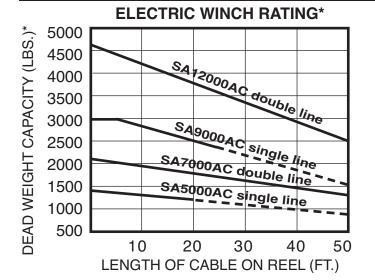
Strongarm, elec

OWNER'S MANUAL

MODELS SA5000AC, SA7000AC, SA9000AC, SA12000AC



WINCH RATINGS



DOUBLE LINE OPERATION

Models SA7000AC and SA12000AC are factory equipped with a pulley block and hook and 50' of cable for double line operation. This increases the pulling capacity of the winch as shown, however, care must be taken to allow adequate motor cooling. Note that with double line, a pull of 25' requires reeling in 50' of cable.

120 Volt AC

For intermittent use only. Ratings at left are based on 10' pull. For longer pulls motor cooling periods must be allowed.

MAXIMUM CONTINUOUS RUN TIME 3 MINUTES

CAUTION: CONTINUOUS RUNNING IN EXCESS OF 3 MINUTES WILL DAMAGE WINCH MOTOR.

GUIDE TO ROLLING LOAD CAPACITY**

Maximum weight in pounds and kilograms rolling load.

MODEL	PERCENT INCLINE							
	5%	10%	20%	30%	50%	70%	LOAD	
	(3°)	(6°)	(11°)	(17°)	(26°)	(35°)	CAPACITY*	
SA5000AC	8,000 lbs.	6,000 lbs.	4,000 lbs.	3,100 lbs.	2,200 lbs.	1,800 lbs.	1,200 lbs.	
	3,629 kg	2,722 kg	1,814 kg	1,406 kg	998 kg	816 kg	544 kg	
SA7000AC	12,000 lbs.	9,000 lbs.	6,100 lbs.	4,600 lbs.	3,300 lbs.	2,700 lbs.	1,800 lbs.	
	5,443 kg	4,082 kg	2,767 kg	2,087 kg	1,497 kg	1,225 kg	816 kg	
SA9000AC	18,000 lbs.	13,500 lbs.	9,100 lbs.	6,900 lbs.	5,000 lbs.	4,100 lbs.	2,700 lbs.	
	8,165 kg	6,124 kg	4,128 kg	3,130 kg	2,268 kg	1,860 kg	1,225 kg	
SA12000AC	26,700 lbs.	20,100 lbs.	13,600 lbs.	10,300 lbs.	7,400 lbs.	6,100 lbs.	4,000 lbs.	
	12,111 kg	9,117 kg	6,169 kg	4,672 kg	3,357 kg	2,767 kg	1,814 kg	

(*) Load capacity (dead weight) is a measure of actual maximum force to which the winch system may be subjected.

APPROXIMATE LOAD SPEED (FT/MIN.)

	NO I	OAD	FULL LOAD			
	Full Reel	Empty Reel	Full Reel	Empty Reel		
SA5000AC	35	16	16	9		
SA7000AC	17.5	8	9.5	6		
SA9000AC	18	6	7	3.5		
SA12000AC	9	3	4	2		

WARNING: NOT TO BE USED AS A HOIST FOR LIFTING, SUPPORTING OR TRANSPORTING PEOPLE OR LOADS OVER AREAS WHERE PEOPLE COULD BE PRESENT!

^(**) All capacities shown are with 15' of cable on the reel and 10% rolling friction factor. For full reel of cable adjust capacities according to graph above. Note 5% incline is one-half foot rise in ten feet.

IMPORTANT SAFETY INFORMATION

AWARNING: FAILURE TO READ AND FOLLOW INSTRUCTIONS BELOW COULD RESULT IN SERIOUS OR FATAL INJURY.

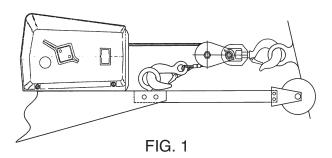
AWARNING: NOT TO BE USED AS A HOIST FOR LIFTING, SUPPORTING, OR TRANSPORTING PEOPLE OR LOADS OVER AREAS WHERE PEOPLE COULD BE PRESENT.

- ⚠ This winch is not designed for movement of human beings. Do not use for scaffolding, elevators, or any other application in which persons could be positioned on or under the load at any time. Do not use as an overhead hoist.
- ▲ Consult the manufacturer before using this winch in any vertical lifting/lowering applications. Tel. 402-462-4141, Fax 402-460-4613 E-Mail dlsales@dutton-lainson.com
- ⚠ This electric winch should be respected as power equipment. High forces are created when using a winch, creating potential safety hazards. Never allow children or anyone who is not familiar with the operation of the winch to use it.
- Never exceed rated winch load. Dangerously high forces can be created if the load being moved is too large or is allowed to get in a bind, etc. Note that installing longer than normal cable results in increased load on winch. If overloaded, this winch has power enough to break the cable.
- ⚠ Winch is equipped with a high-quality aircraft cable capable of handling the rated winch load. Never exceed the rated capacity. Do not use vehicle pulling power to increase the pulling capacity of your winch. When cable breakage occurs under tension, the cable tends to whip toward the winch area. It is recommended that a blanket or rug be placed over the cable during winching operations to minimize this whipping action in case of cable breakage.
- A Never apply load to winch with cable fully extended. Keep at least three turns of cable on the reel.
- A Keep the winching area free of all unnecessary personnel. Never stand between load and winch.

- ♠ When winching operation has been completed, do not depend on the winch to support the load. Always secure the load properly. Use tie down straps or chains.
- ⚠ The auxiliary handle is provided for emergency use only. Never use the auxiliary handle as an assist to the motor when the motor is running. Always remove the auxiliary handle when it is not in use. Do not operate the winch motor or allow the winch to free wheel with the handle installed.
- A Special care should be taken with 120-volt AC winches, as with any other 120-volt tools. It is recommended that whenever a 120-volt AC winch is out-of-doors that it be used with a ground fault circuit interrupter. The winch should be used only with a three pronged grounded outlet. Do not remove the grounding prong on the power cord for any reason. Do not operate the unit in the rain or when it is wet. Avoid using the winch around water or water pipes and never operate the winch while standing in water.
- ♠ Periodically check the power cord for wear or frays which could cause electrical shorts or shocks.
- ⚠ Keep hands and fingers clear of the drum and cable area of the winch when operating. Do not attempt to guide the cable by hand as it rewinds on the drum.
- ⚠ The winch must be securely attached to a structural member or frame that is capable of sustaining loads in excess of the winch capacity. When attaching the winch to a vehicle, make sure the mounting pad area is rigidly supported by the vehicle frame. Always block the wheels to prevent vehicle from rolling when pulling a load with the winch.
- ♠When releasing a load with the clutch, maintain control of the speed. Excess speed could result in winch damage and serious personal injury.

MOUNTING INSTRUCTIONS

- Be sure that the mounting surface is of sufficient strength to support a load well in excess of the rated winch capacity.
- Fasten the winch to the trailer winch stand (or other mounting surface) with three 1/2" bolts, nuts, washers and lock washers. Be sure that the winch is positioned so that the cable does not rub the front opening of the winch.
- 3. For double line use, install an eyehook on the winch stand close to the base of the winch for fastening the stationary cable hook.(see Fig. 1) Be sure the eyehook is of sufficient strength to withstand loads in excess of the single line rating of the winch.



4. Your winch is equipped with keyhole slots in the base for use with quick mounting shoulder studs, if desirable. (See FIG. 2&3) If you wish to use quick mount studs, they should be mounted securely into the winch stand. After positioning the winch on the studs, a 3/8" bolt should be placed in one of the other holes available to keep the winch securely in position.

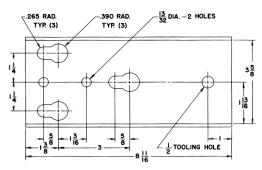


FIG. 2 BASE HOLE PATTERN (SA5000AC & SA7000AC)

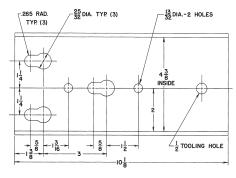


FIG. 3 BASE HOLE PATTERN (SA9000AC & SA12000AC)

LOADING AND UNLOADING UNDER POWER

With the clutch in the engaged gears position, you may power the winch in either the "in" or "out" direction.

- 1. To operate the unit, simply press the switch "in" for loading and "out" for unloading.
- 2. Allowing the switch to return to the OFF position will automatically stop the winch and lock the load in position
 - NOTE: It is normal for smoke to be produced during the initial power down use.
- WARNING: BECAUSE THE WINCH IS NOT EQUIPPED WITH CIRCUIT BREAKER OVERLOAD PROTECTION, PARTICULAR CARE SHOULD BE TAKEN NOT TO CREATE AN OVERLOAD. PAY ATTENTION TO THE SOUND OF THE WINCH AND THE LOAD BEING PULLED. MAKE CERTAIN THAT THE CABLE TENSION DOES NOT RISE SUDDENLY BECAUSE OF A BIND IN THE LOAD.
- A CAUTION: The electric motor is designed for intermittent service only. Extended use without cooling off periods will cause overheating resulting in motor damage. Maximum recommended continuous run time is three minutes.
- It is recommended that whenever the winch is not being used that it be unplugged from the power supply. The bridge is subject to damage caused by electrical storms or voltage surges if the winch is left plugged in when not in use.

CLUTCH OPERATION

- The clutch lever provides a means for releasing a load without power while maintaining control of the speed and provides for free wheeling so that cable can be removed from the winch by hand. The clutch lever is spring loaded so that it returns to the engaged position when released. The lever will, however, remain in the free wheeling position if rotated completely forward to free wheel.
- In order to release a load without power, rotate the clutch lever slowly and carefully forward toward "Free Wheel." When the load begins to move, it can be controlled by the clutch lever. Careful, slow movement of the lever will provide smooth control of the load.
- WARNING: ALWAYS MAINTAIN CONTROL OF THE LOAD. ALLOWING EXCESS SPEED COULD RESULT IN WINCH DAMAGE AND SEVERE PER-SONAL INJURY.
- Remember that the gear train and brake mechanism are completely disengaged in the "Free Wheel" position and in order to power the winch or hold a load in position, the lever must be allowed to return to the "Engaged Gears" position.

NOTE: It is not necessary to turn the clutch lever completely to the "Engaged Gears" position manually. The spring tension built into the winch provides adequate force on the clutch lever.

A CAUTION: Never force clutch lever in either direction.

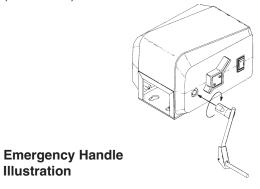
AUXILIARY HANDLE

 An emergency crank handle is provided for use in the event of a power failure. Remove the electrical power from the winch.

WARNING: NEVER OPERATE THE WINCH ELECTRICALLY WITH THE EMERGENCY HANDLE IN POSITION.

- Remove the plastic plug from the side of the winch housing and insert the handle so that it completely engages with the drive shaft. The handle can be cranked in either direction with the clutch in the engaged position. To make cranking easier, the clutch can be placed in the free wheel position while holding onto the emergency handle.
- WARNING: IF THE CLUTCH IS PLACED IN FREE WHEEL FOR HAND CRANKING, BE SURE TO MAINTAIN A FIRM GRIP ON THE HANDLE AT ALL TIMES.

Because the emergency crank handle for models SA9000AC and SA12000AC attaches to the clutch side of the winch, it is equipped with a spring operated clip which will be depressed by the clutch handle in the free wheel position when cranking in a clockwise direction to retrieve the cable. This clip is a safety feature and will reengage the clutch mechanism in the event that the operator loses control of the handle with a load on the winch. (See FIG. 4)



WARNING: EVEN WITH THIS SAFETY FEATURE THE HANDLE WILL STILL SPIN VIOLENTLY ONE OR TWO TURNS BEFORE RE-ENGAGING THE CLUTCH TO STOP THE WINCH. DO NOT LOSE CONTROL.

3. Always remove the handle from the winch after use and replace the plastic plug.

WINCH MAINTENANCE

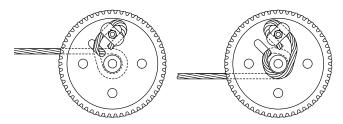
For long life and trouble-free operation your winch should periodically be inspected for any required maintenance. This should be done at least once annually and more frequently in adverse conditions such as salt water areas or areas of extreme dust and dirt.

Carefully inspect the winch cable for any kinks, frays
or abnormal stiffness and replace at the first sign of
this kind of damage. Periodic lubrication with a light
oil will improve the life of the cable. In order to
replace the winch cable, it is necessary to remove
the clutch handle, by removing the two clutch

handle screws, and the four cover mounting bolts. Be sure that the power is disconnected from the housing and lift the housing off of the winch by gently stretching it open near the lower front corner. Rotate the winch reel so that you have access to the rope clamp. Remove the old cable and replace it with a new cable of the same size. Be sure that the cable passes under both sides of the rope clamp and that the clamp is tightened securely. NOTE: CABLE IS WOUND OVER THE TOP OF THE DRUM ON MODELS SA5000AC AND SA7000AC AND UNDER THE DRUM ON MODELS SA9000AC AND SA12000AC. SEE ATTACHMENT METHOD BELOW (FIG. 5).

CABLE ATTACHMENT METHODS

FIG. 5

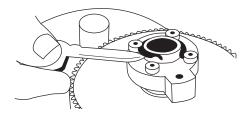


Model SA5000/7000AC Model SA9000/12000AC

- 2. With the cover removed as described above, inspect the entire gear train and all drive shafts for any significant wear or loose bearing fits. Grease all of the gears on the inside of the winch base and apply a drop of oil on all of the bearings in the base. Also, very sparingly oil all of the bearings in the clutch mechanism and place a drop of oil on the roller clutch. Do not over lubricate these areas and do not use grease in the roller clutch. The clutch mechanism and the brake pads and brake disc must be kept clean and oil free.
- 3. Check the operation of the roller clutch. Carefully rotate the brake disc and observe the motor shaft. When the disc is turned clockwise the motor shaft should turn with it. When the disc is turned counterclockwise the motor shaft should not turn. Also, check all nuts, bolts, retaining rings, etc., to be sure that they are tight and secure.
- 4. If the clutch has been slipping and requires adjustment the following procedures should be used. The clutch is adjustable in ten degree increments. With a screwdriver and pliers, remove the end of the clutch spring from the hole in the winch base. The spring tension is quite high so be careful to maintain a firm grip on the spring. The O-ring should be rotated so that the cut out portions align with the lugs on the spring keeper. (See FIG. 6)

The ring can then be expanded with a pencil or similar object and the spring keeper can be lifted free from the clutch nut. Rotate the keeper clockwise 10 degrees and install on the next serration in the clutch nut. Reinstall O-ring and rotate slightly so that the cut outs are not in line with the lugs on the spring keeper and reinstall the clutch spring into the hole in the base. Adjustment of the clutch more than 10 degrees to 20 degrees should normally not be necessary. With only spring pressure (do not forcibly

FIG. 4



O-Ring Illustration

FIG. 6

tighten the clutch mechanism) the spring lug on the spring keeper should come to rest at approximately the 2:30 o'clock position.(See FIG. 7)

5. Check the pulley block and hook assembly (MODELS SA7000AC AND SA12000AC) to be sure that the pulley rotates freely on the bronze pulley spacer. Occasional greasing of these two items is recommended.

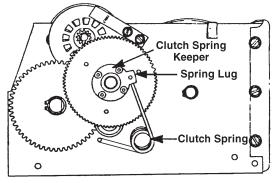
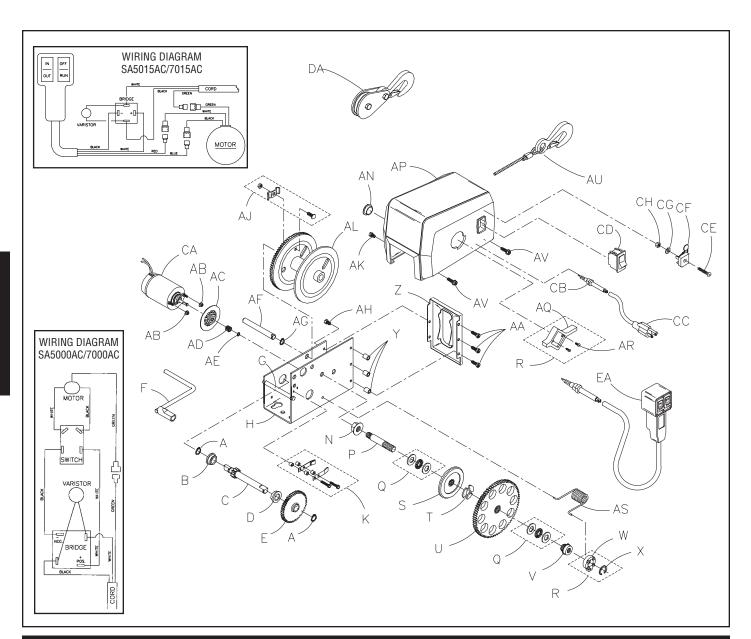


FIG. 7

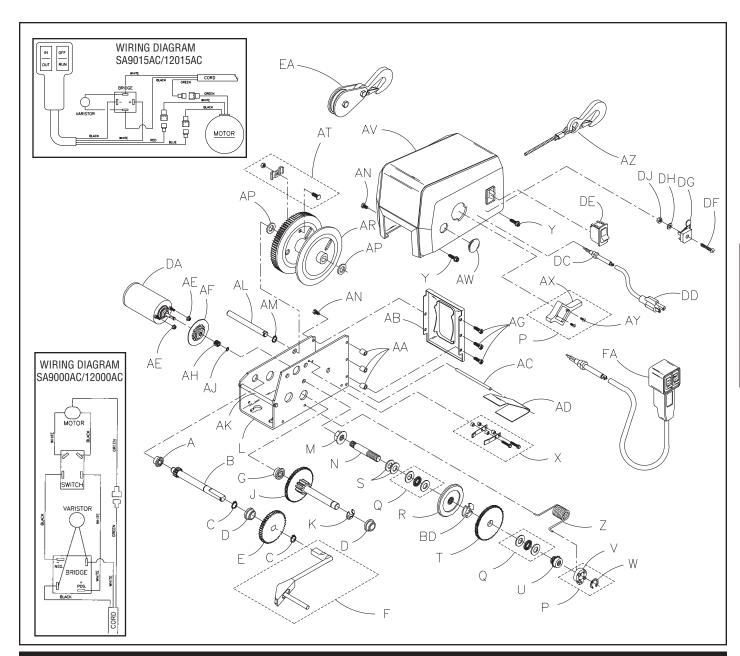
Clutch Spring Illustration

TR	OUBLESHOOTING	CHART			
SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION			
Safety hook spreads	Point loading of hook Load exceeds rated capacity of unit	Replace hook Lighten load, reduce % of incline or reduce load friction			
Cable snaps	Improperly maintained cable. Overloading	See "Maintenance" Reduce load			
Cable miswrap and/or crushing	Loose cable being wound onto drum	Keep tension on cable at all times			
Load creeps when power is OFF	Brake/clutch out of adjustment Roller clutch, not engaging Overloading	Adjust (see Maintenance). Replace. Reduce load.			
Winch motor runs but fails to wind cable	Clutch is slipping. Gear train is damaged.	Check clutch lining for grease or oil. See "Maintenance" for clutch adjustment procedure. Check and Repair			
Winch motor runs hot	In operation too long	Let motor cool for at least 20 minutes. (See Winch Rating Section.)			
Winch motor fails to run	Electrical	Check the following: power supply, wiring, control switch, male/female connections and motor.			
Cable will not pull out (free wheel)	Sticking cable Sticking clutch	Avoid cable miswrap. 2.a. "Jog" power switch with clutch in free wheel (No load only). b. Disassemble, clean & readjust clutch, see "Maintenance".			
Smokes	Normal on initial power down use	None			



SA5000AC and SA7000AC PARTS Ref. Part Ref. Part Number Number Ref. Part Number MOTOR PARTS Retaining Ring (2) 205191 Screw-1/4-20x5/8 (3) 205238 Bushing 204012 Locknut, 10-32 (2) 205193 304921 В AB CA Motor Ass'y. Strain Relief Bushing Drive Shaft Ass'y. 304813 AC Brake Disc Ass'y. 304407 CB 204912 D Bushina 204009 AD Motor Pinion 404522 CC Cord 205038 56T Gear 204703 ΑE 205135 CD 204419 'E' Ring Switch F Handle Ass'v. 304412 AF Reel Shaft 404559 CE Cap Screw 205180 Retaining Ring 204468 Bridge Ass'y. 304426 G Base Spacer 404557 AG CF Screw, 1/4-20x3/8 (2) 404922 ΑH 205337 CG Washer 205194 K Brake Spring Replacement Kit 5703186 ΑJ Cable Clamp Kit 304617 Hex Nut, 8-32 205195 Locknut, 7/16-20 Screw, 1/4-20x3/4 (2) N 205192 ΑK 205338 PULLEY BLOCK Clutch Stud Reel Ass'y. 304812 404517 AL Q Thrust Bearing Replacement Kit Cover Plug Pulley Block & Hook (Complete)5240270 AN 204713 Cover-SA5000AC/7000AC (Includes Item X) 5703194 AP 404564 Cover-SA5015AC/7015AC REMOTE SWITCH R Clutch Handle Replacement Kit ΑP 404582 Switch Ass'y. 5240890 (Inc. Items W, X, AQ & AR) 5703178 Clutch Handle AQ 204712 Clutch Gear Ass'y 306100 Screw, #4 (2) 205196 S AR To order replacement parts contact: Clutch Spring Finger Spring Washer 205200 AS 204661 **Dutton-Lainson Company** 120T Gear Ass'v. 306102 Cable & Hook-3/16x20' 5240692 www.dlco.com Clutch Handle Nut 404518 (SA5000AC) Tel: 800-569-6577 • Fax: 402-460-4612 Cable & Hook-3/16x50' W Clutch Spring Keeper 204721 5240445 e-mail: DLsales@dutton-lainson.com 204770 (SA7000AC) '0' Ring In Europe Contact: Front Plate Spacer (3) Screw ,1/4-20x7/8 (2) 205242 404562 Aqua-Marine International Ltd. Front Plate Top Decal (Not Shown) 204895 404553 AW 8 Flanders Park • Hedge End, Southampton D-L Decal (Not Shown) 204729 AY Hants, England SO30 2FZ Clutch Decal (Not Shown) 204731 Tel: +44 (0) 1489-776050 Fax: +44 (0) 1489-776055

e-mail: sales@aqua-marineint.co.uk



SA9000AC and SA12000AC PAR

Ref	. Part	Number	Ref.	Part	Number		MOTOR PARTS	
Α	Bearing Housing Assy.	304314	AC	Level Wind Pin	404516	DA	Motor Assy	304921
В	Primary Drive Shaft Assy.	304304	AD	Level Wind	204709	DC	Strain Relief Bushing	205037
С	Retaining Ring (2)	205191	ΑE	Nut, 10-32 Locknut (2)	205193	DD	Electrical Cord	205038
D	Bushing (2)	204012	AF	Brake Disc Assy.	304422	DE	Switch	204419
Ε	56T Gear	204703	AG	Screw, 1/4-20x7/8 (3)	205242	DF	Screw – 8-32x1"	205180
F	Aux. Handle Assy.	5703079	AΗ	12T Pinion Gear	404522	DG	Bridge Assy	304426
G	Drive Shaft Bushing	304313	AJ	"E" Ring	205135	DH	Washer	205194
	Housing Assy.		ΑK	Base Spacer	404510	DJ	Nut – 8-32	205195
J	Interm. Drive Shaft Assy.	304814	ΑL	Reel Shaft	404514		PULLEY BLOCK	
K	"E" Ring	205116	ΑM	Retaining Ring	204468	EA	Pulley Block & Hook (Com	noleta) 52/0270
L	Base	404921	ΑN	Screw, 1/4x20x1/2" (4)	205189	LA	,	101616/3240270
M	Nut, 7/16-20 Locknut	205192	AΡ	Washer (2)	205109		REMOTE SWITCH	
N	Clutch Stud	404517	AR	Reel Assy.	304815	FA	Switch Assy	5240890
Р	Clutch Handle Replacement Kit	5703178	ΑT	Rope Clamp Kit	5243506			
	(Includes Items V, W, AX & AY)		ΑV	Cover-SA9000/12000AC	204747	To order i	eplacement parts conta	ct:
Q	Thrust Bearing Replacement Kit	5703194	ΑV	Cover-SA9015AC/12015AC	204630	Dutton-L	ainson Company	
_	(Includes Item W, O-Ring)		AW	Cover Plug	204713	www.c	llco.com	
R	Clutch Gear Assy	306100	AX	Clutch Handle	204712	Tal· 80	00-569-6577 • Fax: 402-4	160-4612
S	Washer (2)	204360	AY	Screw – #4x1/2	205196			
Ţ	84T Gear Assy	306101	ΑZ	Cable & Hook	5240478		: DLsales@dutton-lainso	n.com
U	Clutch Handle Nut	404518		(7/32x25') (SA9000AC)			e Contact:	
V	Clutch Spring Keeper	204721	ΑZ	Cable & Hook	5240452		a-Marine International	
W	"O"-Ring	204770	-	(7/32x50') (SA12000AC)	005000		anders Park • Hedge End	d, Southampton
X	Brake Spring Replacement Kit	5703160	BD	Finger Spring Washer	205200		ts, England SO30 2FZ	
Y	Screw, 1/4-20x1" (2)	205190	BE	Top Decal (Not Shown)	204737	Tel:	+44 (0) 1489-776050	
Z	Clutch Spring	204711	BG	DL Decal (Not Shown)	204729	Fax:	+44 (0) 1489-776055	
AA	Spacer (3)	404513	BH	Clutch Decal (Not Shown)	204731	e-ma	ail: sales@aqua-marineir	nt.co.uk
AB	Front Plate	404511		_				
7								



FLORIDA

Hagood Brothers Marine 1121 West Church St. Orlando, FL 32805 Tel: 407-843-4220

MISSOURI

Stewart Enterprises Route 2, Box 33C Cameron, MO 64429 Tel: 816-632-6578

NEBRASKA

Dutton-Lainson Company 1601 West 2nd Hastings, NE 68902 Tel: 402-462-4141

NEW YORK

American Marine 2161 Jericho Turnpike Commack, NY 11724 Tel: 631-543-6433

These authorized centers will be able to supply parts and technical service on all StrongArm® Electric Winches For warranty claims follow instruction given in "Limited One Year Warranty."

DECLARATION OF CONFORMITY - Dutton-Lainson Company, Hastings, NE 68902-0729 U.S.A. manufactures and declares that the winch identified above fulfills all relevant provisions of the Directive 2006/42/EC. The technical file may be obtained from the persons listed below.

Hastings NE USA

Hastings, NE USA January 4, 2010

Ron Haare

Senior Vice President
Dutton-Lainson Company

Peter Munday

Bainbridge International Limited

Unit 8, Flanders Park, Flanders Road, Hedge End

Southampton, Hampshire, SO30 2FZ

NOTES					
WINCH MODEL NUMBER: DATE PURCHASED:					