

# MODEL 23 2-SPEED SELF TAILING WINCH

## MAINTENANCE & SERVICE INFORMATION

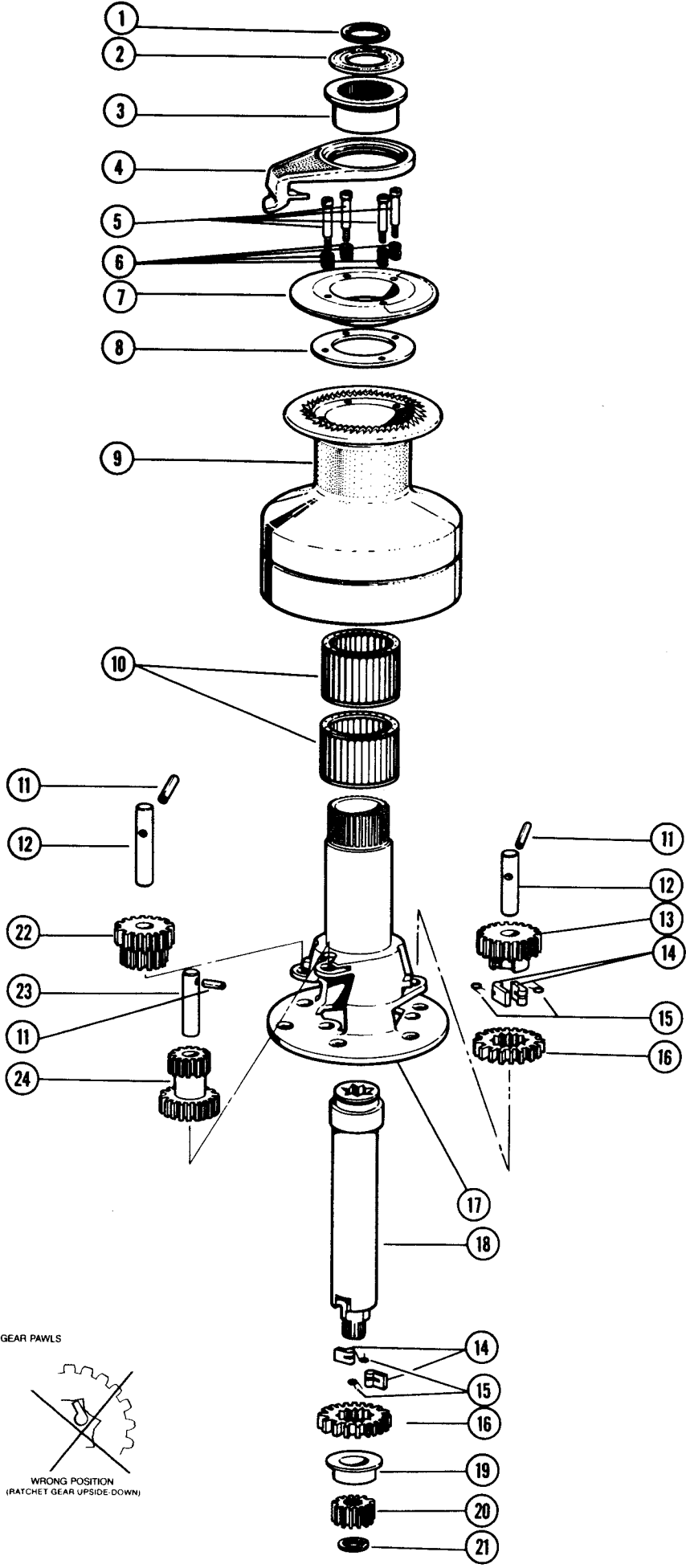
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*Quality Winches and Fine Yacht Gear*



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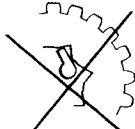
# MODEL 23 2-SPEED WINCH S/T



VIEW OF RATCHET GEAR PAWLS



CORRECT POSITION



WRONG POSITION  
(RATCHET GEAR UPSIDE-DOWN)

| Item No. | Part No.             | Description               | Qty. |
|----------|----------------------|---------------------------|------|
| 1        | RSN-125S             | Spirolox snap ring        | 1    |
| 2        | B-14635              | Washer — top              | 1    |
| 3        | B-24026              | Anchor sleeve             | 1    |
| 4        | C-24029              | Line lifter               | 1    |
| 5        | B-24022              | Shoulder screw            | 4    |
| 6        | B-24023              | Clamping spring           | 4    |
| 7        | C-14648              | Clamp ring                | 1    |
| 8        | B-24024              | Screw stop plate          | 1    |
| 9        | D-14634              | Aluminum drum             | 1    |
| Alt.     | D-14646              | Chrome plated bronze drum | 1    |
| 10       | 00422                | Roller bearing            | 2    |
| 11       | 3/16 dia. x 3/4 long | Spirol pin                | 3    |
| 12       | B-14640              | Idler shaft — short       | 2    |
| 13       | C-14608              | Pinion — driver           | 1    |
| 14       | 00330                | Pawl                      | 4    |
| 15       | 00209                | Pawl spring               | 4    |
| 16       | C-14613              | Ratchet gear              | 2    |
| 17       | D-14633              | Base                      | 1    |
| 18       | B-14642              | Main shaft                | 1    |

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## MODEL #23 SELF-TAILING — DIS-ASSEMBLY PROCEDURE

- Using a small screw driver, remove the snap ring (1) and the washer (2) at the top of the winch.  
NOTE: If it is not necessary to dis-assemble the self-tailing mechanism, the drum assembly with the line lifter in place can be lifted off. (Proceed to step 4)
- Using a soft hammer, tap the line lifter (4) in a counter-clockwise direction to un-screw it from the anchor sleeve (3) (left hand thread) and remove both parts.
- Remove the four shoulder screws (5) in the clamp ring (7) and remove the springs (6) the clamp ring (7) and the screw stop plate (8).
- Lift off the drum (9). CAUTION: The drum bearings (10) sometimes stick to the drum and are dropped. Remove the drum bearings (10).
- Using the roll pins (11) in the three idler gear shafts, rotate the shafts 90 degrees to release the roll pins from the locking tabs in the gear housing.
- Remove each idler shaft and its gear. The pinion (13) should be kept in assembly with the ratchet gear (16), pawls (14) and springs (15).
- Remove the winch from the deck and turn the housing up-side down. NOTE: It may be stood up-side down in the drum to support it for further work.
- Remove the snap ring (21), the low speed pinion (20), and the spacer (19).
- Remove the ratchet gear (16) being careful to leave the pawls in their pockets in the shaft. CAUTION: Be sure to note which face of the ratchet gear is up so it may be assembled in the same direction.
- While holding the two ends of the pawl spring (15) together, lift out the pawls (14).
- Remove the mainshaft (18) from the housing.
- Remove the ratchet gear (16) from the pinion (13) removed in Step 6 above. Again, note the proper orientation of the gear. Holding the pawl springs, remove the pawls. Clean and re-assemble. Check for proper ratchet action.
- Clean the remaining parts in mineral spirits (fuel oil or 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.

## RE-ASSEMBLY

- Install the mainshaft (18) in the gear housing (17).
- Install the pawls (14) with their springs (15) into the pockets in the mainshaft (18) (lubricate with machine oil).
- Install the ratchet gear (16) (proper direction) over the pawls. Install the spacer (19), the low-speed pinion (20) and the snap ring (21). Check for proper ratchet action.

| Item No. | Part No. | Description        | Qty. |
|----------|----------|--------------------|------|
| 19       | B-14636  | Spacer             | 1    |
| 20       | C-14639  | Pinion — low speed | 1    |
| 21       | RSN-59S  | Spirolox snap ring | 1    |
| 22       | C-14638  | Idler gear — short | 1    |
| 23       | B-14641  | Idler shaft — long | 1    |
| 24       | C-14637  | Idler gear — long  | 1    |

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17. Install the pinion (13) assembled with its pawls, springs and ratchet gear (16) in the housing. Install the pin (12) and rotate it to lock in the housing.
  18. Install the two idler gears (22) and (24) in the housing with their pins (23) and (12).
  19. Mount the housing on deck.
  20. Install the drum bearings (10) (liberally greased) and the drum (9) on the housing.
  21. Place the screw stop plate (8) and the clamp ring (7) on top of the drum (align its holes with those in the drum). Install the four shoulder screws with their springs and tighten.
  22. Place the line lifter (4) on the drum assembly with the lifting tab between the clamp ring and drum. Install the sleeve (13) through the lifter onto the splines on the housing.
  23. 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 dis-engages; then, rotating the lifter to the desired position.
  24. Install the retaining washer (2) and the snap ring (1).
  25. Check the winch for proper operation. The drum should rotate freely but only in the clockwise direction. When cranking high gear is clockwise, low 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 cranker's position.

## **DISASSEMBLY TOOLS REQUIRED**

Small screwdriver

## **MONTHLY MAINTENANCE**

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 in 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.

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## **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.*

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