

## Barient Winch Info –

Barient winches for the J40

The early J40s used Barient Winches, a wonderful product that went out of business in a financial move by Lewmar. Lewmar bought both Barlow and Barient and then folded the companies. But the winches still live on, and most of the J40s still have them. Typical setup is 3-4 ST22s for the halyards, 2 ST24s for the mainsheet, 2 ST28 or ST32 primary winches, 2 ST27 secondary winches. The exploded diagrams below (ST22, ST24, ST27, ST28 courtesy of the Romeys, J40 #45, Chinook-greasy ST32 drawing is Ed Huckins') will help you locate the parts you might need and make it easier to ask about specific availability. Parts are still available, sometimes with difficulty, and the winches can still be maintained.

The main source for Barient Winch Parts is [The Australian Winch Company](#) who have some parts in stock, can make others, but may take a while. Another source in the US that stocks some spares and can help find others is [Florida Rigging and Hydraulics](#).

Explosion (parts) Diagrams are on the following pages.

The J42 specs called for the following:

- 2 Lewmar 50STC, 2-speed self-tailing primary winches, 2.4:1/7.6:1 gear ratios and 48:1 power ratio.
- 4 Lewmar 44STC, self-tailing secondary/halyard & mainsheet winches with 2.2:1/6:1 gear ratios and 44.8:1 power ratio.

Runner & mid-deck/mastman winch configurations are a racing option as they were on the J40.

ST-22:

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MODEL

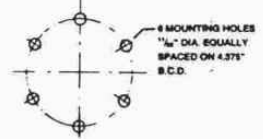
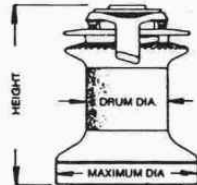
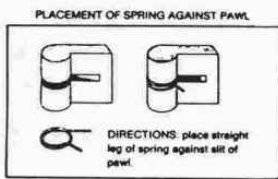
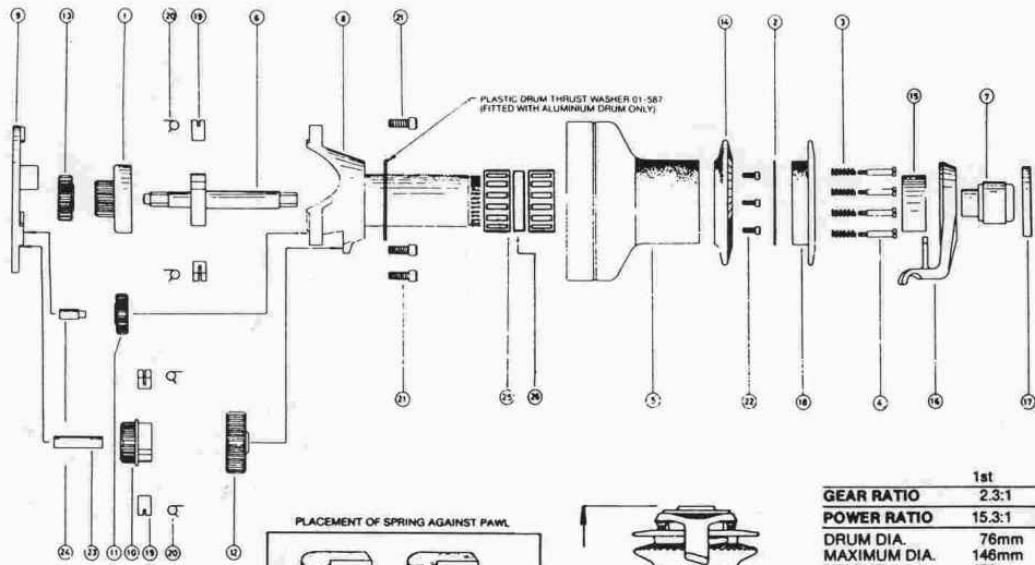
FROM : MAY 1985 TO : 1989

THIS VERSION OF WINCH MODEL MANUFACTURED : IN AUSTRALIA

**2-SPEED  
SELF-  
TAILING  
WINCH**

**GRAND  
PRIX  
SERIES**

**RECOMMENDED LINE SIZES**  
Minimum dia.: 5/16" 8mm  
Maximum dia.: 1/2" 13mm.



Item	Part No.	Description	Qty
1	25-107	Center Gear	1
2	24024	Screw Stop Plate	1
3	24023	Clamping Spring	4
4	24022	Shoulder Screw	4
5	24-604C	Drum — Chrome	1
Alt.	24-604A	Drum — Aluminium	1
Alt.	24-604B	Drum — Bronze	1
6	24-211	Mainshaft Assy.	1
7	24-206	Mainshaft Top	1
8	24-203	Gearbox	1
9	24-202	Base	1
10	24-112	Drive Pinion	1
11	24-018	Idler Gear	1
12	24-015	Drive Ratchet	1
13	24-012	Center Gear	1
14	17-434C	Drum Top — Chrome	1
Alt.	17-434A	Drum Top — Aluminium	1
Alt.	17-434B	Drum Top — Bronze	1
15	17-430	Tube Spacer	1
16	17-413	Line Lifter	1
17	17-409	Retaining Nut	1
18	14675/22	Clamp Ring	1
19	00330	Ratchet Pawl	4
20	00209	Pawl Spring	4
21	01-215	Capscrew 5/16" x 3/4" lg	3
22	01-213	Capscrew 3/16" x 1/2" lg	3
23	01-158	Drive Pinion Shaft	1
24	01-156	Idler Gear Shaft	1
25	01-021	Bearing	2
26	27-134	Bearing Spacer	1

24

MODEL

FROM : 1985

TO : 1989

THIS VERSION OF WINCH MODEL MANUFACTURED :

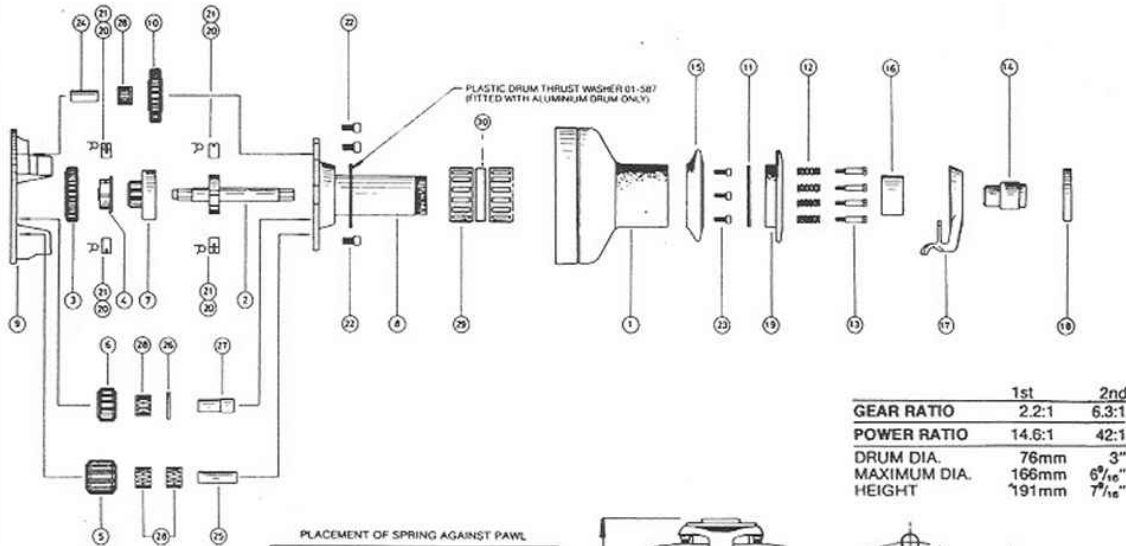
# 2-SPEED SELF- TAILING WINCH

## GRAND PRIX SERIES

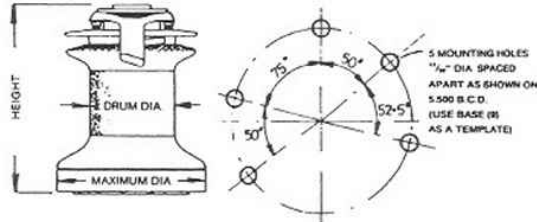
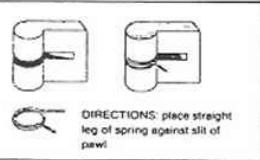
RECOMMENDED LINE SIZES

Minimum dia.: 3/8" 10mm

Maximum dia.: 1/2" 13mm.



PLACEMENT OF SPRING AGAINST PAWL



Item	Part No.	Description	Qty
1	25-604C	Drum — Chrome	1
Alt.	25-604A	Drum — Aluminium	1
Alt.	25-604B	Drum — Bronze	1
2	25-306	Mainshaft Assy	1
3	25-117	High Speed Ratchet	1
4	25-115	High Speed Ratchet Drive	1
5	25-111	Drum Drive Pinion	1
6	25-108	Idler Gear	1
7	25-107	Center Gear	1
8	25-103	Gearbox	1
9	25-102	Base	1
10	25-008	Idler Gear	1
11	24024	Screw Stop Plate	1
12	24023	Clamping Spring	4
13	24022	Shoulder Screw	4
14	24-206	Mainshaft Top	1
15	17-434C	Drum Top — Chrome	1
Alt.	17-434A	Drum Top — Aluminium	1
Alt.	17-434B	Drum Top — Bronze	1
16	17-430	Tube Spacer	1
17	17-413	Line Lifter	1
18	17-409	Retaining Nut	1
19	14675/24	Clamp Ring	1
20	00330	Ratchet Pawl	4
21	00209	Pawl Spring	4
22	01-215	Capscrew 1/16" x 3/8" lg	3
23	01-213	Capscrew 1/16" x 1/2" lg	3
24	01-149	Pinion Spindle	1
25	01-148	Pinion Spindle	1
26	01-147	Gear Washer	1
27	01-146	Gear Shaft	1
28	01-010	Bearing — Bronze	4
29	01-021	Bearing	2
30	01-530	Bearing Spacer	1

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**27**  
MODEL

FROM : 1983

TO : 1987

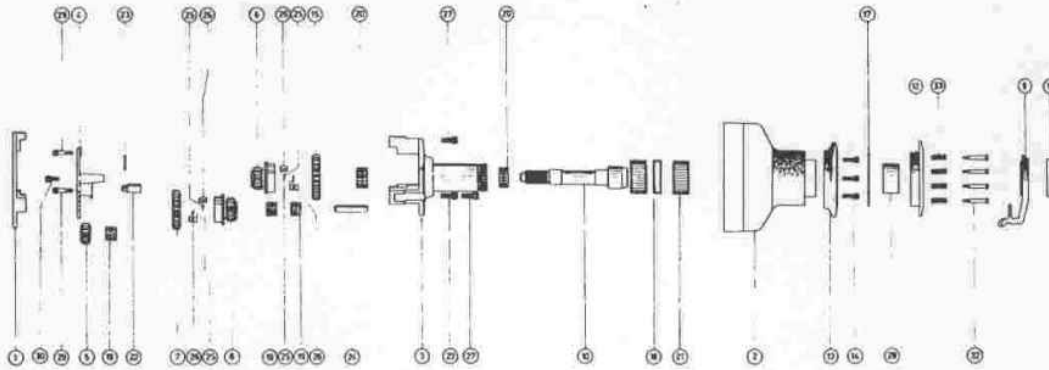
THIS VERSION OF WINCH MODEL MANUFACTURED : IN AUSTRALIA

**2-SPEED  
SELF-  
TAILING**

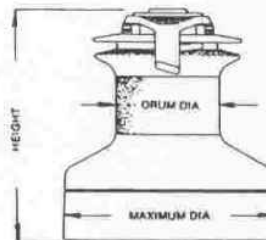
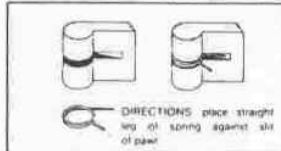
Barent's patented spring loaded self tailing winches allow various size line to be used without adjustment to the self tailing device. We do, however, recommend using the following line sizes for best results.

RECOMMENDED LINE SIZES

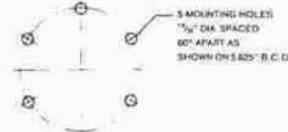
Minimum dia.:  $\frac{1}{4}$ " 10mm  
Maximum dia.:  $\frac{3}{8}$ " 14mm



PLACEMENT OF SPRING AGAINST PAWL



	1st	2nd
GEAR RATIO	2:1	8.4:1
POWER RATIO	10.8:1	45.3:1
DRUM DIA.	94mm	3 $\frac{3}{4}$ "
MAXIMUM DIA.	190mm	7 $\frac{1}{2}$ "
HEIGHT	207mm	8 $\frac{1}{8}$ "



MODEL 27

Item	Part No.	Description	Qty
1	27-002	Base	1
2	27-604C	Drum — Chrome	1
Alt.	27-604A	Drum — Aluminium	1
Alt.	27-604B	Drum — Bronze	1
3	27-103	Gearbox	1
4	27-001	Gearbox Plate	1
5	27-008	Idler Gear	1
6	27-012	Center Pinion	1
7	27-015	Drum Drive Ratchet	1
8	27-011	Drum Drive Pinion	1
9	27-413	Line Lifter	1
10	27-106	Mainshaft	1
11	17-409	Retaining Nut	1
12	27014	Clamp Ring	1
13	27-434C	Drum Top — Chrome	1
Alt.	27-434A	Drum Top — Aluminium	1
Alt.	27-434B	Drum Top — Bronze	1
14	01-213	Capscrew 10-24 unc. x $\frac{1}{2}$ " lg	3
15	27-013	Center Ratchet Gear	1
17	27-431	Screw Stop Plate	1
18	27-134	Bearing Spacer	1
19	01-010	Bearing	3
20	01-012	Bearing	2
21	00414	Bearing	2
22	01-145	Idler Gear Shaft	1
23	01-232	Cotter Pin $\frac{3}{32}$ " dia. x $\frac{3}{4}$ " lg	1
24	01-144	Drum Drive Pinion Shaft	1
25	00209	Pawl Spring	4
26	00330	Ratchet Pawl	4
27	01-231	Capscrew $\frac{1}{4}$ " x $\frac{5}{16}$ " unc.	3
28	27-430	Tube Spacer	1
29	01-227	Special Capscrew	2
30	01-205	Capscrew $\frac{1}{4}$ " unc. x $\frac{5}{8}$ " lg	1
32	27016	Shoulder Screw	4
33	27017	Clamping Spring	4

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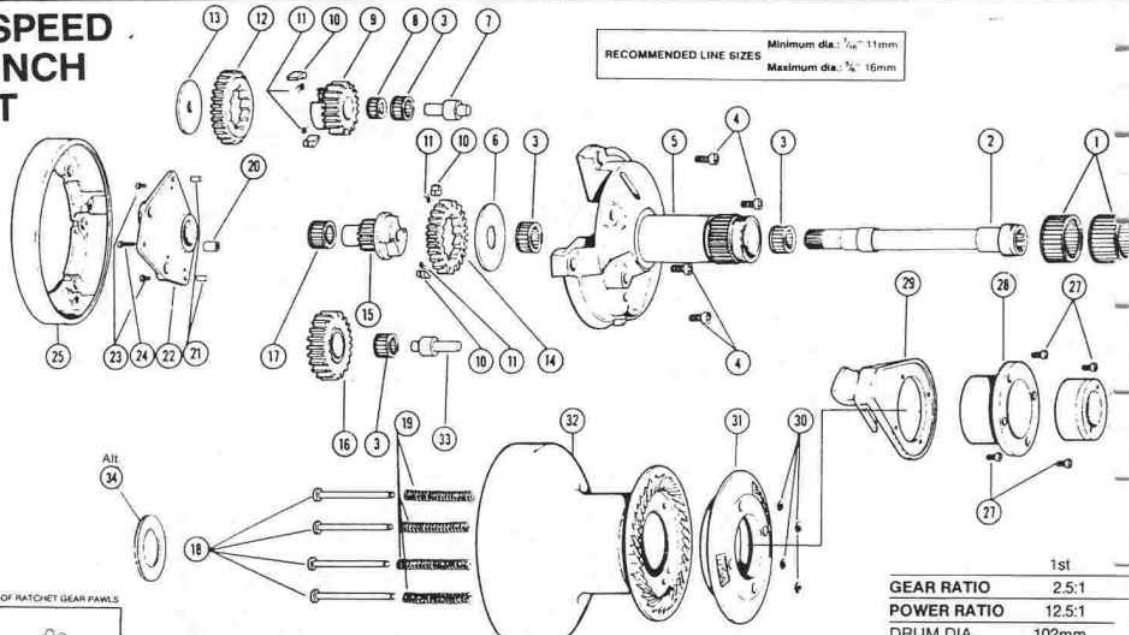
MODEL

FROM : 1987

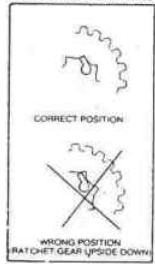
TO : CURRENT STYLE

THIS VERSION OF WINCH MODEL MANUFACTURED : IN AUSTRALIA

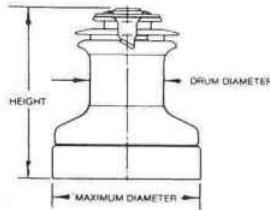
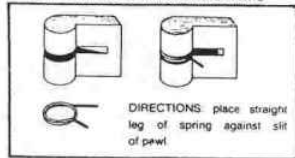
**2-SPEED  
WINCH  
S/T**



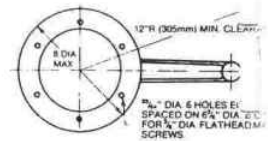
VIEW OF RATCHET GEAR PAWLS



PLACEMENT OF SPRING AGAINST PAWL



	1st	7
GEAR RATIO	2.5:1	7
POWER RATIO	12.5:1	7
DRUM DIA.	102mm	7
MAXIMUM DIA.	203mm	7
HEIGHT	230mm	9



Item	Part No.	Description	Qty				
1	00422	Drum Bearing	2				
2	28-406	Mainshaft	1	Alt	28215A	Line Lifter — Ultralight	1
3	00403	Bearing	4	30	28020	Spring Guide Lock	4
4	01-266	Capscrew 1/8" unc x 1" L.G.	4	31	28016	Clamping Ring — Chrome	1
5	11768	Gearbox Housing	1	Alt	28016A	Clamping Ring — Aluminium	1
Alt	28-603	Gearbox Housing — Ultralight	1	32	28-304S	Drum — Stainless Steel-54T	1
6	00322	Thrust Washer — Mainshaft	1	Alt	28-304C	Drum — Chrome-54T	1
7	11211	Gear Spindle	1	Alt	28-304A	Drum — Aluminium-54T	1
8	00401	Bearing	1	Alt	28-304B	Drum — Bronze-54T	1
9	28-311	Final Drive Pinion-15T	1	33	11211-2	Gear Spindle	1
10	01-400	Ratchet Pawl	4	34	01-587	Thrust Washer (Aluminium Drum Only)	1
11	01-300	Pawl Spring	4	Alt	01-587	Thrust Washer (Ultralight Winches Only)	2
12	28-014	Ratchet Gear — Final Drive	1	35	01-021	Alternative Bearing with Plastic Rollers	3
13	00323	Thrust Washer — Final Drive	1				
14	28-313	Center Ratchet Gear — 22T	1				
15	28-112	Center Pinion	1				
16	11708	Idler Gear	1				
17	00404	Bearing	1				
18	28021	Spring Guide	1				
19	28008	Clamp Spring	4				
20	11217	Spacer	1				
21	11218	Dowel Pin	2				
22	11703	Gearbox Cover	1				
Alt	28-401	Gearbox Cover — Ultralight	1				
23	01-205	Capscrew 1/4" unc x 1/2" L.G.	2				
24	01-206	Capscrew 1/4" unc x 1 1/4" L.G.	1				
25	11746	Base Aluminium	1				
26	28037	Drum Nut	1				
Alt	28037A	Drum Nut — Ultralight	1				
27	01-265	Capscrew 1/4" unc x 3/4" L.G.	4				
28	28025	Anchor Sleeve	1				
Alt	28025A	Anchor Sleeve — Ultralight	1				
29	28216	Line Lifter	1				

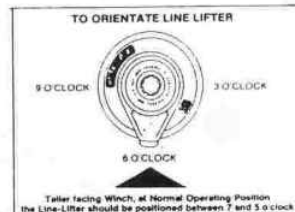
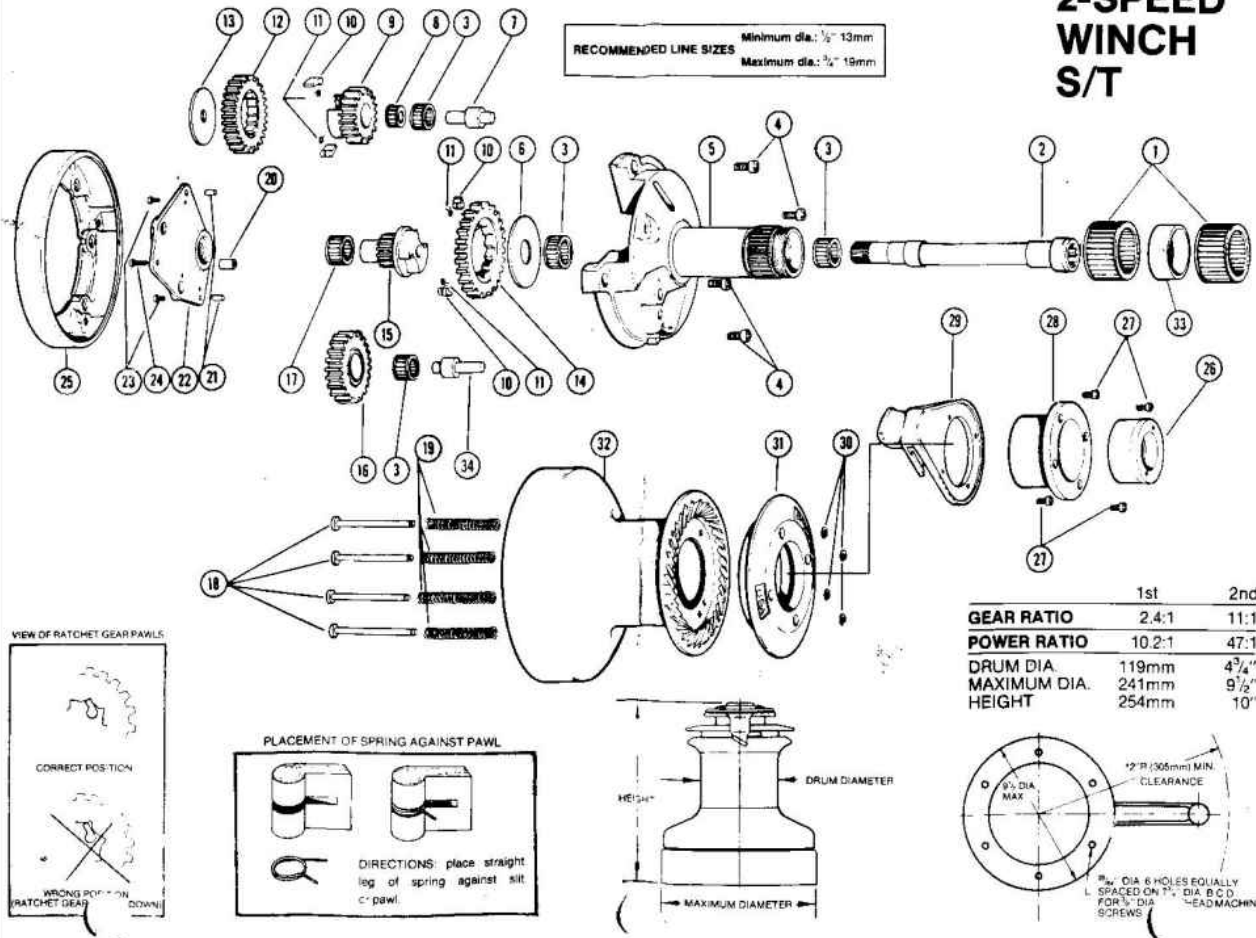


Fig. 1.

# MAINTENANCE & SERVICE INFORMATION

## MODEL 32 2-SPEED WINCH S/T



**MOUNTING INSTRUCTIONS:**

- Using a Barient drum nut tool or deck plate key remove the drum nut (26) in the line lifter (29) & (28).
- Lift the drum assembly and the line lifter together from the gearbox assembly (5). **CAUTION:** The drum bearings (1) may come off with drum — be careful not to let them fall out.
- Remove the four capscrews (4), holding the gearbox assembly to the base (25). Keeping the gearbox assembly completed remove it from base (25). **NOTE:** The mainshaft (2) may fall out when turning the gearbox assy. over — be careful not to drop.
- Bolt the base (25) to a flat and smooth surface drilled to take six flathead bolts  $\frac{3}{8}$ " (10mm) dia. on  $7\frac{1}{4}$ " (197mm) bolts circle dia. (Use base (25) as a template.) Be sure adequate reinforcement is provided to take the loads produced by the winch. **DO NOT** Block the drain channels in the base (25) with bedding (sealing) compound.
- To re-assemble winch — reverse dismantling procedure. Be sure the line lifter is orientated towards the winch cranker's position (see fig. 1).

**TO LUBRICATE & DISASSEMBLE:**

- As steps 1, 2 and 3 above.
- Remove the line lifter (29), the anchor sleeve (28) and the bearings (1) with spacer (33). **NOTE:** If it is not necessary to disassemble self-tailing mechanism proceed to step 5.
- Remove four capscrews (27) from anchor sleeve (28) and line lifter (29), separate them.
- It is usually not necessary to remove the clamp ring (31) from the drum. If this is required push the spring guides (18) up from the inside of the drum to allow removal of the lock rings (30).
- Carefully turn the gearbox assembly on side, making sure the main shaft (2) does not fall out. The drum can be used as a holder-stand for inverted gearbox assembly. (insert the stem of the gearbox housing into the top of the drum)
- Remove the three  $\frac{1}{4}$ " capscrews (23) and (24) from gearbox cover (22) and remove the cover. (It may be necessary to gently lift the cover off with a screwdriver.)
- Remove the spacer (20) beneath the cover screw (24), the center pinion bearing (17) and thrust washer (13).
- Lift out the final drive pinion (9) in assembly with its ratchet gear (12), ratchet pawls (10) and springs (11). **NOTE:** Keep this assembly together until you are ready to clean it, then re-assemble it immediately. This avoids confusion in the assembly procedure.
- Remove the two bearings (3) and (8).
- Remove the idler gear (16) and its bearing (3).
- Lift up the center ratchet gear (14) — removing it in assembly with the center pinion (15), the pawls (10) and springs (11). Keep this assembly together until it can be cleaned and re-assembled.
- Remove the thrust washer (6), the main shaft (2) and its upper and lower bearings (3). The two gear spindles (7), (34) are pressed into the housing and should not be removed unless they are damaged.
- Clean all parts in petroleum solvent. Replace any parts showing damage or excessive wear. During the assembly procedure, all gears and bearings should be liberally greased with Barient — Barlube.
- Assemble winch in reverse order to that shown above.

**TOOL REQUIRED:**  $\frac{3}{16}$ " and  $\frac{3}{16}$ " Allen Key; Barient drum nut tool or deck plate key.

**LUBRICANT:** Non-detergent Machine Oil (SAE 30); Barient Barlube.

**INSPECTION & LUBRICATION:**

Quarterly lubrication is recommended. Inspect more frequently in a racing season. Monthly cleaning and lubrication of the aluminium drum winches is advisable.

Item	Part No.	Description	Qty
1	00422	Drum Bearing	2
2	32-406	Mainshaft	1
3	00403	Bearing	4
4	01-267	Capscrew $\frac{3}{16}$ " unc x $\frac{3}{4}$ " L.G.	4
5	32567	Gearbox Housing	1
6	00322	Thrust Washer — Mainshaft	1
7	11211	Gear Spindle	1
8	00401	Bearing	1
9	11248	Final Drive Pinion	1
10	00330	Ratchet Pawl	4
11	00209	Pawl Spring	4
12	11250	Ratchet Gear — Final Drive	1
13	00323	Thrust Washer — Final Drive	1
14	11208	Center Ratchet Gear	1
15	32-012	Center Pinion	1
16	11251	Idler Gear	1
17	00404	Bearing	1
18	28021	Spring Guide	4
19	28008	Clamp Spring	4
20	11217	Spacer	1
21	11218	Dowel Pin	2
22	11203	Gearbox Cover	1
23	01-205	Capscrew $\frac{1}{4}$ " unc x $\frac{5}{8}$ " L.G.	2
24	01-206	Capscrew $\frac{1}{4}$ " unc x $1\frac{1}{4}$ " L.G.	1
25	32534	Base Aluminium	1
26	28037	Drum Nut	1
27	01-265	Capscrew $\frac{1}{4}$ " unc x $\frac{3}{8}$ " L.G.	4
28	28025	Anchor Sleeve	1
29	32721	Line Lifter	1
30	28020	Spring Guide Lock	4
31	32577	Clamping Ring	1
32	32719S	Drum — Stainless Steel	1
Alt.	32722C	Drum — Chrome	1
Alt.	32722A	Drum — Aluminium	1
Alt.	32722B	Drum — Bronze	1
33	11215	Bearing Spacer	1
34	11211-2	Gear Spindle	1

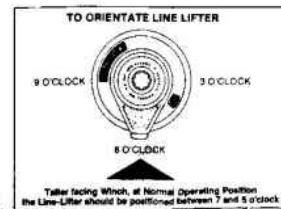


Fig. 1.