

# MAINTENANCE

## ROTARY (R.E.B.) UNIONS

The Filton Bellows Seal fitted to the **Rotary (R.E.B.) Union** is self-adjusting within its working life. The ball bearings fitted need occasional greasing. Generally once per shift on 'hot' applications and once per month on 'cold' applications is suitable. **For specific recommendations we suggest you contact the grease manufacturer.**

Before despatch we lubricate the bearings with a Bentone base grease, ensure your lubricant is compatible with this.

### RECOMMENDED LUBRICANTS

<b>BARDAHL</b> Multipurpose Grease No 2 Haute Temperature	- 20°/+160°C - 10°/+180°C	<b>ESSO</b> Beacon 2 IL 2880	- 25°/+125°C - 20°/+180°C
<b>BP</b> Energrease LS2 Energrease HTG2	- 30°/+130°C - 20°/+180°C	<b>KLÜBER</b> Centoplex 2EP Petamo GHY443	- 20°/+130°C - 25°/+180°C
<b>BURMAH-CASTROL</b> Spheerol MP3 Spheerol B2	- 20°/+110°C - 25°/+180°C	<b>MOBIL</b> Mobilplex 47 Mobiltemp 1	- 25°/+150°C + 10°/+180°C
<b>CALTEX</b> Regal Starfak Premium 2 Thermatex EP	- 40°/+120°C - 20°/+180°C	<b>ROCOL LTD</b> Sapphire 2 Sapphire Hi-Temp 2	- 30°/+150°C - 40°/+180°C
<b>DOW CORNING</b> Molykote 44M	- 40°/+180°C	<b>SHELL</b> Alvania EP LF2 Darina Grease R2	- 20°/+120°C + 10°/+190°C
<b>ELF OIL</b> Multi 2 Staterma GB3	- 25°/+130°C - 10°/+180°C	<b>TEXACO</b> Multifak AFB2 Starfak Ultratemp 2	- 40°/+120°C - 40°/+175°C

### NOTE:

For sub-zero temperatures check with our Technical Department that the Rotary Union you are considering is acceptable for the temperature and fluid.

## ROTARY (C.B.N.) UNIONS

The Filton Bellows Seal fitted to the **Rotary (C.B.N.) Union** is self-adjusting within its working life. The Rotary (C.B.) Union has dry carbon journal and thrust bearings operating on hardened surfaces. **DO NOT GREASE.** We advise periodic inspection for bearing wear.

# HEALTH & SAFETY

The Rotary Unions shown in this leaflet should not present any hazard when correctly fitted and used.

**To ensure satisfactory performance, every Rotary Union is run-in and leakage tested before despatch.**

De-pressurise and drain the system before removing Rotary Unions for repair.

It is essential to use the correct hand of rotary connection thread to ensure the Rotary Union will not unscrew (see the Installation Instructions). If a shaft reverses rotation the connection thread should be locked or preferably a flanged connection should be used.

At some time the seals in the Rotary Union will leak, so inspect daily. Also, ensure that leakages are not hazardous to personnel and that the Rotary Union is removed for repair immediately. If leakages are not attended to promptly, bearing seizure may occur causing flexible hose failure and massive leakage.

Fit protective guards if leakages or the rotating spindle are likely to be hazardous to personnel.

For hazardous application fit an excess torque detector to stop the machine before major damage occurs to flexible hoses causing massive leakage.

With oil systems minor leakages occur due to the natural characteristics of oil preventing seal faces from contacting fully.

Gaskets are now non-asbestos but existing units may have gaskets manufactured from compressed asbestos fibre fitted.

These should be handled and disposed of according to the Asbestos Products (Safety) Regulations 1985.

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# FILTON ROTARY (R.E.B.) + (C.B.N.) UNIONS

## NOMINAL SIZES 40(1½") to 150(6") WORKING CONDITIONS

(maximum)

<b>Storage</b>	- store indoors in a dry area within the temperatures -10° to 30°C					
<b>Safety</b>	- see back page					
<b>Fluids</b>	- Abrasives free-air (not dry), oil, steam and water					
<b>Pressure</b>	- 17 bar	<b>Vacuum</b>		- 740mm Hg (R.E.B. only)		
<b>Temperature</b>	-20° to +180°C (R.E.B.)	100° to 300°C (C.B.N.)				
<b>Speed</b>	- Size	40/50 (1½"/2")	65/80 (2½"/3")	90/100 (3½"/4")	125/150(5"/6")	
(r.p.m.)	- R.E.B.	600	500	400	300	
	- C.B.N.	300	250	200	150	

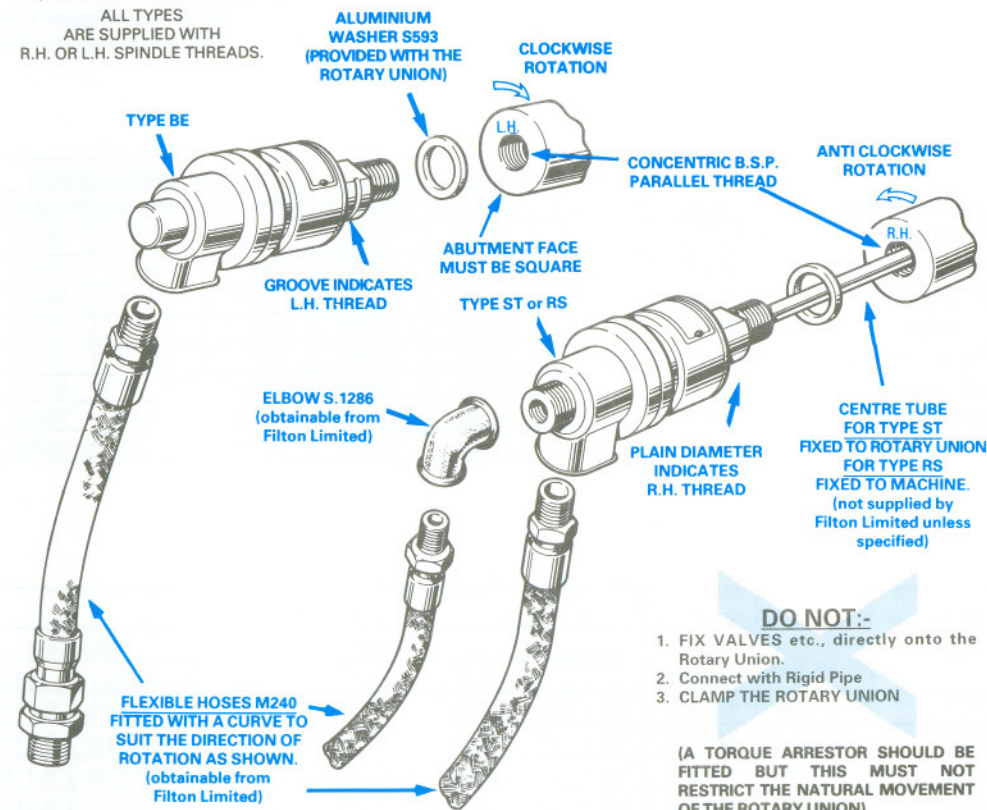
**DO NOT EXCEED OR COMBINE MAXIMUMS - IF IN DOUBT ASK.**

**ALL OF THESE PRODUCTS HAVE BEEN LEAKAGE TESTED - DISMANTLING INVALIDATES THE WARRANTY.**

## INSTALLATION

Run in before fitting - rotate R.E.B. at 100 r.p.m. for 30 minutes for sizes 40 (1½") to 80 (3") and at 50 r.p.m. for 1 hour for other sizes and C.B.N. at half the speed for twice the time. Add system liquid if the seals squeak.

ALL TYPES  
ARE SUPPLIED WITH  
R.H. OR L.H. SPINDLE THREADS.

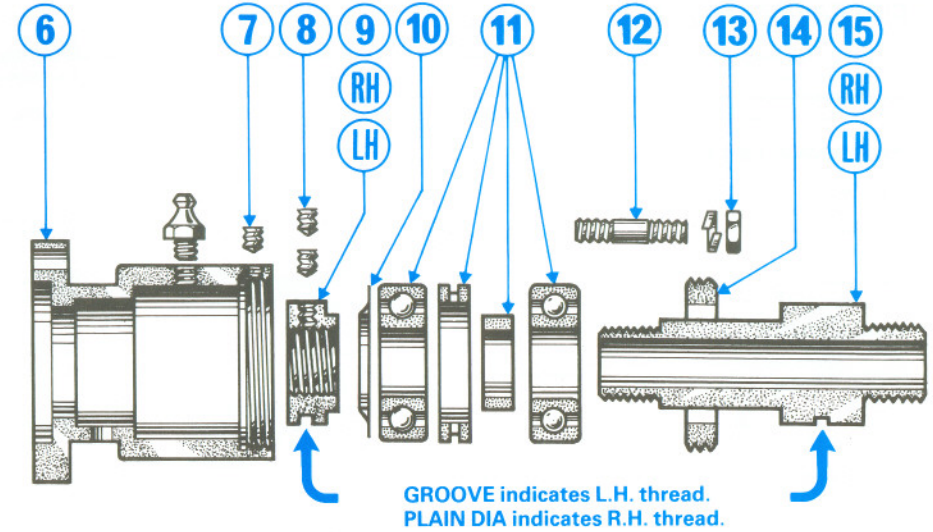
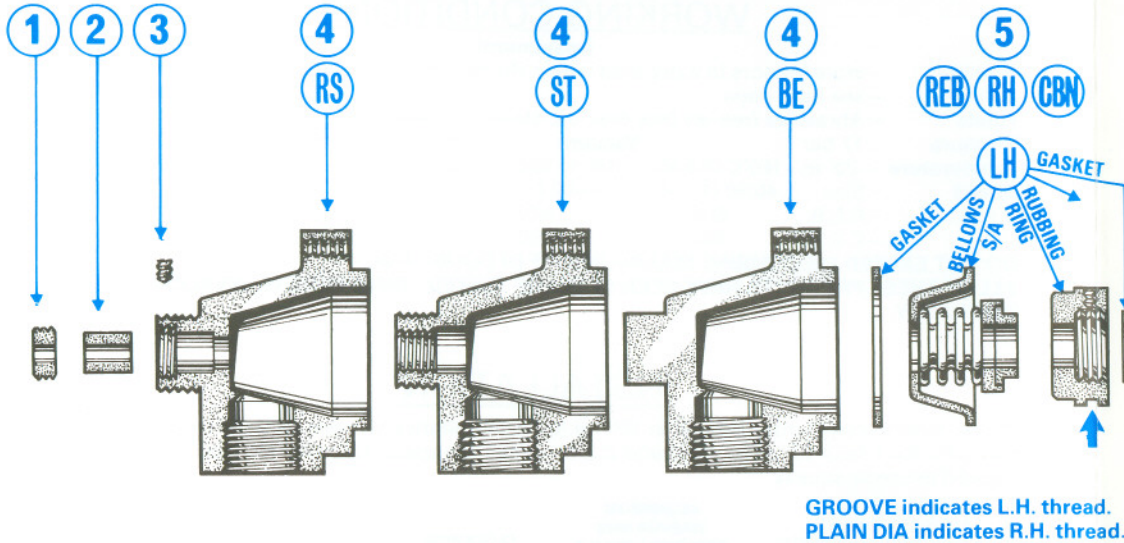


### MINIMUM LENGTHS FOR FLEXIBLE HOSE

<b>Nom size</b>	20 (¾")	25 (1")	32/40(1¼"/1½")	50/65(2"/2½")	80(3")	100/125/150(4"/5" & 6")
<b>length mm</b>	305	380	460	610	760	915
<b>FILTON HOSE</b>	M240/4	M240/5	M240/6 & 7	M240/8 & 9	M240/10	M240/11,12 & 13

# ROTARY (R.E.B.) & (C.B.N.) UNIONS COMMON PARTS

# SPECIFIC PARTS FOR ROTARY (R.E.B.) UNIONS



CHECK THE LABEL FOR PART NO. IDENTIFY THE SIZE AND TYPE FROM THIS TABLE. REFER TO PARTS LISTED UNDER NOMINAL SIZE.

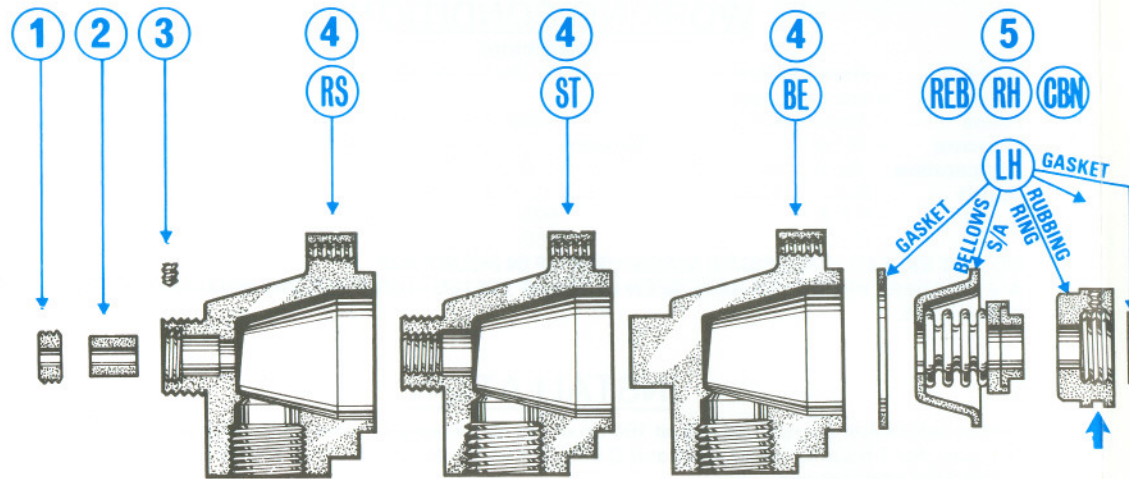
Nominal Size	ROTARY (R.E.B.) UNION			ROTARY (C.B.N.) UNION		
	TYPE B.E.	TYPE S.T.	TYPE R.S.	TYPE B.E.	TYPE S.T.	TYPE R.S.
40 (1½")	18104	18105	18106	18101	18102	18103
50 (2")	17350	17238	17351	15471	15472	15473
65 (2½")	18131	18132	18133	18240	18241	18242
80 (3")	17265	17266	17263	15477	15478	15479
90 (3½")	17421	17422	17423	16171	16172	16173
100 (4")	17424	17425	17426	16174	16175	16176
125 (5")	17634	17635	17636	15486	15487	15488
150 (6")	17637	17638	17639	16704	16703	16702

WE MANUFACTURE MANY SPECIALS. IF YOU HAVE ANY DOUBT CONTACT US GIVING THE PART No. AND SERIAL No. FROM THE IDENTIFICATION LABEL FITTED.

**Note!** For the 125 (5") and 150 (6") there is a screwed Adjusting Ring at the flanged end of the body which locked with a screw. This is similar to components 16 and 18 for the Rotary (C.B.N.) Unions and can be adjusted to give 6 mm compression on the Bellow S/A if necessary.

NOMINAL SIZE	1	2	3	4			5		6	7	8	9	10	11	12	13	14	15
	RETAINER	C/T BEARING	SCREW	ADAPTOR			SEAL KIT		BODY	SCREW	SCREW	LOCKING RING	NILOS RING	BEARING KIT	STUD	NUT	LOCKING RING	SPINDLE
				R.S.	S.T.	B.E.	R.E.B.	C.B.N.										
40 (1½")	18103/3	18103/2	M5 × 0.8	18103/1	18102/1	18101/1	S.1151/3	S.1151/3	18104/8	M6 × 1.0	M5 × 0.8	18104/4	18104/5	S.1235/0	17238/4	M8 × 1.25	18104/2	18104/3
50 (2")	15473/1	15473/3	M5 × 0.8	15473/2	15472/1	15471/1	S.1171/4	S.1151/4	17238/11	M6 × 1.0	M4 × 0.7	17238/5	17238/12	S.1235/1	17238/4	M8 × 1.25	17238/7	17238/8
65 (2½")	15476/3	18133/2	M6 × 1.0	18133/1	18132/1	18131/16	S.1171/8	S.1151/8	18131/15	M6 × 1.0	M5 × 0.8	18131/10	18131/11	S.1235/5	18131/6	M10 × 1.5	18131/13	18131/14
80 (3")	15479/3	15479/2	M6 × 1.0	15479/1	15478/1	15477/1	S.1171/5	S.1151/5	17263/11	M6 × 1.0	M5 × 0.8	17263/5	17263/16	S.1235/2	17423/1	M12 × 1.75	17263/7	17263/8
90 (3½")	16173/3	16173/2	M6 × 1.0	16173/1	16172/1	16171/1	S.1151/6	S.1151/6	17423/7	M5 × 0.8	M5 × 0.8	17423/2	17155/15	S.1235/3	17423/1	M12 × 1.75	17423/8	17423/9
100 (4")	16176/3	16176/2	M6 × 1.0	16176/1	16175/1	16174/1	S.1151/6	S.1151/6	17423/7	M5 × 0.8	M5 × 0.8	17423/2	17155/15	S.1235/3	17423/1	M12 × 1.75	17423/8	17426/1
125 (5")	15488/3	15488/2	M8 × 1.25	15488/1	15487/1	15486/1	S.1151/7	S.1151/7	17635/3	M12 × 1.75	M12 × 7.5	17635/5	17635/4	S.1235/4	17635/7	M16 × 2	17635/2	17635/1
150 (6")	16702/1	16702/3	M8 × 1.25	16702/2	16703/1	16704/1	S.1151/7	S.1151/7	17635/3	M12 × 1.75	M12 × 7.5	17635/5	17635/4	S.1235/4	17635/7	M16 × 2	17635/2	17637/1

# ROTARY (R.E.B.) & (C.B.N.) UNIONS COMMON PARTS

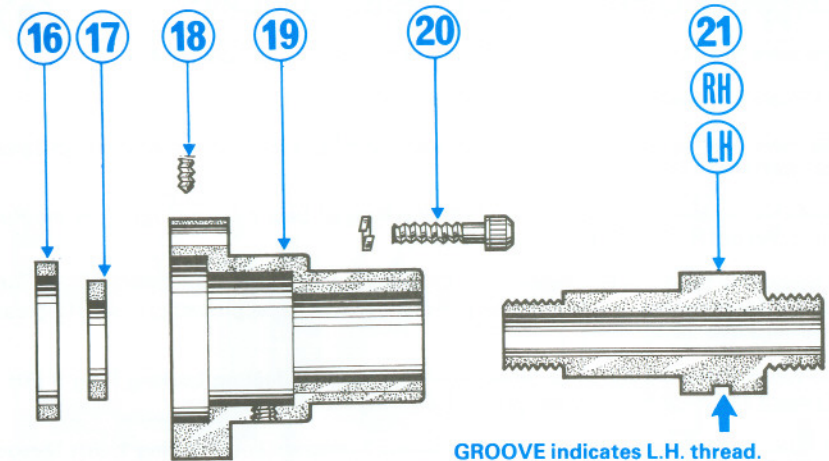


GROOVE indicates L.H. thread.  
PLAIN DIA indicates R.H. thread.

CHECK THE LABEL FOR PART NO. IDENTIFY THE SIZE AND TYPE FROM THIS TABLE. REFER TO PARTS LISTED UNDER NOMINAL SIZE.

Nominal Size	ROTARY (R.E.B.) UNION			ROTARY (C.B.N.) UNION		
	TYPE B.E.	TYPE S.T.	TYPE R.S.	TYPE B.E.	TYPE S.T.	TYPE R.S.
40 (1½")	18104	18105	18106	18101	18102	18103
50 (2")	17350	17238	17351	15471	15472	15473
65 (2½")	18131	18132	18133	18240	18241	18242
80 (3")	17265	17266	17263	15477	15478	15479
90 (3½")	17421	17422	17423	16171	16172	16173
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125 (5")	17634	17635	17636	15486	15487	15488
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# SPECIFIC PARTS FOR ROTARY (C.B.N.) UNIONS



GROOVE indicates L.H. thread.  
PLAIN DIA indicates R.H. thread.

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**Note!** For the 125 (5") and 150 (6") spacer 16 is screwed into Bearing S/A 19 and locked with screw 18. Compression on the Bellows S/A can be adjusted using these to obtain the correct compression of 6 mm.

NOMINAL SIZE	1	2	3	4			5	
	RETAINER	C/T BEARING	SCREW	ADAPTOR			SEAL KIT	
				R.S.	S.T.	B.E.	R.E.B.	C.B.N.
40 (1½")	18103/3	18103/2	M5 × 0.8	18103/1	18102/1	18101/1	S.1151/3	S.1151/3
50 (2")	15473/1	15473/3	M5 × 0.8	15473/2	15472/1	15471/1	S.1171/4	S.1151/4
65 (2½")	15476/3	18133/2	M6 × 1.0	18133/1	18132/1	18131/16	S.1171/8	S.1151/8
80 (3")	15479/3	15479/2	M6 × 1.0	15479/1	15478/1	15477/1	S.1171/5	S.1151/5
90 (3½")	16173/3	16173/2	M6 × 1.0	16173/1	16172/1	16171/1	S.1151/6	S.1151/6
100 (4")	16176/3	16176/2	M6 × 1.0	16176/1	16175/1	16174/1	S.1151/6	S.1151/6
125 (5")	15488/3	15488/2	M8 × 1.25	15488/1	15487/1	15486/1	S.1151/7	S.1151/7
150 (6")	16702/1	16702/3	M8 × 1.25	16702/2	16703/1	16704/1	S.1151/7	S.1151/7

16	17	18	19	20	21	NOMINAL SIZE
SPACER	THRUST PAD	SCREW	BEARING S/A	BOLT	SPINDLE	
18101/10	18101/5	N/A	18101/12	M8 × 1.25	18101/8	40 (1½")
15325/7	15325/11	N/A	15325/15	M8 × 1.25	15472/3	50 (2")
18240/6	18240/2	N/A	18240/7	M10 × 1.5	18240/5	65 (2½")
15478/7	15478/10	N/A	15478/14	M12 × 1.75	15478/13	80 (3")
16172/12	16172/7	N/A	16172/16	M12 × 1.75	16172/10	90 (3½")
16172/12	16172/7	N/A	16172/16	M12 × 1.75	16175/2	100 (4")
16702/13	16702/9	M12 × 1.75	16702/16	M16 × 2.0	15487/2	125 (5")
16702/13	16702/9	M12 × 1.75	16702/16	M16 × 2.0	16702/12	150 (6")

# OVERHAUL

## OVERHAUL OF ROTARY (R.E.B.) UNIONS

- a. Remove Nuts 13 and Washers which allows the removal of Adaptor 4.
- b. Remove Bellows Sub-Assembly and Gasket of Seal Kit 5.
- c. Remove Locking Screw 7 and unscrew Locking Ring 14 (RH Thread) and extract Spindle 15 complete with Ball Bearings etc.
- d. Remove Locking Screws from the Rubbing Ring of Seal Kit 5 and unscrew the Rubbing Ring (RH or LH Thread) and remove Gasket.
- e. Thoroughly clean the Ball Bearing Kit 11 and check the condition of the bearings. (If there is any doubt replace the Bearing Kit pre-packing with an approved grease). Re-grease the bearings if re-using.
- f. To replace Bearing Kit 11 remove Locking Screws 8, Bearing Locking Ring 9 (RH or LH Thread) and Nilos Ring 10 then press off Bearing Kit 11.
- g. If Adaptor 4 is type RS remove Locking Screw 3 unscrew Locking Ring 1, (RH Thread) and remove C.T. Bush 2.
- h. **REPLACE:-** Seal Kit 5, Bearing Kit 11 and if type RS C.T. Bush 2.
- i. Thoroughly clean all parts before re-assembly, which is virtually the reverse of the above.
- j. Handle Seal Kit carefully to avoid damaging the lapped seal faces.
- k. After re-assembly run-in as indicated in the Installation Instructions and Test to ensure the seals are working correctly before refitting to the machine.

## OVERHAUL OF ROTARY (C.B.N.) UNIONS

- a. Remove Bolts and Washers 20, which allows the removal of Adaptor 4.
- b. Remove Bellows Sub-Assembly and Gasket of Seal Kit 5 and Spacer 6. (For the 125 (5") and 150 (6") Locking Screw 18 will need removing as Spacer 16 is screwed RH Thread and should be adjusted to give 6 mm compression on the Bellows Sub-Assembly during refitting).
- c. Remove Locking Screws from the Rubbing Ring of Seal Kit 5, through the bleed port in Body S/A 19 and unscrew the Rubbing Ring (RH or LH Thread) and remove the Gasket and Thrust Pad 17.
- d. Remove Spindle 21 from Body S/A 19 and check the bore of the carbon bearing in Body S/A 19 for excessive wear and the bearing surface of Spindle 21 similarly.
- e. If the Adaptor 4 is type RS remove Locking Screw 3, unscrew Locking Ring 1 and remove C.T. Bush 2.
- f. **REPLACE:-** Seal Kit 5, Thrust Pad 17 as a minimum.  
**REPLACE:-** Body S/A 19 and Spindle 21 depending on condition. If type RS replace CT Bush 2.
- g. Thoroughly clean all parts before re-assembly which is virtually the reverse of the above.
- h. Handle Seal Kit carefully to avoid damaging the lapped seal faces.
- i. After re-assembly run-in as indicated in the Installation Instructions and Test to ensure the seals are working correctly before refitting to the machine.