

Model: 04-6014-0010
Bae HS-125 Battery Lift

01/2007 – Rev. 01

REVISION
OR
01

DATE
04/1993
01/2007

TEXT AFFECTED
Original Release
Modified Parts List

TABLE OF CONTENTS

PAGE

1.0	PRODUCT INFORMATION	1
1.1	DESCRIPTION.....	1
1.2	MODEL & SERIAL NUMBER.....	1
1.3	MANUFACTURER	1
1.4	SPECIFICATIONS	1
2.0	SAFETY INFORMATION.....	1
2.1	USAGE AND SAFETY INFORMATION	1
3.0	PREPARATION PRIOR TO FIRST USE	1
3.1	ASSEMBLY INSTRUCTIONS	1
4.0	TRAINING	1
4.1	TRAINING REQUIREMENTS	1
4.2	TRAINING PROGRAM.....	1
4.3	OPERATOR TRAINING	1
5.0	OPERATING INSTRUCTIONS	2
5.1	BATTERY REMOVAL PROCEDURE	2
5.1.1	Battery Preparation	2
5.1.2.	Removal of Batteries.....	2
5.2	INSTALLATION OF BATTERIES.....	2
6.0	PROVISION OF SPARES.....	2
6.1	SOURCE OF SPARE PARTS.....	2
6.2	RECOMMENDED SPARE PARTS LISTS	2
7.0	GUARANTEES/LIMITATION OF LIABILITY	3
8.0	APPENDICES	3

This product can not be modified without the written approval of Tronair, Inc. Any modifications done without written approval voids all warranties and releases Tronair, Inc., its suppliers, distributors, employees, or financial institutions from any liability from consequences that may occur. Only Tronair OEM replacement parts shall be used.

1.0 PRODUCT INFORMATION

1.1 DESCRIPTION

The Tronair Battery Lift, Model 04-6014-0010, is designed to aid in the installation and removal of batteries in the BAe HS-125 aircraft.

The telescoping design of the battery lift enables it to conveniently fit under the tail section of the aircraft and extend up into the battery compartment for the removal or installation of batteries.

1.2 MODEL & SERIAL NUMBER

Reference nameplate on unit

1.3 MANUFACTURER

TRONAIR, Inc.
1 Air Cargo Pkwy East
Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301
Fax: (419) 867-0634
E-mail: sales@tronair.com
Website: www.tronair.com

1.4 SPECIFICATIONS

- Capacity 100 lbs Maximum
- Net Weight 54 lbs
- Height, Collapsed 35 inches
- Height, Extended 84 inches

2.0 SAFETY INFORMATION

2.1 USAGE AND SAFETY INFORMATION

To insure safe operations please read the following statements and understand their meaning. Also refer to your equipment manufacturer's manual for other important safety information. This manual contains safety precautions which are explained below. Please read carefully.



WARNING!

Warning is used to indicate the presence of a hazard that can cause **severe personal injury, death, and/or substantial property damage** if the Warning Notice is ignored.



CAUTION!

Caution is used to indicate the presence of a hazard, which will or can cause **minor personal injury or property damage** if the Caution Notice is ignored.

3.0 PREPARATION PRIOR TO FIRST USE

3.1 ASSEMBLY INSTRUCTIONS

Reference Parts List Illustrations

Attach crane sub-base weldment (Item 20) to base weldment (Item 1) using the four ¼ inch bolts, stopnuts and washers (Items 26, 27, 28) supplied. Torque bolts to 75 in-lbs.

4.0 TRAINING

4.1 TRAINING REQUIREMENTS

The employer of the operator is responsible for providing a training program sufficient for the safe operation of the unit.

4.2 TRAINING PROGRAM

The employer provided operator training program should cover safety procedures concerning use of the unit in and around the intended aircraft at the intended aircraft servicing location.

4.3 OPERATOR TRAINING

The operator training should provide the required training for safe operation of the unit.

NOTE: Maintenance and Trouble Shooting are to be performed by a skilled and trained technician.

5.0 OPERATING INSTRUCTIONS

To properly operate this Battery Lift, it is mandatory that the operating procedures listed below be read thoroughly and followed.

5.1 BATTERY REMOVAL PROCEDURE

5.1.1 Battery Preparation

- Remove all connections to the battery according to the aircraft manufacturer's maintenance manual, leaving the battery in its mounting tray.
- Loosen the wing nut at the base of the battery to free the battery and its mounting tray from the aircraft.
- Slide the battery, while in its tray, down to the edge of the battery ramp.
- While in this position, attach the lifting adaptor to the battery.
- The battery is now ready for removal.

5.1.2. Removal of Batteries

Reference Parts List Illustrations



CAUTION!

Remove battery from battery lift before extending or retracting telescoping tubes.

1. Extend Items 9, 16, 18 & 19, respectively, and insert locking pins (Item 17) four places. The top of the battery lift should be approximately 8" to 10" above the battery.
2. After the Battery Lift is fully extended as required, lower the cable, by turning the crank counter-clockwise, to approximately the top of the battery.
3. Position the Battery Lift so the sheave (Item 6) at the top of the Battery Lift is located directly above the battery hitch mounting hole.
4. Slip the Aerofast pin into the lifting adaptor for removal.
5. Exercising caution to avoid contact with other components in the aircraft, pull the Battery Lift and battery back. It may be necessary to rotate the Battery Lift to provide the necessary battery clearance.
6. Slowly turn the crank handle counter-clockwise to lower the battery through the battery compartment access door. It may be helpful to guide the battery with one hand while cranking with the other.
7. Lower the battery until it rests on the rubber pad (Item 21).

5.2 INSTALLATION OF BATTERIES

The installation of batteries is accomplished by reversing the above procedures. After lifting the battery, above the level of the battery ramp, move the Battery Lift & battery forward over the ramp. Then lower the battery into the ramp, and remove the Aerofast pin from lifting adaptor.



CAUTION!

To lower the telescoping section of the battery lift, hold the section directly above the locking pin before removing it. It is imperative to remove the lowest locking pin first.

6.0 PROVISION OF SPARES

6.1 SOURCE OF SPARE PARTS

Spare parts may be obtained from the manufacturer:

TRONAIR, Inc.

1 Air Cargo Pkwy East

Swanton, Ohio 43558 USA

Telephone: (419) 866-6301 or 800-426-6301

Fax: (419) 867-0634

E-mail: sales@tronair.com

Website: www.tronair.com

6.2 RECOMMENDED SPARE PARTS LISTS

Reference the following page(s) for Replacement Parts and Kits available.

7.0 GUARANTEES/LIMITATION OF LIABILITY

Tronair products are warranted to be free of manufacturing or material defects for a period of one year after shipment to the original customer. This is solely limited to the repair or replacement of defective components. This warranty does not cover the following items:

- a) Parts required for normal maintenance
- b) Parts covered by a component manufacturers warranty
- c) Replacement parts have a 90-day warranty from date of shipment

If you have a problem that may require service, contact Tronair immediately. Do not attempt to repair or disassemble a product without first contacting Tronair, any action may affect warranty coverage. When you contact Tronair be prepared to provide the following information:

- a) Product Model Number
- b) Product Serial Number
- c) Description of the problem

If warranty coverage is approved, either replacement parts will be sent or the product will have to be returned to Tronair for repairs. If the product is to be returned, a Return Material Authorization (RMA) number will be issued for reference purposes on any shipping documents. Failure to obtain a RMA in advance of returning an item will result in a service fee. A decision on the extent of warranty coverage on returned products is reserved pending inspection at Tronair. Any shipments to Tronair must be shipped freight prepaid. Freight costs on shipments to customers will be paid by Tronair on any warranty claims only. Any unauthorized modification of the Tronair products or use of the Tronair products in violation of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by Tronair will immediately void any warranty, express or implied.

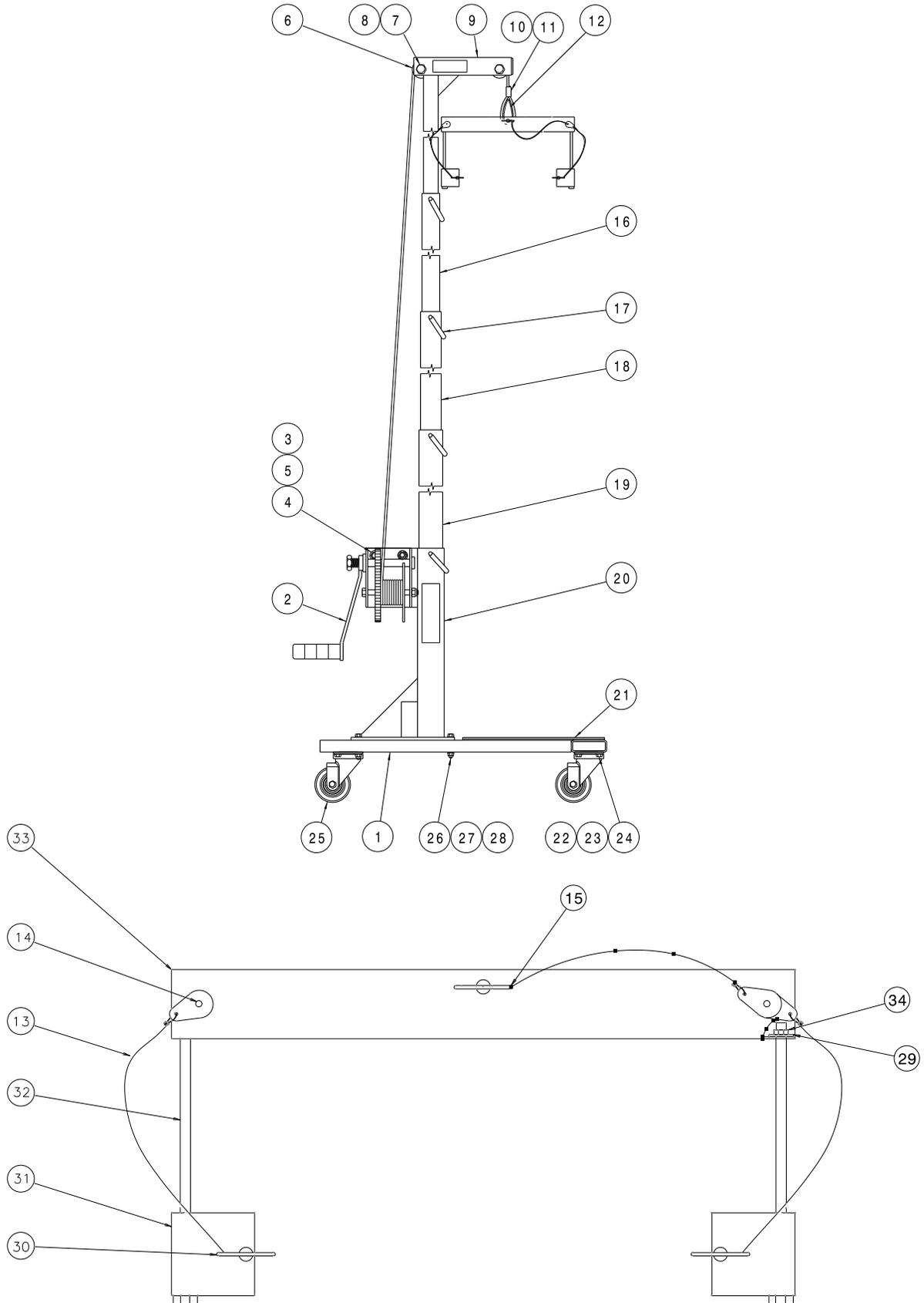
The obligations of Tronair expressly stated herein are in lieu of all other warranties or conditions expressed or implied. **Any unauthorized modification of the Tronair products or use of the Tronair products in violations of cautions and warnings in any manual (including updates) or safety bulletins published or delivered by Tronair will immediately void any warranty, express or implied and Tronair disclaims any and all liability for injury (WITHOUT LIMITATION and including DEATH), loss or damage arising from or relating to such misuse.**

8.0 APPENDICES

APPENDIX I Dutton-Lainson DLB800 Brake Winches Safety, Operation & Parts List Manual

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Parts List



Parts List

When ordering replacement parts/kits, please specify model, serial number and color of your unit.

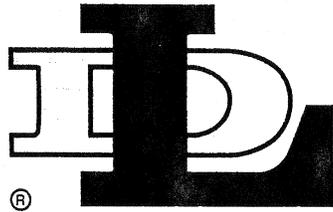
Item	Part Number	Description	Qty
1	Z-2802-01	Weldment, Base	1
2	H-1896	Winch, Brake	1
3	G-1100-107010	Bolt, Hex Head, Grade 5, 3/8-16 x 1" long	3
4	G-1202-1070	Jamnut, 3/8-16 Elastic	3
5	G-1205-1070N	Flatwasher, 3/8 Narrow	6
6	H-1895	Sheave, Steel	2
7	G-1100-109520	Bolt, Hex Head, Grade 5, 1/2-20 x 2" long	2
8	G-1203-1095	Jamnut, 1/2-20 Elastic	2
9	Z-2801-01	Weldment, Upright	1
10	H-1894*180.00	Cable, Aircraft	1
11	H-2980	Sleeve, Compressed Oval	1
12	H-2981	Thimble, Wire Rope	1
13	H-1026*07.0	Assembly, Lanyard	3
14	G-1351-04	Rivet, 1/8 x 1/4 Grip	2
15	G-1307-0418	Pin, Aerofast 1/4" diameter x 1.8" long	1
16	TS-1216	Tube	1
17	G-1311-02	Pin, Lock	4
18	TS-1215	Tube	1
19	TS-1214	Tube	1
20	Z-2800-01	Weldment, Sub-base	1
21	H-1381	Pad, Base	1
22	G-1232-05-S	Nutsert, 1/4-20	6
23	G-1100-105006	Bolt, Hex Head, Grade 5, 1/4-20 x 3/4" long	6
24	G-1251-1050R	Lockwasher, 1/4 Regular	6
25	U-1000	Caster	3
26	G-1100-105020	Bolt, Hex Head, Grade 5, 1/4-20 x 2" long	4
27	G-1202-1050	Jamnut, 1/4-20 Elastic	4
28	G-1250-1050N	Flatwasher, 1/4" Narrow	4
29	G-1250-1050W	Flatwasher, 1/4" Wide	2
30	G-1307-0321	Pin, Aerofast, 3/16" diameter x 2.1" long	2
31	J-2169	Block, Battery Lifting	2
32	G-1100-105052	Bolt, 1/4 - 20 Hex Head Grade 5, 5.25 Lg	2
33	TS-1485	Bar, Adapter	1
34	G-1202-1050	Stopnut, 1/4 - 20 Elastic	2



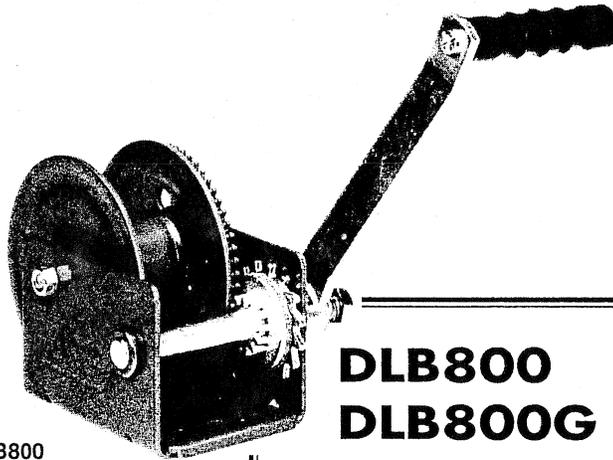
APPENDIX I

**Dutton-Lainson
DLB800**

Brake Winches Safety, Operation & Parts List Manual



BRAKE WINCHES

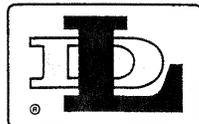


DLB800

- DLB800**
- DLB800G**
- DLB805**
- DLB1200**
- DLB1200G**
- DLB1205**
- DLB1500**
- DLB1500G**
- DLB1505**
- DLB2000**
- DLB2000G**

MANUFACTURED BY

MADE IN U.S.A.



DUTTON-LAINSON
COMPANY *SINCE 1886*

451 West 2nd St. • Hastings, NE 68902-0729 • PH: 402-462-4141 • FAX: 402-460-4612



WARNING READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO
INSTALL, OPERATE OR SERVICE THIS WINCH. FAILURE TO COMPLY WITH
INSTRUCTIONS COULD RESULT IN SERIOUS OR FATAL INJURY. RETAIN THESE
INSTRUCTIONS FOR FUTURE REFERENCE.



**DLB800, DLB800G, DLB805, DLB1200, DLB1200G, DLB1205,
DLB1500, DLB1500G, DLB1505, DLB2000, DLB2000G Winch**



IMPORTANT SAFETY INFORMATION

- This brake winch is built for multi-purpose hauling and lifting operations. It is not to be used as a hoist for lifting, supporting or transporting people, or for loads over areas where people could be present.
- Respect this winch. High forces are created when using a winch, creating potential safety hazards. It should be operated and maintained in accordance with instructions. Never allow children or anyone who is not familiar with the operation of the winch to use it. A winch accident could result in personal injury.
- Check winch for proper operation on each use. Do not use if damaged. Seek immediate repairs.
- Never exceed rated capacity. Excess load may cause premature failure and could result in serious personal injury. This winch is rated with one layer of cable on the hub.
- Never apply load on winch with cable fully extended. Keep at least three full turns of cable on the reel.
- Secure load properly. When winching operation is complete, do not depend on winch to support load.
- Operate with hand power only. This winch should not be operated with a motor of any kind. If the winch cannot be cranked easily with one hand, it is probably over-loaded.

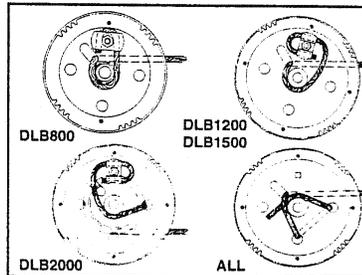
ASSEMBLY – Thread the handle onto the winch drive shaft and be certain that a clicking noise is produced when the handle is turned clockwise. Install the spring and locknut (Items E and G) on the end of the drive shaft as shown

on parts drawing. These parts may appear to serve no function, but they provide several important fail-safe features, and should not be altered or removed.

WINCH MOUNTING AND CABLE ATTACHMENT

– For maximum strength and safety, this winch should be mounted with three $\frac{3}{8}$ " bolts (M10), washers and lock washers. (See parts drawing). Using fewer bolts or alternate locations will result in damage to the winch base and the winch may malfunction.

Attach cable or rope by either method shown in sketch.



OPERATING INSTRUCTIONS

– Wind cable on winch reel by turning winch handle in clockwise direction. This should produce a loud, sharp, clicking noise. The load will remain in position when the handle is released. Wind cable off the winch reel by turning winch handle counterclockwise (no noise will be produced). The load will remain in position when the handle is released, but for extra security it is recommended that the handle be turned clockwise until at least two clicks are heard. This will add extra tightness to the brake mechanism. Always satisfy yourself that the winch is holding the load before releasing the winch handle.

⚠ IMPORTANT: Sufficient load must be applied to the cable to overcome internal resistance and operate the brake properly, otherwise turning the crank handle counterclockwise will only remove the handle from the shaft – the reel will not turn. The mini-

um operating load requirement is 50 lbs. (23 kg) for Models DLB800, DLB800G, DLB1200 and DLB1200G, 75 lbs. (34 kg) for DLB1500 and DLB1500G, 175 lbs. (80 kg) for DLB2000 and DLB2000G.

Models DLB805, DLB1205, & DLB1505, are equipped with a lockout lever for the purpose of 'freewheeling' cable out when there is no load on the winch. To 'freewheel' cable out, simply turn the handle counterclockwise until lockout lever can be engaged behind handle hub. In this condition cable can be easily pulled from the winch drum.

⚠ WARNING: Never put winch in freewheel mode if any potential for a load on the cable exists. Engaging the lockout lever keeps the winch from stopping in the event that a load is accidentally applied.

WINCH MAINTENANCE – In order to insure maximum performance, a periodic inspection for any necessary preventive maintenance should be made. Check at least once annually and more frequently when the winch is exposed to an environment which is particularly dirty or wet. For continued smooth performance and increased life, occasionally grease gears, reel shaft and handle threads. An occasional drop of oil on the drive shaft bearings is

also recommended. **NOTE: Do not oil or grease brake mechanism.**

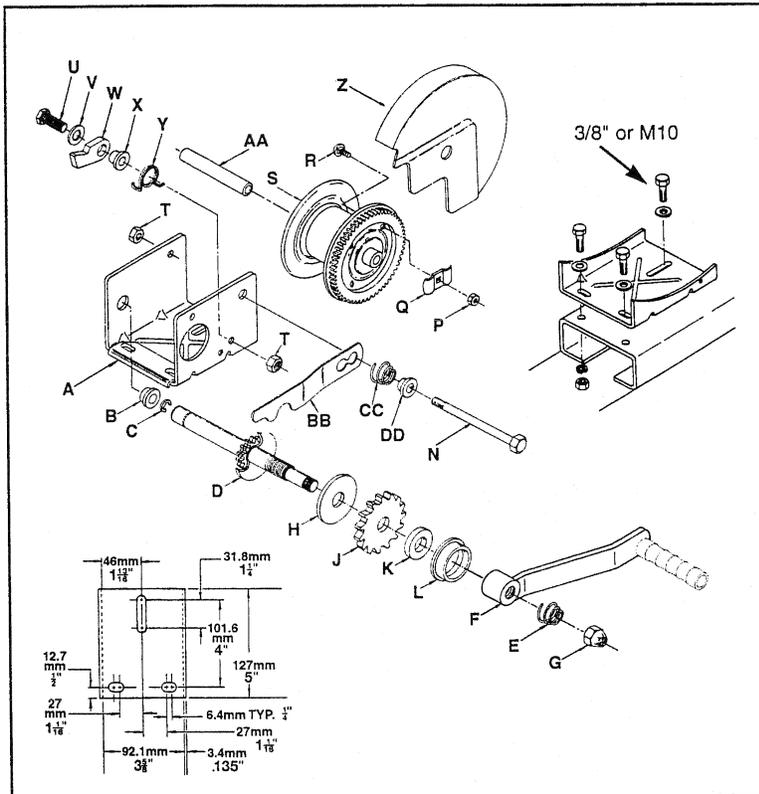
The winch finish can be protected and will provide longer service if it is periodically washed with water and then wiped with light oil or wax.

Keep winch in good working order. Damaged or severely-worn parts create unnecessary dangers and could result in personal injury or property damage.

NOT FOR THE MOVEMENT OF HUMAN BEINGS



DLB800, DLB800G & DLB805 Winch



DLB800, DLB800G & DLB805 Winch Parts List

Ref.	Description	Part No.	Ref.	Description	Part No.
A	Base (DLB800)	304342	S	Reel	304339
A	Base (DLB800G)	304372	T	Locknut (2)	204803
B	Bushing	204012	U	Bolt	205167
C	"E" Ring	205116	V	Flat Washer	205055
D	Drive Shaft	304228	W	Pawl (DLB800)	404409
E	Spring	204364	W	Pawl (DLB800G)	404190
F	Handle	304231	X	Spacer (DLB800)	404166
G	Nut	205015	X	Spacer (DLB800G)	404191
H	Pressure Plate	204362	Y	Spring (DLB800)	204363
J	Ratchet Wheel	404164	Y	Spring (DLB800G) (2)	204460
K	Pressure Washer	404163	Z	Gear Cover (Optional)	404271
L	Bushing	204359	AA	Spacer (Reel)	204807
N	Bolt	203161	BB	Lockout Lever (DLB805)	404579
P	Nut	205016	CC	Spring (DLB805)	204364
Q	Rope Clamp	404043	DD	Spacer (DLB805)	404166
R	Carriage Bolt	205017			

To order replacement parts:
In The USA and Canada
Parts Company of America
 Tel: 1-800-323-0620
 Fax: 1-800-PCA-FAX

In Europe Contact
Aqua Marine • 216 Fair Oak Road •
 Bishopstoke • Eastleigh • Hants • S05 6NJ
 Tel: Southampton (703) 694949
 Fax: (703) 601381

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