



TOBOGGAN MAINTENANCE

Maintenance is divided into two categories:

- 1. Annual Checkup**
- 2. Daily Checkup**

ANNUAL CHECKUP - Rule of Thumb: Apply Common Sense, broken or poorly serviced equipment is a safety hazard, a Risk Management Issue and CAN ENDANGER LIVES. If it looks like it could be a problem it likely will. Don't use it.

STRAPS AND FOOTMAN LOOPS (strap holders)

1. Check all straps for wear and the footman loops for looseness. If the footman loops are not securely attached to the toboggan shell they should be repaired. The proper procedure for replacing a footman loop is to grasp the rivet on the inside of the toboggan with a pair of vice-grips or similar device while drilling from the outside in with a 3/16 high speed drill bit. Care should be taken to prevent the rivet from spinning as it will burn through the toboggan shell rendering attachment point useless. The footman loops should then be re-installed using 3/16" wide flange steel rivets.
2. Check strap ends. If they are frayed, heat weld (melt) the ends on the nylon ones then dip in catalyzed resin (thinned lightly with acetone). Be sure the ends can get through the spring clip.
3. Check the Tourniquet Buckles. If they show excessive wear, replace them. All tourniquet buckles should be lubricated prior to being put into service each year.

HANDLE ATTACHMENT DEVICES

Handle Latch Pins

Also known as Bail Pins, Handle Pins, Locking Pins, Lynch Pins etc. Due to liability reasons, Latch Pins have been discontinued on Cascade Toboggans. If you are currently using Latch Pins to secure your handles to your toboggan, we strongly recommend replacing them with 3/8" Grade 5 bolts and Nylock nuts. Please see the Service Bulletin under Product Information at Cascadetoboggan.com.

If you need to remove the handles frequently from your Cascade Toboggan, we suggest using the 3/8" Avi-Bank or Jergins Ball Lock Pin. This pin is constructed of hardened stainless steel and will release only when the recessed release button is pushed.

Bolt with Nylock Nut (self-locking)

Check the Nylock nut to be sure the nylon is not worn out. If you can screw it on or off easily, it is worn out. Replace it.

Handle Locks

1. Check the sled handle for travel. If there is too much handle travel it can impair the patrollers' ability to work (control) the sled. There should be little more than 2-3 inches of upward/downward travel at the end of the handles. If excessive travel exists, it could be due to the handle locks being worn out at the point that they intersect the handles, or at the point where they attach to the toboggan Handle Lock Ears. In either case, the problem should be corrected by repairing the handle lock or replacing it.
2. Remove handle locks and inspect. Handle locks should be reinstalled by using a 3/8" Grade 5 Bolt and Nylock Nut with steel washers on the outside of each Handle Lock Ear, and Nylon Washers on the inside of the Handle Lock Ears but on the outside of the Handle Lock. Proper tension on the bolt will secure the handle lock preventing it from swinging off the handle when the sled is in operation with the handles in the locked position. The Handle Lock Claw should also have a nylon washer inserted between the Handle Lock and Claw mechanism to prevent it from moving when in the locked position.
3. Older Cascade Toboggan Model 100's (pre 1990) may have Handle Locks made of thinner aluminum stock. These handle locks should be replaced regardless of their condition.

CRACKS AND OTHER BAD THINGS

Thoroughly inspect the areas around the handle lock ears and handle uprights. If the metal is cracked or otherwise perceivably damaged, **DO NOT ALLOW THE TOBOGGAN BACK ON THE HILL.** See the section titled Handle and Handle Lock Mount Repairs in the Repairs section.

Pre 1980 Cascade Toboggans used flexible tubing as a form material in the nose and tail sections. Depending upon use, the tail section of a toboggan may experience cracking around these areas. Depending upon the severity of damage, this can be a repairable condition – Use common sense and apply the Rule of Thumb. Repairing a 20 plus year old toboggan may not be your best move from a liability standpoint.

CHAIN BRAKE

Check to see where the chain falls on the sled bottom. If it is too long or too short modify it by adding or subtracting quick links. Ensure that the Chain Brake Guards are still in place and in good condition.

Replace if necessary. If the chain brake has created excessive wear on the toboggan bottom or sides, repair the damage and install a Bow Guard.

TAIL ROPE

Check for fray where the rope goes through the sled shell and repair or replace rope if necessary. Ensure length is appropriate to the demands of the area. It is usually 18" to 24 feet in length.

HANDLES (or Traces)

Check the handle attachment ends for cracks or other excessive wear or stress. Use common sense here. If the end of the handle that bolts to the toboggan is excessively worn, cracked, split or otherwise damaged – Replace the handles. If the handles have been bent from excessive downward pressure or from incidental damage, they may in some cases be straightened and restored to duty without hazard. The standard height of Model 100 handles is approximately 38" to 40" from the top of the curve of the handle to the ground. Rule of thumb, if you wonder if it will be OK, it probably won't be!

FINS (or Skags or Runners)

Check the fins for bends, gouges, and rounded edges. If bent, pound the fins so that the edges are straight and square. This can be best accomplished by backing one side of the fin with some form of anvil while pounding the other side with a hammer to straighten the bend. Straight fins track better and handle (edge) better on ice and hard pack.

LIFT HANDLES

Inspect all lift handles for fraying or excessive wear at their attachment points. Inspect Lift Handle Tubing and replace as necessary.

COMMON SENSE:

- 1. At the beginning and end of each season the sleds should be cleaned, (car wash soap), and waxed with a good grade of car wax to protect the gel coat from oxidation and UV damage.**
- 2. Toboggans that are stored inside some form of shelter will have a longer life than those left outside all season, or all year.**
- 3. NOTHING LASTS FOREVER. Cascade Toboggan has been making rescue toboggans for over 55 years. The useful life of a toboggan can vary greatly depending upon use, care and the environment it lives in. Generally speaking it is not reasonable to expect a rescue toboggan that experiences average use and care and is stored outdoors to last more than 7 to 10 years. UV damage and neglect are the primary causes of failure. The life of your equipment can be greatly extended by simply taking care of the product.**

DAILY CHECKUP - Rule of Thumb: Apply Common Sense, broken or poorly serviced equipment is a safety hazard, a Risk Management Issue and CAN ENDANGER LIVES.

At the beginning of each working day, all toboggans should undergo a visual inspection to insure that no damage has occurred the previous day. This should include a quick scan of:

STRAPS AND FOOTMAN LOOPS

HANDLE ATTACHMENTS

HANDLE LOCKS

CHAIN BRAKE

TAIL ROPE

FINS

If any problems are detected during this CHECKUP, the toboggan should be removed from service until the problem can be corrected.