

Lewmar Service Manual Volume III

Introduction

Lewmar is the world's leading manufacturer of yacht winches. Our manufacturing facilities set the highest standards in quality materials and performance. Each Lewmar winch is tested to ensure that at all stages in the manufacturing process it conforms to the Lewmar requirements of dimensional accuracy, rated strength and operating efficiency. Our winches are approved to Lloyds standards and in practice are in excess of them.

Lewmar winches are constantly being tested in the latest racing competition, aboard leading ocean racers around the world and, whether racing or cruising, they are rated for their long life and performance.

However, as with any precision engineered assembly, Lewmar winches need regular maintenance to operate at peak efficiency and, without this attention, permanent damage and premature wear can result.

This Manual uses exploded view drawings to illustrate the techniques required to dismantle completely, service and assemble each winch in the Lewmar range. The drawings illustrate clearly the 'strip from the top' system.

Lewmar has a worldwide network of offices and distributors who carry stocks of spare parts and spare kits. Expert advice and assistance is available for any servicing or repair problem.

Warranty Details

Lewmar winches have been developed over many years by extensive testing aboard the world's finest ocean racers, long distance cruising yachts and match racing yachts such as 12 metres. They are manufactured to quality standards in excess of those required by Lloyds and only the finest materials are used.

If installed, used and maintained as described in this Manual they will give outstanding performance.

Lewmar undertake that any winch which proves defective in materials or workmanship within one year of the date of supply will be repaired or replaced FREE OF CHARGE provided that the winch is returned by the registered owner to the nearest Lewmar office or distributor for examination. Lewmar reserve all rights on determining the nature of the alleged fault and their decision is final.

Any warranty expressed or implied is ineffective unless the winch has been installed, used and regularly serviced in accordance with our instruction.

Service Notes

For satisfactory long term performance and product life these winches must be given the routine and full maintenance procedure described below.

1. **MONTHLY:** All Lewmar winches should be hosed down with fresh water then lightly oiled and greased as detailed in the separate free leaflet, "How to service your Lewmar Winch".
2. **TWO OR THREE TIMES DURING ACTIVE SAILING SEASON:** All Lewmar winches should be stripped, cleaned and relubricated.
3. **AT THE END OF EACH SAILING SEASON OR BEFORE STARTING THE NEW SEASON:** All Lewmar winches should be completely stripped, cleaned, thoroughly checked for damage, lubricated and reassembled as detailed in this Service Manual.

Dismantling

Lewmar winches are simple to dismantle and are designed for easy maintenance. The exploded view drawings show how the component parts can be removed easily from each winch. Consult the 'How to service your Lewmar Winch' booklet for further details.

Assembly

Winches must be assembled in the reverse sequence to the order of dismantling.

Mounting

All winches must be mounted using the correct size and type of retaining bolts. Having decided on the correct winch position, the drum must be removed as detailed in the maintenance instructions for mounting. The winch must be mounted on a flat clean surface.

The hole centres for the winch retaining bolts must be marked off and drilled separately. The winch should be bedded on a **LIGHT** coating of sealing compound to stop leaks — too much compound gets in the gears and pawls.

The winch retaining fastenings must be securely tightened (but not overtightened). The winch is self draining and care must be taken to ensure the drain holes are not blocked.

Handles

All current winches accept any standard international handle (Lewmar red grip handle).

Recommended Lubricants

Grease

Lewmar Grease 7010 (Lubriplate Marine Lube 'A', etc.)

Oil

Light Machine Oil (3-in-1 or equivalent)

Service and Spares

Full service facilities for Lewmar winches are provided at our factory and subsidiary companies and by our distributors and service centres worldwide.

A full listing is provided on the inside back cover.

Parts pricing is subject to change. Apply to your nearest Lewmar office or distributor for current price lists.

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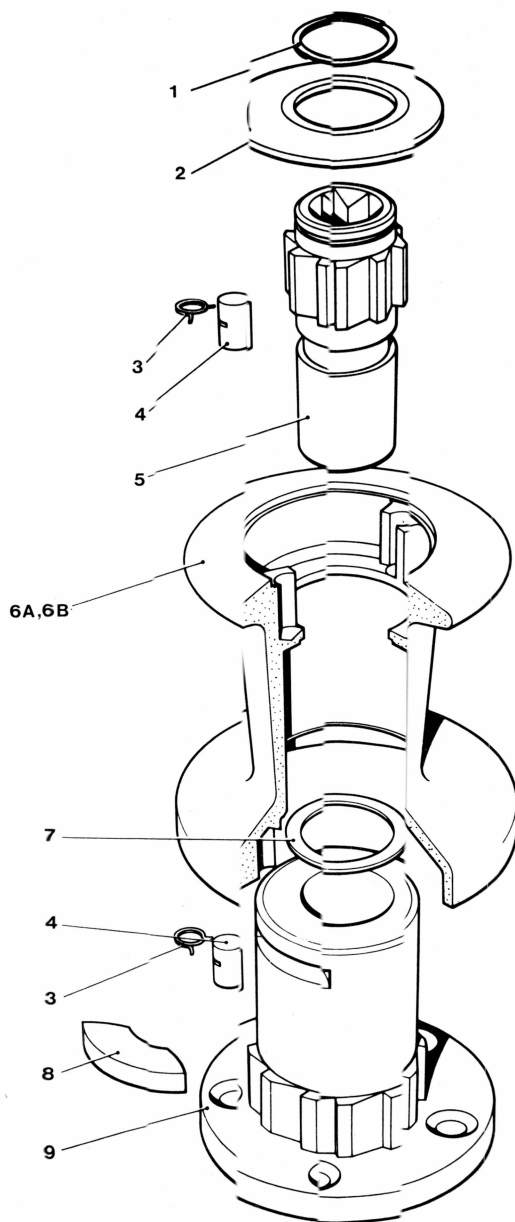
Lloyd's Certificate

Lloyd's make a very careful examination of the material, design, construction, quality control and test procedures used by Lewmar and approved all the existing systems without alteration. Lewmar's existing standards proved to be higher than were required by Lloyd's.

Spares Kits

7001	Single Speed Winches except $\frac{3}{8}$ " socket No. 8's.
7002	Two speed and small self-tailing winches up to and including 42ST, $\frac{3}{8}$ " socket No. 16.
7003	Three speed push button winches.
7004	Self Tailing Winches 44ST and above.
7005	Halliard Reel winches.
7006	Three speed Disc type winches.
7007	Sprung Loaded 34ST plus $\frac{3}{8}$ " socket Nos. 8 and 16 winches.
7008	Various Circlips. (Owners are strongly recommended to carry spare circlips for all winches).
7009	Allen key set.
7010	Grease.

Nos. 6/7



No. Single Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000048	Top Cap	1
3	1260/7	Pawl Spring	4
4	1260/8	Pawl	4
5	15000148	Spindle	1
6A	15006102	Drum - Bronze	1
6B	15006202	Drum - Alloy	1
7	15006004	Washer	1
8	15006005	Key	1
9	15000144	Centre Stem	1

No. Single Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000049	Top Cap	1
3	1260/7	Pawl Spring	4
4	1260/8	Pawl	4
5	15000148	Spindle	1
6A	15008102	Drum - Bronze	1
6B	15008202	Drum - Alloy	1
7	15006004	Washer	1
8	15010005	Key	1
9	15000143	Centre Stem	1

No.1a Bottom Action Winch

Schedule as above except:-

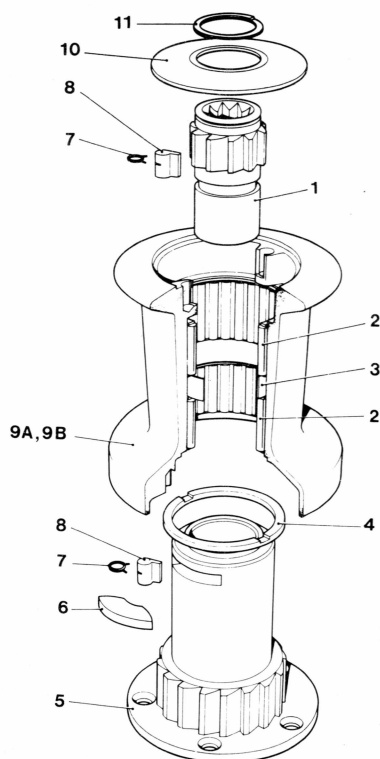
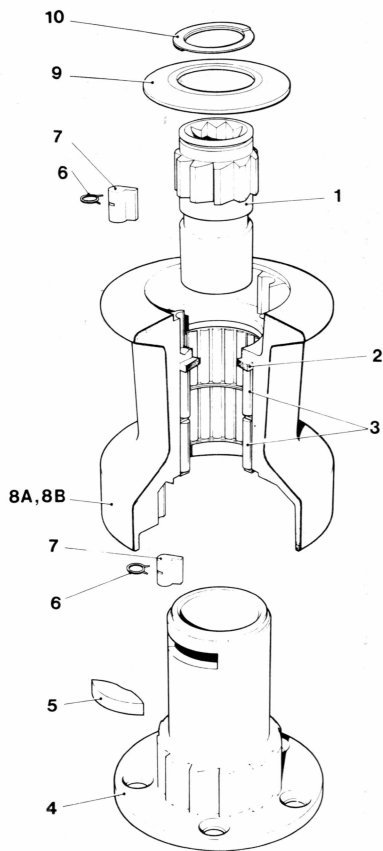
Item No.	Part No.	Description	No. Off
5	15000146	Spindle	1
9	15000179	Centre Stem	1
10	15006007	Handle	1
11	15006008	Base	1
12	15006010	Plug	1

No.7a Bottom Action Winch

Schedule as above except:-

Item No.	Part No.	Description	No. Off
5	15000147	Spindle	1
9	15000143	Centre Stem	1
10	15006007	Handle	1
11	15007008	Base	1
12	15006010	Plug	1

Nos. 8/10



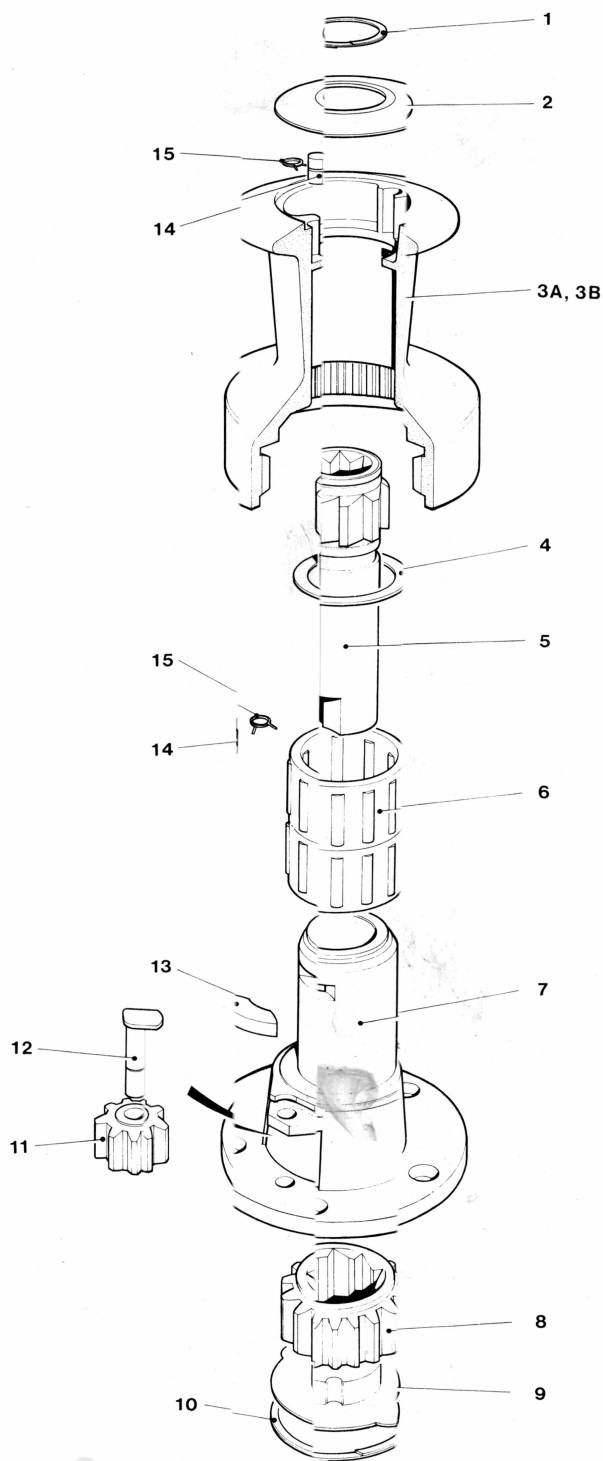
No. 8 Single Speed Winch

Item No.	Part No.	Description	No. Off
1	15008003	Spindle	1
2	15008004	Drum Washer	1
3	15008007	Roller Bearing	2
4	15008001	Centre Stem	1
5	15008005	Key	1
6	1260/7	Pawl Spring	4
7	1260/8	Pawl	4
8A	15008102	Drum – Bronze	1
8B	15008202	Drum – Alloy	1
9	18000050	Top Cap	1
10	B.2075	Circlip	1

No. 10 Single Speed Winch

Item No.	Part No.	Description	No. Off
1	15008003	Spindle	1
2	15010007	Roller Bearing	2
3	15010008	Spacer	1
4	15010004	Drum Washer	1
5	15000227	Centre Stem	1
6	15010005	Key	1
7	1260/7	Pawl Spring	4
8	1260/8	Pawl	4
9A	15010102	Drum – Bronze	1
9B	15010202	Drum – Alloy	1
10	18000053	Top Cap	1
11	B.2075	Circlip	1

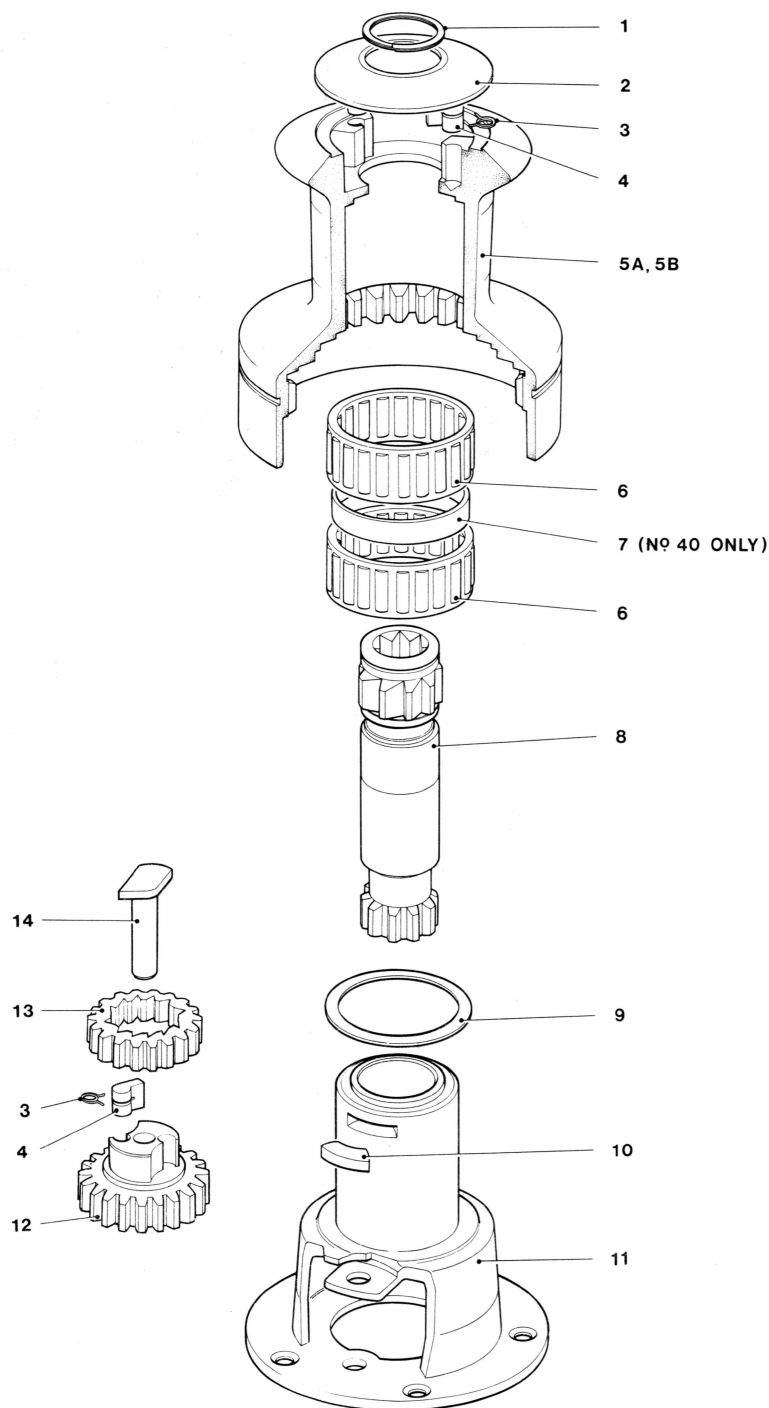
No. 16



No.16 2 Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000051	Top Cap	1
3A	15016102	Drum – Bronze	1
3B	15016202	Drum – Alloy	1
4	15008004	Drum Washer	1
5	15000336	Spindle Assembly	1
6	15008007	Roller Bearing	2
7	15000115	Centre Stem	1
8	15000098	Ratchet Gear	1
9	15016007	Retaining Plate	1
10	B.2085	Circlip	1
11	15000099	Idler Gear	1
12	15000128	Idler Spindle	1
13	15008005	Key	1
14	1260/8	Pawl	4
15	1260/7	Pawl Spring	4

Nos. 24/30/40



No. 24 Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000052	Top Cap	1
3	1260/8	Pawl	4
4	1260/7	Pawl Spring	4
5A	15000118	Drum – Bronze	1
5B	15000122	Drum – Alloy	1
6	15008007	Roller Bearing	2
8	18000005	Spindle Assembly	1
9	15008004	Drum Washer	1
10	15008005	Key	1
11	15000116	Centre Stem	1
12	15000120	Pawl Gear	1
13	15030005	Ratchet Gear	1
14	15000129	Gear Spindle	1

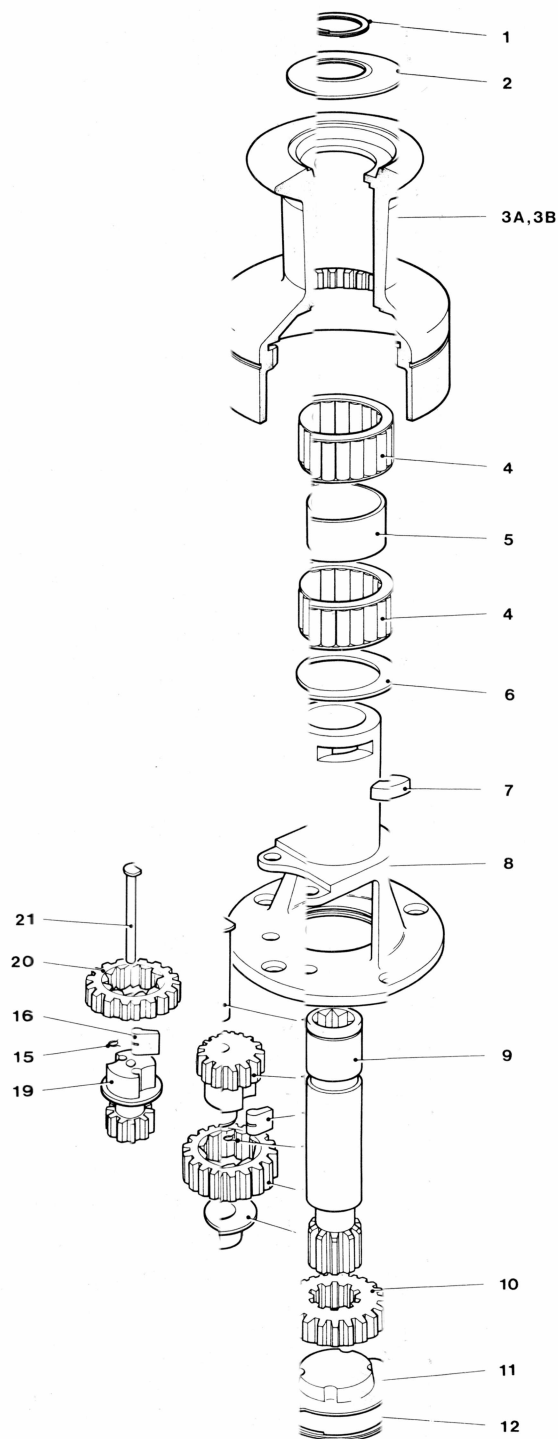
No. 30 Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000054	Top Cap	1
3	1260/7	Pawl Spring	4
4	1260/8	Pawl	4
5A	15030102	Drum – Bronze	1
5B	15030202	Drum – Alloy	1
6	15008007	Roller Bearing	2
8	18030003	Spindle Assembly	1
9	15030007	Drum Washer	1
10	15008005	Key	1
11	15000126	Centre Stem	1
12	15030006	Pawl Gear	1
13	15030005	Ratchet Gear	1
14	15000129	Gear Spindle	1

No. 40 Winch – 2 Speed

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000055	Top Cap	1
3	1260/7	Pawl Spring	4
4	1260/8	Pawl	4
5A	15000002	Drum – Bronze	1
5B	15000003	Drum – Alloy	1
6	15010007	Roller Bearing	2
7	15010008	Spacer	1
8	18040001	Spindle Assembly	1
9	15034638	Drum Washer	1
10	15010005	Key	1
11	15000174	Centre Stem	1
12	15000106	Pawl Gear	1
13	15000107	Ratchet Gear	1
14	15000129	Gear Spindle	1

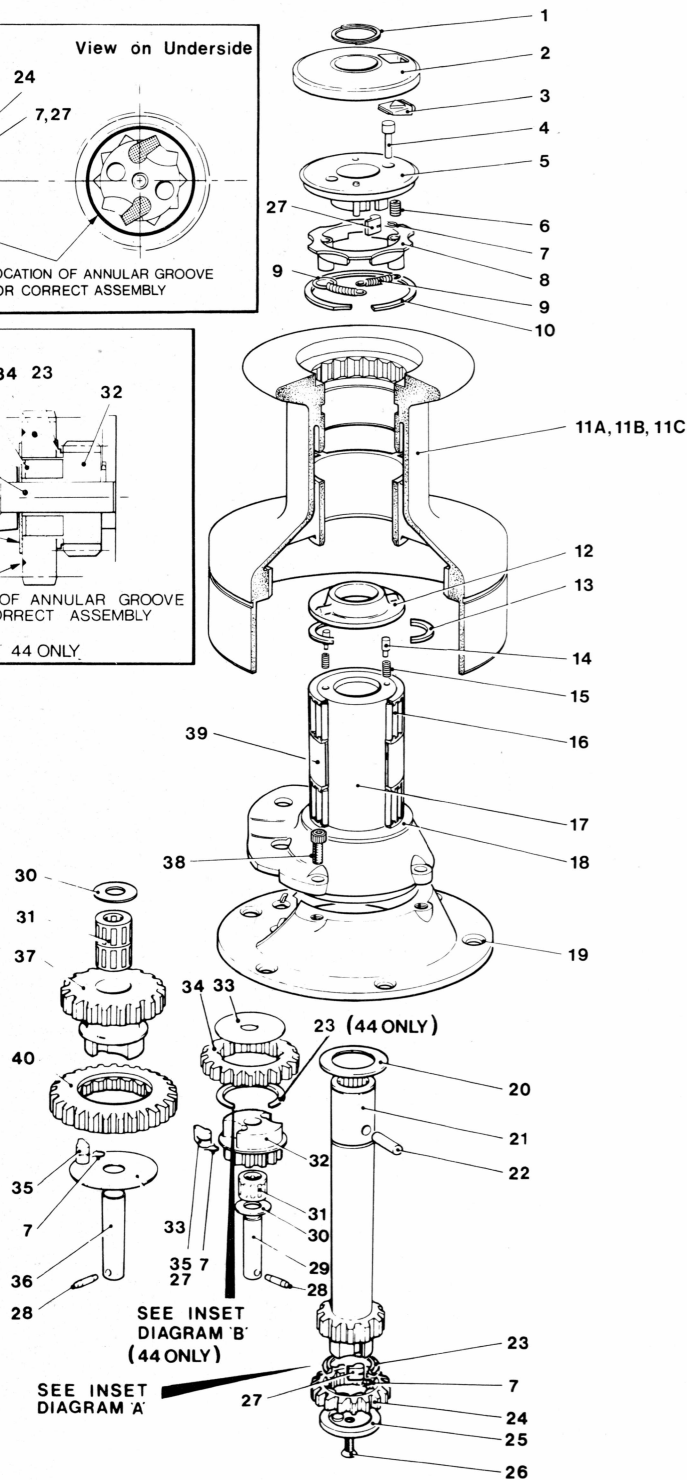
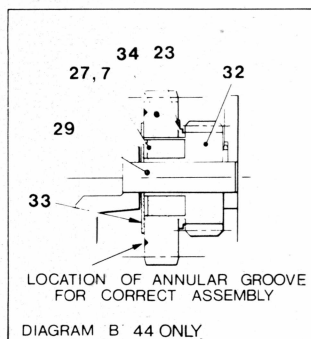
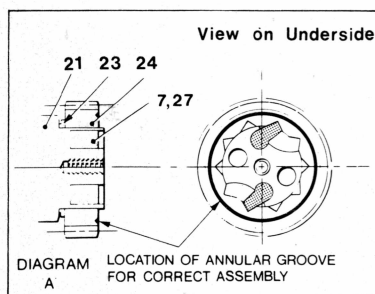
No. 42



No.42 2 Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000056	Top Cap	1
3A	15042102	Drum – Bronze	1
3B	15042202	Drum – Alloy	1
4	15010007	Roller Bearing	2
5	15042012	Spacer	1
6	15042010	Drum Washer	1
7	15010005	Key	1
8	15042001	Centre Stem	1
9	15042003	Spindle	1
10	15042009	Ratchet Gear	1
11	15016007	Retaining Plate	1
12	B.2085	Circlip	1
13	15042011	Flanged Bush	1
14	15042006	Ratchet Gear	1
15	1260/7	Pawl Spring	4
16	1260/8	Pawl	4
17	15042007	Pawl Gear	1
18	15042004	Gear Spindle	1
19	15042008	Pawl Gear	1
20	15030005	Ratchet Gear	1
21	15042005	Gear Spindle	1

Nos. 44/48



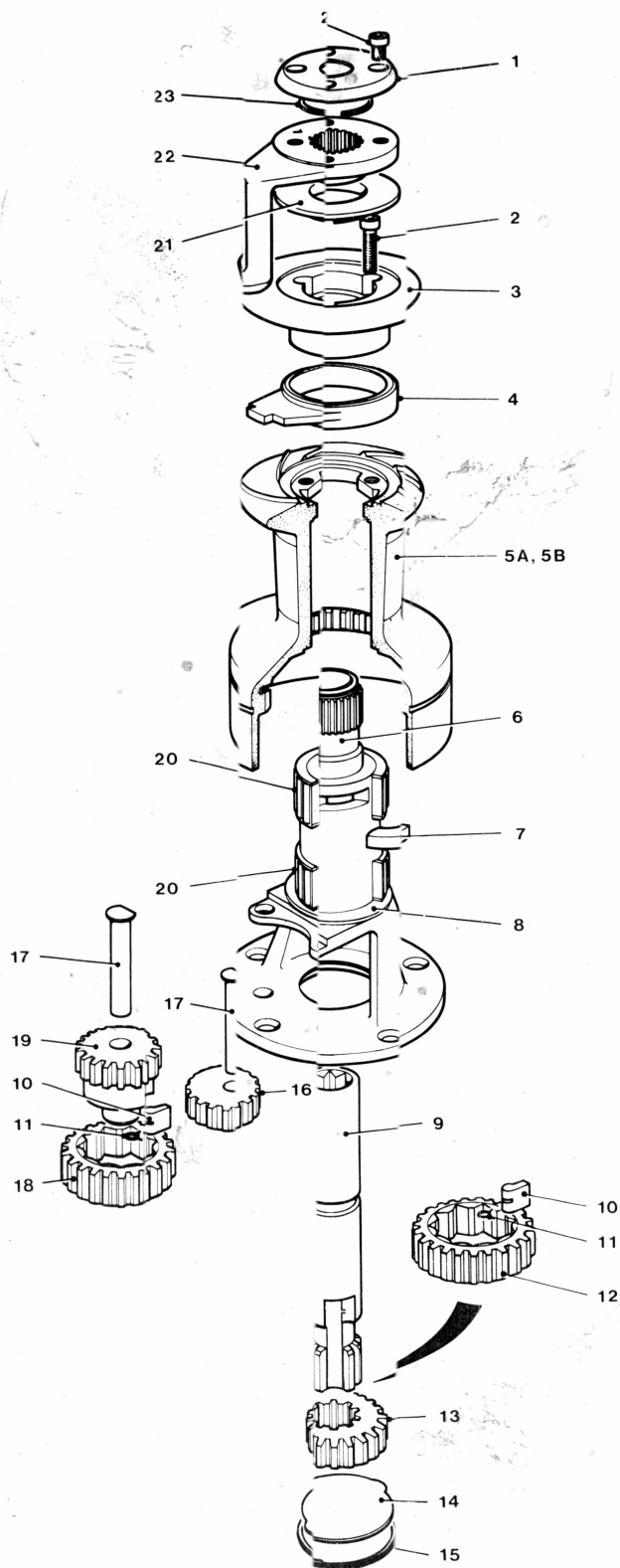
No. 44 Push Button 3 Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	15044117	Top Cap Cover	1
3	15044114	Push Button	1
4	15044111	Plunger	1
5	15044104	Top Cap Assembly	1
6	15044112	Spring	1
7	1260/7	Pawl Spring	8
8	15044106	Closing Ring	1
9	15044115	Spring - Anchor Pin	2
10	B.2083	Circlip	1
11A	15044102	Drum - Bronze	1
11B	15044202	Drum - Alloy	1
11C	15044302	Drum - St. Steel	1
12	15044105	Clutch Plate	1
13	15044118	Collet	2
14	15137203	Plunger	2
15	15137204	Spring	2
16	15044121	Roller Bearing	2
17	15000008	Centre Stem - Upper	1
18	15044116	Drum - Washer	1
19	15000009	Centre Stem - Lower	1
21	15044103	Spindle	1
22	15044119	Drive Pin	1
23	15025107	Spacer	2
24	15016015	Ratchet Gear	1
25	15016107	Spindle End Cap	1
26	B.0515	C'sk. Screw - 1/4" UNC x 1/2" Long	1
27	1260/8	Pawl	8
28	B.1516	Spirol Pin	2
29	15000010	Gear Spindle	1
32	15025105	Pawl Gear	1
33	15025106	Washer	2
34	15041105	Ratchet Gear	1
36	15000011	Gear Spindle	1
37	15044107	Pawl Gear	1
38	B.0719	Skt. Hd. Cap Screw - 5/8" UNC x 3/4" Long	4
39	15065115	Spacer (44 Winch only)	1
40	15016105	Ratchet Gear	1

No. 48 Push Button 3 Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	15048106	Top Cap Cover	1
3-10	As 44 Schedule		
11A	15048102	Drum - Bronze	1
11B	15048202	Drum - Alloy	1
11C	15048302	Drum - St. Steel	1
12-15	As 44 Schedule		
16	15044121	Roller Bearing	3
17	15000013	Centre Stem - Upper	1
18	15044116	Drum - Washer	1
19	15000014	Centre Stem - Lower	1
20	1300/21	Washer	1
21	15048103	Spindle	1
22	15044119	Drive Pin	1
23	15025107	Spacer	1
24	15048104	Ratchet Gear	1
25	15016107	Spindle End Cap	1
26	B.0515	C'sk. Screw - 1/4" UNC x 1/2" Long	1
27	1260/8	Pawl	4
28	B.1516	Spirol Pin	2
29	15000016	Gear Spindle	1
30	1300/22	Washer	2
31	1300/SA2	Roller Bearing	3
32	1300/8	Pawl Gear	1
33	1264/7	Washer	2
34	1300/7	Ratchet Gear	1
35	1264/8	Pawl	4
36	15000015	Gear Spindle	1
37	1300/6	Pawl Gear	1
38	B.0719	Skt. Hd. Cap Screw - 5/8" UNC x 3/4" Long	4
40	1300/5	Ratchet Gear	1

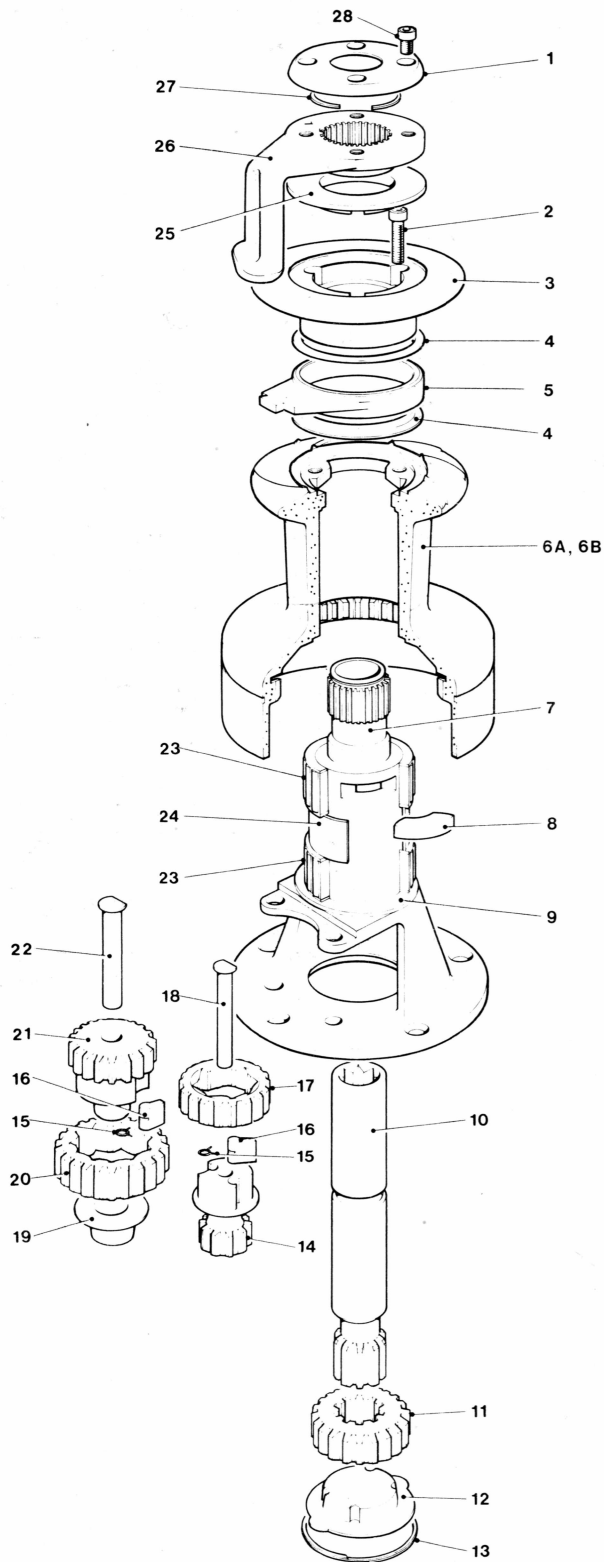
No. 40ST



No. 10 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15000138	Top Cap	1
2	B 0709	Skt. Hd. Cap Screw – 1/4" UNC x 3/4" Long	3
3	15000124	Upper Crown Plate	1
4	15000137	Stripper Ring	1
5A	15000226	Drum – Bronze	1
5B	15000123	Drum – Alloy	1
6	15000117	Centre Stem	1
7	15010005	Key	1
8	15000175	Drum Washer	1
9	18000008	Spindle Assy.	1
10	1260/8	Pawl	4
11	1260/7	Pawl Spring	4
12	15000125	Ratchet Gear	1
13	15000136	Splined Gear	1
14	15000142	Retaining Plate	1
15	B 2085	Circlip	1
16	15000127	Idler Gear	1
17	15000141	Gear Spindle	2
18	15000135	Ratchet Gear	1
19	15000130	Pawl Gear	1
20	15010007	Roller Bearing	2
21	15000140	Flanged Bush	1
22	15000134	Stripper Arm	1
23	15042608	Split Collet	2
24	B 0733	Skt. Hd. Cap Screw – 1/4" UNC x 3/8" Long	4

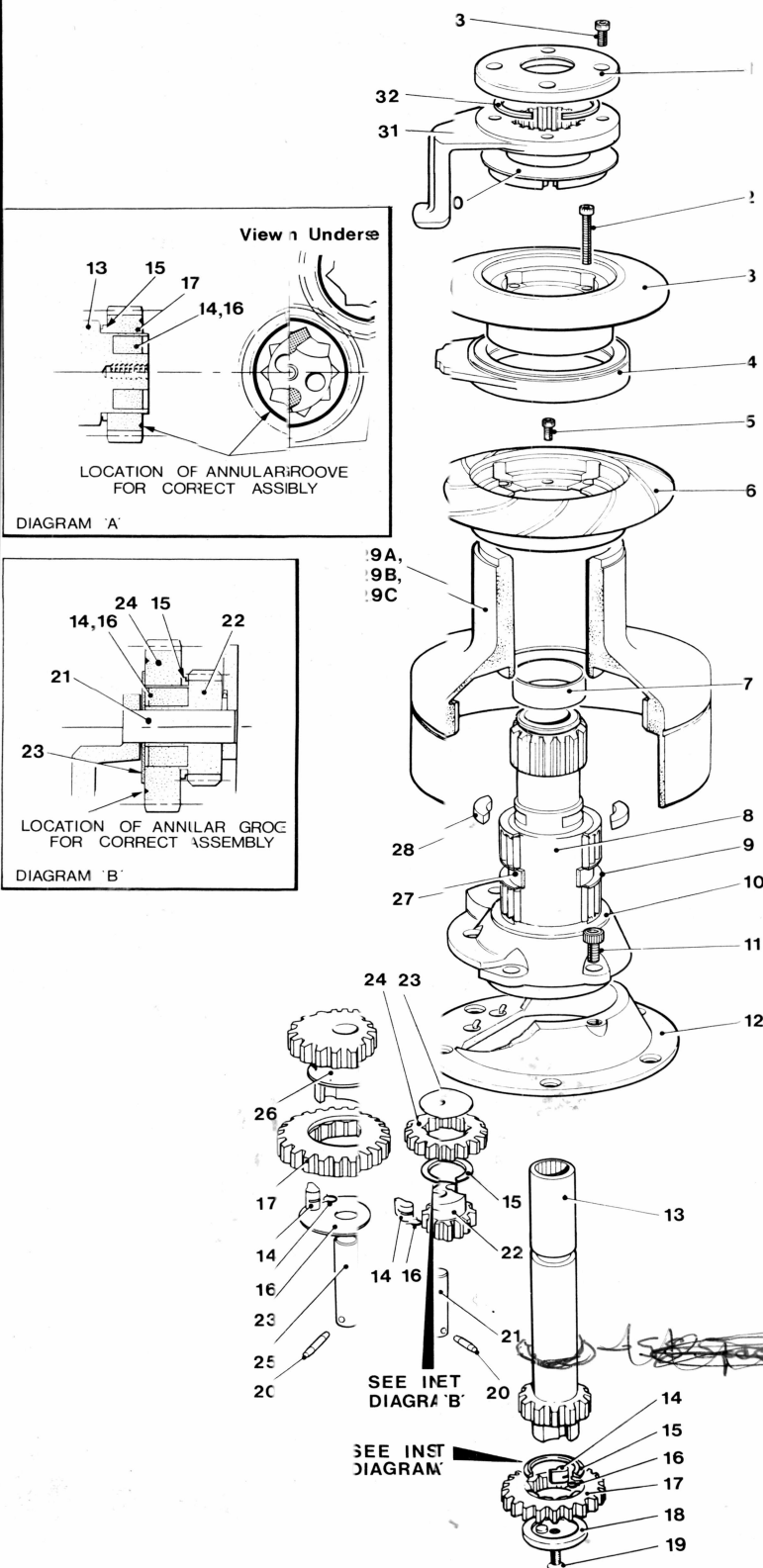
No. 42ST



No. 42 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15042607	Top Cap	1
2	B 0721	Skt. Hd. Cap Screw – 1/4" UNC x 1" Long	3
3	15042604	Upper Crown Plate	1
4	15042641	Stripper Ring Insert	2
5	15042606	Stripper Ring	1
6A	15042402	Drum – Bronze	1
6B	15042502	Drum – Alloy	1
7	15042601	Centre Stem	1
8	15010005	Key	1
9	15042010	Drum Washer	1
10	15042603	Spindle	1
11	15042009	Gear	1
12	15016007	Retaining Plate	1
13	B 2085	Circlip	1
14	15042008	Pawl Gear	1
15	1260/7	Pawl Spring	4
16	1260/8	Pawl	4
17	15030005	Ratchet Gear	1
18	15042005	Gear Spindle	1
19	15042011	Retaining Bush	1
20	15042006	Ratchet Gear	1
21	15042007	Pawl Gear	1
22	15042004	Gear Spindle	1
23	15010007	Roller Bearing	2
24	15042012	Spacer	1
25	15042609	Flanged Bush	1
26	15042605	Stripper Arm	1
27	15042608	Collet	2
28	B 0733	Skt. Hd. Cap Screw – 1/4" UNC x 3/8" Long	4

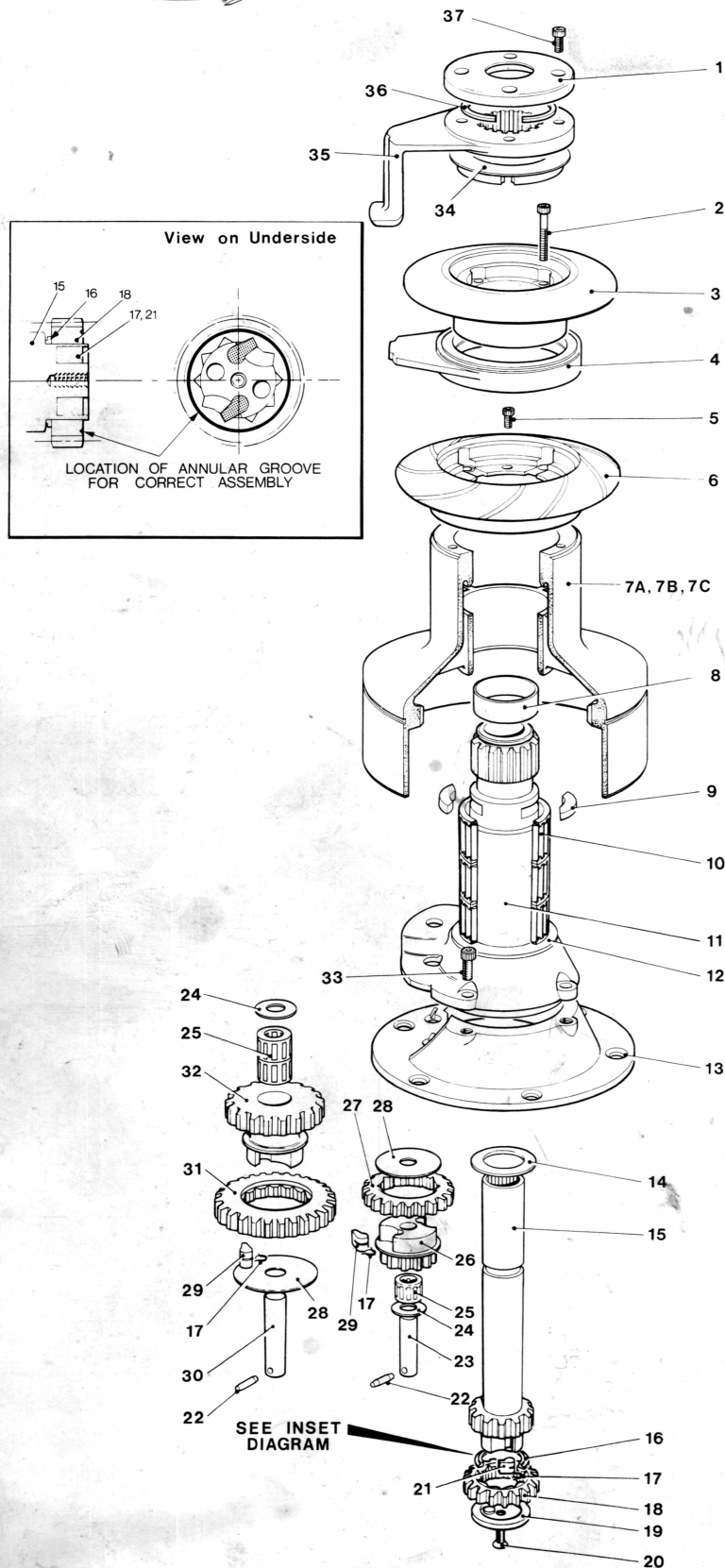
No. 44ST



Nc44 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15044639	Top Cap	1
2	B.0729	Skt. Hd. Cap Screw — 1/4" UNC x 1 1/2" Long	3
3	15044644	Upper Crown Plate	1
4	15044649	Stripper Ring	1
	15044641	Stripper Ring Insert	2
5	B.0723	Skt. Hd. Cap Screw — 1/4" UNC x 1/2" Long	3
6	15044635	Lower Crown Plate	1
7	15000308	Collar	1
8	15000007	Centre Stem — Upper	1
9	15044121	Roller Bearing	2
10	15044116	Drum Washer	1
11	B.0719	Skt. Hd. Cap Screw — 5/8" UNC x 1/2" Long	4
12	15000009	Centre Stem — Lower	1
13	15044633	Spindle	1
14	1260/8	Pawl	6
15	15025107	Spacer	2
16	1260/7	Pawl Spring	6
17	15016105	Ratchet Gear	2
18	15016107	Spindle End Cap	1
19	B.0515	C'sk. Screw — 1/4" UNC x 1/2" Long	1
20	B.1516	Spirol Pin	2
21	15000011	Gear Spindle	1
22	15025105	Pawl Gear	1
23	15025106	Washer	2
24	15041105	Ratchet Gear	1
25	15000010	Gear Spindle	1
26	15044107	Output Gear	1
27	15065115	Spacer	1
28	15040605	Key	2
29A	15000074	Drum — Bronze	1
29E	15044502	Drum — Alloy	1
29C	15044602	Drum — St. Steel	1
30	15044627	Flanged Bush	1
31	15044648	Stripper Arm	1
32	15044637	Collet	2
33	B.0733	Skt. Hd. Cap Screw — 1/4" UNC x 3/8" Long	4

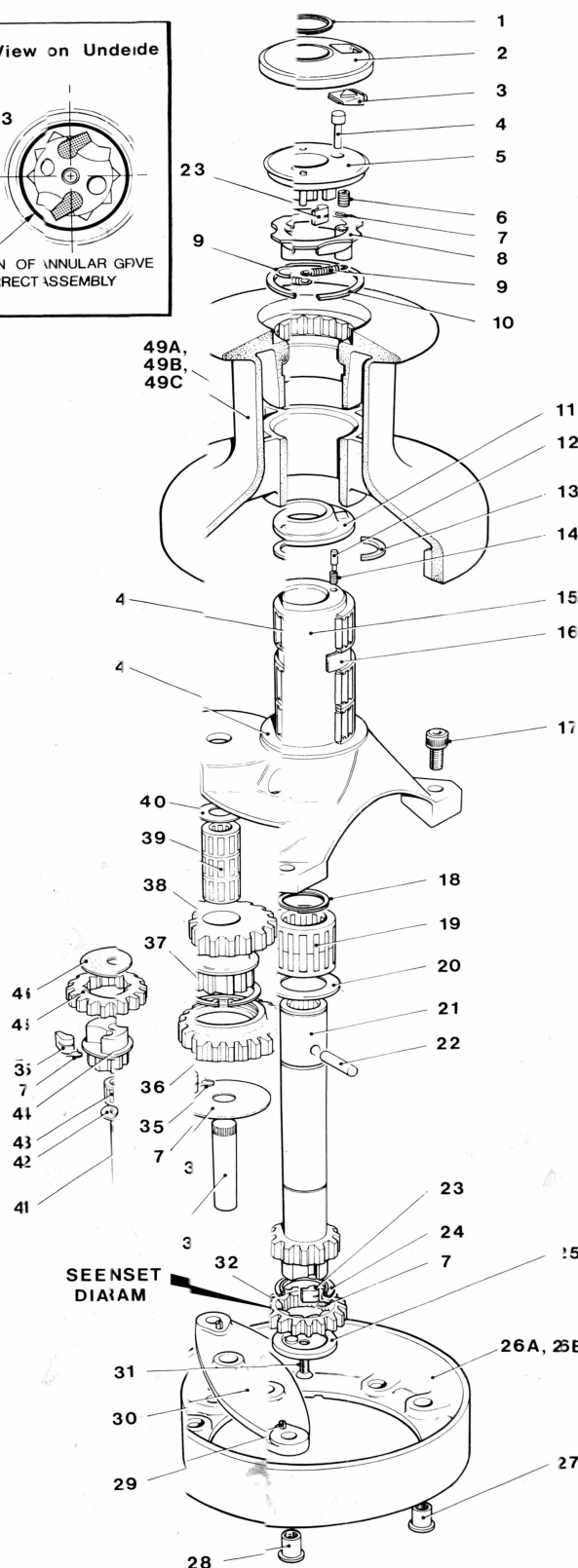
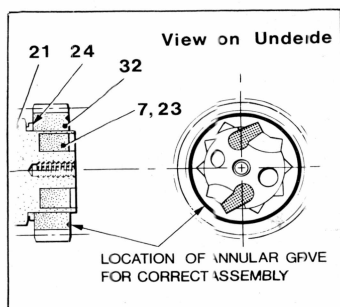
No. 48ST



No. 48 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15044639	Top Cap	1
2	B.0729	Skt. Hd. Cap Screw — 1/4" UNC x 1 1/2" Long	3
3	15048644	Upper Crown Plate	1
4	15048649	Stripper Ring	1
	15048641	Stripper Ring Insert	2
5	B.0723	Skt. Hd. Cap Screw — 1/4" UNC x 1 1/2" Long	3
6	15048635	Lower Crown Plate	1
7A	15000097	Drum — Bronze	1
7B	15048502	Drum — Alloy	1
7C	15048602	Drum — St. Steel	1
8	15000308	Collar	1
9	15040605	Key	2
10	15044121	Roller Bearing	3
11	15000012	Centre Stem — Upper	1
12	15044116	Drum — Washer	1
13	15000014	Centre Stem — Lower	1
14	1300/21	Washer	1
15	15048633	Spindle	1
16	15025107	Spacer	1
17	1260/7	Pawl Spring	6
18	15048104	Ratchet Gear	1
19	15016107	Spindle End Cap	1
20	B.0515	C'sk. Screw — 1/4" UNC x 1/2" Long	1
21	1260/8	Pawl	2
22	B.1516	Spiral Pin	2
23	15000016	Gear Spindle	1
24	1300/22	Washer	2
25	1300/SA2	Roller Bearing	3
26	1300/8	Pawl Gear	1
27	1300/7	Ratchet Gear	1
28	1264/7	Washer	2
29	1264/8	Pawl	4
30	15000015	Gear Spindle	1
31	1300/5	Ratchet Gear	1
32	1300/6	Pawl Gear	1
33	B.0719	Skt. Hd. Cap Screw — 5/16" UNC x 3/4" Long	4
34	15044627	Flanged Bush	1
35	15048648	Stripper Arm	1
36	15044637	Split Collet	2
37	B.0733	Skt. Hd. Cap Screw — 1/4" UNC x 3/8" Long	4

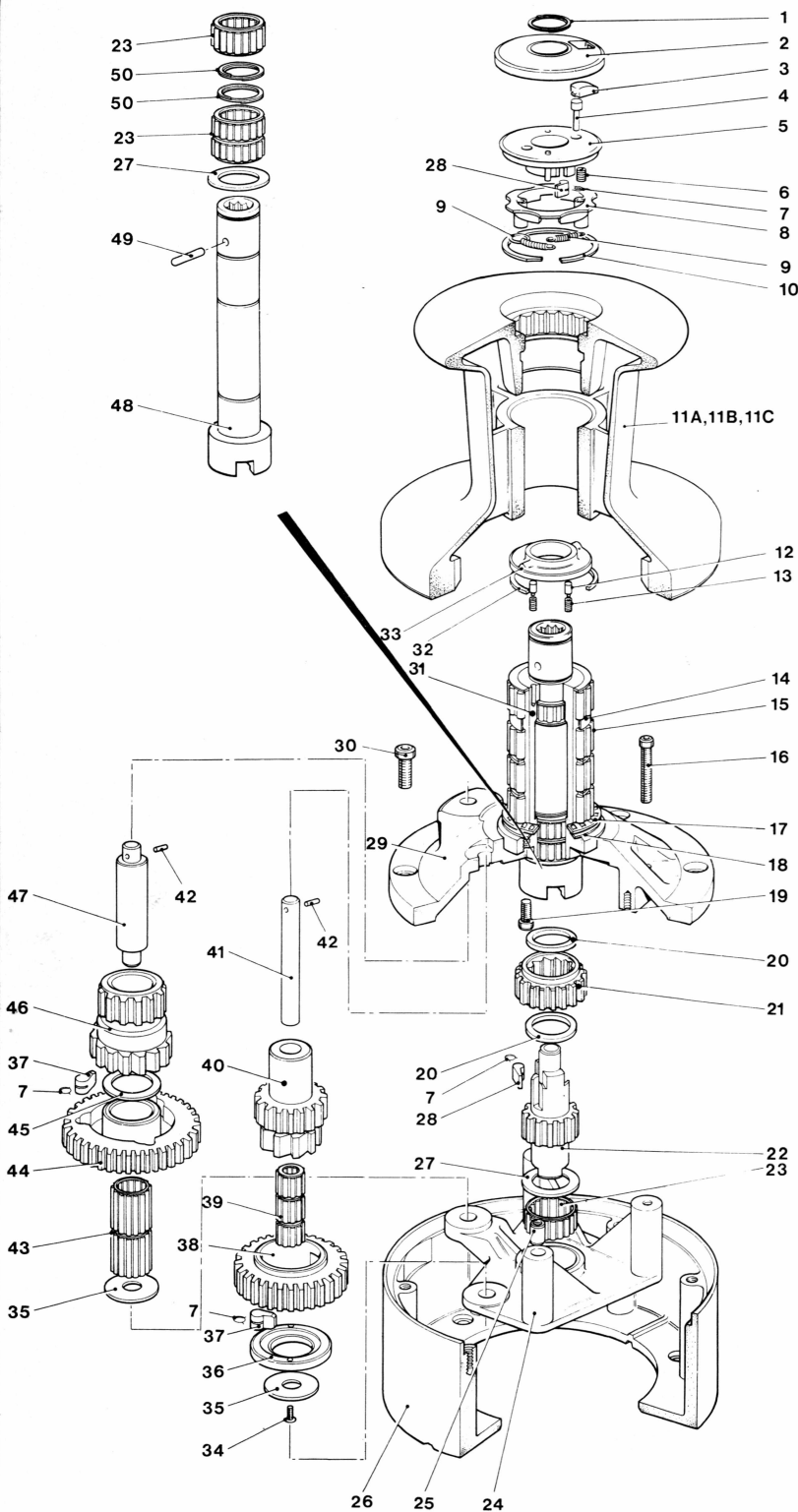
No. 55



No. 5 3 Speed Winch

Item No.	Part No.	Description	No. Off.
1	B.2075	Circlip	1
2	15055106	Top Cap Cover	1
3	15044114	Push Button	1
4	15044111	Plunger	1
5	15044104	Top Cap Assembly	1
6	15044112	Spring	1
7	1260/7	Pawl Spring	8
8	15044106	Closing Ring	1
9	15044113	Spring	2
	15044115	Spring - Anchor Pin	2
10	B.2083	Circlip	1
11	15044105	Clutch Plate	1
12	15137203	Plunger	2
13	15044118	Collet	2
14	15137204	Spring	2
15	15055101	Centre Stem	1
16	15048105	Spacer	1
17	B.0714	Skt. Hd. Cap Screw - $\frac{3}{8}$ " UNC $\times$ $\frac{3}{4}$ " Long	3
18	B.2079	Circlip	1
19	1264/SA2	Roller Bearing	1
20	1300/21	Washer	1
21	15055103	Spindle	1
22	15044119	Drive Pin	1
23	1260/8	Pawl	4
24	15025107	Spacer	1
25	15016107	Spindle End Cap	1
26A	15055104	Base - Bronze	1
26B	15055204	Base - Alloy	1
27	1301/22	Dowel	1
28	1301/17	Dowel	2
29	B.1506	Spiral Pin	2
30	15055105	Bridge Piece	1
31	B.0515	C'sk Screw - $\frac{1}{4}$ " UNC $\times$ $\frac{1}{2}$ " Long	1
32	15048104	Ratchet Gear	1
33	1301/10	Gear Spindle	1
34	1301/11	Washer	1
35	1264/8	Pawl	4
36	1301/7	Pawl Gear	1
37	B.2077	Circlip	1
38	1301/6	Ratchet Gear	1
39	1301/SA2	Roller Bearing	3
40	1301/19	Washer	1
41	1264/6	Gear Spindle	1
42	1300/22	Washer	1
43	1300/SA2	Roller Bearing	1
44	1300/8	Pawl Gear	1
45	1300/7	Ratchet Gear	1
46	15055119	Washer	1
47	15044116	Drum Washer	1
48	15044121	Roller Bearing	3
49A	15055102	Drum - Bronze	1
49E	15055202	Drum - Alloy	1
49C	15055302	Drum - St. Steel	1

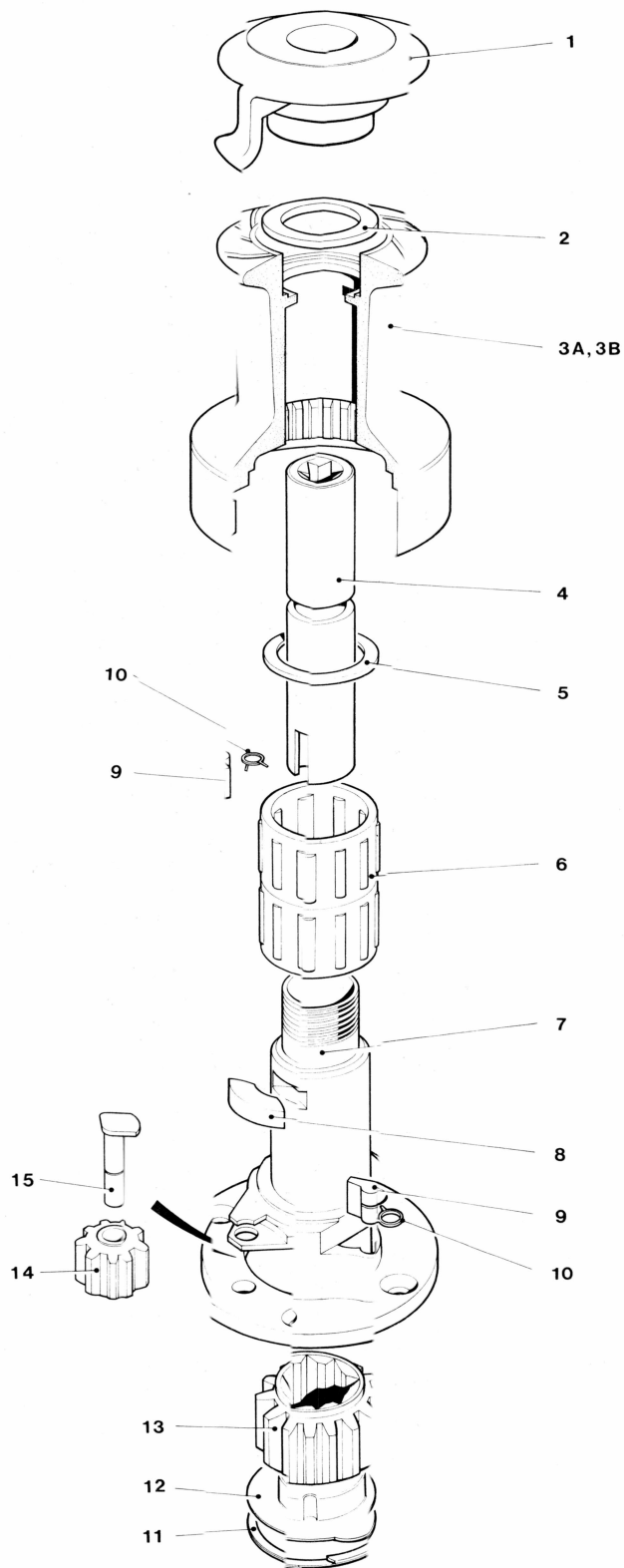
No. 65



No. 65 3 Speed Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	15065106	Top Cap Cover	1
3	15044114	Push Button	1
4	15044111	Plunger	1
5	15044104	Top Cap Assembly	1
6	15044112	Spring	1
7	1260/7	Pawl Spring	9
8	15044106	Closing Ring	1
9	15044113	Spring	2
	15044115	Spring — Anchor Pin	2
10	B.2083	Circlip	1
11A	15000206	Drum — Bronze	1
11B	15000207	Drum — Alloy	1
11C	15000208	Drum — St. Steel	1
12	15137203	Plunger	2
13	15137204	Spring	2
14	15065115	Spacer	1
15	15044121	Roller Bearing	4
16	B.0698	Skt. Hd. Cap Screw — $\frac{5}{16}$ " UNC $\times$ $1\frac{1}{2}$ " Long	3
17	18080015	Thrust Bearing	1
18	15000082	Drum Washer	1
19	B.0730	Skt. Hd. Cap Screw — $\frac{5}{16}$ " UNC $\times$ $\frac{5}{8}$ " Long	8
20	15000303	Spacer	2
21	15000242	Ratchet Gear	1
22	15000241	Spindle Extension	1
23	15000019	Roller Bearing	4
24	15000048	Bridge Piece	1
	15000053	Bridge Piece Sleeve	1
25	15065111	Hollow Dowel	2
26	15000197	Base	1
27	15000024	Washer	2
28	1260/8	Pawl	4
29	15000049	Centre Stem — Lower	1
30	B.0714	Skt. Hd. Cap Screw — $\frac{3}{8}$ " UNC $\times$ $\frac{3}{4}$ " Long	6
31	15000195	Centre Stem — Upper	1
32	15044118	Collet	2
33	15044105	Clutch Plate	1
34	B.0511	Csk. Screw — 2BA $\times$ $\frac{3}{8}$ " Long	2
35	15000247	Washer	2
36	15000023	Retainer	1
37	1264/8	Pawl	5
38	15000040	Pawl Gear	1
39	15000017	Roller Bearing	3
40	15000245	Idler Gear	1
41	15000240	Gear Spindle	1
42	B.1501	Spirol Pin	2
43	15000018	Roller Bearing	2
44	15000244	Pawl Gear	1
45	15000246	Washer	1
46	15000243	Ratchet Gear	1
47	15000239	Gear Spindle	1
48	15000198	Spindle	1
49	15044119	Drive Pin	1
50	B.2086	Circlip	2

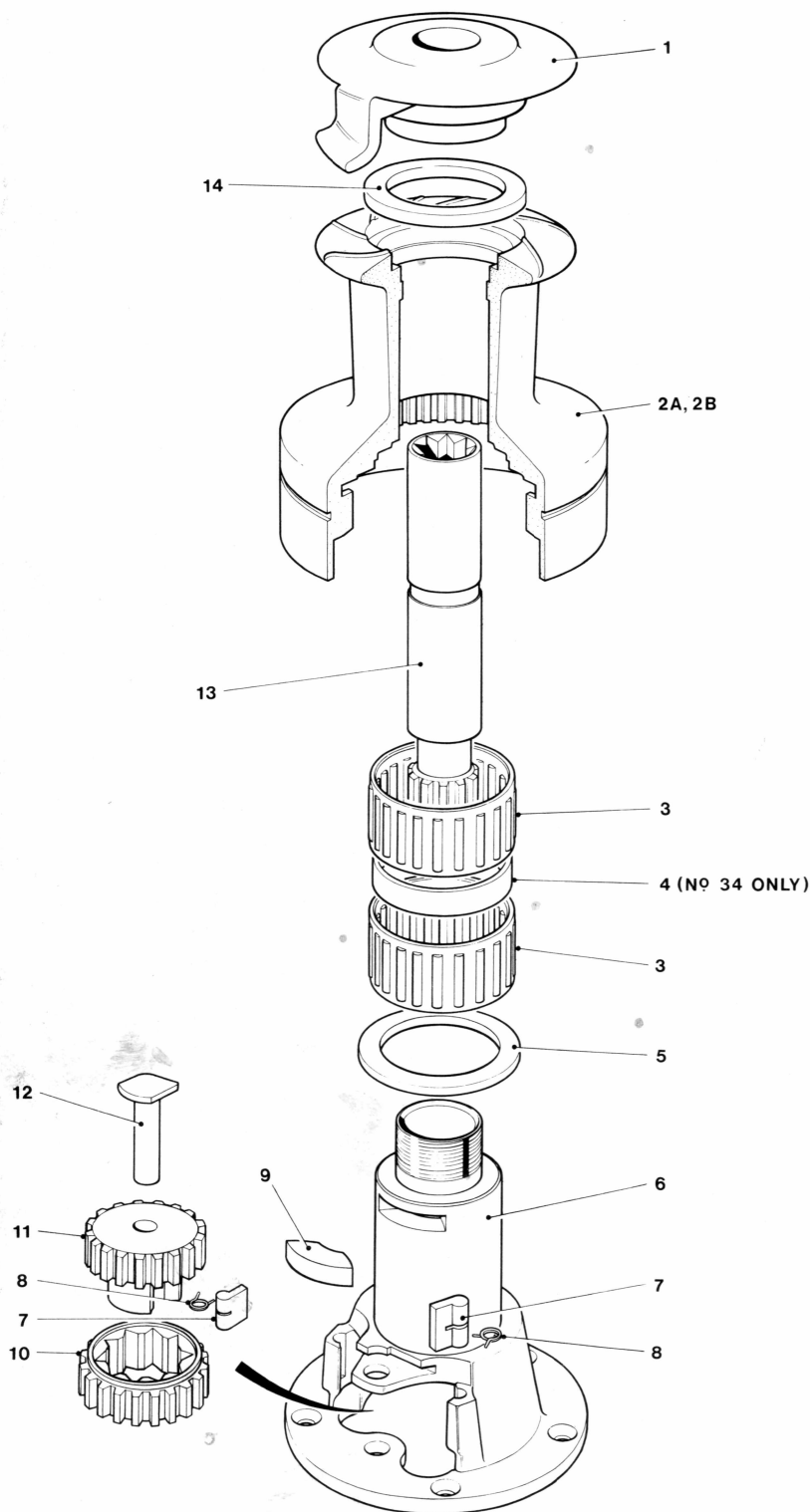
No. 16ST



No. 1 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15016604	Stripper Nut/Top Cap	1
	B 2404	Helicoil Insert	1
2	15016010	Washer	1
3A	15016402	Drum – Bronze	1
3B	15016502	Drum – Alloy	1
4	15016603	Spindle	1
5	15008004	Washer	1
6	15008007	Roller Bearing	2
7	15000189	Centre Stem	1
8	15008005	Key	1
9	1260/8	Pawl	4
10	1260/7	Pawl Spring	4
11	B 2085	Circlip	1
12	15016007	Retaining Plate	1
13	15000098	Ratchet Gear	1
14	15000099	Idler Gear	1
15	15000128	Idler Spindle	1

Nos. 30ST/34ST



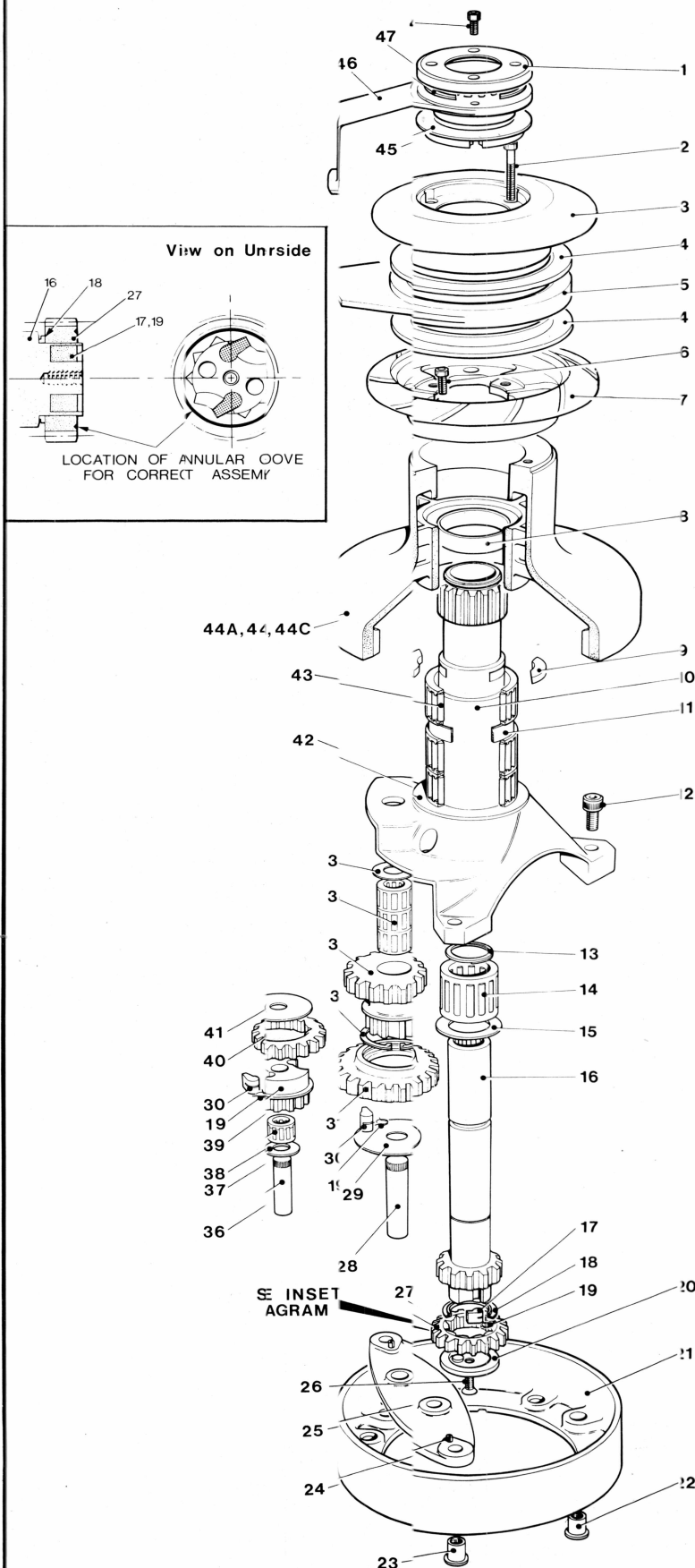
No. 30 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15030604	Stripper Nut/Top Cap	1
2A	15030402	Drum – Bronze	1
2B	15030502	Drum – Alloy	1
3	15008007	Roller Bearing	2
5	15030007	Drum Washer	1
6	15000190	Centre Stem	1
7	1260/8	Pawl	4
8	1260/7	Pawl Spring	4
9	15008005	Key	1
10	15030005	Ratchet Gear	1
11	15030006	Pawl Gear	1
12	15000129	Gear Spindle	1
13	15030603	Spindle	1
14	15030607	Washer	1

No. 34 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	15034634	Stripper Nut/Top Cap	1
2A	15034432	Drum – Bronze	1
2B	15034532	Drum – Alloy	1
3	15010007	Roller Bearing	2
4	15010008	Spacer	1
5	15034638	Drum Washer	1
6	15000180	Centre Stem	1
7	1260/8	Pawl	4
8	1260/7	Pawl Spring	4
9	15010005	Key	1
10	15034635	Ratchet Gear	1
11	15034636	Pawl Gear	1
12	15000129	Gear Spindle	1
13	15034633	Spindle	1
14	15034637	Washer	1

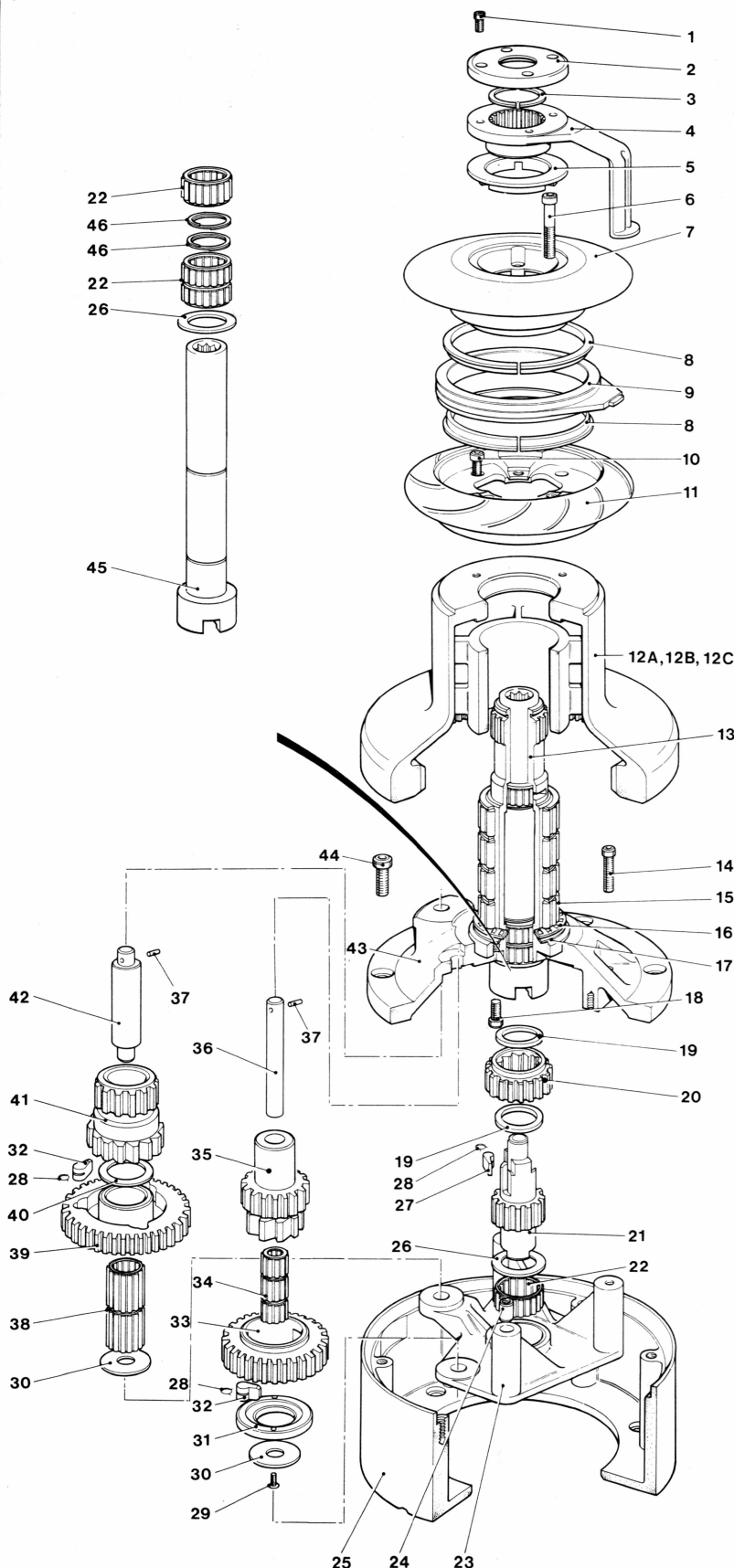
No. 55ST



No 55 Self Tailing Winch

Item No	Part No.	Description	No. Off
1	15044639	Top Cap	1
2	B 0731	Skt. Hd. Cap Screw — 1/4" UNC x 1 3/4" Long	3
3	15055644	Upper Crown Plate	1
4	15055641	Stripper Ring Insert	2
5	15055649	Stripper Ring	1
6	B 0709	Skt. Hd. Cap Screw — 1/4" UNC x 1/2" Long	3
7	15055645	Lower Crown Plate	1
8	15044638	Collar	1
9	15040605	Key	2
10	15055631	Centre Stem	1
	15055636	Centre Stem Extension	1
	15044614	Pin	1
11	15048105	Spacer	1
12	B 0714	Skt. Hd. Cap Screw — 3/8" UNC x 3/4" Long	3
13	B 2079	Circlip	1
14	1264/SA2	Roller Bearing	1
15	1300/21	Washer	1
16	15055603	Spindle	1
17	1260/8	Pawl	2
18	15025107	Spacer	1
19	1260/7	Pawl Spring	6
20	15016107	Spindle End Cap	1
21	15055204	Base	1
22	1301/22	Dowel	1
23	1301/17	Dowel	2
24	B 1506	Spiral Pin	2
25	15055105	Bridge Piece	1
26	B 0515	C'sk. Screw — 1/4" UNC x 1/2" Long	1
27	15048104	Ratchet Gear	1
28	1301/10	Gear Spindle	1
29	1301/11	Washer	1
30	1264/8	Pawl	4
31	1301/7	Pawl Gear	1
32	B 2077	Circlip	1
33	1301/6	Ratchet Gear	1
34	1301/SA2	Roller Bearing	3
35	1301/19	Washer	1
36	1264/6	Gear Spindle	1
37	1300/22	Washer	1
38	1300/SA2	Roller Bearing	1
39	1300/8	Pawl Gear	1
40	1300/7	Ratchet Gear	1
41	15055119	Washer	1
42	15044116	Drum Washer	1
43	15044121	Roller Bearing	3
44A	15000096	Drum — Bronze	1
44E	15055502	Drum — Alloy	1
44C	15055602	Drum — St. Steel	1
45	15044627	Flanged Bush	1
46	15055648	Stripper Arm	1
47	15044637	Split Collet	2
48	B 0733	Skt. Hd. Cap Screw — 1/4" UNC x 3/8" Long	4

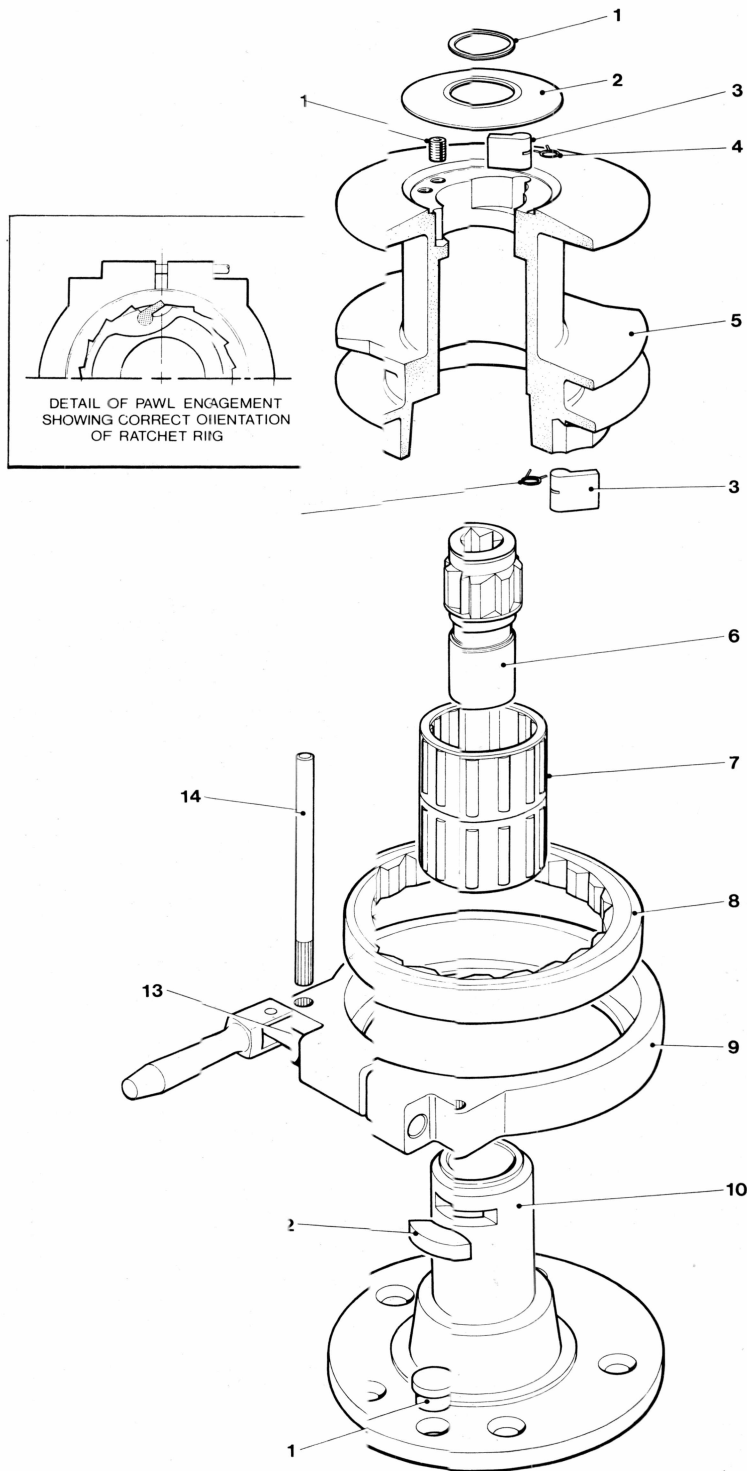
No. 65 ST



No. 65 Self Tailing Winch

Item No.	Part No.	Description	No. Off
1	B.0733	Skt. Hd. Cap Screw — 1/4" UNC x 3/8" Long	4
2	15044639	Top Cap	1
3	15044637	Split Collet	2
4	15065648	Stripper Arm	1
5	15044627	Flanged Bush	1
6	B.0731	Skt. Hd. Cap Screw — 1/4" UNC x 1 3/4" Long	3
7	15065644	Upper Crown Plate	1
8	15065641	Stripper Ring Insert	2
9	15065649	Stripper Ring	1
10	B.0709	Skt. Hd. Cap Screw — 1/4" UNC x 1/2" Long	3
11	15065645	Lower Crown Plate	1
12A	15000032	Drum — Bronze	1
12B	15000248	Drum — Alloy	1
12C	15000081	Drum — St. Steel	1
13	15000050	Centre Stem — Upper	1
14	B.0698	Skt. Hd. Cap Screw — 5/16" UNC x 1 1/2" Long	3
15	15044121	Roller Bearing	4
16	18080015	Thrust Bearing	1
17	15000082	Drum Washer	1
18	B.0730	Skt. Hd. Cap Screw — 5/16" UNC x 5/8" Long	8
19	15000303	Spacer	2
20	15000242	Ratchet Gear	1
21	15000241	Spindle Extension	1
22	15000019	Roller Bearing	4
23	15000048	Bridge Piece	1
	15000053	Bridge Piece Sleeve	1
24	15065111	Hollow Dowel	2
25	15000197	Base Alloy	1
26	15000024	Washer	2
27	1260/8	Pawl	2
28	1260/7	Pawl Spring	7
29	B.0511	Csk. Screw — 2 BA x 3/8" Long	2
30	15000247	Washer	2
31	15000023	Retaining Plate	1
32	1264/8	Pawl	5
33	15000040	Pawl Gear	1
34	15000017	Roller Bearing	3
35	15000245	Idler Gear	1
36	15000240	Gear Spindle	1
37	B.1501	Spirol Pin	2
38	15000018	Roller Bearing	2
39	15000244	Pawl Gear	1
40	15000246	Washer	1
41	15000243	Ratchet Gear	1
42	15000239	Gear Spindle	1
43	15000049	Centre Stem — Lower	1
44	B.0714	Skt. Hd. Cap Screw — 3/8" UNC x 3/4" Long	6
45	15000238	Main Spindle	1
46	B.2086	Circlip	2

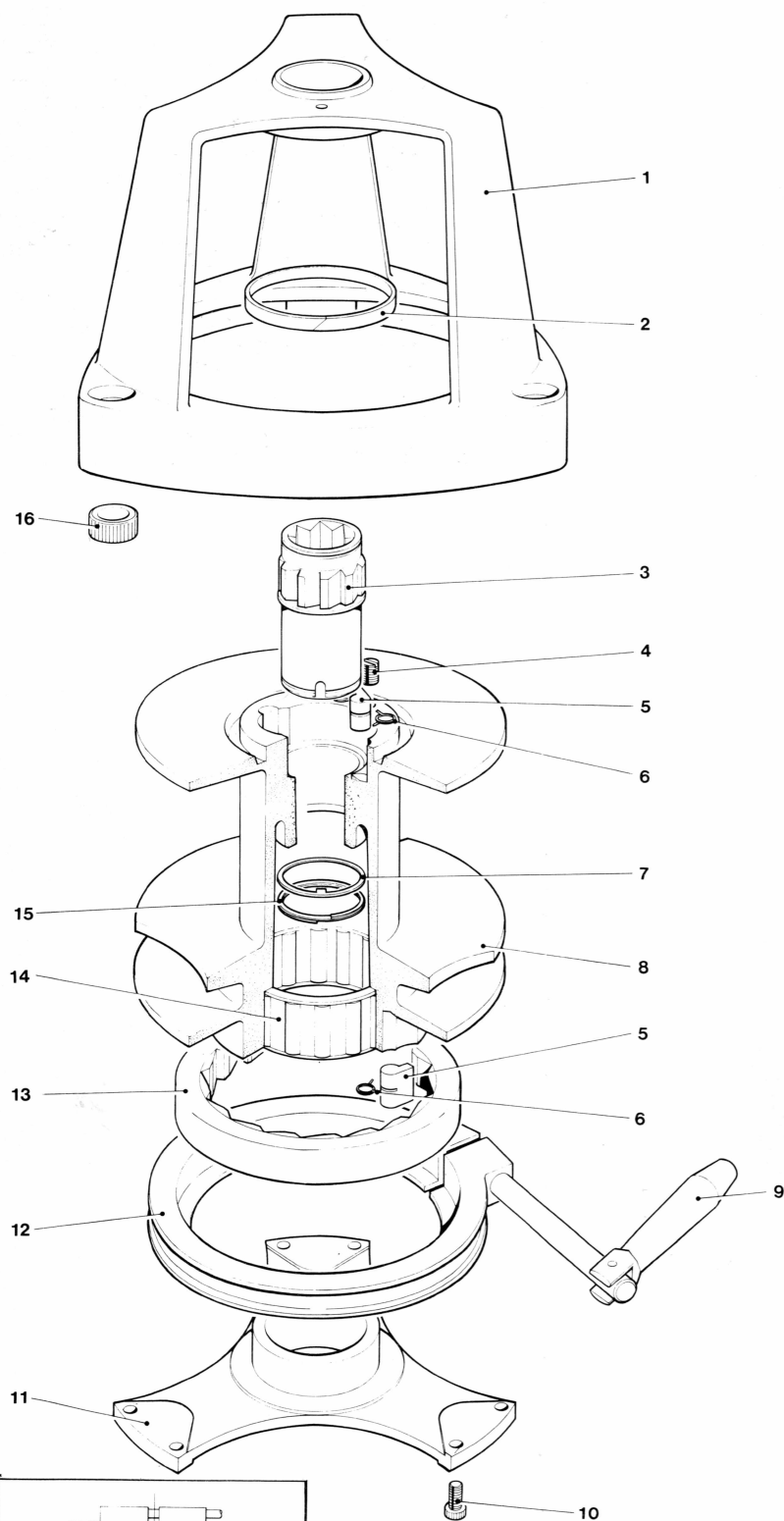
No. 1



No. 1 Halliard Winch

Item No.	Part No.	Description	No. Off
1	B.2075	Circlip	1
2	18000047	Top Cap	1
3	1260/8	Pawl	4
4	1260/7	Pawl Spring	4
5	15001022	Drum	1
6	15008003	Spindle	1
7	15008007	Roller Bearing	2
8	15001024	Ratchet Ring	1
9	15001025	Brake Strap	1
	B.1992	Halliard Plate	1
10	15001021	Centre Stem	1
11	15001008	Locating Pin	1
12	15008005	Key	1
13	15001010	Brake Lever	1
	15001011	Brake Screw	1
	15001009	Handle Rivet	1
14	15001006	Guard Rod	2
15	B.0901	Grub Screw	2

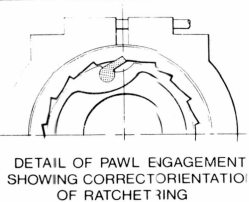
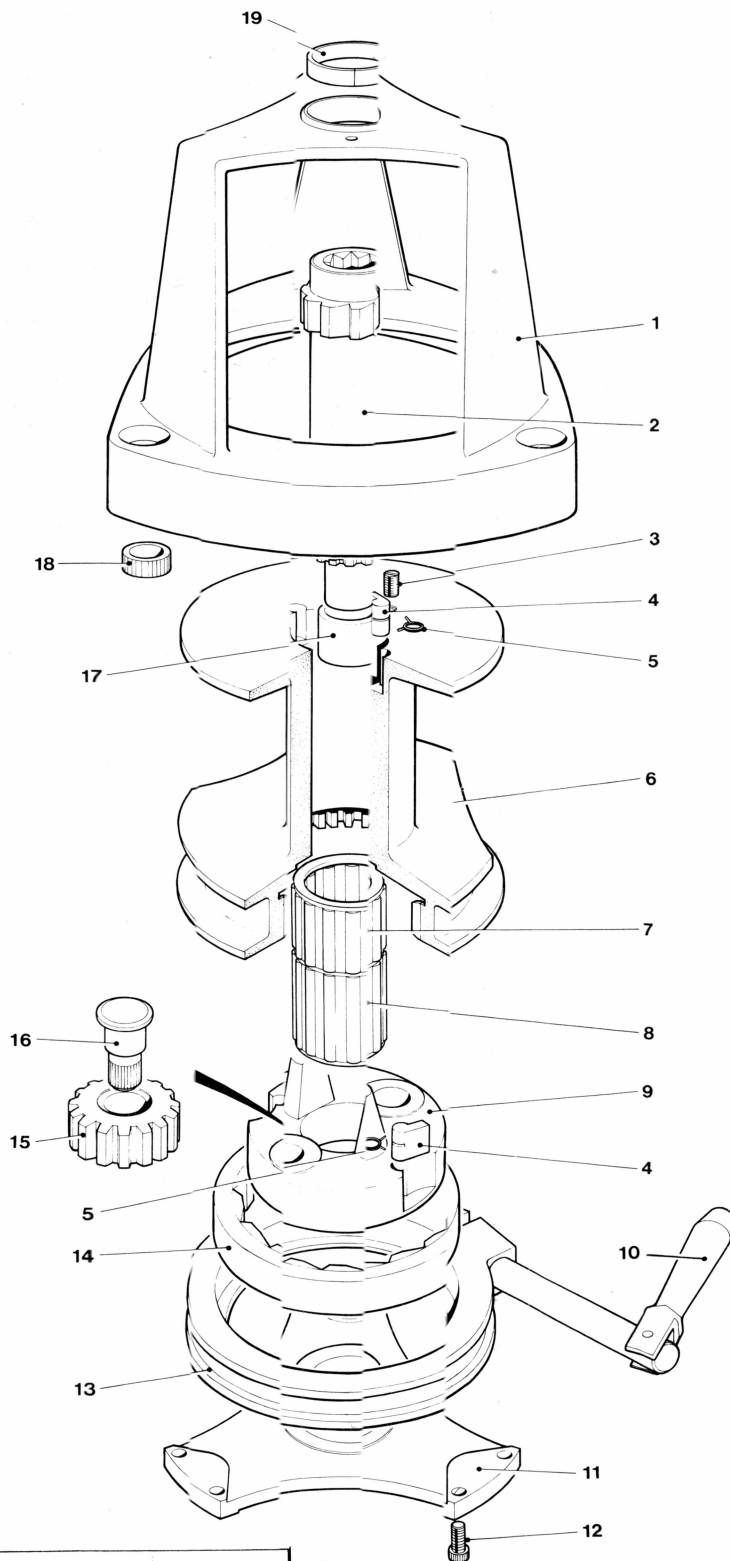
No. 2



No. 2 Halliard Winch

Item No.	Part No.	Description	No. Off
1	1282/1	Drum Casing	1
2	1282/8	Bush	1
3	1266/3	Main Spindle	1
4	B 0901	Grub Screw	2
5	1260/8	Pawl	4
6	1260/7	Pawl Spring	4
7	1266/6	Tab Washer	1
8	1282/2	Drum	1
9	15001010	Brake Lever	1
	15001009	Handle Rivet	1
	1282/7	Brake Screw	1
10	B 0705	Screw	6
11	1282/5	Base Plate	1
12	1280/4	Brake Strap	1
	B 1992	Halliard Plate	1
13	1280/7	Ratchet Ring	1
14	1260/SA2	Roller Bearing	1
15	B 2080	Circlip	1
16	1283/13	Casing Insert	1

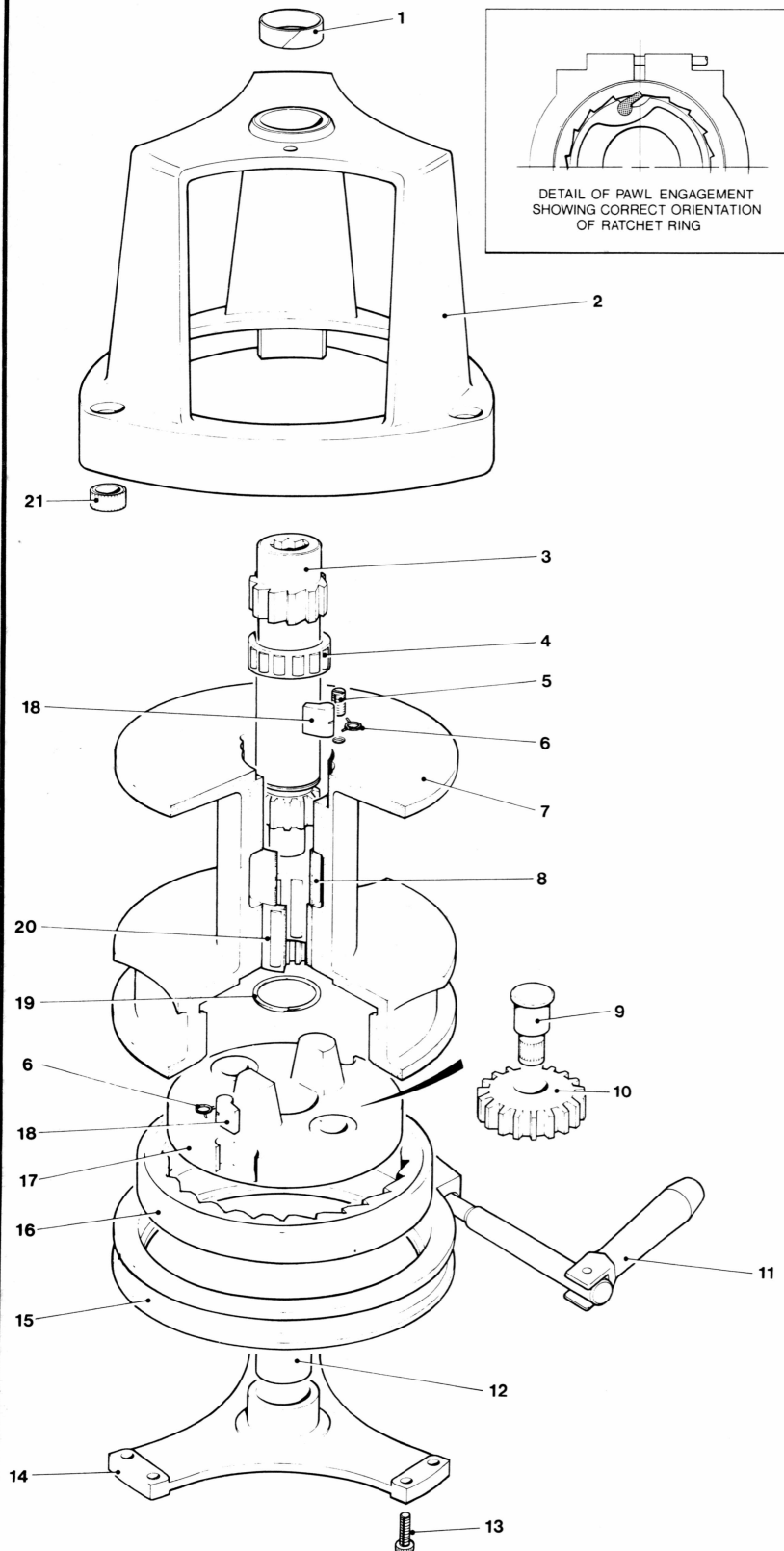
No. 2-2



No. 2 2 Speed Halliard Winch

Item No.	Part No.	Description	No. Off
1	1280/1	Drum Casing	1
2	1280/3	Spindle	1
3	B.0901	Grub Screw	2
4	1260/8	Pawl	4
5	1260/7	Pawl Spring	4
6	1280/2	Drum	1
7	1287/SA1	Roller Bearing	1
8	1264/SA2	Roller Bearing	1
9	1280/6	Planet Carriage	1
10	15001010	Brake Lever	1
	15001009	Handle Rivet	1
	1282/7	Brake Screw	1
11	1280/5	Base Plate	1
12	B.0705	Screw	6
13	1280/4	Brake Strap	1
	B.1992	Halliard Plate	1
14	1280/7	Ratchet Ring	1
15	1280/8	Idler Gear	2
16	1280/9	Idler Spindle	2
17	B.1630	Bush	1
18	1283/13	Insert	3
19	1280/10	Strip Bearing	1

No. 3



No. 3 Halliard Winch

Item No.	Part No.	Description	No. Off
1	1283/12	Strip Bearing	1
2	1283/1	Drum Casing	1
3	1283/7	Main Spindle	1
4	1287/SA1	Roller Bearing	1
5	B 0901	Grub Screw	2
6	1260/7	Pawl Spring	4
7	1283/2	Drum	1
8	1283/15	Tube Spacer	1
9	1283/9	Idler Gear Spindle	2
10	1283/8	Idler Gear	2
11	15001009	Handle Rivet	1
	1283/SA2	Brake Lever	1
	1283/10	Brake Screw	1
12	B 1630	Bush	1
13	B 0705	Screw	6
14	1283/5	Base Plate	1
15	1283/4	Brake Strap	1
	B 1992	Halliard Plate	1
16	1283/3	Ratchet Ring	1
17	1283/6	Planet Carriage	1
18	1264/8	Pawl	4
19	B 2075	Circlip	1
20	1264/SA2	Roller Bearing	1
21	1283/13	Casing Insert	3

Lewmar Worldwide Service and Spare

Full service (re, spare parts and assistance) available from Lewmar offices and distributors worldwide. In case of any difficulty with your Lewmar winches contact your nearest Lewmar office or distributor.

Lewmar Marine Limited (Head Office)

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tlx: 3342 LE/MAR G

Lewmar Marine AB

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S-1706 Surbyberg, Sweden
tel: 8) 98 075
tlx: 184 LE/MAR S

Lewmar SudEurope S.A.R.L.

Avenue Louisaumiere
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1701 La Rochelle, France
tel: 6) 44 356
tlx: 12202 YCHTEQF

Lewmar Marine Inc. East Coast)

Box 90
125 Wilbur Place, Bohemia
Long Island, N.Y. 11716, USA
tel: (6) 567770
twx: 10228215 LEWMAR BOMA

Lewmar Marine Inc. West Coast)

400 Segersom, Santa Ana
California 92704, USA
tel: (4) 979413
tlx: 68436 LVP SNA

Lewmar Marine Limited

136 Delaidetreet East
Torco, M5CL6, Canada
tel: (6) 363151
tlx: 3332 TCITAYCO

Lewmar Guarantee

Lewmar winches have been developed over many years by extensive testing aboard the world's finest ocean racers, long distance cruising yachts and match racing yachts such as 12 metres. They are manufactured to quality standards in excess of those required by Lloyds and only the finest materials are used.

If installed, used and maintained as described in this leaflet, they will give outstanding performance.

Lewmar undertake that any winch which proves defective in materials or workmanship within 1 year of the date of supply will be repaired or replaced FREE OF CHARGE provided that the winch is returned by the registered owner to the nearest Lewmar office or distributor for examination. Lewmar reserve all rights on determining the nature of the alleged fault and their decision is final.

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**Lewnar Service Manual
Volume II**

 **LEWMAR**



**Care & Servicing
of
Lewmar Winches**



Lewmar Marine Inc.
23 Front Street,
Greenport,
Long Island,
New York 11944

Lewmar Marine Inc.,
892 West 18th Street,
Costa Mesa,
California 9267

Lewmar Winches

FREQUENCY OF SERVICING

- 1 - Monthly: all Lewmar sheet winches (not wire reel halyard winches) should be lightly oiled and greased as directed during the sailing season.
- 2 - Two or three times during the active sailing season it is recommended that all Lewmar winches should be stripped, examined for undue wear, cleaned and re-lubricated as directed.
- 3 - At the end of the season and when commissioning for the next, all Lewmar winches should be completely stripped, cleaned, thoroughly checked for damage and fully lubricated. Any signs of undue wear or damage should be brought to the attention of your Lewmar dealer or distributor for his examination.

DISMANTLING

Lewmar winches are the simplest, easiest winches in the world to maintain. All parts are easily accessible and nothing will fly apart or drop out when the drum is removed.

WINCH NO. 5

The drum is retained by a screw located at the bottom of the handle socket. When this has been removed, the drum can be lifted off and servicing performed.

WINCH NO'S 8-1625-40-43-4-55-65-1H

In all of the above mentioned winches the drum is retained by a circlip which rests in a recessed groove in the caterspindle. Lift one end of this by inserting a knife blade or screwdriver underneath the exposed end. Carefully wid the circlip from the spindle. Do not pull up ward for this will distort and stretch the circlip and it cannot be used.

WINCH NO'S 2H, 3, 2/2H

These winches must be removed from their mountings in order to remove the drum and service the working mechanism. This should not be undertaken without the appropriate section of the full Lewmar maintenance manual.



Lewmar Marine Inc., Lewmar Marine Inc.,
203 Font Street, 12 West 8th Street,
Greepport, Costa Mesa,
Longsland, California 92627
New York 11944

Lewmar Winches

SERVICING

After removal of the drum, servicing should be performed using the following procedure:

1. Clean off old oil, grease, caked on salt residue and dirt from all surfaces. Be especially careful to clean all gears, roller bearings, pawls and pawl pockets. We recommend a fine brush and either diesel fuel or methylate spirits as a solvent.

2. Completely wipe dry all surfaces and inspect the following for wear, damage, etc.

- a - Inner drum bearing surface
- b - All roller bearings
- c - Pawls and pawl springs
- d - Center stem bearing surfaces
- e - All gear teeth
- f - Circlips and circlip grooves

3. Lubricate all gears and roller bearings with a thin coating of Lewmarube or similar grease. Apply a light coat of mineral based machine oil to all spring loaded pawls. Be careful not to apply a heavy grease to pawls or springs as it may cause them to stick.

NO OIL OR GREASE SHOULD BE APPLIED TO THE BRAKE

DRUM ON HALLYARD WINCHES.

ASSEMBLY

Reassemble your winch in the reverse sequence of dismantling. It will be necessary to depress the pawls in certain winches allowing the drum to slide down to its proper position. Examine the circlip ensuring it has not been unduly expanded by removal. Make sure it is not distorted and seats in its groove correctly.



LEWMAR

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New York 1194

Lewmar Marine Inc.,
2 West 18th Street,
Santa Mesta,
California 92627

Lewmar Canada Ltd.
36 Adelaide St. E.
Toronto M5S 1L6, Ont.

THE LEWMAR GUARANTEE

Lewmar undertakes that any winch which proves defective in materials or workmanship within one year of the date of supply will be repaired or replaced free of charge provided that the winch is returned by the registered owner to the nearest Lewmar office or distributor for examination. Lewmar reserve all rights in determining the nature of the alleged fault and their decision is final.

SPARE PARTS KITS

<u>WINCH</u>	<u>KIT #</u>	<u>PRICE</u>
1	1231	3.25
2	1322	5.50
3	1323	5.50
2/2	1323	5.50
5	1346	3.50
8	1308	3.25
10		
16	1309	3.25
25	1310	3.90
40	1311	3.90
43	1312	3.90
45	1313	14.40
55	1314	14.40
65	1315	14.40

Spare parts kits contain necessary pawls, springs, circlips, thrust washers, screws, etc.

CIRCLIP KITS

Contains all necessary retaining circlips. We strongly recommend owners carry spares for all winches aboard.

<u>KIT #</u>	<u>FOR WINCH</u>	<u>PRICE</u>
1328	8, 16, 1, 2	2.20
1329	25, 40, 43	2.20
1326	45	2.40
1327	55, 65	2.40
1385	Lewmar lube	4.00

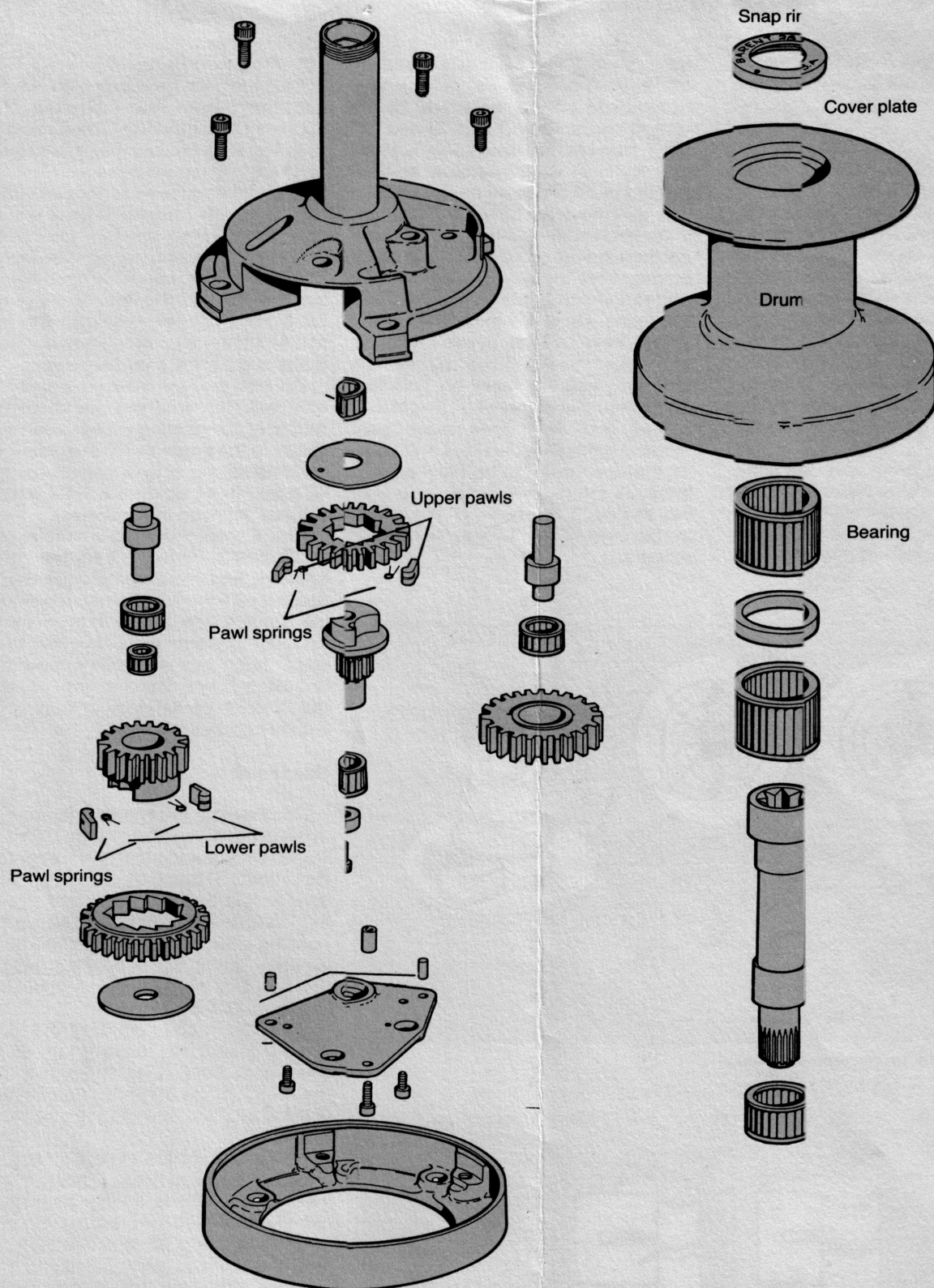


Fig. 1 A typical shop manual will include an exploded view of your winch. Shown here is a Barier Model 2 two-speed.

Clean and service winches at least once a year. This not only minimizes friction and corrosion, but enables you to monitor worn or broken parts. Even if you only sail twice this year, the winch grease still breaks down and accumulates dirt from the immediate environment.

If you cruise or race frequently, you may choose to service your winches more often. Also, winches with aluminum drums and synthetic parts require more care than bronze or stainless steel ones because aluminum and plastic are more susceptible to salt and dirt damage.

Before disassembling any winch, ob-

tain a manual from the manufacturer that shows schematic breakdown of its components (Figure 1). If you are unable to procure a manual, sketch out the disassembly process and the individual pieces as you take the winch apart. Experiment with smaller and simpler winches. Two- and three-speed self-tail-

ing and wire-reel winches are more intricate and should not be tampered with by an inexperienced hand.

Disassembly

With your manual close-by, lay out some clean rags or boxes to collect the parts. If the winch is spar-mounted, tap a box directly underneath to catch parts as you pull the drum off. Depending on manufacturer and model, winch drums are usually held onto the base with snap rings or allen screws. The snap ring is pried out, in a circular motion away from its seat, with a small screwdriver. Winch tops held with screws may require that you hold the drum as you loosen the fastener (Barent/Barlow makes a tool to facilitate this).

Now pull the drum and cover plate away from the base, watching for bearings that might slip out at the same time. If the drum does not come off with moderate pressure, do not force it, but look

for the cause. Either the pawls are catching the drum somewhere, or you have not removed all the fasteners or the winch is corroded and thus "galled" together. If corrosion is the problem, find a rigger to finish what you have started. But if the drum slides off easily you are ready to remove the pawls and springs.

Grip each spring with its pair as the pawl is pulled out so springs won't shoot out away from the winch. Next remove any bearings, the main drive shaft and the gearing. On some models the main shaft is held in with nylon retainers, which must be removed before the shaft. Any gearing must be unbolted from the housing before you get to it.

These two- and three-speed gear units also hold pawls, springs and bearings that also need to be cleaned and lubricated. On older winches, you may have to unbolt the base of the winch from the deck or spar in order to remove the gears.

Cleaning And Servicing

With the parts disassembled, you now can clean them with fuel oil or spray such as CRC's Marine Cleaner and Degreaser. A toothbrush helps in scouring gear teeth and pawl traps.

Inspect parts for wear and tear. Check for pawls with rounded edges, clipped gear teeth, worn spaces and broken bearings or bearing cages. Also look for cracked drums, bases or housings. Inspect winch handles, too. Are drive nuts badly worn? Do self-locking mechanisms still function? Replace anything that is faulty and lubricate moving parts.

Do not re-weld cracked drum; not only will this void the manufacturer's warranty, but heating causes even more stress on the drum, which may result in a winch breaking at an inopportune time. Besides, most welders will not guarantee their work on these items.

Use a recommended lubricant such as Barent's "Barlube," on the gears, bearings and interior winch surfaces. Be sparing with the lube because overloading a winch with grease induces friction and its accumulation. So that they'll operate properly, pawls, springs and their housings should not receive any grease, but could be lubricated with a 30-weight non-detergent oil.

Reassembly

Reassemble the winch in the reverse of the order it was taken apart. Pawls will work flawlessly only if aligned properly in their seats (Figure 2). Likewise, each spring must be installed with its straight leg against the groove in the corresponding pawl (Figure 3). On self-aligning winches, point the self-aligning arms at the gear's normal operating position to ensure proper line flow.

You may need to squeeze the pawls again to their seats in order to slide the drum over them. Once back together, the drum should rotate with a minimum of effort and you will hear the pawls click distinctly.

When you order manuals, ask for parts lists for each winch. These usually include spare pawls, springs and fasteners. Carry spares for plastic parts, such as retainers, spacers and bearings. Extend the life and serviceability of your winches by using breakable, water-proof covers.

Maintenence and musc are very good for their maintenance allows Dirty and sky winches become corroded and frozen. Remember that winches are expected to perform flawlessly with hazards and sets — and when the occasional humbabeing is suspended in a big gun's chair, to keep winches serviced so they won't let you down unexpectedly.

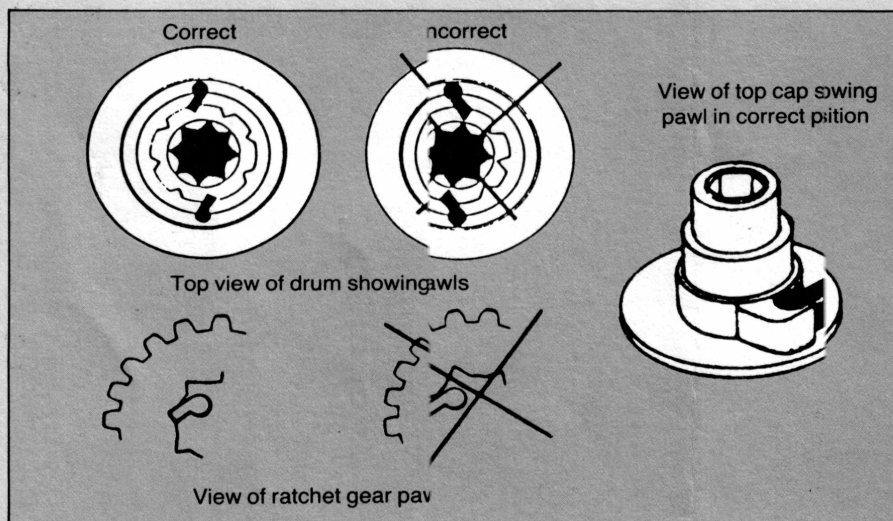


Fig. 2 Pawls must be reassembled properly.

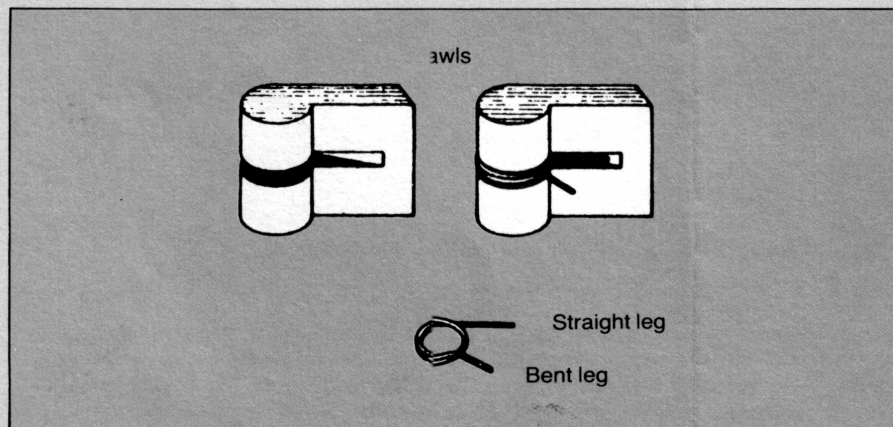


Fig. 3 The straight leg of the spring must be fitted to the groove in the pawl.