

Stationary/Mobile Coconut Tree Climb Identification

Product Name: _____

Model: _____ Date Manufactured: _____

Specialty Items: _____

Serial Number: _____ VIN Number: _____

of Axles: _____ GVRW: _____

Passenger Capacity: _____ Weight Capacity per Auto-Belay: _____

Company Name: _____

Customer Name: _____

Phone Number: _____

Address: _____



720 West 200 South
Logan, Utah 84321
888-563-0163

CHANGE OF OWNER/OPERATOR FORM²

Original Owner of Product:

Company Name: _____
Contact name (s): _____
Bill to Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Alt. Phone: _____ Fax: _____

Former Product Location: _____
City: _____ State: _____ Zip: _____

Date Sold: _____

New Owner/Operator Information:

Company Name: _____
Contact name (s): _____
Bill to Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Alt. Phone: _____ Fax: _____

Product Location: _____
City: _____ State: _____ Zip: _____

Product Information:

Mobile Stationary 24' 32' Other: _____

Serial # _____
VIN # _____
Year: _____

*Please mail or fax to:

Spectrum Sports Int'l
720 West 200 South
Logan, Utah 84321
Attn: Krissy
Fax: (435) 792-3884
Phone: (888) 563-0163 (Toll Free)



COCONUT TREE CLIMB®
Mobile Operations Manual
2006

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Welcome

It is with great pleasure that I congratulate you on your Coconut Tree Climb® (also referred to as CTC) purchase and welcome you to Spectrum Sports International (SSI). We are excited about our products and feel confident that through proper planning, placement and hard work, the Coconut Tree Climb will be a rewarding and profitable purchase. Our philosophy is centered on a commitment to excellence in meeting the needs of our customers and providing a quality product that is safe, exciting and profitable. We encourage you to likewise develop a standard of quality and service that makes you the leader in supplying Coconut Tree Climb's for the amusement, entertainment and special attractions market.

Our part in making our team successful is:

- Commitment to proper, effective and profitable design. Each of our products is stamped by a certified engineer, which means that you can rest assured you have purchased a product that will be safe.
- Manufacturing to "ASTM F-24" safety standards for the amusement industry. Why is this important? Because it demonstrates our commitment to design, operations and most importantly, safety!
- Testing designs before the sale.
- Maximum customer throughput generating high profits.
- Experience in the industry, from large amusement parks to birthday rental entrepreneurs.
- All manufacturing is done in-house, which provides for exceptional Quality Control.

Your part in building a successful business using Spectrum Sports International products is:

- Commitment to safe operation.
- Consistent inspection for proper maintenance.
- Effective and active marketing and promotion.

We are looking forward to a long and prosperous relationship. Should you have any comments or questions, please do not hesitate in calling.

Sincerely,
Spectrum Sports Team

Copyright© 1996 – 2006 Spectrum Sports International.

Reproduction or translation of any part of this work beyond that permitted by Section 107 or 108 of the 1976 United States Copyright Act without permission of the copyright owner is unlawful. Requests for permission or further information should be addressed to Spectrum Sports International.

Confidentiality Agreement

This manual and the content within this manual are for the exclusive use and operation of the Coconut Tree Climb product, by the owner of the respective product and its authorized personnel and for Spectrum Sports International. This manual is designed to provide accurate and authoritative information in regard to the subject matter covered. This manual may not be reproduced in whole or part in any form or by any means, without the prior written consent of **Spectrum Sports International**.

Confidentiality

This manual contains proprietary information belonging to Spectrum Sports International. It is to be viewed only by persons employed by Spectrum Sports International and/or the Coconut Tree Climb owner and authorized personnel.

Distribution

This manual is not to be distributed to any other persons other than those actively engaged in the operating and/or marketing of the Coconut Tree Climb product and customers serviced by the owner of the Coconut Tree Climb.

Disposition

This manual is the property of the Coconut Tree Climb owner and Spectrum Sports International and must be discarded or returned to Spectrum Sports International upon receipt of an updated manual.

Revision

Spectrum Sports International may make periodic additions, deletions and modifications to this manual at any time without prior notification. These updates will, in the judgment of Spectrum Sports International, add to the quality of services offered.

Notice of Changes

In the event that revisions are made to this manual, Spectrum Sports International will send the appropriate pages reflecting such changes as are deemed necessary and a revised document will be issued to the individual for replacement. Any pages that are then outdated must be destroyed and discarded.

In the event that replacement pages are sent, Spectrum Sports International will provide a cover letter outlining the revision and the effective date of any procedural changes.

Receipt and Acknowledgment

This Operations Manual is an important document intended to help you become acquainted with the Coconut Tree Climb and Spectrum Sports International and includes guidelines as to safe and recommended operation.

Please read the following statement. Respond to Spectrum Sports International in writing with any questions or if the intent of this document is unclear.

As an owner I have received and read my copy of the Coconut Tree Climb Spectrum Sports International Operations Manual. I understand that the information outlined in this manual is subject to change at the sole discretion of Spectrum Sports International at any time.

As an owner of the Coconut Tree Climb or authorized representative, it is my responsibility to keep this manual up-to-date with any changes that are made by Spectrum Sports International. In addition, if there is anything about the product and/or this manual that is unclear or not understood, it is my responsibility to seek clarification and not use the product until the issue is understood.

Unless informed in writing, Spectrum Sports International assumes that the customer understands the Coconut Tree Climb product and that there are no questions regarding the product and/or the contents of this document.

It is the customer's sole responsibility to clarify any question or concern with Spectrum Sports International before use and/or operation.

Training Overview

This manual is an introduction to the **Coconut Tree Climb** and its operation. The purpose of this manual is to provide a compilation of information that will assist you in proper and safe operation.

The philosophy of **Spectrum Sports International** is centered on a commitment to excellence in meeting the needs of its customers and associates by providing them with the enclosed information.

The manual is designed to provide the CTC owner with the information, tips, and techniques that will help the owner and employees operate the CTC as effectively and safely as possible. This manual is in no way a total representation of all facts. Safe operation of this product is the sole responsibility of the CTC owner/operator. Good and reasonable judgment must be used when traveling, promoting and/or operating the CTC.

Product Overview

COCONUT TREE CLIMB - Welcome to the Coconut Tree Climb product. As the originators and inventors of the Auto-Belay, Spectrum Sports' products are industry leaders in innovation, safety, design, and customer satisfaction. Designed for the amusement, entertainment, and recreation industries, Spectrum Sports products are engineered with safety, customer appeal and customer throughput in mind. Complete with the first redundant Auto-Belay device, the Coconut Tree Climb maximizes profit and safety; this is different from other CTC's as the COCONUT TREE CLIMB does not use what is commonly referred to as a belayer (a person who controls the rate of descent of a climber), because of our innovative Auto-Belay devices. With the Auto-Belay devices doing all of the belay work and ensuring safety, the person(s) operating the CTC act more like a coach offering encouragement and direction. The Coconut Tree Climb is designed to meet ASTM F-24 standards for the Amusement Industry. In addition, upon request, each unit can be inspected by a third party C.W.I.(Certified Welding Inspector). This means that the Coconut Tree Climb is designed, manufactured, tested, and supported by comprehensive quality assurance and quality control measures to ensure product reliability and safety. The enclosed information is an outline as to the procedures for safe operation and set-up of the product.

What is an Auto-Belay?

The Belay - In order to understand the term Auto-Belay, we must first define the term belayer respective to traditional rock-climbing. The act of belaying can be defined as a procedure of securing a climber by the use of a rope. In recreational sport climbing there are generally two people involved in a climb: the Climber (the person climbing the intended surface or structure) and the Belayer (the person who is providing the safety for the climber). The belayer's role is to use two hands on a braking device which controls the descent of the climber. One of the functions of the belayer is to ensure the rope is stacked carefully to prevent the rope from tangling which would result in the climber dangling. Once the climber asks to come down, it is the function of the belayer to allow the rope to pass through the braking device such that the climber descends at a rate that is not too fast or too slow.

The biggest fears in manually lowering someone as a belayer is that a belayer could drop the climber out of control or let the end of the rope pass through the belay device such that the climber falls to the ground. Both of these mistakes have often happened, even to very experienced climbers.

Auto-Belay - Spectrum Sports International uses the term "Auto-Belay" to describe its automated belaying process. Rather than a person acting as the belayer, SSI has developed an air/oil hydraulic system that automatically controls the rate of descent when a climber falls or chooses to come down off the CTC. The function of the automated belaying system is to take up the climbing cable as the person climbs. As a climber scales the CTC, the climber will take weight off of the cable in which the positive air pressure in the hydraulic system causes the cable to retract or to functionally take up the cable slack. The Auto-Belay system by SSI has developed a system that automates this function. Spectrum Sports' automated system eliminates the need to rely upon a human belayer for every climber; instead it allows a single person (belayer) to supervise all climbers ensuring safe and proper climbing.

In summary, the Auto-Belay system simply allows a climber to climb the CTC without the need of a human belayer. The Coconut Tree Climb, with its Auto-Belay devices, allows for one/two climbers to climb the CTC simultaneously with only one person acting as a belaying coach. This simple feature means that when operating a CTC for profit, the Coconut Tree Climb generates more profit than a CTC requiring human belayers by simply reducing the amount of labor needed to operate the CTC.

COCONUT TREE CLIMB®

The name Coconut Tree Climb is the product name for the entire system. The mobile units have been designed to travel on the road in a down/closed fashion. As a reminder, please follow any and all rules established by a state or interstate highway system on which you would travel in the course of conducting your business or transport of the product. Please abide by all traffic laws and warnings.

There are 2 styles of mobile units:

- 1) Standard Trailer (single axle with electric brakes)
- 2) International Standard Trailer (single axle with hydraulic brakes)

The “Drop & Go” optional package (steel bracing) can be added to standard trailers which will make it a stationary/mobile combination

Physical Dimensions – The dimensions for the CTC mobile products are:

COCONUT TREE CLIMB 22’ Mobile

- Width: 7’ – 6”
- Travel Height: 9’ – 0”
- Overall Length: 26’ – 0”
- Standard Trailer when standing vertical: 10’ (Width), 28’ (Length), 24’ (Height)

*** When raising a 24’ CTC, a minimum ceiling height of 30’ is required due to the length of the fronds at the top of the CTC.**

*Spectrum Sports International reserves the right to change any part(s) of described products without prior customer notifications.

24’ Coconut Tree Climb non-folding trailer options:

1. Coconut Tree Climb mobile using the trailer in travel position (straight trailer). The footprint area needed for function is approx. 28’ long and 10’ wide, with an additional 6’ – 8’ needed in front of the CTC climbing surfaces for belay area (referred to as “safety zone”).
2. Coconut Tree Climb mobile with trailer removed. The footprint will be 9’ long/deep by 8’ wide with an additional 6’ – 8’ needed in front of the CTC climbing surfaces for safety zone.

Mechanical Engineering Approval – The Coconut Tree Climb has been designed and reviewed by engineers that stand behind the Coconut Tree Climb design. If it is necessary that you receive a copy of the engineering analysis, SSI will provide a copy contingent upon the signing of a “non-disclosure/non-compete agreement”. Please call Spectrum Sports International for details.

*** CUSTOMER IS RESPONSIBLE FOR FINDING WHAT CURRENT CODES ARE REQUIRED TO OPERATE PRODUCT WITHIN THEIR STATE.**

Required Personnel - The Coconut Tree Climb can be operated with only one person. However, for efficient operations, SSI recommends that at least two people operate the attraction for optimal performance and safety. Spectrum Sports International recommends that one person act as the climbing coach, supervising any one or all of the climbers and a second person to harness the climber and obtain a parental consent or hold harmless signature. The climbing coach should offer encouragement, entertain the climber and most importantly watch the belay cable to ensure that there is no excess slack in the cable or that the climber does not out climb the Auto-Belay device. The second person in charge of harnessing should ensure the harness is worn correctly.

Hitch and Wiring - To pull the Coconut Tree Climb standard, single-axle, you will need a 2-inch ball on your vehicle and a female seven - (7) prong-wiring plug (See Appendix F) for wiring. Remember that your tow hitch must be equipped with an electric trailer brake control. As a note, if you only use your unit for close proximity/cross town type attractions/events, it may be necessary to charge your battery with a 12 V car style battery charger. The ability to raise and lower the CTC from the trailer depends upon the battery being fully charged. Short trips will NOT be sufficient to fully charge your battery off the vehicle. Not having a fully charged battery will affect the raising and lowering of the CTC. In the event that there is insufficient power to raise/lower the CTC, you may need to use jumper cables from a towing vehicle or some type of battery charger. Please note that your receiving “female” electrical connection on your vehicle must terminate as close to the hitch as possible. The “male” pigtail of the trailer is a perfect length for the appropriate turn radius without dragging on the ground. However, if the connection is anywhere other than next to the actual hitch, the pigtail may not be long enough to reach. Refer to Appendix B for Wiring Schematic for the Breakaway Switch.

****** Note: International trailers come equipped with a European connector and a hydraulic brake on the hitch. Follow all local and regional safety codes and procedures for a trailer equipped with such equipment.**

Setting up the CTC

We highly recommend setting up your CTC on a flat surface before your first event to become familiar with the set-up procedure. Remove all shrink-wrap from the factory that is on the Auto-Belay cables inside and at the top of CTC. Your CTC can be set-up on surfaces that have been compacted, blacktop, concrete, established lawns, etc. Do not set up CTC if current winds exceed 35mph or a storm is approaching. Make sure the desired location is free from overhead obstacles, utility lines/cables or any other obstacle(s) as the CTC is being raised. You need another 18" above the climbing CTC to clear the Fronds as the CTC is being raised.

- Check air pressure in all Auto-Belay tanks by looking at the pressure gauge (see Auto-Belay Diagram). This should be the first thing to check as it's easier to add air while the CTC is horizontal.
- Disconnect trailer from towing vehicle.
- Remove tie down strap from front of CTC.
- Pull all belay cables down the front of the CTC and attach them to the anchor bolts on the bottom of CTC tree.
- Pull pin and extend jacks out so the holes in trailer and jack extensions align. Reinsert pin in hole.
- Pull jackleg pin so the leg drops to the ground. You may have to lift leg up for the holes to align. Reinsert pin.
- Snap on only large banner to front of upper frame at this time.
- Turn the jack handle so it starts to lift the trailer and then go to another jack and repeat until the entire trailer had been raised 2-3" off the ground. This is to ensure that the metal base of the CTC does not drag on surface while being raised. This is the most time consuming procedure but is important so the individual jack is not being side loaded, which will shear the roll pin inside.
- Remove cover cap from pendant (remote) plug socket, which is located on the driver's rear side of trailer. Carefully insert the yellow pendant (remote) plug end into socket; it will only go on one way. Be careful not to force the plug into socket since the pins are small and can break off. Secure plug by threading black ring into plug socket.
- Once the trailer is leveled, raise it up high enough to open the cargo box on the trailer. This is when you can snap on the back banner. Open the cargo box and remove all of the Fronds and install them on the top of the CTC. Once they are all installed and secured continue to raise the CTC until the frame is vertical and level.

- Level the trailer from front to back and side-to-side, this is important for the base of the CTC when it is vertical; if needed add shims under the base of the CTC to stabilize CTC on uneven surfaces.
- Press the “UP” button and hold it down the entire time as the CTC is being raised. If you have to stop while raising the CTC, wait until the CTC stops moving before you restart. Once again, make sure there is proper clearance for the arc of the CTC before raising the CTC.
- Release the “UP” when the CTC is 90 degrees to the trailer. You can make fine adjustments to the CTC but wait until CTC stops moving in between adjustments.
- Lower the entire trailer by the use of all the jacks so the base of the CTC (steel base, not fiberglass base) is flat against the surface. Remember to rotate from jack to jack so as not to put a side load onto jacklegs. The weight of the CTC needs to rest on the metal triangle frame on the base of the CTC.
- The use of shims might be needed to compensate for irregular surfaces. Shim ONLY the metal frame. This will greatly add to the stability of the CTC.
- While holding onto a belay cable, unlock the carabineer and allow the cable to retract overhead (not letting go of the cable) and then pull it to the ground. This is referred to as “priming” the system to remove any air pockets or bubbles from the hydraulic hoses. Repeat this until you feel constant resistance on the down stroke. This procedure will have to be performed each time the CTC is raised to eliminate air from belay cylinders. Repeat this procedure with each of the belay cables. We recommend you climb each of the trees at least 5 times to make sure that each belay cable has constant resistance.
- Once the above instructions are complete you are now ready to operate the CTC.
- If you do not clearly understand the above instructions not do hesitate to call for further instructions on operating the CTC.

Takedown of the CTC

At the end of an event or use of the CTC, please take the following steps to ensure safe and proper takedown of the CTC.

- Raise the steel base of the CTC off the ground 2 inches using the trailer jacks.
- Connect the remote control to the CTC.
- Ensure that it is safe to lower the CTC, making sure there are no overhead obstructions in the arc path. Press and hold the “Down” button the entire time the CTC is lowering.
- Lower the CTC low enough so that you can remove the fronds from the top of the CTC and then load them in to the cargo box mounted on the trailer.
- If you have to stop while lowering the CTC, wait until the CTC stops moving before you restart.
- You want to release the “Down” button when the CTC is firmly on the front catch. After the CTC is completely down do not continue to hold the “Down” button, it will cause the lifting cylinder to completely retract pulling the trailer and CTC together.
- Remove fronds and front banner at this time.
- Raise the upper frame so you can remove the back banner and store the fronds in the cargo box. Then lower the upper frame onto the trailer.
- Attach the tie-down strap from the front of the CTC to the front catch and ratchet it tight.
- Lower the trailer, making sure to rotate from jack to jack until the tires are resting on the surface
- Pull jackleg pin and raise the jackleg to the highest pinhole and insert pin. Continue to fully raise the jackleg to the highest possible position. Stop turning jack handle when you feel resistances.
- Pull jack arm pin and slide in jack towards trailer. Align both holes and insert pin to hold jack during traveling.
- Attach towing vehicle to trailer and insert hitch closure pin and secure hitch.
- When attaching the safety chains to towing vehicle, crisscross them to form an “X”.
- Secure trailer plug.
- As always, make sure to obey all traffic laws and regulations.

Inspections & Preventative Maintenance

Daily Inspections

Please note that these inspection guidelines are a minimum. Please take caution and ensure that any and all working parts and safety related products are thoroughly inspected and that all bolts are secure before use.

- **Cables must be inspected daily.**
Replace cable(s) if one of the following is true.
 1. A single broken wire in any strand any place on the cable.
 2. If the cables have been on the ride/CTC for 1 year.
 3. If there are any twists, frays or kinks.
 4. If you have purchased a used CTC.
 5. If any of the individual wires in a strand have a flat spot than ½ the diameter of the smallest wire.
- **Inspect the retraction of the cable on each Auto-Belay.**
 1. Mobile CTC's will need to be vertical.
 2. One operator manually extending the cable (rope tied to carabineers) to the top of the CTC while a second operator inspects the retraction of the cable to ensure there is no cable slack behind the CTC panel.
- **For proper Auto-Belay function make sure that the air pressure 85-90 psi.**
 1. Look at pressure gauge on Auto-Belay tank.
 2. This is the same for a 22 CTC.
- **Inspect oil level.**
 1. Do this when the cable is anchored at the bottom of the CTC panel.
 2. Mobile CTCs will have to be vertical to check oil level.
 3. One quart will fill up 3.5" of the tank.
 4. Use ISO 32 hydraulic oil. We have listed several ISO 32 oil brand names:
 Texaco Rando 32, Chevron AW-32, and Mobile DTE-24.
- **Make sure to check the function of each swivel and carabineer.**
 1. Read and understand the manual for each.
- **Breakaway System**
 1. Check battery charge and switch operation before each use. Refer to Dexter Axel Operation & Maintenance Manual (included in Climbing CTC Manual).

Weekly Inspections (in addition to Daily Inspections)

- ❑ **Maintain a fully charged battery.**
This will greatly depend on the use of the CTC in a week's time. A battery charger will be required to do this. Refer to Battery Manual insert included with CTC manual.
- ❑ **Tire Pressure**
Check the pressure of all tires including the spare. Inflate to manufactures specifications.
- ❑ **Inspect all pulleys.**
Pulleys on a mobile CTC can be inspected while the CTC is in the down position, ground level.
- ❑ **Visual inspection**
Visually inspect all structural components; CTC Frame, Davits, Trailer, etc. for damage or cracking.

3 Month Inspection (in addition to Daily and Weekly Inspections)

- ❑ **Grease pivot zerks** (located at the rear of trailer where CTC and trailer connect.).
- ❑ **Grease all wheel bearings.**
Refer to Dexter Axle operation and maintenance manual.
- ❑ **Grease hitch ball and trailer hitch.**
- ❑ **Brake adjustment.**
Refer to Dexter Axle operation and maintenance manual.
- ❑ **Wheel nuts and bolts.**
Refer to Dexter Axle operation and maintenance manual.
- ❑ **Tire condition.**
Refer to Dexter Axle operation and maintenance manual.
- ❑ **Oil level in hydraulic power unit.**
 1. With the CTC in the down position, oil level should be 2"- 2 ½" from top. Do not over fill. Use ISO 32 hydraulic oil. The following are several ISO 32 oil brand names; Texaco Rando 32, Chevron AW-32 or Mobile DTE-24.
- ❑ **Check all hydraulic hoses.**
Check all hoses for external wear, cracks, splits, ect. Call if you have any questions.
- ❑ **Check all 8 pulley cart bearings to ensure they roll.**
If any resistance is felt while spinning the bearing with fingers replace immediately.
- ❑ **Check bolt-on axle hardware and tighten if required.**

Annual Inspection (in addition to Daily, Weekly and Quarterly Inspections)

Replace ALL cables annually.

Replace all bolts and nuts securing all pulleys on CTC annually.

Change oil in Auto-Belay's annually.

Re-torque all nuts and bolts on CTC annually.

Replace all Quick Links annually on front and back of CTC.

Trip Preparation Checklist

1. Check hitch. Is it showing wear? Is it properly lubricated?
2. Fasten safety chains and breakaway switch actuating cable. Make certain the breakaway battery (battery at the rear of trailer) is fully charged.
3. Make sure in-line fuse to battery is okay, not burned.
4. Inspect towing hookup for secure attachment.
5. Do not overload! Stay within your gross vehicle rated capacity.
6. Inflate tires according to manufacturer's specifications; inspect tires for cuts, excessive wear, etc...
7. Check wheel-mounting nuts/bolts with a torque wrench. Torque, in proper sequence, to levels specified in the Dexter Axle Operation and Maintenance Manual. **Check and re-torque after the first 10 miles, 25 miles and again at 50 miles.** Check periodically thereafter.
8. Make certain brakes are synchronized and functioning properly.
9. Check operation of all lights.
10. Check that your trailer is towing in a level position and adjust hitch if required.

CTC Storage (Winterization)

If your CTC will not be in service for a period of 30 days or more we recommend the following procedures to keep your CTC free from defects and in optimal operating condition.

- Store cables so Auto-Belay cylinders are retracted at bottom of climbing CTC).
- Depressurize (release air pressure) from belay tanks.
- Disconnect battery cables from battery (disconnect ground cable first). Store battery indoors (off the ground).
- Cover the horn with a plastic bag.
- Remove swivels and carabineers and attach cable to bolt hanger with quick link.
- Store trailer on jacks, not tires.
- Lubricate the trailer plug, hose fittings, power unit and cylinder rod on folding trailers with silicone spray to keep from rusting.
- Store entire trailer under roof or tarp.

- Grease pivot pins, jacks and trailer hitch.
- Refer to Dexter Axle Service Manual for axle and wheel care.

If you have any questions or concerns, please call Spectrum Sports International at (435) 792-3883 or toll free (888) 563-0163.

Cleaning and Maintenance

Under no circumstances should any unqualified person(s) service the unit. Any work to the steel frame, fiberglass body, hydraulic Auto-Belay and cabling should be performed by an experienced person in the field of service who is certified, bonded, etc., to perform the work. It is the owners' responsibility to ask for such certification and/or bonding verification. Cleaning of the unit should be similar to an automobile (i.e. car wash with spray washers and mild detergents). For harnesses, please refer to the original manufacturers' recommendations. Handhold cleaning is best performed using a "citrus degreaser" (type of detergent) and a sprayer at a local car wash.

Coconut Tree Climb® Preventative Maintenance Schedule

Inspection Date: _____

Inspected by: _____

Daily

- Auto-Belay Cable – Check every inch of cable for fraying, if frayed, **replace cable immediately**.
- Auto-Belay Cable Ends – Ensure that there are no broken strands by crimp.
- Auto-Belay Cables are tracking along pulleys without restriction.
- Ensure there is no cable slack in front or behind the CTC.
- Harness Stitching – If stitching is pulling apart, send to Spectrum Sports International for repair or **replace immediately**.
- Air Tank Pressure – Pressure Gauge reading between 85 psi. – 90 psi.
- Carabineer – If the auto locking Carabineer is not locking positively or sticking open **replace immediately**.
- Ensure the swivel turns freely.

Weekly

- Pulley Wear – Inspect pulleys closely to ensure proper function, replace if worn.
- Hydraulic Hose – Inspect for road damage and proper function. No leaks!
- Tire Pressure – On mobile units, check tire for proper pressure
- Lug nuts – Make sure lug nuts are secured and that they are NOT rusting into place. Rust/corrosion will inhibit a tire; change if necessary. If needed, back off the lug nut and re-secure. You may want to use a rust inhibitor for lubricating and protection purposes.
- Cable Slack – With rope test the full length to ensure proper Auto-Belay function.

Note: At a minimum, please make copies from this page and use as directed!

Thank you and have fun!



Issue Date: 7/18/2003
M & SD-1001

Maintenance and Safety Directive

Reference: Auto-Belay cable and hardware replacement schedule

Introduction:

Due to several unfortunate accidents in the climbing industry that have been caused by climbing cables (wire rope) and related hardware issues, Spectrum Sports International is issuing this M&SD, which is to inform owners and operators of their responsibility to maintain cables and hardware for safety reasons. It should be noted that Spectrum Sports International customers have not had a cable/hardware failure to this date. We want it to stay this way. *It should be noted that the issues/accidents have not been a fault of engineering and manufacturing, but have been a result of inadequate inspection and maintenance. It is absolutely necessary to do daily inspections and regular maintenance to reduce the possibility of any accidents!*

This Directive is being sent to each jurisdiction so that the jurisdiction inspectors will know the requirements for the inspection of cables and hardware and require that they be replaced per this Directive. This is for all Spectrum Sports Int'l. Climbing walls and CTCs, mobile and/or stationary models. It is also being sent to insurance providers so they will know what to expect of their customers.

Background:

Spectrum uses ¼ inch class 6 x 37 cables (wire rope) with a 4500 lb minimum rated static strength. With a 250 lb. climber the safety factor is 18. Quasi-static testing of each spool of cable has given results of actual strength 4500 lbs. to 6500 lbs. and Impulse testing has given results of 3900 to 5000 lbs. The pulleys' diameter provides a (D/d) of 23 which falls within the Wire Rope Corporation of America listed minimum (D/d) for 6 x 37 rope range of 20-26.

Even though the cable has a good safety factor and is within the accepted ranges, it is continually being flexed under load as it moves around the pulleys. The flexing causes fatigue in the wires that make up the cable. In addition, moisture and dirt are pulled into the cable bundles and center core of the cable. This contamination causes corrosion that reduces the life of the cable. As the cable is used it wears the wires so

they become damaged. The fatigue, corrosion and wear make the cable a component that has a limited time life; in other words, the cable only lasts for a limited time. It must be inspected carefully on a regular basis and replaced at a minimum annually, whether the cable looks bad or not.

Spectrum has cycle tested the cable and has found that the cable put on SSI products will cycle an average of 40,000 climbs before any failure occurs. Giving it some safety factor, it should be replaced at 35,000 to 40,000 climbs. If you are doing a lot of climbs then the cables should be replaced more often than the required 12 calendar months. The cable and hardware should be replaced if the cable ever sees 40,000 climbs. **Safety should be the first consideration!**

It should also be noted that all cable is not manufactured to the same standard. It is not recommended that you run down to the local hardware store and buy whatever ¼ inch cable they carry. Spectrum buys a specific class of cable, tests each lot to assure that the cable meets engineering requirements stated on the cable manufactures Certificate of Conformance and then makes-up the cables to meet engineering requirements.

The ends of the cable are terminated with 2 each F6-Oval 1-1/4 zinc coated Copper swage sleeve connector using the correct swaging crimper and go-no-go gages. A critical inspection point is at the junction of the cable to the swaged sleeve.

The hardware associated with the cable – pulleys, pulley bolts, quick links, swivels, carabineers, bolts, pulley cart bearings, etc –are also subject to fatigue and wear and thus become time life components. Failure to do the inspection and replacement may result in a failure, which in turn results in injury or the death of a customer. **If we don't take care of safety, insurance will become so costly that there will not be CTCs.**

Action:

Regardless of ownership we have taken steps to inform state inspectors, insurers and/or new or old operator/owners of any of our climbing CTC products of the following mandated actions:

1. **NEW SPECTRUM POLICY:** A warning sticker will be placed upon each new Auto-Belay device that is installed on a CTC or sold to a customer stating "IT IS MANDATORY THAT EACH CABLE IS REPLACED WITH A CERTIFIED SPECTRUM SPORTS CABLE EVERY 12 CALENDAR MONTHS FROM DATE OF PURCHASE. REFER TO YOUR OWNERS MANUAL".
2. **MAINTENANCE AND SAFETY DIRECTIVE:** M&SD-1001, **Reference:** Auto-Belay cable and hardware replacement schedule has been developed and will be sent to all of SSI's customers/Spectrum CTC owners along with 3 or 4 each of the warning stickers. The warning sticker shall be attached by the

customer to the Auto-Belays in a prominent place as a reminder to CTC owners to replace the cables and hardware.

3. REPLACEMENT PARTS: Cables will be serialized starting August 1, 2003 and will have a Serialized Certificate of Conformance accompanying each cable. This means that all cables on all customer-owned Spectrum CTCs will have Serial Number tags by August 1, 2004. Any CTC after August 1, 2004 that does not have serialized cables will be in violation of Spectrum Safety requirements and should be taken out of service.
4. CTC OWNERS/OPERATORS SHALL DO ONE OF THE FOLLOWING:
 - a. NO MATTER THE AGE OF THE CABLE: The owner or operator should replace the cable (wire rope) if any of the following conditions are true:
 1. If any of the individual wires in a strand have a flat spot of more than $\frac{1}{2}$ the diameter of the smallest wire.
 2. If there is a single broken wire in any strand.
 3. If there are 40,000 or more climbing cycles on a CTC.
 4. If the cables have been on the CTC for 12 calendar months.
 5. If there are any twists, frays, or kinks.
 6. If there is any signs of corrosion on strands or individual wires.
 - b. CTCS LESS THAN 12 CALENDAR MONTHS OLD: Inspect the cables and hardware prior to each day's use of the CTC. The inspection should include a careful visual inspection of the entire cable and hardware, and a physical inspection by wrapping a rag around the cable and sliding it full length of the cable in both directions to determine if a wire strand is broken. If any single wire strand is broken, the cables should be replaced before further use. **Record the inspection in the CTCs daily maintenance and safety log.** Change the cable and hardware with Spectrum Certified parts when the CTC is 12 calendar months old.
 - c. CABLES HAVE BEEN CHANGED LESS THAN 12 CALENDAR MONTHS AGO: Inspect the cables and hardware prior to each day's use of the CTC. The inspection should include a careful visual inspection of the entire cable and a physical inspection by wrapping a rag around the cable and sliding it full length of the cable in both directions to determine if a wire strand is broken. If any single wire strand is broken, the cables should be replaced before further use. **Record the inspection in the CTCs daily maintenance and safety log.** Change the cable and hardware with Spectrum Certified parts when the CTC is 12 calendar months old.
 - d. CABLES HAVE BEEN IN SERVICE FOR 12 OR MORE CALENDAR MONTHS: The CTC should be removed from service and the cables and hardware **shall** be replaced with Spectrum certified parts before any further use of the climbing CTCs. No exceptions! Use of cables and hardware after 12 calendar months is a violation of Spectrum's maintenance and safety standards. No exceptions!
 - e. CABLES THAT HAVE BEEN REPLACED WITH NON-APPROVED CABLE: The CTC should be removed from service and the cables and

hardware shall be replaced with Spectrum certified parts before any further use of the climbing CTC. No exceptions! Use of cables and hardware after 12 calendar months is a violation of Spectrum's maintenance and safety standards. No exceptions!

- f. CTCS THAT HAVE CONSISTENT HEAVY USAGE: If the CTC has a lot of usage every day for most of the year, it may go over 40,000 climbs in a year. Also, if the cables are exposed to high humidity (particularly close to a salty environment) they may experience excess corrosion and stress corrosion of the single wire strands. **Any signs of corrosion require that the cables be replaced** with Spectrum certified parts. Safety is the key issue!
5. REPLACING OF PARTS: Customers may do their own work on their CTCs if they have the proper tools and equipment or they may have Spectrum trained and certified service personnel do the replacement and annual inspection. Authorized parts (serialized cables) and service should be ordered from Spectrum's Service Manager:

Kevin Bethers
Service Manager
Spectrum Sports International
435-792-3883
Email:
Kevin@spectrumsports.com

Warranty

The warranty is established from the date of a signed receipt and acknowledgement along with a signed product warranty (refer to the following page).

Should it be determined that the defect is due to abuse or misuse, any and all warranty rights or responsibilities are void. Spectrum Sports International reserves the right to void warranty service on any modification to product done by customer.

Please refer to the following pages for the Limited Warranty Acknowledgement. Warranty will NOT be effective unless registered, by completing the following Limited Liability Warranty form and mailing to Spectrum Sports International within 15 days of purchase.

LIMITED LIABILITY WARRANTY

Equipment manufactured by Spectrum Sports International, 720 West 200 South, Logan, UT 84321 is warranted free from defect in material and workmanship for a period of 90 days from the date of purchase. Equipment not manufactured by Spectrum Sports International is covered to the extent of warranty provided by the original manufacturer and this warranty does not cover any equipment, new or used, purchased from anyone other than Spectrum Sports International. All replacement parts shall be covered under warranty for a period of 90 days from date of purchase. **SPECTRUM SPORTS INTERNATIONAL MAKES NO OTHER REPRESENTATION OF WARRANTY OF ANY OTHER KIND, EXPRESSED OR IMPLIED, WITH RESPECT TO THE GOODS SOLD HEREUNDER, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE.**

Spectrum Sports International's sole obligation under this warranty shall be to repair or replace any part or parts which, to Spectrum Sports International's satisfaction, prove to be defective upon prepaid return to Spectrum Sports International, 720 West 200 South, Logan, UT 84321. In such a case, once the necessary repair(s) has/have been made or a replacement part secured, Spectrum Sports International will pay the cost to return the item back to the customer. This obligation does not, however, include labor to install replacement parts, nor does it cover any failure due to accident, abuse, neglect, or use in disregard of instructions furnished by Spectrum Sports International. In no event shall damages for defective goods exceed the purchase price of the goods, and **SPECTRUM SPORTS INTERNATIONAL SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.**

All claims in regard to the parts or equipment must be made within ten (10) days after Purchaser learns of the facts upon which the claim is based. Authorization must be obtained from Spectrum Sports International prior to returning any equipment, components, or parts. This warranty is voided by failure to comply with these notice requirements.

Production output is dependent on feed stock, input, and many other variables beyond the control of Spectrum Sports International and therefore, Spectrum Sports International makes no guarantees expressed or implied as to production performance.

NOTICE

The warranty on Spectrum Sports International equipment remains valid only when genuine Spectrum Sports International replacement parts are employed. If purchaser defaults in making payment for any parts or equipment, this warranty shall be void and shall not apply to such parts and equipment. No late payment or cure of default in payment shall extend the warranty period provided herein.

Spectrum Sports International is not responsible for damage to any associated instruments, equipment or apparatus nor will Spectrum Sports International be held liable for loss of profit or other special damages for any reason. The Buyer, their employees, agents and successors in interest assume all risks and liabilities for the operation, use and/or misuse of the product(s) described herein and agree to indemnify, hold harmless and defend the seller from any and all claims and actions arising from any cause whatsoever, including sellers negligence for personal injury incurred in connection with the use of said product(s) and any and all damages proximately resulting there from.

CAUTION

Only technically qualified individuals who have fully read and understand the provided instructions should operate the equipment. The equipment should be operated only in accordance with these instructions. The operator should follow all of the warnings and cautions set forth in the manual and should follow and employ all applicable standard laboratory safety procedures.

LIMITATION OF REMEDY

During the period of warranty, Spectrum Sports International will at its option either repair or replace defective parts or items. To obtain repair or replacement, call or fax Spectrum Sports International customer service for a Return Authorization Number. Include the following information: name, address, date of purchase, address where the product is currently being used, office phone or mobile phone (if at an event), and your product model and VIN # for mobile products. At your expense, ship or deliver the product to Spectrum Sports International, 720 West 200 South, Logan, Utah 84321. Replaced or repaired items will be shipped back to you at no cost and will be shipped by the same manner as it was received (i.e., overnight, ground, etc.). For items that must be received before the defective part is sent to Spectrum Sports International, it is REQUIRED that a valid credit card be charged for the warranty item before Spectrum Sports International will ship. Once Spectrum Sports International receives the defective part; a credit will be issued back to the credit card.

RELEASE OF LIABILITY

I understand and am aware that the use of mobile climbing CTCs is a hazardous activity. I understand that I am solely responsible for safe operation, daily inspection and maintenance and customer adherence to the rules. I understand that rock climbing involves a risk of injury to any and all parts of my body and the customers who use this product. I HEREBY AGREE TO FREELY AND EXPRESSLY ASSUME AND ACCEPT ANY AND ALL RISKS OF INJURY OR DEATH TO THE USER OF THIS EQUIPMENT.

Initials: _____

I agree that I will release Spectrum Sports International, its manufacturer, its distributors and retailers from any and all responsibility or liability for injuries or damages to the user of the Climbing products I am purchasing, or to any other person. I agree not to make a claim against or sue Spectrum Sports International, its manufacturers, its distributors or retailers for injuries or damages relating to use of the equipment, other than such claims as are allowed by the limited warranty set forth above.

Initials: _____

AGREEMENT

I understand how to operate the climbing product safely. This means that I do understand, but not necessarily limited to, how the Auto-Belay works on the climbing products, how to perform daily safety inspections, the rules, and in general manage crowd and staffing operational issues.

Initials: _____

ACKNOWLEDGEMENT

I have carefully read this limited warranty, limited remedy, and release of liability and fully understand its contents. I am aware that this is a release of liability and a contract between myself and Spectrum Sports International, and its manufacturers, distributors and retailers and I sign it of my own free will.

Serial #: _____

Date: _____

Customer's Name: _____

Customer Business Name: _____

Customer's Signature: _____

Day-to-Day Operations

Now that the Coconut Tree Climb is set-up and ready for operation and you've performed the appropriate inspections, its time to address the issues of proper climbing.

Equipment - All climbing runs are set up with auto-locking Carabineers. We strongly recommend the auto-locking Carabineers because of the auto-locking mechanism safety feature. In addition, we recommend the SSI Quick Harness. This particular harness does not require a double-over requirement for securing the strap that other climbing harnesses require. Not only is the Quick Harness a safer harness, it is a harness that participants can secure with little help from the climbing coach because the harness is more straightforward and simpler to fasten. For children, we recommend a full body climbing harness. Any of these products can be ordered from Spectrum Sports for approx. the same cost as any local climbing retail store.

For maximum through-put, we recommend that a second person (harness assistant) other than the climbing/belay coach, make sure the climbing harnesses are tight and secure and are being worn properly. Having several climbers harnessed and ready to go ahead of time will result in maximum utilization of the CTC.

Belay Coach & Harness Assistant- The belay/climbing coach is responsible for proper climbing. His/her role is to ensure that the participant understands the rules and double checks the harness and equipment to check for appropriate wear and function. The belay coach is also responsible to make sure that there is NO CABLE SLACK in the climbing line. In addition, the belay coach should be the ONLY non-climbing person in the 8' rappelling area in front of the CTC. At Spectrum Sports, we refer to this area as the "Climbing Zone" and its purpose is to provide a safe area whereby a climber can rappel without fear of coming down onto another person. The belay coach has the responsibility to ensure that each climber is safely directed out of the climbing zone and back to the harness area for removal of the harness after his or her completed climb. The belay coach should offer positive words of encouragement to both climbers and spectators. The more fun the belay coach can make the experience for the climber, the more enjoyable the event will be for the participant. Happy customers result in repeat business. The belay coach will be asked questions from the crowd and should try to answer questions without taking their eyes off of the climber. In an effort to assist the belay coach, the harness assistant should try to address all questions, if possible. This will allow the belay/climbing coach to manage the climbers on the CTC effectively.

Harness Assistant – This person's responsibility is to make sure the harness is being worn correctly for climbing (i.e. small children in a children's harness, a small to large person in the adult large harness, and a large adult in the adult extra large harness). In addition, the harness assistant should recite the rules to the climber such that after the belay coach reviews the rules, each climber will have heard the rules twice. The harness assistant should try to take an active role in answering all questions from the crowd so that the belay coach's attention is with the climbers. The harness assistant should also watch the CTC in an effort to assist the climbing/belay coach in proper climbing.

Rules and Safety Tips - First, ensure the climbing coach has double-checked the wearing of the harness and has properly instructed the climber on the climbing rules which are:

1. Climbers stay within the respective climbing route, generally marked with different color handholds. If matching handholds, the four-foot area directly under the belay cable outlines the climbing area.
2. No swinging from side to side.
3. No stepping on the belay cable.
4. No climbing if cable does not retract.
5. Communications with the climbing coach only, no distracting other climbers with idle conversation.
6. When rappelling, keep the kick-off distance to a minimum (approx. 2 – 3 feet from the CTC).
7. No climbing with shoes without toes or toe protection (i.e. no sandals, thongs, etc.).
8. DO NOT allow a climber to climb beyond the top of the CTC. A climber should never climb higher than head high to the top of the CTC.
9. The weight range for the CTC is 45lbs. (or minimum height of 36”) – 250lbs. It is possible for a child weighing less than 45 lbs. to climb the CTC as long as the climbing harness is properly fitted and they are 36” in height. In the event a child weighs less than 45 lbs, a climbing rope may need to be attached to the child’s harness to aid in the child being pulled down after the climb since the safety system needs approx. 40 lbs of pressure to allow a child’s descent (this is a normal procedure and can be done quickly and easily so that even your smallest customer can enjoy the experience).
10. Do not allow someone to sit and bounce on the belay cable when finished rappelling. Have them rappel onto their feet.

As a note, it may be necessary for the climbing coach to climb the CTC to retrieve a child who may be frozen in place on the CTC, afraid to come down after they have climbed to a specific height.

By way of recommendation, as the climber climbs the CTC, the belay coach should be interactive by offering positive words of encouragement and possible hand or foothold selection. As a climber rappels after having climbed to the top, make sure the area on the ground is free of any individual who could possibly get in the way of the repelling climber. The distance we recommend is approx. eight (8) feet from the front surface of the CTC. The only person who should be in this eight-foot area is the climbing coach. Upon the completion of a climb, the climber must wait for direction from the climbing coach before proceeding to the harness area for removal of the climbing harness. Likewise, the upcoming climber must be advised by either the climbing coach or the second person ensuring proper fitting of the harness before proceeding to climb on the CTC. This will ensure that a rappelling climber will not descend onto an upcoming climber.

Entertainment Tips – Never forget that your Coconut Tree Climb is a fun attraction and will draw attention. Use this unique feature to book company picnics, birthday parties, corporate promotion events, special events, public attractions, fairs and festivals, to name a few. Never forget that the CTC can be equipped for corporate advertising, generating revenue up and above the charge by the climb revenue. The belay coach should be someone who enjoys people and has a positive rapport with people, making your attraction fun for the entire family. Remember that this CTC was not necessarily designed for professional climbers. Route the CTC for the intended market – those who have always wanted to give rock climbing a try. The Coconut Tree Climb is a product designed for fun!

Marketing Ideas to Consider

This information is in no way comprehensive. It is a dynamic list that keeps growing. However, for the purpose of brainstorming and generating ideas, the following are marketing considerations.

- Corporate Sponsorship
- Sports Event Marketing
- Fairs
- Parties
- Charity Events
- Graduation Parties
- Tourist Attractions
- Trade Shows
- School Events
- Amusement Park Lease
- Street Festivals
- Radio and Television Station promotions
- Etc.

Make sure to work with your local Chamber of Commerce, Convention Bureaus, Non-profit Organizations and Advertising/Public Relations Firms to ensure your CTC is marketed to its fullest.

Conclusion

This guideline has been written to assist in the proper installation and operation of the Coconut Tree Climb. SSI has tried in its best effort to address relative issues; however, there may be additional information learned or situations that occur that we are unaware of at this time. Please, do not hesitate to call with any technical questions, Monday thru Friday 8:00 a.m. to 5:00 p.m. MST. Remember, there may be questions, issues and/or concerns that may arise through the use of this product that are not listed or addressed in this manual, please call Spectrum Sports and we will provide any additional documentation or diagrams that are needed. It is the responsibility of the owner and/or operator of this product to contact Spectrum Sports International if any questions or concerns arise. As with any amusement device, physical harm can occur and operators and participants must realize that this product is a physical activity and that proper care should be taken to ensure safety. **Please exercise common sense and good judgment while operating and transporting the Coconut Tree Climb®.**

Appendix A

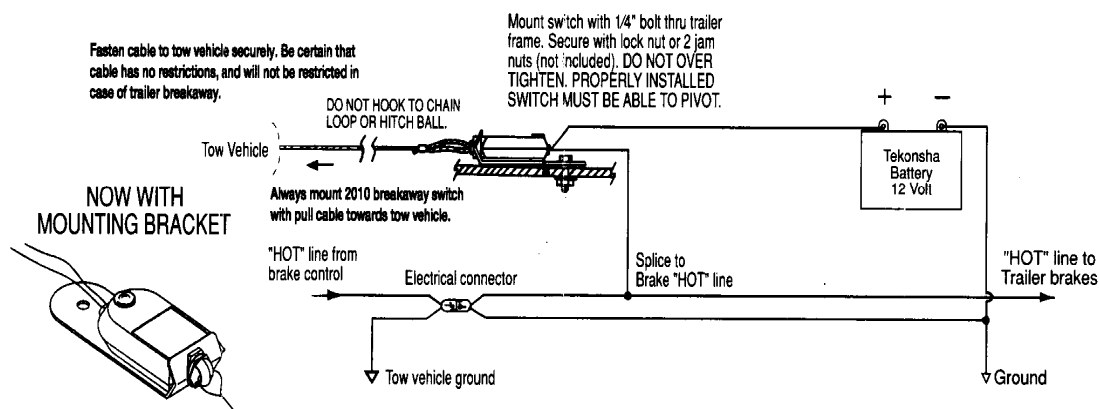
The certified engineering documentation is a lengthy document. Any person needing a copy of these documents please call Spectrum Sports International and one will be forwarded to you as soon as possible. However, be aware that a confidentiality/non-compete agreement must be signed before this document will be provided.

**For additional information, please contact Spectrum Sports International.
888-563-0163**

Appendix B

Wiring Schematic for Breakaway Switch

SCHEMATIC WIRING DIAGRAM FOR TEKONSHA 2010 BREAKAWAY SWITCH



SAFETY ITEM: Solder all wire connections.

ATTENTION INSTALLER: Please give this sheet to consumer upon completion of installation.

1. Mount Tekonsha battery case securely to frame, jack post or other suitable location on trailer.
 2. Bolt breakaway switch bracket to frame of trailer or battery case bracket using 1/4" bolt and lock nut or (2) 1/4" jam nuts. (Bolt and nuts not included in kit).
CAUTION: Do not overtighten bolt. Switch must be able to pivot.
 3. Check and install battery.
 4. Wire per schematic diagram. Properly insulate all connections.
 5. Attaching to tow vehicle:
Attach cable to tow vehicle frame being certain no strain is placed on cable.
CAUTION: Do not hook cable to safety chain loop or hitch ball.
CAUTION:
1. Switch location should be selected to insure unobstructed line of pull in event of vehicle separation.
 2. Do not let cable drag on ground.
 3. Check condition of battery prior to each trip.
 4. **WARNING: Disconnect trailer plug before testing breakaway unit. Failure to do so will result in severe damage to electronic brake control.**



Tekonsha[®]

ENGINEERING COMPANY 537 N. CHURCH STREET, TEKONSHA, MICHIGAN 49092 Phone: (517) 767-4142

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p/n 538

Appendix C

The following documentation in this appendix defines the procedures for classifying “Injury and Illness” data related to amusement rides and devices. Should an accident or an illness occur because of participation of the Coconut Tree Climb, please make sure you obtain the suggested information enclosed within this document. Spectrum Sports highly recommends completing an Incident Report and faxing a copy to our facility for the sole purpose of reviewing incidents that may be related to the manufacturing of our products and to reduce or eliminate similar occurrences.



Standard Guide for the Classification of Amusement Ride and Device Related Injuries and Illnesses¹

This standard is issued under the fixed designation F 1305; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide provides a uniform procedure that should be used when classifying patron injury and illness data related to amusement rides and devices.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 Definitions of Terms Specific to This Standard:

2.1.1 *illness*—personal discomfort resulting in treatment including a personal illness, food poisoning, drug abuse, toxic inhalation, insect sting, or other similar occurrence.

2.1.2 *injury*—sustained bodily harm resulting in treatment such as trauma, cuts, bruises, burns, and sprains.

2.1.3 *minor injuries/illnesses*—injuries and illnesses which may or may not require emergency first aid or significant treatment, or both, but cannot be otherwise classified as a serious injury or illness. This category includes incidents where treatment is limited to such things as the dispensation of over-the-counter medication or plastic adhesive strips², cleansing, rest, and other similar duties or assistance.

2.1.4 *serious injuries/illnesses*—a personal injury/illness that results in death, dismemberment, significant disfigurement, permanent loss of the use of a body organ, member, function, or system, a compound fracture, or other significant injury/illness that requires immediate admission and overnight hospitalization and observation by a licensed physician.

3. Significance and Use

3.1 The purpose of this guide is to provide a uniform procedure under which the amusement ride and device industry can organize data related to injuries and illnesses. This classification system may be used to formulate statistical information within the categories provided and will facilitate the analysis of

injury and illness incidents. The classification system may assist owner/operators and manufacturers to review incidents directly related to their amusement rides and devices, and may provide information for alternatives to reduce or eliminate similar occurrences.

4. Recording Recommendations

4.1 The administration of emergency health care service and treatment should be recorded as deemed appropriate by the owner/operator of amusement rides and devices to include the documentation of all first-aid treatment, including minor injuries and illnesses, in a first-aid log. Injuries and illnesses other than minor should be reported on a firstaid incident report in accordance with 4.2.

4.2 *First-Aid Incident Report*—A first-aid incident report should be completed for injuries or illnesses that result in hospital admission or where medical treatment is given, recommended, or may be required at a future date. All injuries or illnesses reported and other than those classified as minor, can be presumed to be in this category.

4.3 Recorded Information:

4.3.1 Information recorded in the first-aid incident report should include but not be limited to the following, where applicable:

4.3.1.1 Date the incident occurred.

4.3.1.2 Name, address, and telephone number of the person to receive emergency health care service or treatment.

4.3.1.3 Age of the person to receive emergency health care service or treatment.

4.3.1.4 Manufacturer's name of the amusement ride or device where or on which the incident occurred.

4.3.1.5 Description of the injury or illness. Physical description of the injury or illness. Description of the events causing and related to the incident.

4.3.1.6 Description of the first-aid service or treatment administered including medications given.

4.3.1.7 Incident classification in accordance with Section 5.

4.3.1.8 Additional information deemed necessary by the owner/operator.

5. Classification of First-Aid Incidents

5.1 When recording an applicable first-aid-related incident the owner/operator of an amusement ride or device should classify the injury or illness in accordance with each of the

¹ This guide is under the jurisdiction of ASTM Committee F-24 on Amusement Rides and Devices and is the direct responsibility of Subcommittee F24.40 on Operations.

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² Band-Aid brand adhesive strips, a trademark of Johnson and Johnson Products, Inc., New Brunswick, NJ 08093, have been found suitable for this purpose.

following categories based on the available reported or observed reliable information, or both:

5.1.1 *Amusement Ride and Device Incidents Classified in Accordance with Injury Qualification and Degree of Injury*—Injury, illness, serious injury/illness, and minor injury/illness as defined in Section 2 should be determined by the owner/operator to best describe the incident circumstances.

5.1.2 *Amusement Ride and Device Incidents Classified in Accordance with Facility Implication*:

5.1.2.1 *Facility-Related Incidents*—Injuries or illnesses that occur on facility premises shall be additionally classified as “Facility Related.”

5.1.2.2 *Not-Facility Related Incidents*—Injuries or illnesses that occur off facility premises shall be additionally classified as “Not Facility Related.”

5.1.3 *Amusement Ride and Device Incidents Classified in Accordance with Facility Location*:

5.1.3.1 *Amusement Ride and Device on Ride Incident*—Injuries or illnesses that actually occur to a person while riding during the operation of the amusement ride or device, including during the start up or shut down procedures, shall be additionally classified as an amusement ride and device “On Ride Incident.”

5.1.3.2 *Loading and Unloading Incidents*—Injuries or illnesses that actually occur to a person while he is within the area designated for loading and unloading of an amusement ride or device that was under the direct control of an amusement ride and device operator or attendant shall be additionally classified as a “Loading and Unloading Incident.”

5.1.3.3 *Queue Line Incident*—Injuries or illnesses that actually occur to a person while in a queue line for an amusement ride or device shall be additionally classified as a “Queue Line Incident.”

5.1.3.4 *Other Incidents*—Injuries or illnesses that occur to a person in a location other than as described in 5.1.3.1, 5.1.3.2, or 5.1.3.3 shall be classified as other than the preceding classifications and should be categorized in accordance with other predetermined descriptions that may be established by the owner/operator.

6. Manufacturer Notification

6.1 The owner/operator of an amusement ride or device shall notify the appropriate manufacturer(s) of an incident that resulted in a serious injury as defined in 2.1.4 within seven days of the occurrence of the incident.

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

This standard is copyrighted by ASTM, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (<http://www.astm.org>).

Appendix D

Trouble Shooting Guide

Always check the obvious things first. Some times it's a simple fix to solve a problem.
Please call if your problem is not listed or unable to remedy problem.

SYMPTOMS

REMEDIES

Light(s) not working

- ✓ Check for burned out bulb(s), bulb might be loose in socket.
 - ✓ Refer to Owners manual for wiring diagram of trailer and plug.
 - ✓ Make sure trailer and towing vehicle plugs are compatible.
- Call Spectrum for complete trailer wiring diagram.

Brake(s) problem

Refer to Dexter Axle Operation Maintenance Manual for specific remedies.

Hydraulic Power unit not working.

- ✓ Charge battery or use jumper cables to raise CTC.
 - ✓ Check remote control connection to trailer.
 - ✓ Check continuity of motor solenoid.
- Call Spectrum for details.

Hydraulic Power unit motor is working but CTC will not raise.

- ✓ Remove tie-down strap from front of CTC.
- ✓ Check oil level in power unit reservoir tank
- ✓ Check wire connection(s) to valve solenoid(s).
- ✓ If flow control(s) are closed, possible bad flow control(s). Call Spectrum for instructions.
- ✓ Check wiring from remote socket to power unit.
- ✓ Check remote wiring; if loose call Spectrum for diagram.

Hydraulic Power unit motor is working but CTC will not lower.

- ✓ Check wire connection(s) to valve solenoid(s).
- ✓ If flow control(s) are closed, possible bad flow control. Call Spectrum for instructions.
- ✓ Sticking valve spool. Call Spectrum for instructions.
- ✓ Check wiring from remote socket to power unit. Call Spectrum for diagram.
- ✓ Check Pendant wiring; if loose call Spectrum for diagram.

- Horn is not working at all.**
- ✓ Check wire connection at (+) post at battery.
 - ✓ Check all wire connections under horn base.
- Call Spectrum for wiring diagram of horn and switches.
- Horn is working but not on one run.**
- ✓ Remove pocket holds and check wire connection at contact block.
 - ✓ Remove contact block and check for debris, ie. Spider nests.
Clean contact block.
 - ✓ Check continuity of contact block.
- Auto-Belay cable is not retracting when CTC is vertical.**
- ✓ Remove all shrink-wrap from cable. Wrapped at spectrum for shipping
 - ✓ Check oil level and air pressure (85-90psi) with cable anchored to hanger at base of CTC
 - ✓ Check all eight bearings on the belay cart to see if any are seized.
- Auto-Belay is very slow in descending.**
- ✓ Children will belay slower than adults.
 - ✓ Check valve is partially clogged. Call Spectrum for instructions.
- Auto-Belay has oil coming from cylinder breather.**
- Jack handle is hard to turn while raising trailer.**
- ✓ Rotate from jack to jack so not put a bind on just one jack.
 - ✓ Check for sheared roll pins inside of jack.
- Identify the problem and call Spectrum for replacement parts.

- *Should you encounter a problem not listed, please call Spectrum Sports International for technical support at 888-563-0163 or 435-792-3883.*

Appendix E

The following form is the Coconut Tree Climb® Order form for replacement or accessory needs. Please refer to the attached parts list if ordering a replacement item or with warranty questions.



Climbing Wall Accessories Order Form



Spectrum Sports, Inc Accessories & Parts
720 West 200 South, Logan, Utah 84321
Tel: (888)563-0163 (435)792-3883 Fax: (435)792-3884
http://www.spectrumsports.com

SHIP TO: (If different than Bill To address, please indicate!)

Date: _____ Contact: _____
 Company: _____
 Address: _____

 Phone: _____ Fax: _____
 Check box if you are the original owner of wall.

BILL TO:

Company: _____
 Address: _____

 Attn: _____ Phone: _____

PRODUCT INFORMATION:

CND _____ DAR _____ 24' _____ 32' _____
 Stationary _____ Mobile _____ **Serial #** _____
 Year Manufactured: _____

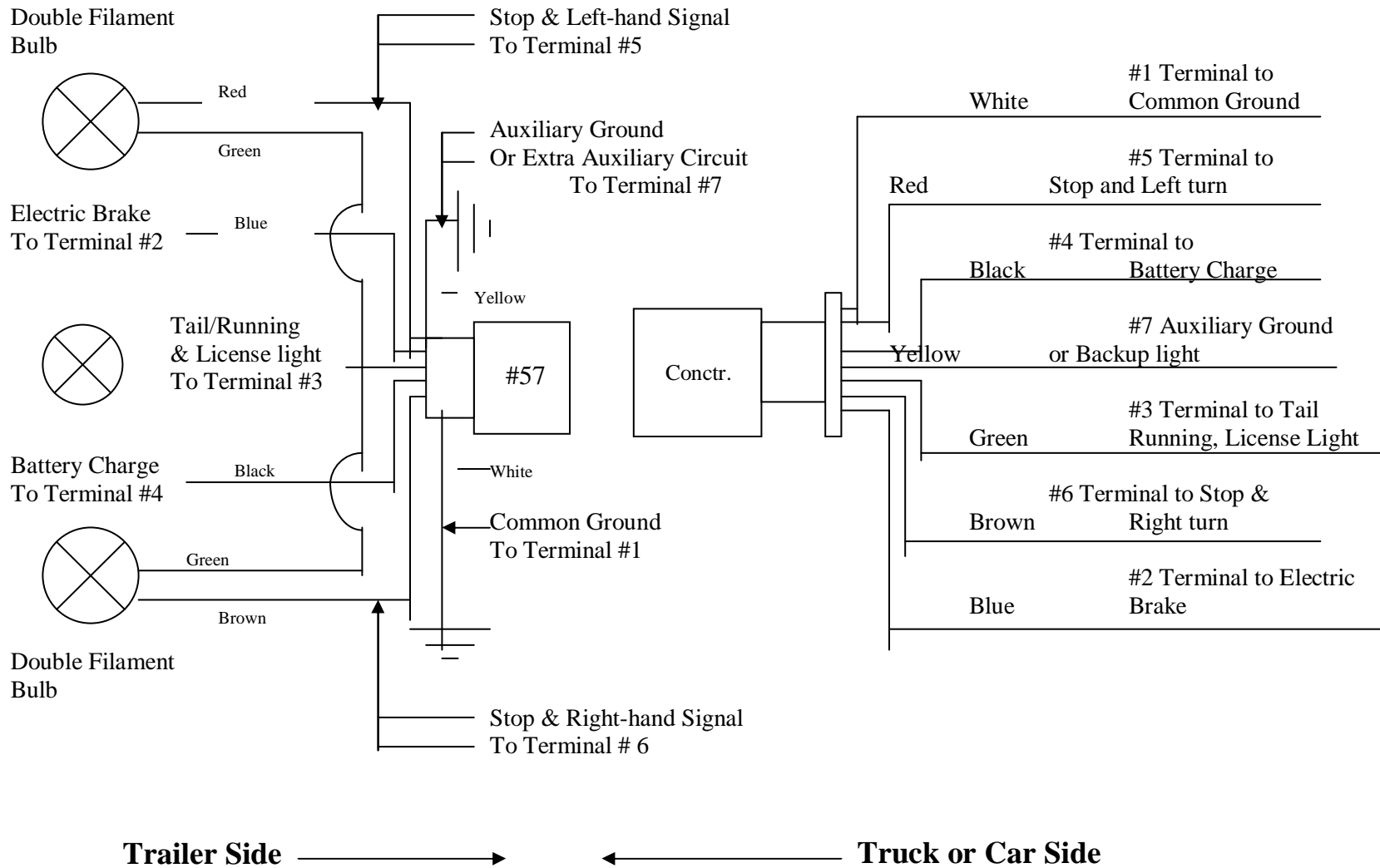
Order Taken By: _____
 Date Order Shipped: _____
 Comments:

Payment Type: C.O.D. _____ CC _____ Card #: _____ Exp Date: _____
Name on Credit Card: _____ **Address on Card:** _____

Shipping: UPS ___ Fed Ex ___ **Via:** Ground ___ 3-day ___ 2-day ___ Overnight ___ Other _____

Description	Quantity	Unit Price	Total
Quick Harness		\$ 79	
Child Harness		\$ 54	
Jack w/ Bolt on Plate		\$ 150	
Rear Jack Sliding Attachment		\$ 80	
FrontJack Attachment		\$ 30	
Buzzer (Complete unit, includes pocket)		\$ 70	
Buzzer contacts		\$ 29	
Cylinder (Specify date manuf.)		\$ 225	
Cylinder Seal Kit		\$ 45	
Regular Handholds & Hardware (Each) (Specify size and color)		\$ 7	
Handhold Wrench (T Handle)		\$ 19	
Swivels		\$ 80	
Carabineers-auto locking		\$ 19	
Quick Link		\$ 5	
Remote to Hydraulic Lift (folding-4 button)		\$ 300	
Remote to Hydraulic Lift (non folding-2 button)		\$ 200	
Replacement Pulleys (6 inch)		\$ 19	
Certified Cable with BOTH ends crimped for 24' wall (Specify length) (Lengths) _____		\$ 150	
Certified Cable with BOTH ends crimped for 32' wall (Specify length) (Lengths) _____		\$ 175	
Rules Sign (Each)		\$ 25	
Warning Sign (Each)		\$ 25	
Operator / Owners Manual (for DAR, CND or Auto-Belay's)		\$ 25	
"Closed Sign" - Prevention Cover / DAR or CND		\$ 390	
Trailer Jack Handle Repair Kit		\$ 15	
Trailer Jack Gear Kit		\$ 16	
Oil Containment System		\$ 135	
All other replacement parts available. Call for prices.			

Wiring Diagram for Bargman 7 and 9 Circuit, 12V Electrical Connectors



Appendix F

Appendix G

Changing an Auto-Belay Cylinder

This procedure is for the current 2001 Auto-Belay design with a 4 x 4 tank installed on Stationary 24' and 32' CTCs. The mobile procedure will be a little different. Two people are recommended.

TOOLS REQUIRED ARE:

- *TWO ADJUSTABLE WRENCHES CAPABLE TO OPEN TO 1 1/2" OR TWO 1 1/2" AND ONE 11/8" OPEN END WRENCHES*
- *AIR CHUCK*
- *7/8" OPEN END WRENCH*
- *9/16" OPEN WRENCH*
- *ISO 32 OIL*
- *RAGS TO ABSORB OIL*

1. Pull cable all the way down to bottom of CTC panel to fully retract cylinders (3) to force oil from the cylinder tube.
2. Depressurize the Auto-Belay tank (1) entirely. Depress the center of the schrader valve (15) with a schrader valve air chuck.
3. Use the wrench to remove 1" nut (5) from 1" bolt (7). Remove 1" bolt (7) on bottom pulley bracket. Keep the spacer (20) from between cylinders on 32' Auto-Belays to put it back on later.
4. Remove breather (16) from old cylinder and install it on the new cylinder.
5. Use the wrench to remove hose (29) and check valve (18) from cylinder that you are replacing. Loosen hose fitting then check valve (18), repeat this until the check valve is removed. Now it takes two people, one person to hold a CLEAN rag over the check valve (18) to keep oil from escaping. Oil can be replaced afterwards. The second person can do the next steps while the other one holds a rag over check valve.
6. At the top of cylinder (rod end) remove bottom clip from pin so pin can be pulled out. Keep any spacer (19) to reinstall as you put new cylinder on.
7. Cylinder can now be removed.
8. Work backwards from here repeating steps 5 thru 3 to attach new cylinder.
9. Once everything is in place add air to the Auto-Belay tank till it reads 90 psi. Same for 24' and 32' CTCs.

10. Purge the air out of cylinders by repeatedly pulling cable down and allow rising by hand until resistance is felt through out the entire down stroke. Now check oil level.

11. If oil has to be added to make oil level in middle of sight gage, repeat step 2. Remove fill plug at top of tank with a 7/8" wrench or a 5/16" Allen wrench. Add oil than tighten fill plug and repeat step 9. Check oil level again. Repeat if necessary to acquire oil level to be in the middle of sight gage.

NOTE:
 EXCESSIVE HYDRAULIC STEERING CHARGE
 SEALANT MUST BE USED AT THE
 FOLLOWING STEERING:

- 15
- 17
- 12 AT FITTED END OF TEE

AIR PRESSURE
 80-90 PSI

HYDRAULIC FLUID
 FILL RESERVOIR CHRG WITH
 ISO 32 HYDRAULIC FLUID
 UP TO MID LEVEL OF SIGHT
 CHRG WITH BELCAN SEC HP
 IN VERTICAL POSITION:
 APPROX. 7 QUARTS.

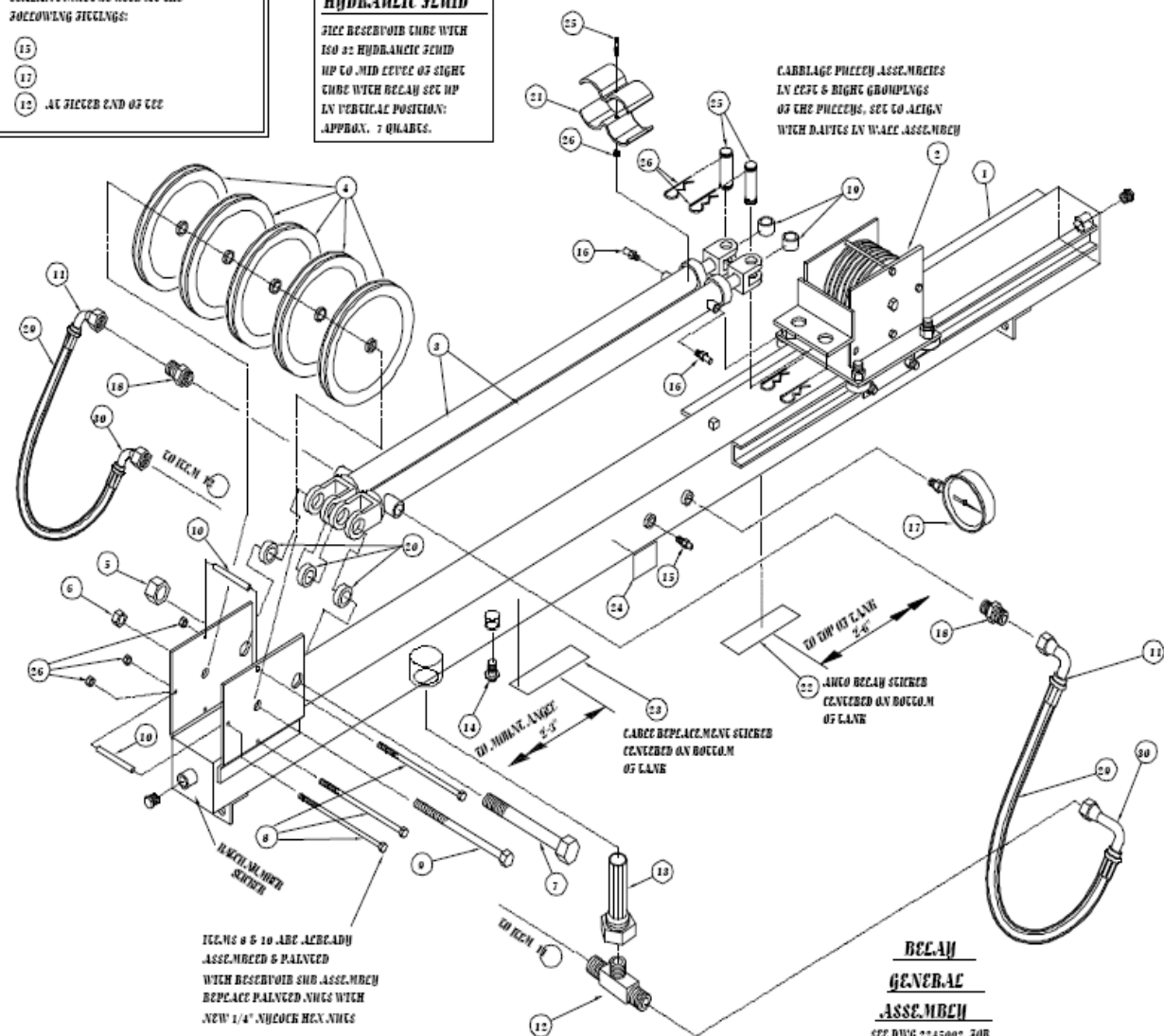


FIG. NO 6 & 10 ARE ALREADY
 ASSEMBLED & PAINTED
 WITH DESCRIBED SHG ASSEMBLY
 REPLACE PAINTED NUTS WITH
 NEW 1/4" NYLOCK HEX NUTS

**BELCAN
 GENERAL
 ASSEMBLY**
 SEC DWG 2245002 JOB
 CARRIAGE AND CABLE
 ASSEMBLY DIAGRAMS

QTY	NO	DESCRIPTION	QUANTITY
1	1	BELAY RESERVOIR TUBE WELDMENT	2244001
2	1	CARRIAGE WELDMENT FOR DOUBLE AND SINGLE PULLEY	2244004
3	2	HYDRAULIC CYLINDER 1 1/2" Ø x 39" STROKE	401-22AB-1007
4	5	PULLEY 6" Ø w/5/8" Ø BEARINGS	401-22AB-1020
5	1	1/4"-BNC NYLOCK NUT GR5	102-10008NYL5
6	1	3/8"-11NC NYLOCK NUT GR5	102-62511NYL5
7	1	HEX BOLT 1 3/8"-BNC x 8" LG GR5 w/NYLOCK NUT	101-10008R.05
8	3	HEX BOLT 1/4"-20NC x 6" LG GR5	101-250206.05
9	1	HEX BOLT 5/8"-4011NC x 7" LG GR5 w/NYLOCK NUT	101-825117.0R
10	2	SPACER 1/4" x 5" LG	1751006
11	2	SAE #10 90° FEMALE GR5 SWIVEL	401-22AB-1013
12	1	TEE FITTING- AEROGUP FF2001T-080BS	401-22AB-1031
13	1	HYDRAULIC FLUID FILTER- ZINGA IFS-0510-2-0	401-22AB-1032
14	1	SIGHT GLASS- ZINGA OE-0102	401-22AB-1033
15	1	SCHRADER VALVE 1/4" NPT MALE	401-22AB-1002
16	2	BREATHER 1/4" NPT MALE	401-22AB-1006
17	1	PRESSURE GAUGE 0-180 PSI 1/4"NPT MALE	401-22AB-1001
18	2	0.065 ORIFICE CHECK VALVE SAE # 10 M/F/M	401-22AB-1005
19	2	SPACER 1 3/8" x 3/4" LG	1751011
20	3	SPACER 3/8" x 1" LG	1751010
21	2	CYLINDER SUPPORT- BRACKET	2241013
22	1	AUTO BELAY STICKER	401-22AB-1029
23	1	CABLE REPLACEMENT STICKER	804-3333-1053
24	1	AIR PRESSURE STICKER	804-3333-1054
25	1	1/4"-20NC x 2" SHCS	105-250200000
26	4	1/4"-20NC NYLOCK NUT	102-25020NYL5
27	2	CYLINDER PIN	401-22AB-1036
28	4	PIN CUP	401-22AB-1037
29	2	1/2" HYDRAULIC HOSE 4650 PSI	401-22AB-1014
30	2	SAE #8 90° FEMALE GR5 SWIVEL	401-22AB-1030

REV	NO	DESCRIPTION	DATE
5	JW	ITEMS FOR HOSE ADDED, CARRIAGE WAS 2244002	2/10/04
4	JW	CYLINDER PIN AND PIN CUPS ADDED, NYLOCK NUTS GIVEN SEPERATE NUMBER	2/3/04
3	JW	UPDATED PART NUMBERS AND ADDED PRESSURE STICKER	1/26/04
2	JR	ADDED ITEM 23 PER TONY	8/11/03
1	JR	MODIFIED PER ECO TONYBB	6/11/03
0	JR	ISSUE FOR FABRICATION	10/30/02

APPROVED OFFICER JAR 10/30/02	CHECKED BRJ 10/30/02	DATE 10/30/02
DRAWN BY AA 10/30/02		
GENERAL NOTES 1. BENCH ASSEMBLY 2. PARTS (ASSEMBLY) 3. ASSEMBLY (ASSEMBLY) 4. ASSEMBLY (ASSEMBLY)		
PROJECT CLIMBING WALL ANCO BELAYS		
DATE 21/32 ANCO BELAY EXPLODED FINAL ASSEMBLY GENERAL ARRANGEMENT (5x4)		
PART NUMBER 2245001		
SHEET 1 OF 1		TOTAL SHEETS 5

Appendix H

Cable Replacement Instructions (Both Ends Terminated)

This procedure will work for mobile and stationary CTC equipped with the 2001 model Auto-Belay. Spectrum Sports International cannot be held liable for injuries sustained from changing out cable(s). The customer will have to use their better judgment and have the ability to perform this task safely.

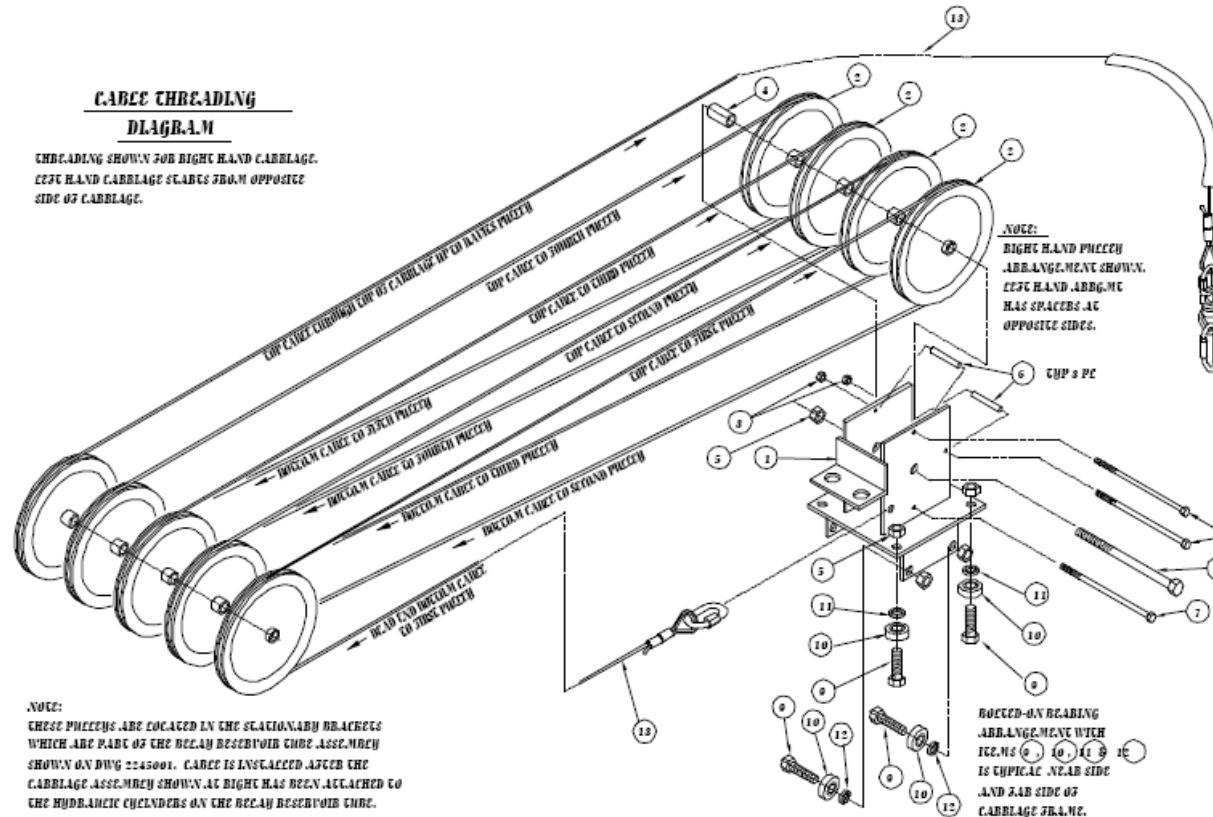
TOOLS REQUIRED ARE:

- Two people are recommended
 - Two 15/16 open-end wrenches or two adjustable wrenches
 - Two 7/16 open-end wrenches
 - Air chuck
 - One 5/8 open-end wrench
 - Replacement Cable
 - 6' ladder if changing one of the middle routes
 - 30-40 minutes per cable change out
1. To change cable(s) on a mobile CTC, have the CTC lying down onto trailer. For stationary CTC, the procedure is the same except the work has to be performed off the ground. You will have to let all of the air pressure out of the Auto-Belay tank. To depressurize the Auto-Belay(s), attach an air chuck onto Schrader valve (#15). Pull the cable with the red hose towards the bottom of the climbing CTC so the cylinders are compressed completely. This will put the pulley cart (#2) closer to the bottom pulleys.
 2. Make note of which side the cable enters the Auto-Belay pulley cart and the side it terminates to and how the cable is routed from pulley to pulley. Use a piece of tape to mark each side of the pulley cart. Refer closely to assembly diagram.
 3. Use the 5/8 open-end wrenches to open the quick link so the cable end can be removed. The quick link can remain attached to the pulley cart (#2).
 4. If the cable end does not fit between the pulleys and the top of the Auto-Belay tank, the pulley assemblies have to be disassembled. Start by removing the 1/4" nuts from the 1/4" bolts (#8) with the 7/16 wrench from the pulley cart and the bottom pulley assembly. Keep hardware and spacers (#10) together.
 5. Now remove the 5/8" nut from the 5/8" bolt (#9) using 15/16 wrenches or adjustable wrenches, from pulley cart and bottom pulley assembly. Take care not to lose the spacer (#5) and spacers (#4 and #3), while removing all pulleys.

6. Now use the 15/16 wrenches to loosen the 5/8" nut from the 5/8" bolt of the bottom pulley on the davit at the top of the CTC, enough to remove cable. The upper pulley on the davit will need to be removed entirely to remove cable. A stepladder may be required if you are replacing a cable on a middle route. Once the top pulley is removed, you can then remove the old cable entirely.
7. When replacing the cable, take extreme care not to kink or pinch cable by pulling on it when there is a loop in the cable.
8. Lay the new cable out on the ground first to remove loops and have the red hose at the bottom of the CTC.
9. Start feeding the end of the cable through the top pulley mount on the davit and then place pulleys groove on cable and finish remounting the pulley. Do the same to the second pulley on the davit. Tighten the 5/8" nuts to 5/8" bolts.
10. Now pull enough cable to reach pulley cart. Make sure the cable doesn't go underneath or behind a steel CTC support while doing this.
11. This is where two people are required. Have cable enter the pulley cart, the side that is marked with tape. Pull cable to bottom pulley area, place cable on pulley and start 5/8" bolt thru the side plate. Place the correct spacer (#4) on the 5/8" bolt; put pulley with cable on the bolt. Pull cable towards the pulley cart. Start the 5/8" bolt, place spacer (#5) on bolt, place cable on pulley, place pulley on bolt. Repeat these steps using the correct spacers until cable ends at the quick link. Place and tighten 5/8" nuts onto 5/8" bolts. Replace all 1/4" bolts (#7) and 1/4" nuts and spacers (#6), to keep cable on pulleys. Refer closely to assembly diagram.
12. Make sure you attach terminated cable end onto quick link and tighten quick link with wrench.
13. Reattach carabineer, swivel and quick link to cable with the red hose that is on the outside of the climbing CTC. Attach carabineer to CTC.
14. You now can re-pressurize the Auto-Belay to the recommended air pressure. Add air slowly to the Auto-Belay tank so that the cylinders don't rapidly extend and cause the cable to jam in a pulley.

**CABLE THREADING
DIAGRAM**

THREADING SHOWN FOR RIGHT HAND CARRIAGE.
LEFT HAND CARRIAGE STARTS FROM OPPOSITE
SIDE OF CARRIAGE.



NOTE:
RIGHT HAND PULLEY
ARRANGEMENT SHOWN.
LEFT HAND ARRANG.
HAS SPACERS AT
OPPOSITE SIDES.

NOTE:
THESE PULLEYS ARE LOCATED IN THE STATIONARY BRACKETS
WHICH ARE PART OF THE BECAJ RESERVOIR CAB ASSEMBLY
SHOWN ON DWG 2245001. CABLE IS INSTALLED AFTER THE
CARRIAGE ASSEMBLY SHOWN AT RIGHT HAS BEEN ATTACHED TO
THE HYDRAULIC CYLINDERS ON THE BECAJ RESERVOIR CAB.

**BECAJ PULLEY CARRIAGE
ASSEMBLY DIAGRAM**

CABLE SHOWN FOR THREADING PURPOSES ONCH
DO NOT INSTALL UNTIL AFTER THIS CARRIAGE
IS MOUNTED ON THE BECAJ RESERVOIR CAB.

QTY	NO	DESCRIPTION	REMARKS
1	1	CARRIAGE PULLEY FRAME	2244004
2	4	PULLEY 6"φ w/5/8" BEARING	401-224B-1020
3	3	1/4"φ-20NC NYLOCK NUT gr5	102-25020NLS
4	1	SPACER 5/8"φ x 1.3" LG	1751003
5	8	HEX BOLT 5/8"φ-11NC x 7" LG DR8 w/NYLOCK NUT	102-62511NYL5
6	2	SPACER 1/4"φ x 5" LG	1751006
7	3	HEX BOLT 1/4"φ-20NC x 6" LG DR5 w/NYLOCK NUT	101-250206.D0
8	1	HEX BOLT 5/8"φ-11NC x 7" LG DR8 w/NYLOCK NUT	101-625117.08
9	8	HEX BOLT 5/8"φ-11NC x 2" LG DR5 w/NYLOCK NUT	101-625112.05
10	8	SEALED BALL BEARING 1 5/8" O.D. x 5/8" I.D.	401-224B-1011
11	4	SPACER 5/8"φ x .115 LG	1751005
12	4	LOCK WASHER 5/8"φ	103-67500LCK2
13	1	CABLE KIT (24' OR 32')	2233001 2233002

NOTE: 7 & 8 ARE ALREADY
ASSEMBLED & PAINTED
WITH CARRIAGE SUB ASSEMBLY
REPLACE PAINTED NUTS WITH
NEW 1/4" NYLOCK HEX NUTS

ROCKET-ON BEARING
ARRANGEMENT WITH
ICE MS (6) (10) (11) (12)
IS TYPICAL NEAR SIDE
AND FAR SIDE OF
CARRIAGE FRAME.

2	JCJ	CARRIAGE WAS 2244002	2/10/04
1	JR	REVISED PER EGON TONYB8	6/11/03
0	JR	ISSUE FOR FABRICATION	10/30/02
REV	NO	DESCRIPTION	REV
DATE	BY	DATE	BY
10/30/02	JAR	10/30/02	BBJ
10/30/02	BBJ	10/30/02	AA
10/30/02	AA	10/30/02	
87 C. COW X. STEELMAN HEAD TEL: (433) 543-3100 SPECTRUM SPORTS CLIMBING WALL AUTO BECAJ 24/32 AUTO BECAJ CARRIAGE EXPLODED ASSEMBLY GENERAL ARRANGEMENT (5x1)		2245002 SHC 1 OF 1 2	

Appendix I
***NDT (Non Destructive Testing) Schedule for Spectrum Sports
International CTC***

The following inspection schedule should be adhered to in order to maintain the structural integrity of the climbing CTC and trailer structure.

- **2-YEAR INSPECTION.** The following should be inspected every 2 years regardless of ride activity
 1. All top frame members, Davits, A-frame.
 2. All cable pulley attachment points located at the top of the ride. This includes all members at the top of the frame. All welded members in association with the attachment of the wire rope pulley.
 3. Cable belay attachments point, Auto-Belay tank and cart included. All welded members associated with the attachment of the auto belay to the CTC frame
 4. Lift system Members. All welded members associated with the lifting cylinders. This included members on the CTC structure and on the trailer.
 5. Trailer hitch.
 6. Axles if welded to trailer frame.
 7. Rigger attachments. All welded members associated with the attachments on the stabilizing riggers, jacks and extension tubes.

- **5-YEAR INSPECTION.** The following should be inspected every 2 years regardless of ride activity
 1. All welds should receive inspection every five years.

- **INSPECTION CRITERIA**
 1. 2 year criteria: All welds as noted on the 2 year inspection needs to be done via an approved NDT method per AWS D1.1
 2. 5-year criteria: All welds noted on the 5-year inspection may be done via a visual method per AWS D1.1 or equivalent.

