

# Dryland Checklist

## Pre-season, Post-season

### Scooter, Bicycle, and Rig

#### **Pre-season:**

Check/service the following:

**Tires**

Look for sidewall cracks and checking. Sidewalls crack/rot from sitting flat all summer, being on damp dirt or damp concrete and exposure to direct sunlight.

**Tire pressure**

Check pressure and inflate as needed. Inspect that the tire bead is inside the rim all the way around.

**Valve stem**

The valve stem should be standing up straight in the rim hole. A bent valve stem indicates the tube is rotated inside the wheel.

It can also get cut at the rim and go flat on the trail. Deflate, rotate tire and tube on the wheel and reinflate. If the valve stem is badly scarred at the rim replace the tube.

**Brake cables/handles**

Brake handles should return with spring action, not a slow dragging return, after applying the brakes. A slow return usually indicates bad cables. Water has gotten inside cable sheathing from washing or rain and caused corrosion. Cables that are bent from going into a frame tube can also cause slow return issues. Sometimes a cable power luber will free up the cable, but it doesn't eliminate the internal cable corrosion. Safety wise, it is best to replace the cable.

**Handlebar**

Is it straight and tight?

**Seat**

Is it straight and tight?

**Chain**

Is it on the sprockets and does it need servicing (lube)?

**Helmet**

Is the plastic or seam tape broken? Is it serviceable? Is it dirty? Does it stink? Wash it!

**Tool kit**

Are all the tools accounted for?  
Do you know where the kit is at?

**Spare parts**

Do you have what you need for race day repairs?

**Proceed to the Post season checklist if you didn't follow it at the end of last season**

**\*See the Note at the end of the last page.**

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## **Post-season:**

Check/service the following:

### **Brake handles**

Check that they are not bent, broken, or loose?

Check that they are positioned to fit your riding hand positions?

Check that they move freely.

### **Cables**, hydraulic brakes are not covered in the scope of this checklist.

Check for free operation, no hang ups after releasing the brakes, cables ends haven't frayed or "squirrel tailed", Fix with a crimp-on cable end cap or tape wrap to prevent further unravelling. Bike brake cables and bike indexed "SIS" style shift cables are not the same internally and are not normally interchangeable.

Suggestion: Use a pressurized cable luber and lube your cables before putting the scooter, bicycle or rig away for the winter. It is easy with a cable luber and the correct cable lube. Disconnect and lube at the brake handle end.

Reference: <https://www.youtube.com/watch?v=NG6JO9f0Q6U>

Reference: <http://sheldonbrown.com/cables.html>

### **Brakes application**

Apply brakes. Contact should be firm, not squishy. A squishy feeling would indicate either that the cable sheathings are possibly stretched or broken internally (most likely), or the caliper is not properly aligned (parallel) with the disc. Brake application would cause the disc to move sideways at the front of the caliper and the opposite direction at the back of the caliper, a twisting of the disc. Replace the bad cable or realign the caliper. Avid BB7 disc brake calipers, when applied to Dryland rigs, are noted for sliding in their slotted mounts during use.

### **Cable adjusters**

Check that the adjusters, at the brake handles and calipers, are not bent and that the cable pockets have a complete pocket w/o one side missing.

### **Caliper brakes**, caliper/cantilever/all styles of each

Check that the brake works?

Check that the brake is adjusted to fit your riding style.

Check for excessive and uneven pad wear, readjust/replace as necessary.

Check the calipers arms, for looseness at pivot. Some models have bushings and return springs

Check that they open up and release and don't stick after applying the brake lever.

Check rim brake surface for excessive wear/scoring. Rim braking surfaces can become badly scored causing excessive pad wear and can wear through from dirt/grit abrasion.

Reference: <http://sheldonbrown.com/calipers.html>,

<http://sheldonbrown.com/cantilever-adjustment.html>

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## **Disc brakes**

Check adjustment by applying brake levers. Spin the wheel and listen for the sound of pads dragging. This can be from too close of pad adjustment, non pad retraction from various reasons, dirt, caliper lever not returning to home position, cable issues, bent/warped disc, caliper misalignment and wheel misalignment.

Check brake pad thickness. Do you have any pads left?

Check for caliper parts missing such as adjuster caps. Do the adjusters work? Avid BB7 calipers are noted for the left side, or outside adjuster cap, to strip out at the center hole. This prevents the brake from being properly adjusted and allows the brakes to disadjust during use (no brakes)! The adjuster cap can be missing all together as well, as it simply snaps on. The right side or inside cap breaks up around the edge causing it not to hold detent position and the aluminum underneath the cap can become worn also causing it to not hold detent position. Both inside and outside plastic adjustment caps and a proprietary internal bushing are noted for melting during heavy braking. If this happens because of the proprietary internal bushing not being replaceable the caliper is rendered unserviceable and must be replaced.

Recommend teardown, thorough cleaning and inspection, with possible caliper rebuild at the end of every season.

Reference: <http://santanatandems.com/Techno/Avid.html>

## **Disc**

Check for excessive wear, scratches and gouging. New pads have less braking when installed on old scored discs until the pads wear to the shape of the old disc. Frequent adjustment is necessary until pads become seated.

Check for bent rotors, visible by spinning the wheel and looking for rotor not running straight and true. Check that the disc is secured firmly to the hub and that the disc mounting bolts are tight. Check for the proper torque on the disc face.

## **Disc brake IS/PM 51mm to 74mm adapter mount, (what the caliper attaches to if not a post mount).**

Check that the the mounting bolts are present and that the bolts are tight. Loose bolts let the mounting holes become ‘egged out,’ or worn to an odd, not round, shape and make it harder to keep the calipers aligned. It also allows the caliper to move around and not work properly. Older front forks and rig rear brakes use these. Newer front forks use 74mm post mounts for direct caliper mounting.

## **Drum brakes**

Remove wheel and inspect the linings for even wearing and proper thickness.

Inspect drum lining for excessive scoring and minimum/maximum drum diameter.

Clean the brake pads and drum area to remove grit and dirt. Use an approved cleaning method for airborne brake dust. Wear an approved dust mask. A vacuum cleaner creates less dust than an air hose.

Use rubber gloves to prevent skin contact. Use a rag or paper shop towel to wipe down surfaces with alcohol or brake parts cleaner. Due to liability issues these are general suggestions on how to clean your drum brake system and not mandates. Reference the manufacturer’s service manual for proper maintenance and cleaning methods for each brand of drum brake.

Check that the application lever moves freely. Clean and lube the shaft as necessary.

Check the wheel bearings for play and noise when spinning.

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**Wheel bearings,**

Check for wheel looseness or play. Pick the wheel off the ground and move top and bottom sideways feeling for play and listening for rough sounds like gravel or rumbling.

**standard bicycle open cage**

Inspect and repack with new grease or replace.

**sealed**

Replace as necessary

**Skewers**

Check for the lock and skewer shaft being bent and that the plastic pad under the lock is present and not torn/cracked/missing. Scooters and bicycles, in a crash, can land on or get drug down the trail on the lock and skewer shaft. When this happens it is possible for the lock and the skewer to bend and allow the wheel, front or rear, to come loose.

Check the threads, internal and external, for stripped, damaged or bent threads.

**Headset bearings**

Check the headset bearings for play. Move the forks forward and backward feeling for looseness. Rock the handle bars up and down/forward and backward feeling for looseness. Any looseness indicates loose or worn bearings. Readjust or replace. Looseness can cause front wheel chatter on the trail and or loss of control

Check front and back bearing sets on double headset rigs such as Outlaw and CannonBall.

**Rod ends**

Check for rod ends with loose bolts, mainly rigs with double headsets and four wheeled rig tie rod ends. Note: especially where the rod end flat surface bolts against a round tube such as the steering links between front and rear headsets.

**Frames**

Inspect frames for cracks at welds and joints. Frames fatigue from trail use and especially from snub lining (tying off) to the back of the rig. The dog team is pulling at the front and the ATV is tied to the back effectively stretching the rig and stressing the frame.

Pay attention to the steel frames of the bike to rig conversion units, generically, rigs made from cut apart bicycles. Check at the front of the chain stays, the horizontal tube from the rear axle forward, for weld cracking where the tube is attached to the bottom bracket, where the pedal crank would go through the bearing tube. This is a high stress area and the thin bicycle tubing was not originally designed for a Dryland rig sliding sideways in a corner.

Pay particular attention to aluminum frames. Inspect the center and edges of the welds on the tubes as this is where cracking most often occurs. Aluminum stress fatigues easier than steel and cracks without warning.

**Spokes**

Check for loose/broken spokes and proper tension. If you snap your finger against the spokes do they all sound about the same or does one sound flat? Bigger wheels flex more on the trail creating more chance for loose spokes

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**Wheels**

Check for trueness by spinning the wheel. It should not appear to be bent or wobbling.  
Check brake surfaces for excessive gouging and wear if using caliper or cantilever brakes.

**Front fork shocks**

Check for leaking oil at seals, torn boots, and scored rod surfaces. Service shock forks according to the manufacturer's recommendations for wear and oil change interval.

**Rear swingarms**

Check for bushing wear at the pivot. Lift up rig side and move swingarm side to side looking for play and movement. Service or replace bushings as necessary.

**Rear swingarm shocks**

**Oil shocks**

Check for leaking oil at seals, torn boots, and scored rod surfaces. Service shock forks according to the manufacturer's recommendations for wear and oil change interval.

**Spring shocks**

Inspect that the spring is not broken and adjuster moves.  
Inspect all shocks for bushing wear by loading and unloading the shock (lift the rig up and down) and watching for play at the bolt attaching area. Replace as necessary.  
Clean as necessary

**Four wheel rigs:**

**Front a-frames**

Check for play at the pivot mounting bushings.  
Lift up rig front and move a-frames forward and backward looking for play and movement.  
Service or replace bushings as necessary.

**Kingpins**

Check for play/wear at the king pin.  
Lift up rig front, wiggle left and right front wheel in and out at top and bottom looking for play and movement at kingpin bushings/bearings. Service or replace bushings/bearings as necessary.

**Tierods**

Are they bent? It affects toe in, rig handling, and rolling resistance.

**Toe in/ front end alignment**

Check your toe in. Measure between the front tires, front and back, at spindle height, either on the center line of the tire face or equal places inside of the tire or rim edge. The distance in front must be shorter than the distance in the back. 0 to 1/16 inch is an acceptable measurement.

Toe out, not "Toe out on turns," but toe out, ie. a measurement wider at the front than at the rear, must not occur as erratic handling from this will create extreme driving instability leading to an accident and bodily injury or death!

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**Bike/scooter, as it applies:**

**Handlebars/saddle**

Check for tightness. Grabbing the bars and trying to twist them, and grabbing the saddle and trying to move it (up down/left right) is usually sufficient.

**Chain**

Check for wear and replace as needed. Everything you need to know about that is here –  
Reference: <http://sheldonbrown.com/chains.html>

If the chain is replaced, be sure to test ride before an event to make sure it works with the old cassette/chainrings.

**Pedals**

Do they spin freely? Do they sound like gravel when you spin them? Is it bearings or lack of lube?

Are they cracked and broken? Did you check them since the last time you crashed?

Do your clip-on pedals work or are they still full of hardened mud from the last ride?

**Derailleur, front and rear**

Is it bent, loose, or damaged?

Do the sprockets track straight and roll freely?

Does it move freely with the shifter?

When was the last time it was lubed or serviced?

**Helmet**

Is it broken? Is the plastic or seam tape cracked?

Wash it before you put it away.

**Note:**

It is highly recommended, post-season or pre-season, if you are not mechanically skilled or familiar with bicycle componentry to have someone qualified ie, a local bike mechanic or a bike shop, inspect your scooter, bicycle, or rig. Take this list with you, especially if it is a rig

It is also extremely important and highly recommended that you have your scooter, bicycle, or rig inspected by someone qualified after a major crash.

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- This list is not all inclusive and is intended as a reference only.
- If bicycle component terminology is unfamiliar Reference: <http://www.sheldonbrown.com/>  
Go to the alphabet Bicycle Glossary.
- Scooters, Bicycles, and Rigs take maintenance!

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