

# MODEL 21 2-SPEED WINCH

## MAINTENANCE & SERVICE INFORMATION

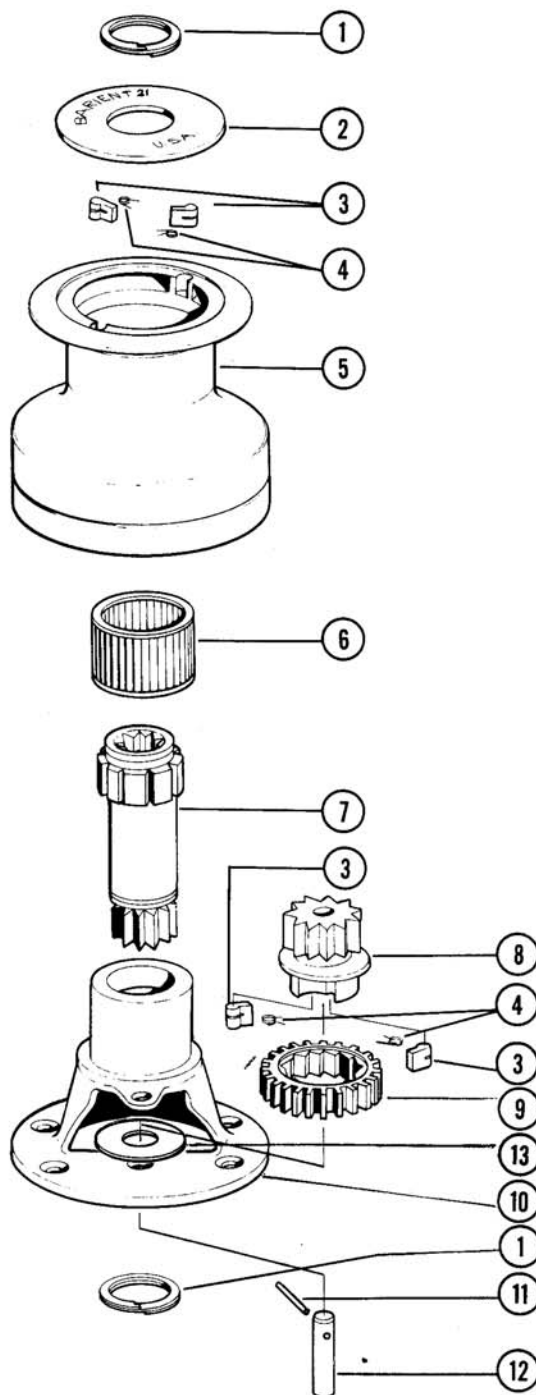
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*Quality Winches and Fine Yacht Gear*

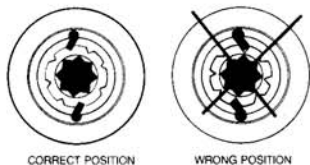
**BARIENT**

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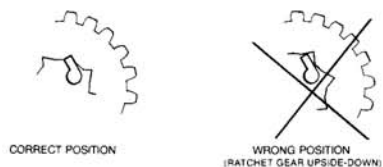
# MODEL 21 2-SPEED WINCH



TOP VIEW OF DRUM SHOWING PAWLS



VIEW OF RATCHET GEAR PAWLS



Item No.	Part No.	Description	Qty.
1	A-01045-125	Snap ring	2
2	B-18023	Cover plate (w/alum. & chrome drums)	1
Alt.	B-18030	Cover plate (w/stainless drum)	1
3	B-00330	Pawl	4
4	B-00209	Pawl spring	4
5	D-18029	Drum (aluminum)	1
Alt.	D-18013	Drum (ch. pltd. brz)	1
Alt.	D18032	Drum (Stainless)	1
6	C-00422	Bearing	1
7	C-18021	Mainshaft	1
8	C-18024	Pinion — final drive	1
9	C-18025	Ratchet gear	1
10	C-18017	Base	1
11	A-01075-07	Spirol pin	1
12	B-18026	Gear shaft	1
13	B-80017	Thrust Washer	1

## MODEL #21 2-SPEED WINCH COMPLETE DISASSEMBLY PROCEDURE

Before dis-assembling the winch, spread out a clean cloth or some newspapers to place the parts on:

1. Remove the snap ring (1) at the top of the drum, using a small screwdriver (use a spiral motion.)
2. Lift off the drum (5) with the cover plate (2) still in place. CAUTION: The drum bearings sometime stick to the drum and may be dropped.
3. Remove the cover plate (2) and the pawls (3) and springs (4) from the drum. NOTE: Squeeze the ends of the pawl springs while removing the pawls from the housing to prevent the springs from being lost.
4. Remove the drum bearing (6) and the mounting screws holding the winch to the deck or mast.
5. Inspect the winch to determine if further dis-assembly is required. If not, the moving parts can be lubricated with light machine oil and the winch re-assembled.
6. Remove the cluster gear shaft (12) by lifting straight up, using the blade of a screwdriver to pry under the cross pin (11).
7. Remove the ratchet gear (9) and pinion (8) assembly and washer (13).
8. Remove the ratchet gear (9), the pawls (3) and their springs (4) from the pinion (8).
9. Working with a small screwdriver, through the window in the housing, lift up the end of the snap ring (1) and spiral it off the mainshaft (2). This operation is somewhat difficult. The mainshaft may be lubricated in place with light oil if desired.
10. Remove the mainshaft (7).
11. Clean all parts with mineral spirits (fuel oil or equivalent). Lubricate the gears and bearings with Barient Barlube. Oil the pawl pockets with light machine oil only—never grease.

## RE-ASSEMBLY

12. Install the mainshaft (7) into the base (10). Using two screwdrivers, start the end of the snapping (1) into the groove in the mainshaft. Then spiral it completely into place.
13. Assemble the pawls (3) and springs (4) into the pinion (8). Put the ratchet gear (9) over the pawls being sure the counter-bore in the face of the ratchet gear is toward the pinion.
14. Locate the assembled pinion-ratchet gear and washer into the window in the case and push the pin (12) down thru the assembly. Lubricate the pawls and their pockets with light machine oil.
15. Mount the winch in its required position. NOTE: Always be sure the surface to which the winch is bolted is *flat* and *smooth*.
16. Install the drum bearing (6) on the base (10). Grease the bearings thoroughly.
17. Install the remaining set of pawls and springs (lubricated) into their pockets in the drum (5). Their direction should be so as to allow the mainshaft (7) to rotate counter-clockwise but not clockwise.
18. While holding the pawls away from the center of the drum, install the drum (5) onto the housing (10).
19. Install the drum cover plate (2) and its remaining snap ring (1).
20. Check the operation of the winch. The drum should rotate freely only in the clockwise direction. High gear is engaged with the clockwise crank rotation, low gear with 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 washers.
5. Reassemble the drum.

## DISASSEMBLY TOOLS REQUIRED

Small screwdriver

## MONTHLY MAINTENANCE

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

Winches should be flushed with fresh water after use in a salt water environment. Chrome and stainless drums should be polished with a good chrome cleaner. Aluminum drums should be kept covered when not in use to protect against fading of the black anodizing. NOTE: Vinyl or rubber covers, which do not allow the moisture in the winch to dry, should **not** be used.

The following maintenance should be carried out monthly.

1. Remove the drum using the disassembly procedure, Steps 1 through 3.
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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