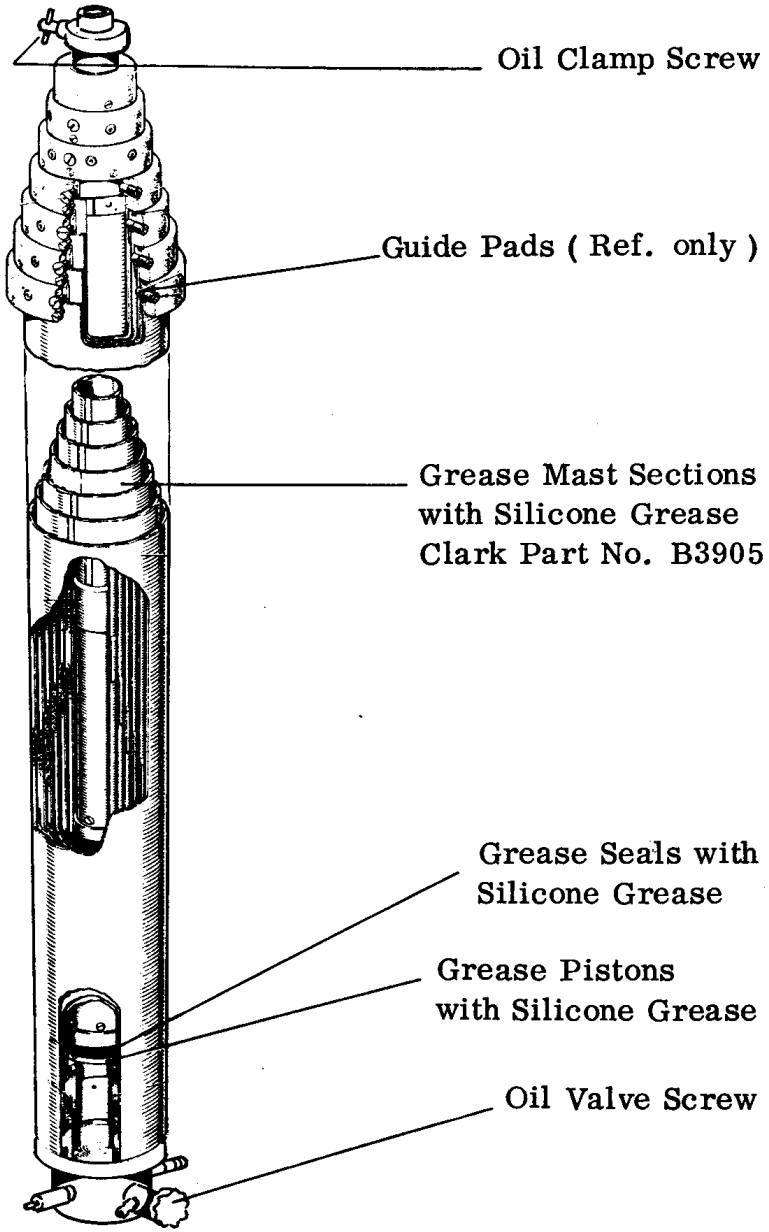
Lubrication Diagram

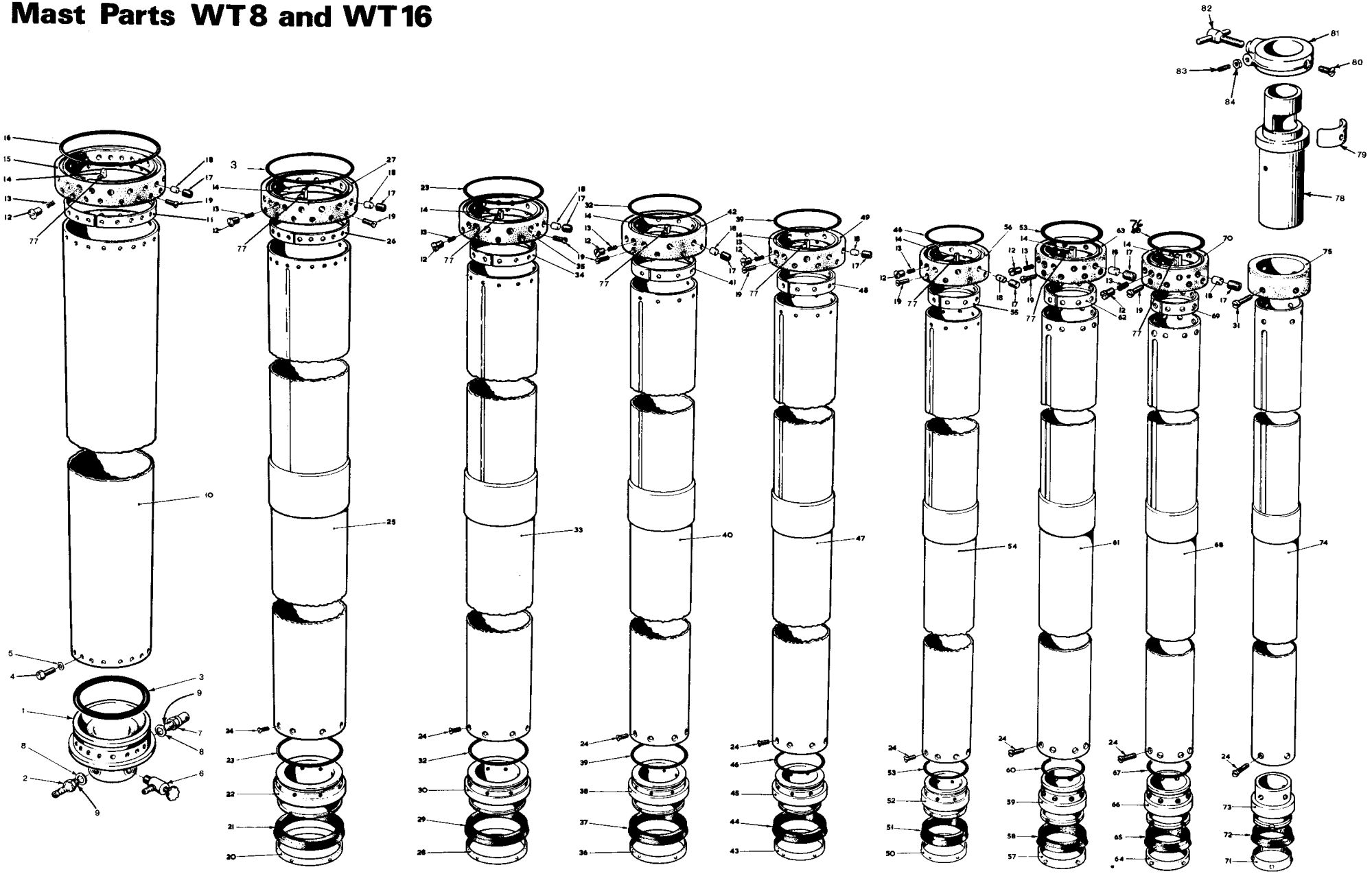


ILLUSTRATED PARTS LIST FOR WT SERIES MASTS

Note: **The following Spares Kits for WT Masts are available:-**

Clark Part No.	Description
8493-KP	Spares Kit for WT1, WT5 and WT10 Masts.
8494-KP	Spares Kit for WT6 Mast.
8495-KP	Spares Kit for WT7 and WT15 Masts.
8496-KP	Spares Kit for WT8 and WT16 Masts.
8497-KP	Spares Kit for WT9, WT11 and WT12 Masts.
8498-KP	Spares Kit for WT14 Mast.

Mast Parts WT8 and WT16



Parts List for WT8 and WT16 Masts

Item	Description	Qty. per Assembly	Clark Part No.	NATO Code Reference No.
1	Base Casting	1	2069	5840-99-624-8111
2	Hose Connector	1	817	4730-99-933-3216
3	'O' Ring	2	B1784	5330-99-801-6825
4	¼" BSF Hex. Hd. Screw, ½" long	18	B36	5306-99-101-1029
5	¼" Plain Washer	18	B40	5310-99-941-8920
6	Drain Valve	1	6485	----
7	Safety Valve	1	1852	5985-99-114-3873
8	Selon Washer	2	B1964	5330-99-106-1106
9	P.T.F.E. Tape	As Reqd.	B5768	----
10	6" dia. Tube (WT8)	1	1800/1	----
10	6" dia. Tube (WT16)	1	7835/1	----
11	5½" Collet Ring	1	2075	5820-99-106-0272
12	Key Housing	8	439	5985-99-933-3214
13	Spring	8	B1796	5360-99-106-1034
14	Key	8	8099	5985-99-643-8430
15	6" Collar	1	2068	5820-99-106-0343
16	'O' Ring	1	B1785	5330-99-820-8794
17	⅜" BSF x 5/16" Allen Socket Screw	85	B1040	5305-99-122-0404
18	Guide Pad	85	379	5985-99-933-3212
19	2 BA x 9/16" Ch. Hd. Steel Screw	86	B375	5305-99-941-7934
20	Seal Retaining Ring	1	2559	5820-99-105-9902
21	Seal	1	B1782	5330-99-633-7710
22	5½" Piston	1	2093	5820-99-220-6950
23	'O' Ring	2	B1783	5330-99-970-9380
24	2 BA x ½" Csk. Hd. Steel Screw	60	B78	5305-99-120-0053
25	5½" dia. Tube (WT8)	1	1800/2	----
25	5½" dia. Tube (WT16)	1	7835/2	----
26	5" Collet Ring	1	2076	5820-99-106-0273
27	5½" Collar	1	2064	5820-99-106-0347
28	Seal Retaining Ring	1	2560	5820-99-105-9903
29	Seal	1	B1781	5330-99-633-7711
30	5" Piston	1	2094	5820-99-220-6951
31	¼" BSF Ch. Hd., Dog Point Screw	4	7209	5305-99-635-7187
32	'O' Ring	2	B412	5330-99-801-6808
33	5" dia. Tube (WT8)	1	1800/3	----
33	5" dia. Tube (WT16)	1	7835/3	----
34	4½" Collet Ring	1	2077	5820-99-106-0274
35	5" Collar	1	2062	5840-99-624-8118
36	Seal Retaining Ring	1	2561	5820-99-105-9907
37	Seal	1	B1780	5330-99-633-7712
38	4½" Piston	1	2096	5820-99-220-6945
39	'O' Ring	2	B411	5330-99-633-7011
40	4½" dia. Tube (WT8)	1	1800/4	----
40	4½" dia. Tube (WT16)	1	7835/4	----
41	4" Collet Ring	1	787	5985-99-933-3206
42	4½" Collar	1	779	5985-99-933-3134
43	Seal Retaining Ring	1	2562	5820-99-105-9906
44	Seal	1	B419	5330-99-633-7716
45	4" Piston	1	773	5985-99-933-3148
46	'O' Ring	2	B410	5330-99-710-0685
47	4" dia. Tube (WT8)	1	1800/5	----
47	4" dia. Tube (WT16)	1	7835/5	----
48	3½" Collet Ring	1	789	5985-99-933-3207
49	4" Collar	1	780	5985-99-933-3135
50	Seal Retaining Ring	1	2563	5820-99-105-9905
51	Seal	1	B418	5330-99-633-7714
52	3½" Piston	1	774	5985-99-933-3149
53	'O' Ring	2	B409	5330-99-882-0538
54	3½" dia. Tube (WT8)	1	1800/6	----
54	3½" dia. Tube (WT16)	1	7835/6	----
55	3" Collet Ring	1	791	5985-99-933-3208
56	3½" Collar	1	781	5985-99-933-3136
57	Seal Retaining Ring	1	2564	5820-99-105-9904
58	Seal	1	B417	5330-99-633-7717
59	3" Piston	1	775	5985-99-933-3150
60	'O' Ring	1	B408	5330-99-815-7743
61	3" dia. Tube (WT8)	1	1800/7	----
61	3" dia. Tube (WT16)	1	7835/7	----
62	2½" Collet Ring	1	793	5985-99-933-3209
63	3" Collar	1	782	5985-99-933-3137
64	Seal Retaining Ring	1	2565	5820-99-105-9901
65	Seal	1	B416	5330-99-633-7715
66	2½" Piston	1	776	5985-99-933-3151
67	'O' Ring	1	B406	5330-99-633-7009
68	2½" dia. Tube (WT8)	1	1800/8	----
68	2½" dia. Tube (WT16)	1	7835/8	----
69	2" Collet Ring	1	795	5985-99-933-3210
70	2½" Collar	1	783	5985-99-933-3138
71	Seal Retaining Ring	1	2585	5820-99-110-9646
72	Seal	1	B415	5335-99-633-7719
73	2" Piston (Top)	1	1380	----
74	2" dia. Tube (WT8)	1	1800/9	----
74	2" dia. Tube (WT16)	1	7835/9	----
75	2" Collar (Top)	1	923	----
76	'O' Ring	1	B407	5330-99-882-0537
77	Pin	1	8100	5315-99-643-8431
	2" Socket Clamp Assy. comprises:-	1	7204	----
78	Clamp Tube	1	7205	----
79	Clamp Segment	1	6735	5985-99-624-8161
80	Csk. Hd. Screw, M5 x 12 long	1	B5950	5305-99-122-5284
81	Clamp Ring	1	6734	5985-99-624-8160
82	Tommy Screw Assy.	1	6737	5985-99-624-8162
83	Slotted Grubscrew	1	6773	5305-99-624-8442
84	Thin Hex. Nut	1	B3548	5310-99-120-0118

Overhaul and Repair (2nd or 3rd Line)

If a mast is leaking badly or has been accidentally damaged, it will be necessary to strip the mast for examination and repair. For carrying out this work, it will be found an advantage to make simple wooden 'Vee' blocks and fix them to a bench top as shown in the illustration (Fig 1).

DISMANTLING THE MAST

1. Start with the top collar by removing the cheese head screws, draw out the top socket and tap out the collar from its tube with a wooden mallet.

2. Fully extend the top tube and partially withdraw the next tube. Remove the cheese head screws from the second collar and tap off as before.

3. The first tube can now be withdrawn complete with its piston and seal. This tube and the second collar should now be laid aside from the main mast assembly on to 'Vee' blocks.

4. To remove the seal retaining ring, twist through 45° to align pips with the notches in the piston. Pull off. Then stretch seal off piston.

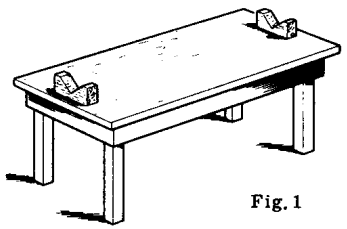


Fig. 1

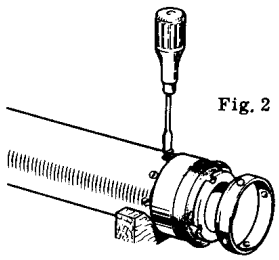


Fig. 2

5. Remove the countersunk screws from the bottom of the tube (Fig. 2). This will allow the piston to be removed.

6. From the other end of the tube, unscrew the guide pad screws and remove guide pads, key housing and spring from the collar. This will now allow the collar to be slipped off the tube (Fig. 3).

7. This procedure should be repeated for each section until dismantling is complete. The method of removing the base will be obvious from the exploded drawings.

EXAMINATION AND REPAIR

8. When the mast has been dismantled into all its components, each piece should be carefully examined for damage and wear, especially seals and 'O' rings. Heavy wear or nicking can cause leakage and such seals and 'O' rings must be replaced (Figs 4 & 5). The nylon keys should be examined for wear and if stepped or radiused on the edges which engage the keyway they should be replaced (Fig 6). Pistons should also be replaced if broken and tubes if badly scored. Check guide pads and replace if missing or badly worn.

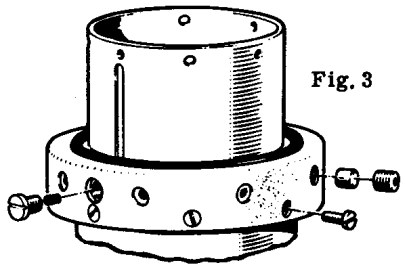


Fig. 3

Fig. 4

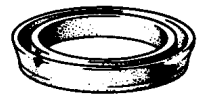


Fig. 5

9. Before reassembly, check that there are no burrs in the ends of the tubes and, if present, remove with a scraper (Fig 7).

REASSEMBLY OF MAST

10. Insert piston into top tube and secure with screws which were removed. Damaged screws should be replaced. Lock the screws in position by punching the tube into the screw slot as shown in Fig. 8. A smear of silicone grease, placed on the piston end which goes into the tube, will greatly assist assembly.

11. The correct seal should be fitted to the piston. Retain the seal with seal retaining ring, fitting the radius edge into the seal and twisting through 45° to lock. This assembly is inserted into the top of the next largest tube. To ease entry of the seal, a smear of silicone grease may be applied.

12. Repeat this procedure until all mast sections are assembled.

13. Before the collars are replaced, the tapped holes at the top of each tube section should be examined. If by chance they are elongated or damaged (see Fig 9), new holes should be made using the appropriate collar as a guide. The drilling size is a No. 24 drill and the thread is 2BA. It is most unlikely that this operation will be necessary, but it is important that the holes are examined.

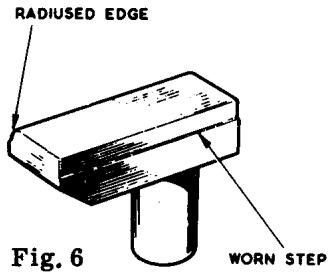


Fig. 6

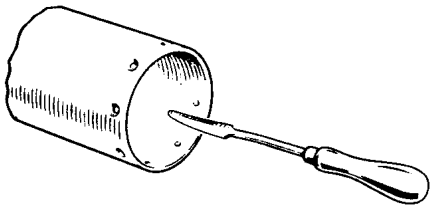


Fig. 7

14. The exact assembly of all parts of this mast will be obvious from the exploded drawings, but ensure that the holes in the collet ring 'line up' with the tapped holes in the top of the tube.

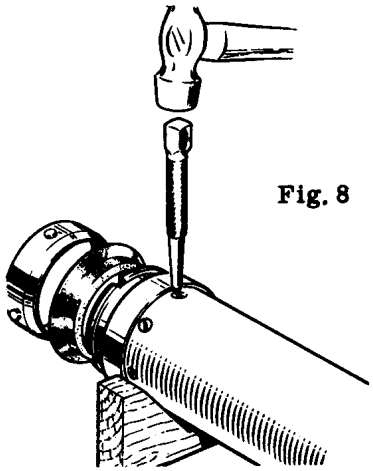


Fig. 8

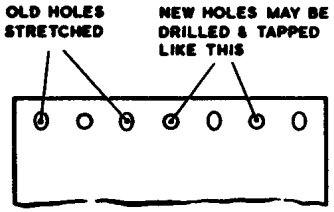


Fig. 9

MAST TESTING

15. After the assembly is completed, the mast should be extended half a dozen times by air pressure and finally left extended for 2 to 3 hours. If the mast does not start to retract under its own weight during this period, the assembly may be considered satisfactory.

FOR USER'S NOTES

Mast Serial No. .....

Supply Date. .....

GENERAL NOTES FOR USERS OF AIR OPERATED TELESCOPIC MASTS

The principle of air pressure as a means of extending a telescopic mast has many advantages. There are, however, certain questions which are repeatedly asked and these are answered here.

Should a Mast leak air pressure? 'Yes' it does. As a guide, if the Mast will carry its headload for at least one hour without losing height, the Mast is in good working order. However, by using locking collars on the Mast, it may be left extended indefinitely, independent of air pressure.

Do they fill with Water? Water can enter a Mast by two routes. Firstly, it may be carried in the air supply and secondly, rain may run down the outside of the Mast Sections and past the seals. In temperate weather conditions this is not harmful. It can be cleared by opening the drain valve or plug fitted to the base of the Mast.

Should the Sections extend in order of size? With no headload the smallest section extends first, whilst with a heavy headload the largest section extends first followed by the next largest, etc. For headloads in between these extremes, the sections extend at random.

What happens in freezing weather? An extended telescopic Mast is a machine with its working parts exposed. It is therefore vulnerable to icing. Risk of icing can be reduced by the following: (a) After extension and clamping the Mast sections, open drain valve in base of Mast or remove drain plug. (b) Keep external surfaces lightly smeared with recommended Silicone grease.