

**MONTANA SNOWBOWL  
LIFT INSPECTION & REPORT  
SUMMER 2023**

**GRIZZLY PEAK  
LAVELLE CHAIR  
SNOW PARK  
TRANSPORTER  
SUNRISE T-BAR  
ROPE TOW**

**PREPARED FOR  
MONTANA SNOWBOWL  
&  
UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
FILE CODE: 2770  
LOLO NATIONAL FOREST**

**INSPECTION CONDUCTED BY:**

**HARRY A. McLEAN, JR., P.E. (MONTANA STATE P.E LICENSE PENDING)  
AERTRAM**

**AS AUTHORIZED BY:  
MONTANA SNOWBOWL SKI AND SUMMER RESORT**

**INSPECTION DATE #1: 16, 17 AUGUST 2023  
REPORT DATE #1: 31 AUGUST – 5 SEPTEMBER 2023**

**NOTE:  
AN ADDITIONAL INSPECTION VISIT WILL BE REQUIRED  
TO COMPLETE THIS INSPECTION REPORT**

**INSPECTION CRITERIA  
AMERICAN NATIONAL STANDARDS INSTITUTE B77.1-2022  
FOREST SERVICE MANUAL (FSM)**

**AERTRAM  
14701 N. LYNWOOD DRIVE  
SPOKANE, WASHINGTON 99208  
PH. (H) 509.466.2959, (C) 509.991.4527  
AERTRAM@msn.com**

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On the dates listed in this report, I personally inspected the skier conveyance devices listed within this report, in accordance with terms of engagement between Montana Snowbowl and me. I certify each device will conform to the current ANSI B77.1 – 2022 Code, upon correction of the list of deficiencies noted, if any. Upon my receiving a letter of compliance letter indicating the specific deficiencies corrected I will respond with a letter stating that each lift is

Inspections performed by and  
Report prepared and submitted by:

Harry A. McLean, Jr., P.E.  
AERTRAM

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\* ATTACHMENTS (CL #5 DYNAMIC TEST RESULTS)

**MONTANA SNOWBOWL  
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**SCOPE OF INSPECTION AND REPORT:**

The purpose of this field inspection is to evaluate the condition of skier conveyance equipment at Montana Snowbowl in accordance with ANSI B.77.1 - 2022.

This field inspection was completed in accordance with an agreement with Montana Snowbowl.

**CONDUCT OF THE FIELD INSPECTION:**

Each listed ski lift at Montana Snowbowl was inspected on the dates referenced. referenced.

Each listed ski lift was ridden on both the “heavy side” (HS) and the “light side” (LS). Some portions of the inspection may have necessitated walking the lift line and/or climbing towers.

Each brake on each ski lift was individually Torque Tested, using torque values supplied by the ski lift manufacturer/designer. All brakes were individually observed for their proper operation and function.

This field inspection entailed a general visual and audible examination of ski lift structures, terminals, towers, line machinery, and other aspects of the ski lift equipment. Detailed visual examinations of structural connections, bearings, or welds were not conducted during this inspection.

The weather during the August 16 and 17 inspection dates was mostly clear. Temperatures ranged in the mid to high 80s F.

**SKI AREA PERSONNEL ASSISTING WITH THE INSPECTION: (16, 17 August)**

(b) (6)

A large rectangular area of the document is redacted with a solid gray box. The redaction covers the names and details of the personnel assisting with the inspection.

**ADDITIONAL WITNESSES TO THE INSPECTION: Grizzly Lift (16 August only)**

Ryan McFarland – Snow Ranger

Jeremy Back – Soil Scientist/Rec. Program

Shaun O’Connor – Missoula Deputy District Ranger

Andy Bryden – Missoula RD Rec. Staff/ Ski Area Administrator

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**SKI LIFT INSPECTION FINDINGS AND COMMENTS:  
ANSI B77.1-2022 REFERENCES BEGIN EACH ITEM(S) LISTED**

**GRIZZLY CHAIRLIFT:**

1. **4.2.3.6** - Drive Terminal – Tooth Brake – Repair/replace Reverse Sensing Whisker Switch – Test switch for proper operation and function.
2. **4.2.3.6** - Drive Terminal – Emergency Brake – Repair/replace Reverse Sensing Whisker Switch – Test switch for proper operation and function.
3. No other exceptions noted.

**LAVALLE CREEK CHAIRLIFT:**

1. **4.1.1.5.3** - Tower #3 - L.S, Line Machinery – Replace “Bumpy sheave” – and align line machinery assembly.
2. **4.1.1.5.3** - Tower #8 – H.S. – “dinner bell” - adjust 8” sheave (approx. 1/8” above traction rope). Check for proper line machinery alignment.
3. **4.2.3.2, 4.2.8** - Unload Platform - Stop Gate – Replace the spring-actuated switch with a manual reset switch. (As a note, all stop switches are to be manually reset) Test the Stop Gate and the switch for proper operation and function.
4. No other exceptions noted.

**SNOW PARK CHAIRLIFT:**

1. The Drive Terminal Motor Room, and all Lift Controls located at the Unloading Platform, and the Loading Platform - Auxiliary Engine lift controls require examination and re-wiring to satisfy the current ANSI B77.1 – 2022 Code.
2. **4.1.1.7** – Loading Platform - Repair/replace lift communication phone. Test for proper operation and function.
3. Further inspection of this lift will occur when item #1 has been completed and tested for proper operation and function.

**TRANSPORTER CHAIRLIFT:**

1. The Drive Terminal Motor Room, and all Lift Controls located at the Unloading Platform, and the Loading Platform - Auxiliary Engine lift controls require examination and re-wiring to satisfy the current ANSI B77.1 – 2022 Code.
2. Further inspection of this lift will occur when item #1 has been completed and tested for proper operation and function.

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**SKI LIFT INSPECTION FINDINGS AND COMMENTS:  
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**SUNRISE T-BAR:**

1. At the August 16 inspection date, this lift was awaiting the arrival and installation of lift parts. Thus, this lift requires inspection.

**FIRST RUN TOW:**

1. Other than a cursory look at the equipment, there was no detailed inspection of this lift.

**SPECIAL COMMENTS: Relating to the 19 March 2023 incident, Forest Service  
File Code 2770.**

Referring to the incident of 19 March 2023, I believe operations adjustments are warranted, but at the time of this report, I have not had the opportunity to review all the equipment and parts involved in this incident. Upon further examination of these items, I hope to gain additional insight as to the cause of the incident.

I will withhold comments and recommendations until these examinations are complete. I will include these comments and recommendations in my final inspection report.

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**GENERAL COMMENTS FOR ALL SKI LIFTS:  
ANSI B77.1-2022 REFERENCES BEGIN EACH ITEM(S) LISTED**

1. **4.1.1.7:** Install phones at all stations and confirm proper operation and function.
2. **5.3.1.2; 4.3.1.2:** Install all required signs before operation.
3. **5.2.9; 4.2.9:** Install all operational items such as satellite control boxes, etc. as required before operation.
4. **5.3.2; 4.3.2:** Complete operator training, including testing and certification before operation.
5. **5.2.3.2; 4.2.3.2:** Install/activate Stop Gates. Test for proper operation and function.
6. **5.3.4; 4.3.4:** Complete wire rope inspection(s) and provide the state with a copy of inspection(s) findings.
7. **F.6:** Install current coded fire extinguishers in all motor rooms and at each platform operator station.
8. **4.3.3:** Label all lift control buttons and test them to ensure proper operation and function.
9. Cover all batteries (battery terminals) to prevent accidental contact.

**CONCLUSIONS:**

All items listed in this report, including the general requirements of ANSI B77.1-2022, must be completed by the Ski Area and recorded in appropriate lift maintenance logs. Proper lift maintenance, lift operations, and inspections are the direct responsibility of ski area management, ref: ANSI B77 4.1.1.11.1. The visual inspections were conducted using knowledge and experience gained through years of Tramway inspections and are to be used as a tool to assist the lift maintenance personnel and the owner.