User Instructions Manual

skyTECH Turbine Trolley

SKY-TT-01, SKY-TT-02

Skyline Ziplines Ltd.

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Revision History

Revision	Sections Affected	Changes	Date
0.0	-	Original Publication	13 May 2019
0.1	4.2, 4.3, 4.4	Addition of Threadlocker in Assembly	April 25 2022
0.2	1.3, 3.2, 8.0	Updated Description, Connector Requirements, Maintenance Procedures	January 13, 2023
1.0	1.0, 2.8, 4.1, 9.0	Braking Position, Description of Parts, SKU's, Lifetime	April 11, 2025

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Warnings and Important Notices

You will find on this page, and throughout this user instructions manual, many warnings and important notices that must be considered seriously when operating this system. It is imperative to understand the meaning of the warnings and potential hazards.

It is the responsibility of the operator to document and maintain a product use, inspection and maintenance logbook. Skyline Ziplines supplies inspection criteria and guidelines, forms and log sheets specific to all manufactured systems and equipment. It is the responsibility of the operator to follow all guidelines, intervals, and criteria set forth by these documents.

WARNING: This product is designed for zip line operations only. The operator(s) must read and understand the instructions in this manual before using this product. Manufacturer's instructions must be followed for the proper use and maintenance of the system and provided equipment. Alterations or misuse of this equipment, or failure to follow instructions, may result in serious injury or death.

This document does not replace a complete training necessary for the use of this product. Knowledge by the user of all appropriate techniques and risks is required.

This manual contains information and instructions specific to skyTECH Turbine Trolley and associated equipment manufactured by Skyline Ziplines Ltd. Make sure this User Instructions Manual is the latest version available. Contact Skyline Ziplines to obtain the latest document revisions, important updates and other notices.

Products and systems manufactured by Skyline Ziplines are intended for use by professionals trained and experienced in the use, inspection, and maintenance of these products, or for use by persons under the direct visual surveillance of competent and responsible persons.

Before using this equipment, record the product identification information from the ID label in the inspection and maintenance log at the end of this document. Make sure this User Instructions Manual is readily available with the product. Contact Skyline Ziplines Ltd to obtain additional copies of this manual.

1.0 Description

1.1 Applications

Skyline trolleys are to be used as personal equipment for zipline amusement rides only

1.2 Standards

Refer to local, provincial/state and federal laws and regulations pertaining to the installation and use of this type of equipment

1.3 Description of Turbine Trolley

1.3.1 Turbine Trolley

Product Code: SKY-TT-01-A1

Specifications:

- 6061 Anodized Aluminum Construction
- Twin Sealed Bearings
- Cooling Vents
- Secondary attachment point for skyTECH Harnesses
- Compatible with 3/8", 1/2", and 5/8" Cable Diameters
- Oversized Nylon Wheels
- Compatible with skyTECH Universal E-Launcher and Turbine Catch Block
- Designed for Use with skyTECH Single Point Harness (SKY-H-02)

1.3.2 Twin Turbine Trolley

Product Code: SKY-TT-02-A2

Specifications:

- 6061 Anodized Aluminum Construction
- Twin Sealed Bearings
- Cooling Vents
- Secondary attachment point for skyTECH Harnesses
- Compatible with 3/8", 1/2", and 5/8" Cable Diameters
- Oversized Nylon Wheels
- Compatible with skyTECH Universal E-Launcher and Turbine Catch Block
- Designed for Use with skyTECH Twin Harness (SKY-H-01)

2.0 Limitations

Consider the following application limitations before using this equipment:

2.1 Capacity and Working Load Limit

Not to be used in operations exceeding working load limit of 300lbs.
Not to be used in operations exceeding 60 mph ride speeds
Not to be used in operations exceeding 40 mph brake impact speeds

2.2 Medical Restrictions

Pregnant women, persons with heart condition or persons with previous neck or back injuries may not use this equipment. Users should have full use of their arms, legs, and hands

2.3 Dress for Safety

Users of this equipment must be dressed appropriately with close-fitting clothes and must not wear jewelry, scarves or other accessories that could get caught in the zip line equipment. Users must be wearing appropriate closed-toe footwear to mitigate potential hazards and injuries.

2.4 Environmental Hazards

Use of this equipment in areas with environmental hazards may require additional precautions to prevent injury to the user or damage to the equipment. Hazards may include, but are not limited to, heat, chemicals, corrosive environments, electrical fields and wires, gases and sharp edges.

2.5 Sharp Edges

Avoid using where the zip line equipment or other system components will be in contact with, or abrade against unprotected sharp edges

2.6 Rescue

Should a rescue be required, the user/supervisor/employer must have a rescue plan, the means at hand to implement it, and the necessary training to safely perform the defined rescue plan. Further reading material can be found in the Skyline Ziplines Rescue Procedures Manual. Contact Skyline Ziplines Ltd. to get a copy of the most updated manual if you do not have it.

2.7 Training

Skyline Trolleys must only be installed and used by persons trained in their correct application and use (See Section 5).

2.8 Braking Position

When contacting the braking system, the correct braking position must be used by the patron in order to ensure correct ergonomics and minimize the risk of injury during impact and deceleration.

2.8.1 Twin Trolley Braking Position

When using a seated trolley with crossbar, the correct braking position consists of the following:

- Both hands on the crossbar, shoulder width apart.
- Arms extended with elbows locked.
- Chin tucked into the chest.
- Knees bent up and spread apart.

2.8.2 Single Point Trolley Braking Position

When using a seated trolley with crossbar, the correct braking position consists of the following:

- Both hands on the sling.
- Arms extended with elbows locked.
- Chin tucked into the chest.
- Knees bent up and spread apart.

3.0 System Requirements

3.1 Compatibility of Components

Skyline equipment is designed for use with the Skyline-approved components and subsystems only. Substitution or replacements made with non-approved components or subsystems may jeopardize compatibility of equipment and may affect the safety and reliability of the complete system.

3.2 Compatibility of Connectors

Connectors are compatible with connecting elements when they have been designed to work together in such a way that their size and shape do not cause their gate mechanism to inadvertently open regardless of how they become oriented.

Connectors used to attach to the Skyline Turbine Trolley should meet these specifications

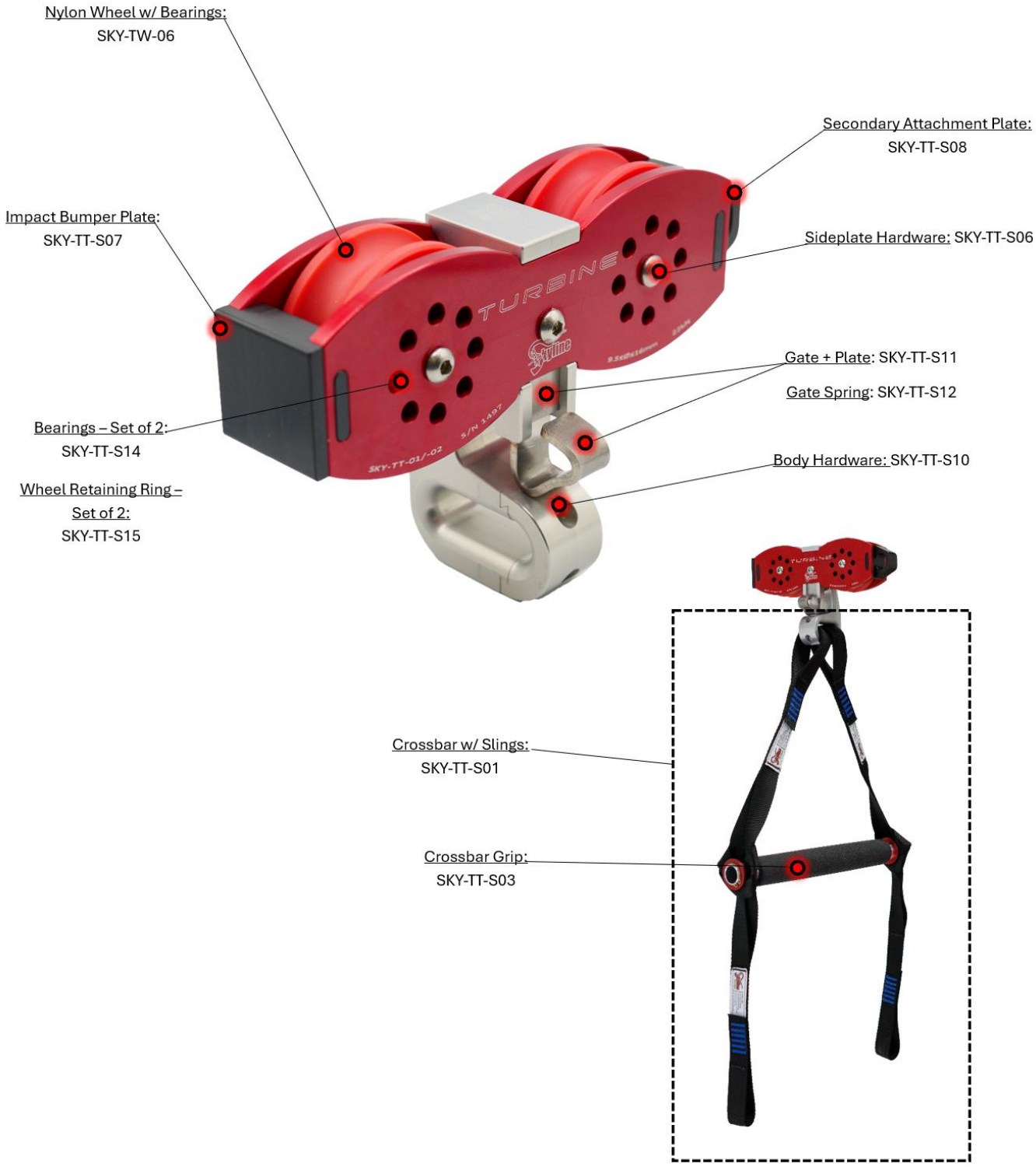
- Minimum break strength of 22 kN
- Shape must be designed to attach to secondary attachment point on trolley, fit over the cable without obstruction and gate fully close and lock
- Must have a self-locking gate mechanism with a minimum of two actions, three is preferable.
- Must be certified by applicable CE, ANSI, CSA, or NFPA standard
- Recommended Connector: Petzl William Triact Lock

3.3 Making Connections

Use only connectors that are suitable to each application. Ensure all connectors are compatible in size, shape, and strength. Do not use equipment that is not compatible. Ensure all connectors are fully closed and locked.

4.0 Nomenclature

4.1 Description of Part



4.2 Procedure for Assembling Turbine Trolley

SCAN THE QR CODE TO SEE A VIDEO SHOWING TYPICAL ASSEMBLY AND MAINTENANCE INSTRUCTIONS AS WELL AS OTHER INFORMATION.

5.0 Standard Operating Procedures

The following operating procedures outline only the necessary steps required to complete each process. The procedures do not consider additional safety requirements and additional safety considerations that should be considered for each site. Please consult a qualified person and/or your site-specific manual to ensure all necessary steps are taken to guarantee safety in your operations.

5.1 Standard Procedure for Loading – Turbine Trolley

5.1.1 Take a trolley from the guest
5.1.2 Instruct the guest to move into position under a cable
5.1.3 Take the trolley from the guest, attach the trolley travel restraint to the guest's trolley and place the trolley on the cable.
5.1.4 Attach guest safety tether to rear of turbine trolley
5.1.5 Insert trolley into E-Launcher or secure Fusion Quick Release to D-Ring on rear of Guest Harness.
5.1.6 Attach the carabiner on the guest harness to the sling on the trolley
5.1.7 Ask the guest to sit down slowly, putting their weight on the harness, lift their legs up and then adjust their shoulder straps for comfort and support.
5.1.8 Ensure all harness straps are properly adjusted.
5.1.9 Perform final check by checking that all carabiners are secured and locked (gate squeeze check) and both shoulder straps and both cobra lock belts are properly adjusted and secured.
5.1.10 Complete radio calls to ensure receiving guide and system is reset and ready for the next guest(s)
5.1.11 Remove the guest platform travel restraint
5.1.12 Remove the trolley travel restraint
5.1.13 Release the guest using the launch mechanism

5.2 Standard Procedure for Removal – Turbine Trolley

5.2.1 Bring guest to dismount position and loosen shoulder straps
5.2.2 Position ladder at a slight angle to cable and assist guest into position on ladder
5.2.3 Guide then climbs other side of ladder and releases secondary tether
5.2.4 Release Guest Harness carabiner from trolley sling
5.2.5 Assist guest down ladder and usher guest to designated waiting area
5.2.6 Take trolley out of catcher by lifting the swingarm and moving trolley back and away.

5.2.7 Remove trolley from cable by pushing up on the latch and the moving trolley up and out, off the cable
5.2.8 Return ladder to designated storage location
5.2.9 Ensure brakes reset fully

5.3 Standard Procedure for Loading – Twin Turbine with Crossbar

5.3.1 Take a trolley from the guest
5.3.2 Instruct the guest to move into position under a cable
5.3.3 Take the trolley from the guest, attach the trolley travel restraint to the guest's trolley and place the trolley on the cable.
5.3.4 Attach guest safety tether to rear of turbine trolley
5.3.5 Insert trolley into E-Launcher or secure Fusion Quick Release to D-Ring on rear of Guest Harness.
5.3.6 Attach the carabiners on the guest harness to the slings below the trolley crossbar
5.3.7 Ask the guest to sit down slowly, putting their weight on the harness, lift their legs up and then adjust their shoulder straps for comfort and support.
5.3.8 Ensure all harness straps are properly adjusted.
5.3.9 Perform final check by checking that all carabiners are secured and locked (gate squeeze check) and both shoulder straps and both cobra lock belts are properly adjusted and secured.
5.3.10 Complete radio calls to ensure receiving guide and system is reset and ready for the next guest(s)
5.3.11 Remove the guest platform travel restraint
5.3.12 Remove the trolley travel restraint
5.3.13 Release the guest using the launch mechanism

5.4 Standard Procedure for Removal – Twin Turbine with Crossbar

5.4.1 Bring guest to dismount position and loosen shoulder straps
5.4.2 Position ladder at a slight angle to cable and assist guest into position on ladder
5.4.3 Guide then climbs other side of ladder and releases secondary tether
5.4.4 Release Guest Harness carabiners from trolley slings
5.4.5 Assist guest down ladder and usher guest to designated waiting area
5.4.6 Take trolley out of catcher by lifting the swingarm and moving trolley back and away.
5.4.7 Remove trolley from cable by pushing up on the latch and the moving trolley up and out, off the cable
5.4.8 Return ladder to designated storage location
5.4.9 Ensure brakes reset fully

5.5 Standard Procedure for Guide Self Launch – Turbine Trolley

5.5.1 Attach guide platform restraint tether

5.5.2 Place trolley on cable and connect trolley travel restraint

5.5.3 Attach the guide safety tether to the secondary attachment point on the trolley

5.5.4 Secure the trolley into the trolley release mechanism or attach Fusion Quick Release to rated anchor point on guide harness

5.5.5 Attach the trolley slings to the guide harness carabiner, ensure it is locked

5.5.6 Sit down in the harness to affirm the harness attachment to the trolley

5.5.7 Perform radio calls

5.5.8 Detach the guide deck travel restraint tether

5.5.9 Detach the trolley safety restraint tether

5.5.10 Release from the launch mechanism

5.6 Standard Procedure for Rescue

Skyline Ziplines recommends consulting with a qualified representative of Skyline Ziplines for all rescue needs. Site needs differ between locations and may require adaptions for appropriate and safe application. For more information, refer to the Rescue Procedures Manual and/or contact Skyline Ziplines.

6.0 Training

It is the responsibility of the buyer/user of this equipment to make sure that they understand these instructions and are sufficiently trained in the correct use and care of this equipment. The user must be aware of the operating characteristics, application limits, and the consequences of improper use. Training must be done prior to use and user must be evaluated for his/her competence to use this equipment. Gaining an adequate education in proper techniques and methods of safety is your own responsibility. Training should be done under the supervision of competent persons.

It is recommended that Skyline Ziplines perform a manufacturer's training to cover the material in this document, use with other equipment, and site specific training.

**Competent Persons: (OSHA) One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are hazardous our dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.*

7.0 Inspection

7.1 Frequency

7.1.1 The Skyline trolley, slings, and lanyards must be inspected each day before use and recorded in the inspection log

7.1.2 The Skyline trolley, slings, and lanyards must be inspected by the manufacturer or Skyline-approved competent person(s) at least once a year (or more frequently if deemed necessary by the frequency and/or conditions of use). The results of this formal inspection must be recorded in the inspection and maintenance log at the end of this manual.

7.2 Inspection Process

The daily pre-use inspection process is included in Appendix A. The forms available in this manual may be used for operations and as a template for site specific forms. It is critical that every item presented on the provided form is inspected and documented.

7.3 Weekly Inspection Process

The weekly inspection process is included in Appendix A. Additional items are included on the weekly inspection. The forms available in this manual may be used for operations and as a template for site specific forms. It is critical that every item presented on the provided form is inspected and documented.

7.4 Documentation Process

Located in Appendix A is a sample Inspection form that Skyline Ziplines recommends using as a template. Located in Appendix B is a sample Maintenance form that Skyline Ziplines recommends using as a template. Located in Appendix C is a flowchart explaining the appropriate process for inspections, maintenance, and documentation. It is important to reference this flowchart for proper Quality Assurance documentation.

7.5 Lock Out, Tag Out

To ensure the highest standard of safety, it is required that all sites produce a Lock Out, Tag Out system. The system/process is designed to identify and prevent the use of all equipment identified through the inspection process as REJECTED (not suitable for use). Below is an example provided by Skyline Ziplines and is also included in the flowchart in Appendix C:

(Procedure on next page)

7.5.1 Item identified as rejected or failed during inspection by staff member

7.5.2 Failure/rejection is noted on inspection log

7.5.3 Item is marked with a tag with the following information:

- 7.5.3.1 Name of staff member
- 7.5.3.2 Date of inspection
- 7.5.3.3 Reason for rejection

7.5.4 Item is placed in designated Lock Out, Tag Out area. This area must be separate from the operating equipment area to avoid any chance of use

8.0 Maintenance and Storage

SCAN THE QR CODE TO SEE A VIDEO SHOWING TYPICAL ASSEMBLY AND MAINTENANCE INSTRUCTIONS AS WELL AS OTHER INFORMATION.

8.1 Storage

Proper storage of equipment leads to longer equipment life and assurance of the integrity of the product. Follow the below guidelines:

- Store the product in a cool, dry, and clean environment out of direct sunlight
- Avoid areas that vapors may exist
- Avoid stacking trolleys on top of each other and metal to metal contact
- Thoroughly inspect all equipment after extended storage

8.2 Replacement Parts and Repairs

All replacement parts must be purchased through Skyline Ziplines Ltd. All equipment repairs must be performed by the following: Skyline Ziplines Ltd, an authorized contractor/vendor of Skyline Ziplines Ltd with approval or trained and authorized onsite personnel.

8.3 Trolley Maintenance – Cleaning a Trolley

Tools Required: Water, soap, and a rag

8.3.1 Rinse trolley unit off with water to remove major debris
8.3.2 Mix water and soap in a container, use a rag to clean with mixture
8.3.3 Let dry thoroughly in a well-ventilated area.
8.3.4 Inspect unit and record maintenance in log (Appendix B)

8.4 Trolley Maintenance – Replacing a Wheel, Axle, or Axle Spacer

Tools Required: (2) 4mm Hex

8.4.1 Remove the three M6 bolts from one side of the turbine trolley, you may need to use a second 4mm Hex to hold the opposing side of the axle from spinning.

8.4.2 Remove the sideplate from the side with the bolts removed

8.4.3 Wheels and/or axle spacers can be replaced now

8.4.4 Regarding axles, remove the M6 bolt that threads into the opposing side of the axle that you wish to replace. The axle can then be replaced

8.4.5 Ensure wheels have an axle spacer on either side and latch, latch plate, and spring are all properly installed in the body.

8.4.6 Replace the trolley sideplate, ensuring the impact bumper and secondary attachment plate are in the correct position (impact bumper on left and secondary attachment plate on right with latch facing you)

8.4.7 Re-insert all M6 bolts with a medium strength threadlocker compound (such as Blue Loctite) and torque to 9 Nm.

8.4.8 Inspect unit and record maintenance in log (Appendix B)

*Note: Ensure you follow manufacturer instructions on proper use of threadlocker compound.

8.5 Trolley Maintenance – Replacing a Sling

Tools Required: 2.5mm Allen Key

8.5.1 Remove the small M4 screw(s) at the bottom of the trolley main block, allowing the side block to be removed by sliding it off to the side.

8.5.2 Remove the sling(s) that require replacement and replace with new parts

8.5.3 Insert and tighten (or replace) the M4 screw(s) with medium strength threadlocker compound* (such as Blue Loctite), securing the trolley body. Torque screw(s) to 3 Nm.

8.5.4 Inspect unit and record maintenance in log (Appendix B)

*Note: Ensure you follow manufacturer instructions on proper use of threadlocker compound.

8.6 Trolley Maintenance – Replacing a Crossbar Grip

Tools Required: Razor blade, rubbing alcohol (or hand sanitizer gel)

8.6.1 Using the razor blade, cut the grip lengthwise and remove grip (SKY-TT-S03) from the crossbar (SKY-TT-S02)

8.6.2 Clean the exposed crossbar with alcohol or hand sanitizer gel

8.6.3 Wet bar and inside of new grip with alcohol or hand sanitizer gel

8.6.4 Slide new grip (SKY-TT-S03) onto crossbar

8.6.5 Let dry for 24 hours

8.6.6 Inspect unit and record maintenance in log (Appendix B)

9.0 Lifetime

The maximum lifetime of a Skyline Ziplines Trolley, sling, or lanyard is 7 years after initial service date (ISD). Should the trolley not be put into service immediately upon receipt by the end user, the products have a shelf life as indicated in the table below. The ISD is defined as the first day of use of the product. The ISD is the commencement date of the 7-year service period and shelf life can no longer be used to extend the life of the product with the exception of proof of complete operational closure, in which case service life can be extended by a maximum period equal to the closure period (at the discretion of Skyline Ziplines). If a service date is not recorded/available, then purchase date is used as the ISD. If purchase date is not available, date of manufacture (DOM) is used as the ISD.

Item	Shelf Life	Service Life
Turbine Trolley – Body Only	No Shelf Life	7 years from ISD
Turbine Wheels	10 years from DOM (as of 2025*)	7 years from ISD (as of 2025*)
Slings and Lanyards	10 years from DOM (as of 2025*)	7 years from ISD (as of 2025*)

*If DOM is 2024 or earlier, shelf life is limited to 7 years and service life is limited to 5 years.

This lifetime is applicable only to equipment that has undergone regular inspections prior to each use without revealing an anomaly. The actual lifetime depends on the intensity and the frequency of use as well as the environment. An exceptional circumstance might limit the product's lifetime to a **single use**. A product that was not inspected at least once per year should be removed from service and replaced

10.0 Incident and Failure Reporting

In the unfortunate situation that a Skyline trolley, sling or lanyard is involved in an incident or a failure, please notify Skyline Ziplines immediately so that prompt corrective measures can be taken by Skyline Ziplines. Product Safety Alerts are available at request and are sent out to all previous customers via email.

Complete information concerning the incident (date, location, details as to event and consequence, etc.) must be communicated to admin@skylineziplines.ca and/or called into the office at 604-905-4149.

Skyline Ziplines will investigate the incident and if a product recall alert is required, shall notify all known customers and distributors who have purchased the product.

11.0 Warranty

Subject to the following limitations, terms, and conditions, Skyline Ziplines LTD warrants to the original purchaser of each Product that such Products when purchased new, are free of defects in materials and workmanship. This limited warranty may be exercised for a period of up to one year from the date of receipt. This limited warranty does not apply to normal wear and tear, nor to claimed defects, malfunctions or failures that result from abuse, neglect, improper assembly, improper maintenance, alteration, collision, crash, or misuse.

EXCEPT AS EXPRESSLY SET FORTH ABOVE, SKYLINE ZIPLINES LTD DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PURPOSE. SKYLINE ZIPLINES LTD'S RESPONSIBILITY FOR WARRANTY CLAIMS IS LIMITED TO, AT SKYLINE ZIPLINES LTD'S SOLE DISCRETION, REIMBURSEMENT OF THE ORIGINAL PURCHASE PRICE, REPAIR OF THE PRODUCT, OR REPLACEMENT OF THE PRODUCT WITH THE SAME OR SIMILAR PRODUCT. NOTWITHSTANDING anything in THESE TERMS to the contrary, SKYLINE ZIPLINES LTD SHALL NOT be responsible or held liable for punitive, indirect, incidental or consequential damages, including without limitation, liability for loss of use, loss of profits, loss of Product or business interruption however the same may be caused, including fault or negligence of SKYLINE ZIPLINES LTD.

To exercise rights under this limited warranty, Customer must return the affected Product to Skyline Ziplines LTD (unless otherwise instructed by Skyline Ziplines LTD) to:

SKYLINE ZIPLINES LTD
6-1006 LYNHAM ROAD
WHISTLER, BRITISH COLUMBIA, CANADA V8E 0S3

Skyline Ziplines LTD will use reasonable commercial efforts to return all product in a timely manner to the designated location and will be responsible for all shipping costs. Skyline Ziplines LTD reserves the right to modify this limited warranty at any time, in its sole discretion.

Appendix A – Inspection Forms

*Sample files available upon request

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INSPECTION FORM I-02

skyTECH Trolleys

Inspection Information **July 9, 2024**

Frequency: Daily Pre-Use
Performed By: Trained Staff Member
Models: *Rocket, M8, M24 and Turbine Trolleys*
Manufacturer: Skyline Ziplines LTD.

Inspect all matching equipment in accordance with the inspect criteria listed below. At the bottom, record the equipment's disposition by marking the appropriate ID number. If the answer is YES to one or more of the following questions, the unit is deemed UNFIT for service.

1. Body Inspection

- Are there any visual indications of a problem with the trolley body? Cracks, damage, or excessive wear?
- Are any loose or missing hardware / rivets?
- Are there any missing or improperly installed snap rings?
- Has the product undergone modifications or alterations not performed or authorized by the manufacturer?

2. Sling and Lanyard Inspection

- Have the slings / lanyards been used by a person weighing more than 310 lbs?
- Have the slings / lanyards received forces resulting from a fall or shock loading without a subsequent inspection?
- Have the slings / lanyards been exposed to detrimental chemical products or an intensive source of heat?
- Are there any signs of fraying, loose/torn/pulled stitching, cuts, melting, discoloration, abrasions, or other damage on the slings and/or lanyards?
- Has the unit not been formally inspected within the last year by a competent person?
- Are the slings / lanyards more than 5 years old?
- Inspect the labels on the slings / lanyards; have they been removed or altered?

3. Wheel and Component Inspection

- Are there signs of melting, deformation, cracking, or other damage to the tread of the wheel?
- Can the wheel move along the axle more than 2mm side-to-side?
- Metallic components (i.e. carabiners, shackles): Is there any deformation, marks, cracks, wear, corrosion, or other? Missing or loose nuts?
- M24 & M8 – Are there any magnets missing for the designated configuration? Are the magnets seated improperly within the body/wheel?

4. Operation Inspection

- Are there any problems with the wheels spinning freely? Do the bearings make any kind of vibration or clicking noise?
- TURBINE ONLY – is the spring latch broken or not functioning correctly? Does it get stuck in an open or semi-open position?

Disposition - Circle all line numbers correlating with all units that have PASSED the inspection and are FIT for service

01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

Failed Equipment - List all ID numbers for units deemed UNFIT for service. Consult the manual for proper Lock Out, Tag Out Protocol

Notes/Comments

Inspected By:

Date:

INSPECTION FORM I-11

skyTECH Trolleys

Inspection Information **July 9, 2024**

Frequency: Weekly
Performed By: Trained Maintenance Personnel
Models: *Rocket, M8, M24 and Turbine Trolleys*
Manufacturer: Skyline Ziplines LTD.

Inspect all matching equipment in accordance with the inspect criteria listed below. At the bottom, record the equipment's disposition by marking the appropriate ID number. If the answer is YES to one or more of the following questions, the unit is deemed UNFIT for service.

1. Wheel Inspection

- Are there any visual indications of damage to the wheels: cracks, loss of material, excessive wear, deformation?
-Are the bearings showing signs of wear: seizing, rattling, excessive rolling resistance? Are there problems with the wheels spinning freely?

2. Crossbar Inspection (Seated Rocket and Twin Turbine ONLY)

- Are the retaining rings loose, missing, cracked, improperly installed, or showing excessive wear (Turbine)?
- Are the snap ring grooves on the crossbar showings signs of excessive wear, deformation, loss of material, or rounding of edges (Turbine)?
- Are the crossbars loose inside the crossbar endplates (Rocket)?
- Does the crossbar fail to assemble properly (Rocket)?
- Are the crossbar grips torn, cut, or otherwise damaged?

3. Trolley Body Inspection

- Are there any visual indications of damage: cracks, bent components, or excessive wear?
- Can the wheels move side-to-side more than 1-2mm?

4. Textile Inspection

- Are there any excessive abrasions, cuts, melting, discoloration, or other damage present on the slings / lanyards?
- TWIN TURBINE & SEATED ROCKET: Remove all slings from crossbar to perform in-depth inspection. Is there any damage in this area?

4. Hardware Inspection

- Are there any loose or missing fasteners / rivets or other hardware?
- Is there any deformation, marks, cracks, wear, corrosion, bends, or other issues with hardware components?
- M8 & M24: Are any of the magnets missing, cracked, installed incorrectly, or having an incorrect polarity orientation?

Disposition - Circle all line numbers correlating with all units that have PASSED the inspection and are FIT for service

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Failed Equipment - List all ID numbers for units deemed UNFIT for service. Consult the manual for proper Lock Out, Tag Out Protocol

Notes/Comments

Inspected By:

Date:

Appendix B – Maintenance Log

*Sample files available upon request

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MAINTENANCE FORM M-02

skyTECH Turbine Trolley

Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
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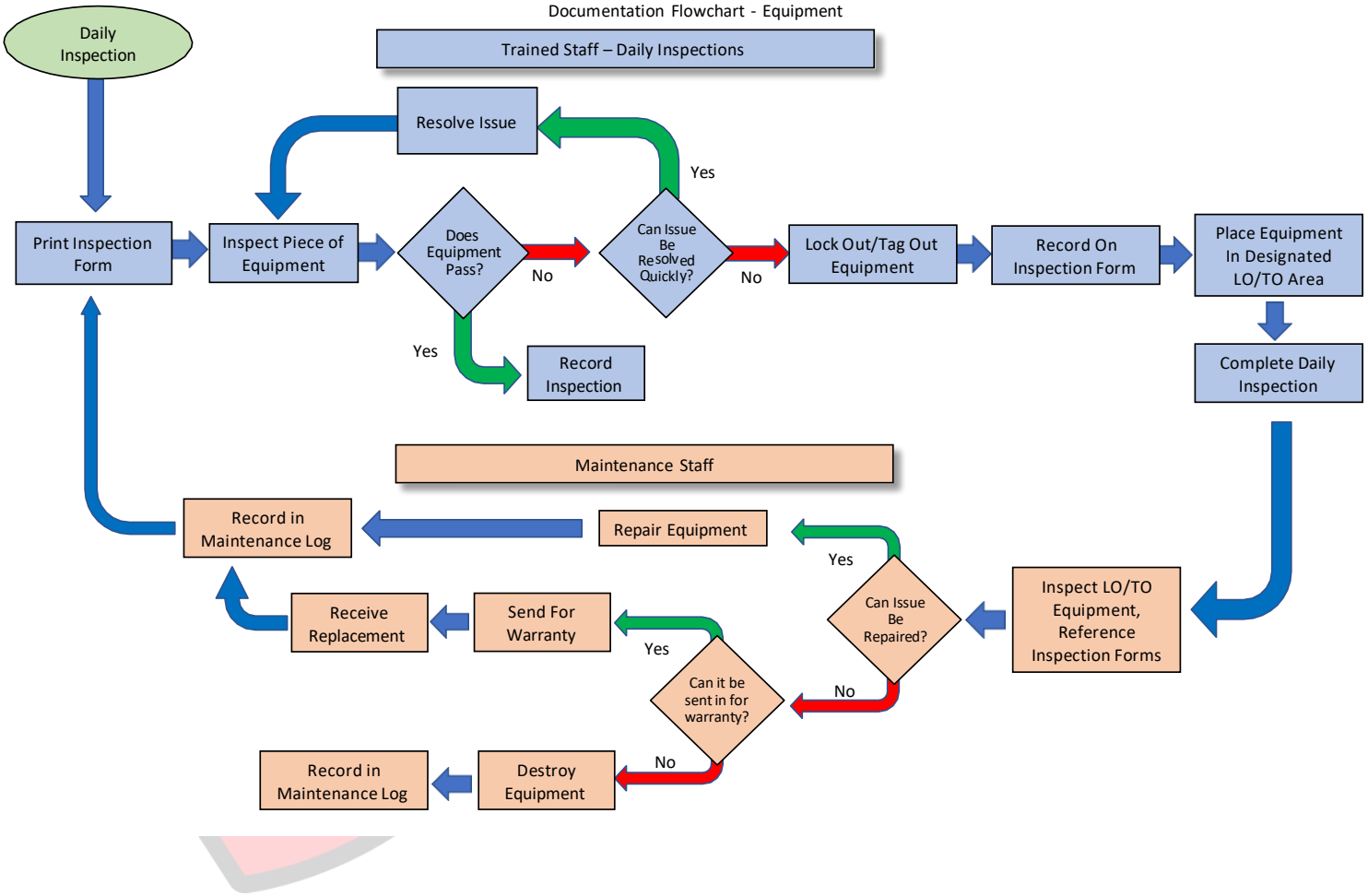
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED
Unit ID:	Performed By:	Date:
Work Performed:		
		Verdict (Circle One): FIT UNFIT RETIRED

Appendix C – Documentation Process Flowchart



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