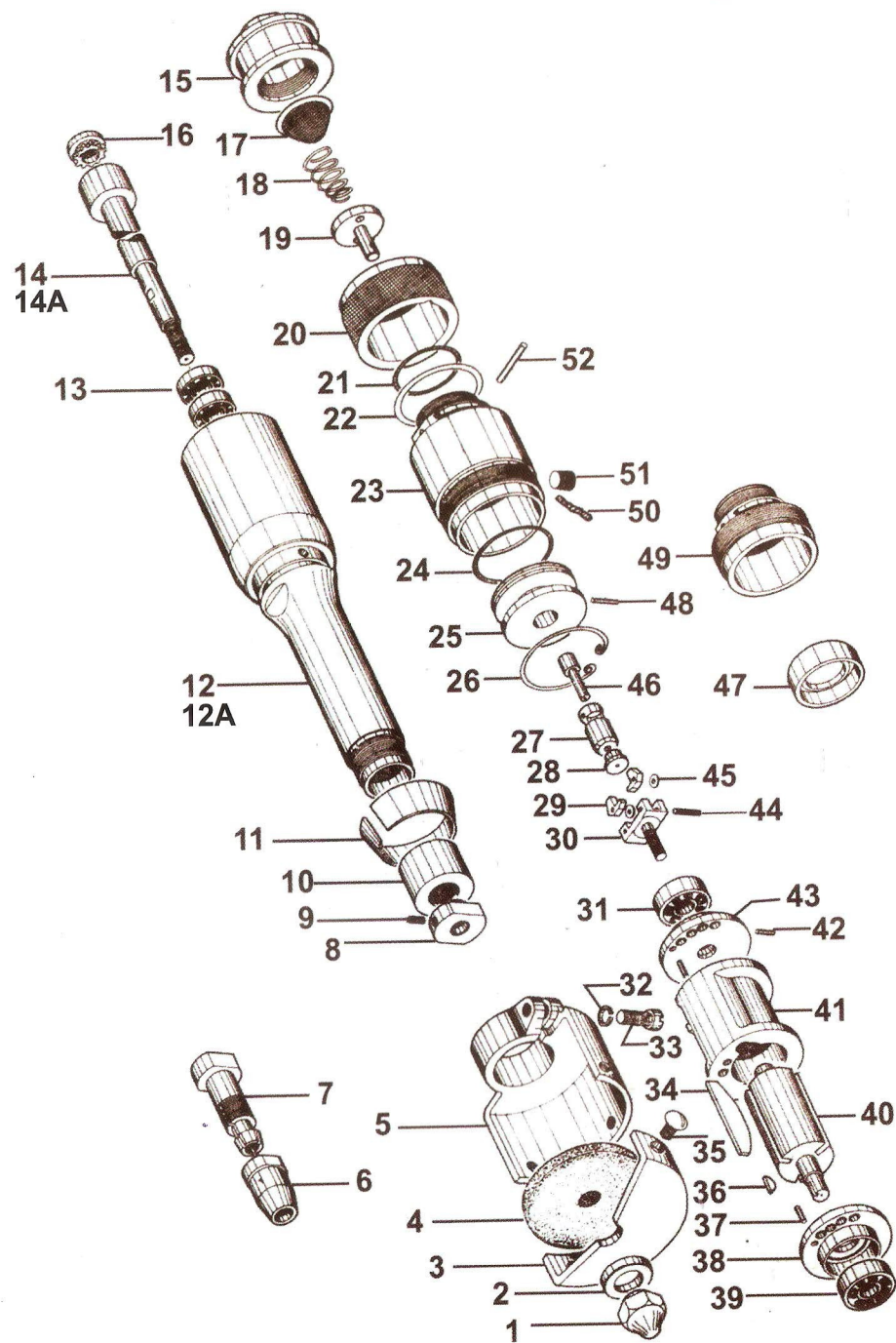


RB-50N/51N
DIE GRINDER



**SPARE PART LIST &
MAINTENANCE INSTRUCTIONS**

RB-50N/51N DIE GRINDER



RB-50N/51N DIE GRINDER

Illust No.	Stock No.	Description	Qty
1	N 20 47 507	Acron Nut	1
2	E 66 14 507	Outer wheel collar	1
3	D 56 10 508	Guard cover	1
4	-	Grinding wheel (No Supply)	1
5	B 75 30 508	Wheel guard	1
6	E 98 21 060	Collet nut 6mm	1
7	E 76 07 507	Collet body 6MM	1
6A	E 98 21 060	Collet nut 1/4"	1
7A	E 76 09 525	Collet body 1/4"	1
8	E 66 13 525	Inner wheel collar	1
9	R 30 01 525	Set screw	1
10	E 96 06 525	Bearing clamp nut	1
11	R 37 01 705	Exhaust deflector	1
12	E 94 16 507	Rotor housing	1
12A	E 94 16 508	Rotor housing	1
13	N 54 78 525	Ball bearing	2
14	E 19 40 555	Spindle (metric)	1
14A	E 19 40 556	Spindle (metric)	1
15	E 43 02 555	Air inlet bushing	2
16	F 04 01 525	Spindle coupling	1
17	R 46 06 005	Strainer	1
18	* R 35 01 705	Throttle spring	1
19	E 73 14 060	Throttle valve (8000 & 12000 RPM)	1
19A	E 73 15 558	Throttle valve (15000 RPM)	1
19B	E 73 16 559	Throttle valve (18000 RPM)	1
19C	E 73 17 560	Throttle valve (21000 RPM)	1
20	E 43 01 555	Throttle sleeve	1
21	* H 02 42 060	'O' Ring	1
22	* R 37 54 005	Friction plate	1
23	E 89 06 555	Governor & throttle housing (8000 & 12000 RPM)	1
24	* I 02 41 555	'O' Ring	1
25	E 74 11 060	Governor housing	1
26	N 41 37 060	Spring retainer	1
27	E 74 13 060	Governor valve cage	1
28	E 95 06 507	Governor valve button	1
29	E 23 03 507	Governor weight	2
29A	F 23 03 507	Governor weight	2

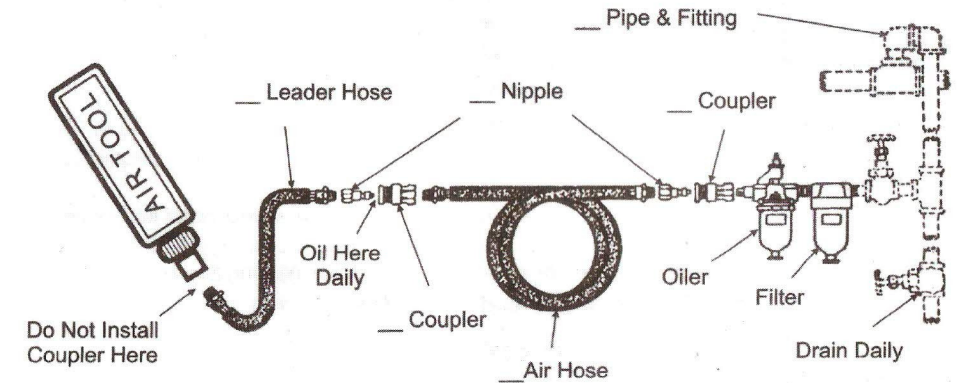
RB-50N/51N DIE GRINDER

Illust No.	Stock No.	Description	Qty
30	E 81 13 060	Governor body	1
31	* N 54 54 008	Ball bearing (8000 & 1200 RPM)	1
32	R 37 06 005	Spring washer	1
33	R 29 43 005	Screw	1
34	* H 50 04 525	Rotor blade	3
35	N 29 10 116	Round head screw	1
36	* R 43 82 005	Rotor key	1
37	R 11 11 405	End plate dowel	1
38	* E 44 25 555	End plate- lower	1
39	* N 54 09 008	Ball bearing	1
40	E 17 28 555	Rotor	1
41	E 71 05 525	Cylinder liner	1
42	R 11 41 405	Pin	1
43	* E 44 25 555	End plate- upper	1
44	* R 11 05 405	Governor weight pin	2
45	* R 65 02 405	Governor weight spacer	4
45A	* R 65 01 405	Governor weight spacer	4
46	E 11 83 507	Governor valve	1
47	D 44 74 060	Bearing cap	1
48	R 11 08 405	Governor stop pin	1
49	E 52 01 060	Throttle housing (15000,18000& 21000 RPM)	1
50	* R 27 01 705	Oil wick 12" long	1
51	H 16 29 610	Plug	1
52	N 48 62 555	Lock pin	1
	A 99 97 535	Wheel guard complete consist of illus. no. 3,5,32,33, & 35	1
	A 95 67 525	Collect chuck complete (6mm,1/4") illus. no. 6 & 7	1
	A 90 02 556	Governor body complete (8000 RPM) consist of illus. No. 29, 30, 44, 45	1
	A 90 04 060	Governor body complete(12000 RPM) consist of item No. 29A, 30, 44, 45A	1
	A 90 03 060	Governor housing complete (8000 & 12000 RPM) Consist of illus no. 15, 17, 18, 19, 20, 21, 22, 23, 24,25 26, 27, 28, 46, 48, 50, 51, & 52	1

RB-50N/51N DIE GRINDER

AIR SUPPLY

To enable the Grinder to function satisfactorily, it is essential that a constant 90 p.s.i. pressure of clean, dry air is supplied to the air inlet. A short leader hose of 5/16" I.D. should be attached to the tool. Longer pipe runs must be 1/2" hose size & connected by coupling with a minimum of 9/32" I.D. The installation of an air line separator & filter to purify & dry the air supply & a regulator to eliminate any pressure fluctuations are recommended. These control units should be located as near to the tool as operation will allow.



PREPARATION FOR OPERATION

Daily & prior to operating the tool, disconnect the air hose & pour approximately 1/4 ounce of recommended oil into the air inlet. Blow out the air line to clear it of any accumulated moisture & dirt. Reconnect & operate the Die Grinder to enable the oil to be carried to the air motor.

LUBRICATION

Daily & prior to operating the tool, the preparation for operation sequences should be carried out. At each inspection period, clean open bearings & repack 25% of free space within bearing with recommended grease.

At each inspection period, the oil wick should be inspected & saturated with a maximum of 1/2 ounce of recommended lubricant (Refer lubricating oils & greases chart.)

LOSS OF POWER OR ERRATIC ACTION

Motor failure, loss of power or erratic action may be caused by factors outside the tool construction.

1. Check air pressure. For rated performance, 90 p.s.i. air pressure is required at the tool while it is in operation, a drop in air pressure may result from reduced compressor output, excessive drain on the air line or the use of piping & connections of improper size & condition.
2. Check for wet or dirt air, wet air tends to wash the lubricant from the motor hence rusting & corrosion. Dirt in the air supply will impede the motor operation & result in damage. If the air is arriving at the tool at a correct pressure & quality, the operator should proceed to inspect the tool in the order given below.
 1. Check motor lubrication. Disconnect the tool & pour a liberal quantity of recommended oil mixed with an equal amount of paraffin into the tool air inlet. Operate the tool to flush out gum & foreign matter.
 2. Check mechanical parts of tool. Disassemble the tool, thoroughly clean & inspect all parts. Inspect ball bearing for irregular action & excessive end play. Ensure that oil or replacement blades are a free sliding fit in their respective slots. Replace any defective parts, relubricate & reassemble tool.

MAINTENANCE

Economic operation of the die grinder can only be achieved if it is kept in perfect running condition. A regularly scheduled inspection & repair Programme should be adhered to as the correction of minor.

RB-50N/51N DIE GRINDER

Faults will prevent extensive at a later date & assist in maintaining the tool at its highest efficiency.

1. Follow the PREPARATION FOR OPERATION instructions.
2. Follow LUBRICATION INSTRUCTIONS carefully.
3. Provide 90 p.s.i. of clean, dry air at the tool.
4. Use hose & connections of proper size & condition.
5. Always install a filter in the air line piping to prevent dirt from entering the tool.
6. Establish & maintain a repair/replacement programme scheduled at regular intervals.

SAFETY INSTRUCTIONS

It is good practice when operating power tools.

1. To wear safety glasses & safety footwear.
2. To ensure that the air line pressure is correct for the tool.
3. To ensure that the steel socket, grinding wheel, etc. is in good condition & correctly fitted & retained.
4. And mandatory to ensure that in the case of grinders the free speed does not exceed that specified for the tool.
5. To wear ear protectors in areas where the noise level could cause hearing damage.
6. To ensure that hose are in good condition & securely fitted.

DISASSEMBLY AND ASSEMBLY INSTRUCTIONS

A. TO REMOVE THROTTLE BODY

1. Grip rotor housing (12) in a soft jawed vice, on flats at exhaust end.
2. Unscrew & remove governor & throttle housing (23) from the rotor housing.

B. TO DISASSEMBLE GOVERNOR & THROTTLE HOUSING

1. Remove the governor & throttle housing (23) from the rotor housing (12).
2. Unscrew & remove the governor valve cage (27) (8000 & 12000 r.p.m. versions) from the governor & throttle housing.
3. Drive the stop pin (48) out of the governor valve cage (27) (8000 & 12000 r.p.m. versions).
4. Remove the governor valve button (28) from the governor valve (46).
5. Remove the governor valve from the governor valve cage (27).
6. Remove the 'o' ring (21) from the governor & throttle housing.
7. Using an Allen wrench, unscrew & remove the oil plug (51) from the throttle housing.
8. If replacement is necessary, remove the throttle valve (19) from the throttle housing.

C. TO ASSEMBLE GOVERNOR & THROTTLE HOUSING

1. Press throttle valve (19) into the governor & throttle housing (23) aligning hole in bushing with porting body. Ream bushing 0.1125" 1230".
2. By using an Allen wrench, screw oil plug (51) into the governor & throttle housing.
3. Position the throttle valve (19) & throttle spring (18) in the governor & throttle housing.
4. Place the governor valve (46) in the governor valve cage (27) (8000 & 12000 r.p.m. versions.)
5. Position the governor valve button (28) on the governor valve (46) (8000 & 12000 r.p.m. versions.)
6. Drive the stop pin (48) through the governor valve cage (27).
7. Screw the air inlet bushing (15) to the governor & throttle housing (23)
8. Assemble to governor & throttle housing (23) to the rotor housing (12).

D. TO REPLACE THROTTLE BODY

1. Grip the rotor housing (12) in a soft jawed vice on flats at exhaust end.
2. Screw the governor & throttle housing (23) to the rotor housing ensuring that the governor valve button (28) engages with the governor weights (29) (8000 & 12000 r.p.m. versions).

RB-50N/51N DIE GRINDER

E. TO DISASSEMBLE ROTOR HOUSING

1. Remove the governor & throttle housing (23) from the rotor housing (12)
2. Loosen screw (33) & remove wheel guard (5) from rotor housing.
3. Tap open end of rotor housing (12) with a soft faced mallet or on block of wood & remove motor assembly from the rotor housing.
4. Unscrew & remove acorn nut (1) & outer wheel collar (2) from spindle (14).
5. Unscrew set screw (9) & press inner wheel collar (8) off spindle
6. Tap threaded end of spindle (14) with a soft faced mallet or on block of wood & remove motor assembly from the rotor housing
7. Unscrew & remove the bearing clamp nut (10) from the rotor housing.
8. If necessary to replace, remove the two ball bearing (13) from the rotor housing.
9. Remove the exhaust deflector (11) from the rotor housing.

F. TO ASSEMBLE THE ROTOR HOUSING

1. By applying pressure on the outer race, press the two ball bearings (13) into the rotor housing (12).
2. Screw the bearing clamp nut (10) onto the rotor housing.
3. Position the spindle (14) in the rotor housing, ensuring that it is correctly seated in the ball bearings.
4. Place the inner wheel collar (11) on spindle. Lock with set screw (9).
5. Position outer wheel collar (2) on spindle & screw acorn nut (1) onto spindle.
6. Position the exhaust deflector (11) on the rotor housing.
7. Place the wheel guard (5) on the rotor housing & tighten the retaining screw.
8. Assemble the governor & throttle housing (23) to the rotor housing (12).

G. TO DISASSEMBLE THE MOTOR

1. Remove the motor from rotor housing.
2. Remove the upper end plate (42), liner (41) & three rotor blades (34) from the rotor.
3. Remove the lower end plate (38) from the rotor.
4. If necessary, to replace the ball bearings (39) from the upper & lower end plates.

H. TO ASSEMBLE THE MOTOR

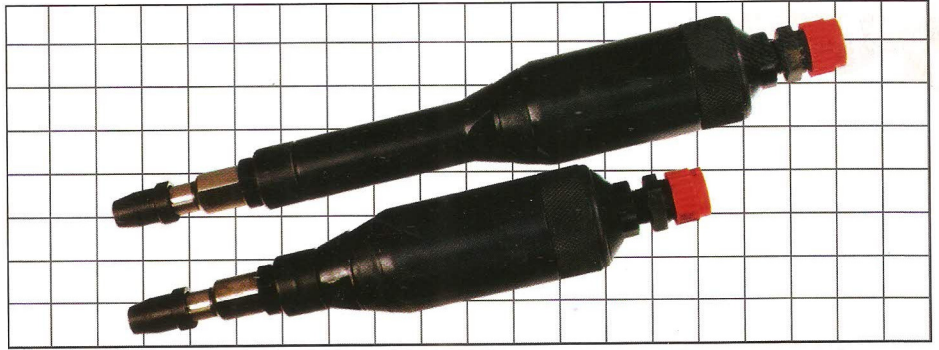
1. Applying pressure to the outer race, press ball bearings (39) into upper & lower end plates (38 & 42).
2. Fit lower end plate over rotor (40).

NOTE: Clearance between flat face of lower end plate & face of rotor must be between 0.001" & 0.0015". check with a feeler guage before proceeding.

3. Place liner (41) over rotor, aligning end plate dowel (37) with driller hole in lower end plate.
NOTE: When seen from spindle end of rotor with pin at top, milled slot at left of liner is aligned with milled slot of end plate & dowel pin enters smaller of four holes drilled through end plate.
4. Locket the three rotor blades (34) in the rotor slots.
5. Fit upper end plate (42) over rotor, ensuring that support is given to coupling end of rotor so that clearance given under item 2 is maintained
NOTE: When seen from handle end of rotor, with pin at top, large hole in liner is at the operator's Right. Dowel pin enters smaller of four holes drilled through end plate.

6. Screw governor body (30) in to rotor (40).
7. Spin rotor to ensure that it runs free & in no way binding.
8. Assemble motor in the rotor housing.

RB-50N/5 IN DIE GRINDER



LUBRICATION OILS AND GREASES FOR PNEUMATIC TOOLS

RB Products	Hindustan Petroleum	Bharat Petroleum	Indian Oil	Indrol
ROTARY AIR MOTOR OF DRILLS, GRINDERS, IMPACT WRENCHES SCREW DRIVERS, AND SUMP PUMPS	SPINTEK-22	BHARAT HYDROL-22	SERVOSPIN 22	CASTROL HYSPIN AWS-22
GREASES FOR PLANETARY AND ENCLOSED GEARS, HAND PACKED, 'O'RINGS & GOVERNOR LEVERS	LITHON-2	BHARAT MP GREASE 2	SERVOGEM 2	CASTROL B.B. AP-2
IMPACT WRENCHES CLUTCH OIL	ENCLO-68	BHARAT HYDROL 68 BHARAT TURBOL 68	SERVO SYSTEM 68	CASTROL HYSPIN AWS-68
SUMP PUMP SPINDLE, BEARINGS & GREASE SEALS	LINTON-2	BHARAT MP GREASE 2	SERVOGEM-3	CASTROL B.B. AP-2
ROCK DRILLS, DEMOLITION TOOLS, RIVETING, CHIPPING AERO HAMMERS, RAMMERS AND SCALERS	SPINTEK-22	BHARAT HYDROL 22	SERVOSPIN 22	CASTROL HYSPIN AWS-22
AIR HOIST	CYNDOL-1500	—	SERVOCYL -M-1500	
RUBBER 'O' RINGS	MOSIL, WSR - 400			

RR PNEUMATIC TOOLS

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