

MODEL 23 2-SPEED SELF TAILING WINCH

MANUFACTURED AFTER MAY 15, 1979

MAINTENANCE & SERVICE INFORMATION

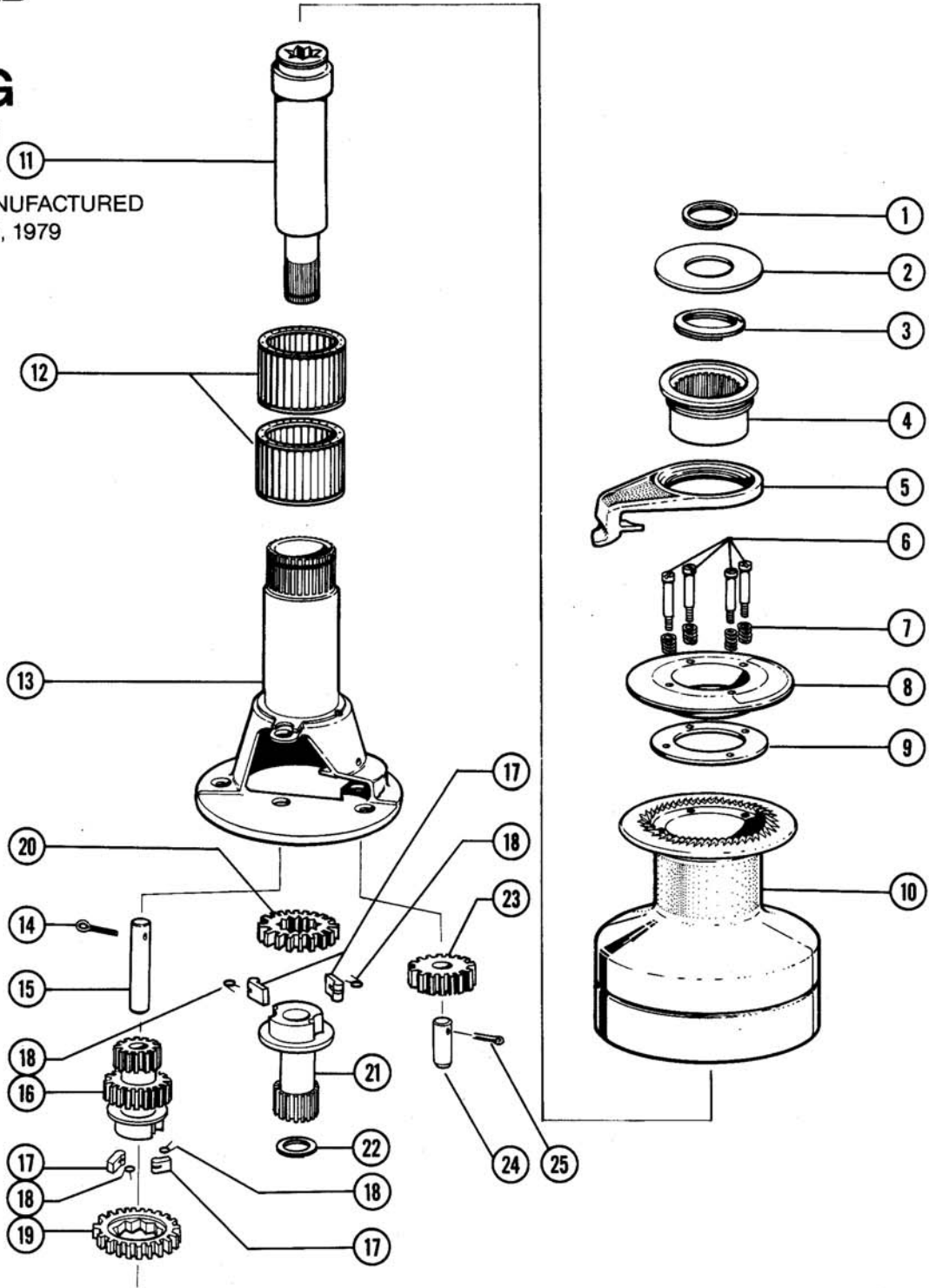
Quality Winches and Fine Yacht Gear

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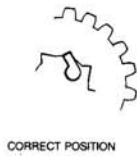
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MODEL 23 2-SPEED SELF TAILING WINCH

WINCHES MANUFACTURED
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VIEW OF RATCHET GEAR PAWLS



| Item No. | Part No. | Description | Qty. |
|----------|-------------|-------------------------|------|
| 1 | A-01045-125 | Retaining Ring | 1 |
| 2 | B-14655 | Cover Plate | 1 |
| 3 | A-01045-175 | Retaining Ring | 1 |
| 4 | C-14653 | Anchor Sleeve | 1 |
| 5 | C-14654 | Line Lifter | 1 |
| 6 | B-24022 | Shoulder Screw | 4 |
| 7 | B-24023 | Clamping Spring | 4 |
| 8 | C-14648 | Clamp Ring | 1 |
| 9 | B-24024 | Screw Stop Plate | 1 |
| 10 | X-24072 | Drum-Aluminum | 1 |
| Alt. | D-14646 | Drum-Chrome | 1 |
| 11 | C-24043 | Mainshaft | 1 |
| 12 | C-00422 | Drum Bearing | 2 |
| 13 | D-24040 | Gear Housing | 1 |
| 14 | A-01077-04 | Cotter Pin | 1 |
| 15 | B-24039 | Shaft-Pawl Gear | 1 |
| 16 | C-24038 | Pawl Gear | 1 |
| 17 | B-00330 | Pawl | 4 |
| 18 | B-00209 | Pawl Spring | 4 |
| 19 | B-24037 | Ratchet Gear (23 teeth) | 1 |

MODEL #23 TWO-SPEED SELF-TAILING DISASSEMBLY PROCEDURE

- Using a small screwdriver, remove the snap ring (1) and the washer (2) at the top of the winch. Remove the snap ring (3) which is exposed after removing the cover plate (2). NOTE: If it is not necessary to disassemble the self-tailing mechanism, the drum assembly with the line lifter in place can be lifted off. (Proceed with Step 4.)
- Using a soft hammer, tap the line lifter (5) in a counter-clockwise direction to unscrew it from the anchor sleeve (4) (left hand thread) and remove both parts.
- Remove the four shoulder screws (6) in the clamp ring (8) and remove the springs (7), the clamp ring (8) and the screw stop plate (9).
- Lift off drum (10). CAUTION: The drum bearings (12) sometimes stick to the drum and are dropped. Remove the drum bearings (12).
- Partially remove the cotter pin (14) in the pinion shaft (15). Rotate the shaft 90° and lift up the cotter pin to remove the shaft.
- Remove the final drive pinion (16) in assembly with its ratchet gear (19), pawls (17) and springs (18). Keep this assembly together until it can be cleaned and reassembled. This avoids confusion in the assembly process.
- Further disassembly of the winch requires that it be removed from the deck. If this is not practical, lubricate the mainshaft and remaining gears with light oil and reassemble starting at Step 16.
- Remove the snap ring (22) and remove the mainshaft (11).
- Lift out the assembly of the mainshaft pinion (21), its ratchet gear (20), pawls (17) and springs (18). Again, keep this assembly together until it can be cleaned and reassembled.
- Remove the cotter pin (25) from the idler gear shaft (24) and push the shaft out from inside the gear housing (13). Remove the gear (23).
- Remove the ratchet gears from their pawl gears. Hold the ends of the pawl springs when removing the pawls, to stop them from being lost. Clean the parts, lubricate with light oil and reassemble. Note the proper pawl positions on the inset detail drawing.
- Clean all the remaining parts, including the inside of the drum, in mineral spirits (fuel oil or the equivalent). During the assembly procedure, all gears and bearings should be liberally greased with Barient Barlube. The pawls should be lubricated with light machine oil only—never grease.

| Item No. | Part No. | Description | Qty. |
|----------|------------|-------------------------|------|
| 20 | C-24041 | Ratchet Gear (28 teeth) | 1 |
| 21 | C-24042 | Mainshaft Pinion | 1 |
| 22 | A-01045-59 | Retaining Ring | 1 |
| 23 | B-24046 | Idler Gear | 1 |
| 24 | B-24047 | Shaft-Idler | 1 |
| 25 | A-01077-07 | Cotter Pin | 1 |

REASSEMBLY

13. Install the mainshaft (11) in the gear housing (13).
14. Install the mainshaft pinion (21) assembled with its pawls, springs and ratchet gear (17, 18 & 20). Install the snap ring (22).
15. Install the idler gear (23), its shaft (24) and cotter pin (25).
16. Install the final drive pinion (16) assembled with its pawls, springs and ratchet gear (17, 18 & 19). Install the pinion shaft (15) and its cotter pin (14).
17. Mount the housing on deck.
18. Install the drum bearings (12) (liberally greased) and the drum (10) on the housing.
19. Place the screw stop plate (9) and the clamp ring (8) on top of the drum (align its holes with those in the drum). Install the four shoulder screws with their springs and **tighten securely** using a screw locking adhesive such as "Loctite" on the threads.
20. Place the jine lifter (5) on the drum assembly with the lifting tab between the clamp ring and drum. Install the sleeve (4) through the lifter onto the splines on the housing.
21. Rotate the lifter clockwise to screw it onto the sleeve. Tighten it by tapping with a soft hammer. The desired lifter orientation can now be achieved by lifting the drum assembly up until the anchor spline disengages; then, rotate the lifter to the desired position. Install the snap ring (3) the cover plate and the snap ring (1).
22. Check the winch for proper operation. The drum should rotate freely but only in the clockwise direction. When cranking, low gear is clockwise, high is counter-clockwise.

MOUNTING INSTRUCTIONS

1. Remove the drum per the disassembly instructions.
2. Locate the winch base in the desired location. NOTE: Be sure the area is smooth and flat.
3. Locate the mounting hole locations and drill the required holes using an 11/32" drill. Be sure adequate reinforcement is provided to take the loads produced by the winch.
4. Mount the winch using 5/16" stainless or bronze flat head machine screws with nuts and flat washers.
5. Reassemble the drum. NOTE: Be sure the line lifter is oriented toward the winch cranks position.

DISASSEMBLY TOOLS REQUIRED

Small and medium screwdrivers
Pliers

MONTHLY MAINTENANCE

All winches should be flushed with fresh water after being used in a salt water environment. Aluminum drums should be covered when not in use to protect against fading of the black anodizing. Chrome and stainless winches should be polished occasionally with a good chrome cleaner.

Periodic maintenance is recommended to insure the proper operation of your Barient product.

1. Remove the drum using the disassembly procedure, Step 1.
2. Insert a handle and rotate the mainshaft both directions (also in high range for 3-speed winches). If winch does not operate freely, continue with the *complete disassembly procedure*.
3. If winch does operate freely, remove the drum bearings.
4. Clean the bearing spindle and housing of the winch of any dirt or salt deposits.
5. Lubricate the mainshaft and the pawls with light machine oil (see exploded drawing for pawl locations.) Crank the winch while lubricating to be sure the oil is worked into the pawl areas and along the length of the mainshaft.
6. Grease the bearings with Barlube and reinstall.
7. Reinstall the drum per the proper reassembly procedure.

LIMITED WARRANTY

Barient Company warrants each piece of equipment to be free from defects in materials and workmanship. Any part which proves to be defective in the normal use of the equipment will be replaced without charge. This Warranty does not apply to damage resulting from accident, neglect, or misuse, including repairs or alterations made by firms other than Barient Company.
