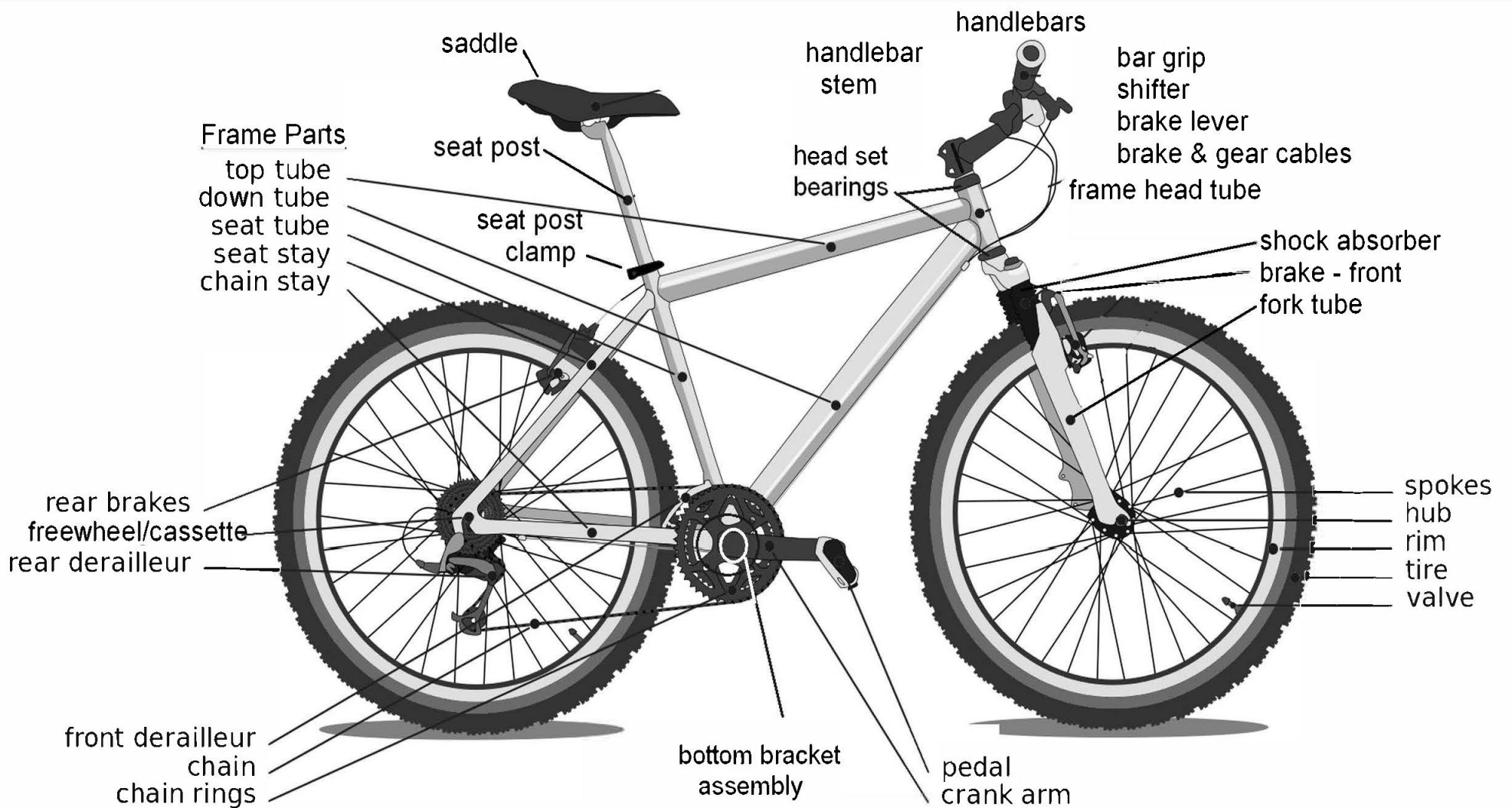
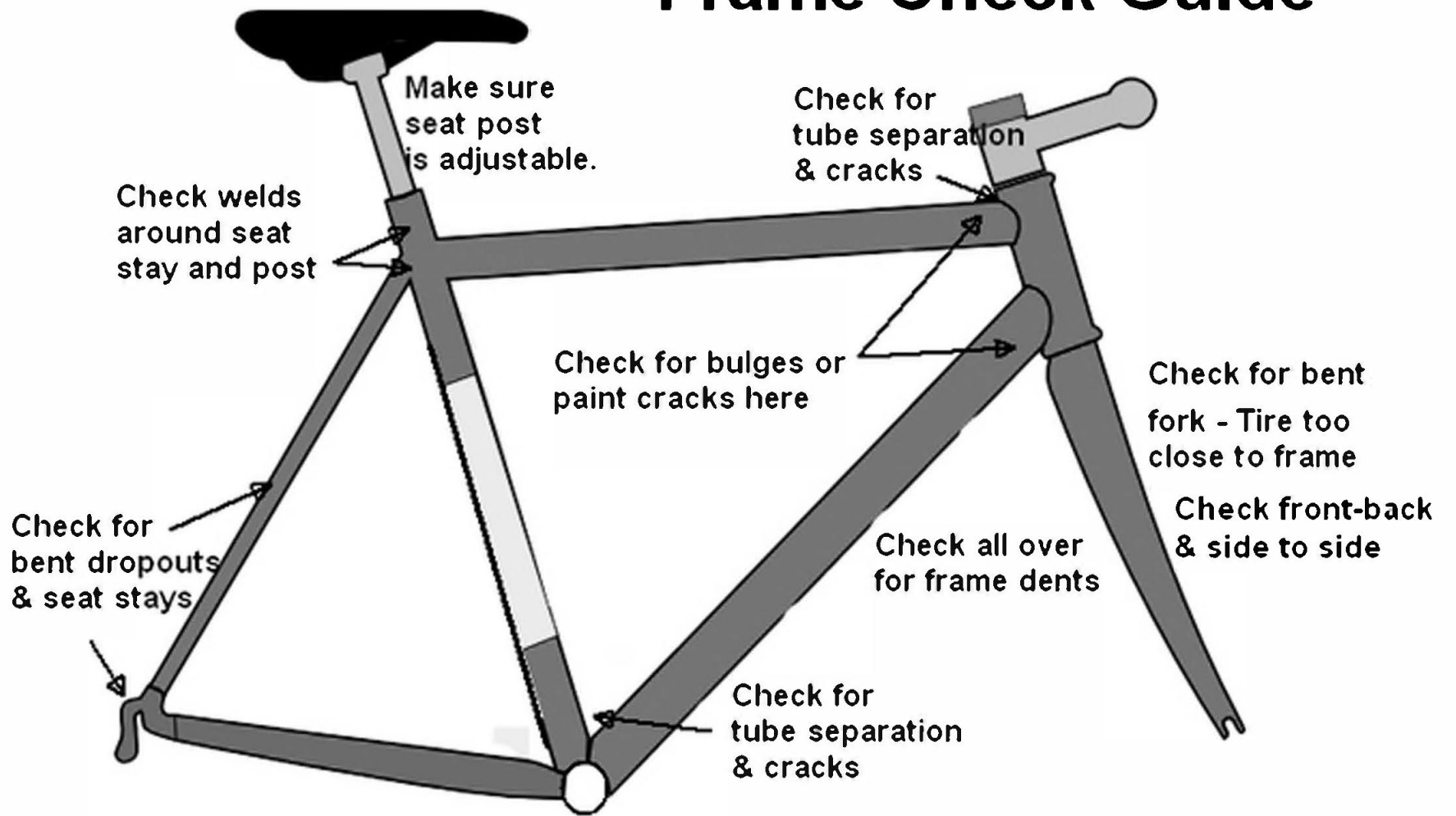


# Frame Check Guide



Volunteer Fixer: \_\_\_\_\_ Email: \_\_\_\_\_ Date: \_\_\_\_\_ QA-er \_\_\_\_\_

Bike Model/Description: \_\_\_\_\_

**CHECK THE BOX when task verified – NOTE: Do Not Neglect Instructions included beneath BOLD headings**

**NOTE: Perform Numbers 1a-1g BEFORE Putting Bike on Stand**

	<b>1a. General Appearance: Frame/Fork/Stays:</b> Look for dents/bends/cracks; <b>Ask if it should be a tear-down</b>
	<b>1b. Check Headset: Tighten if loose. (See #17)</b>
	<b>1c. REMOVE SEAT POST (must be able to do this!</b> Do it right away); grease below "safety line"
	<b>1d. Align stem with front wheel</b>
	<b>1e. Straddle front wheel and try to rotate h'bars side to side; tighten stem if necessary.</b>
	<b>1f. Inflate tires to make sure they hold air through the repair process.</b>
	<b>1g. *Clean bike*</b> Remove dirt, etc! Save water bottle cages, racks, baskets; remove extraneous accessories
	<b>2. In The Stand, REPEAT check for frame damage.</b>
	<b>3. Tires:</b> Replace if worn/cracked. (Look carefully! Check sidewalls as well as tread Check for arrow or tire "chevron" tread for correct "rotation direction"; remove & reorient if wrong Spin wheel slowly to check for wobble; true wheel as necessary; if tire is flat CAREFULLY check tire inside for thorns, etc. Inflate tubes to proper pressure (see tire sidewall for info)
	<b>4. Inner Tubes:</b> Replace if flat; valve stem perpendicular to rim; Add valve cap if missing. Put valve stem by tire logo Make sure both rims use same type valve stem; Presta Valves (Ask event leader)
	<b>5. Hubs:</b> Check for bearing play. Rock wheel from side to side to detect any movement Adjust loose/tight cones; Oveehaul/Grease if "gritty"/rough; check lug nuts/skewers for tightness
	<b>6. Rims:</b> True to 1mm; clean rims w/ steel wool & then alcohol Check for divots/dents/grooves, cracked spoke eyelets, worn/concave rims
	<b>7. Spokes:</b> Check for rounded or cracked nipples Clean spokes w/ steel wool - remove rust, dirt, etc.
	<b>8. Chain:</b> Measure with chain gauge; replace if stretched to 0.75 or if super rusty Lube with chain lube; then with rag wipe off excess lube and dirt No stiff links; Stiff links will bump or jerk over jockey wheels On single speed/3sp bikes, chain should deflect 1/2" to 1" On 10+sp bikes, chain not slack when on smallest chain ring & cog ("little-little") Can shift to "big-big"
	<b>9. Cranks:</b> Rock crank arms side to side to check for Bottom Bracket (BB) play (there should be none) Be prepared to tighten (if play in BB) or loosen & regrease if binding Derail the chain, then spin crank and check for bent chain rings (easier to see from top of bike) Check for worn chain rings (ask if not sure); pedal slowly forward. Watch for chain riding unevenly on worn teeth
	<b>10. Cables &amp; Housing:</b> Remove/replace rusted, kinked, and/or "frizzy ended" cables Replace cracked housing and cracked/bent ferrules; Cantilever brakes: use/install straddle cables/link wires to separate cable from tire Link wires & straddle cables adjusted to a ~90 deg. "V" Trim cables to extend 2-3" from pinch bolts; add & crimp cable end-caps
	<b>11. Brakes: Levers:</b> Should snap back when released; There should be 2" lever-to-bar clearance when brake pads contact the rim. Squeezed levers should not touch the bars. Check that "V" brakes have brake levers with ~1.5" pivot point distance! (This is often missed) Canti, side pull, "U", and center-pull = ~1" between the two pivots Position/tighten drop bar brake securing bolts so safety levers can't touch the h'bar Flat h'bars should have brake levers angled ~45deg down from h'bar Confirm that rear brake lever is on right side of h'bar (American standard)
	<b>12. Brake Calipers:</b> <b>Grease</b> stiff V-brake mounting posts; <b>Tighten</b> mounting bolts; Replace worn/old/hard cracked pads; Check cable tension; barrel adjusters screwed all the way down. (May adjust "up" if no quick release) V-brake arms parallel (    ) to each other not ( \ / ); use V-brake pad "washers/spacers" to adjust for vertical

<b>12. Continued:</b> Verify having a left AND right pad, not two of the same side; ensure correct orientation
Pads securely tightened and can't be rotated by hand; Pads flush to rim; may have front inward "toe"
Pads follow rim curvature; Pads equidistant from rim; no droop below rim; no tire rubbing
Pads must not drag anywhere when spinning wheel; adjust pads as necessary; quick release levers closed.
<b>13. Coaster Brake:</b> Brake arm attached to the chain stay w/ bolt & nut. Tighten bolt holding strap
<b>14. Wheels:</b> Should spin freely before & after riding.
Spin slowly to check for wobble and brake drag; true as necessary
Wheel centered in fork/chain stays; Tighten axle nuts and QR levers
<b>15. Derailleurs:</b> Check shifting, all chain rings, all cogs; Lower Jockey Wheel parallel to chain.
A few drops of lube on front & rear derailleur springs & pivot points
Replace if broken; straighten if necessary; adjust cable tension;
Adjust hi-lo set screws if necessary
<b>Front Derailleur:</b> Raise/lower/move rotate as is necessary
Check limits: 1mm chain clearance from cage at lowest gear (critical)
Shift between chainrings quickly to try to shift the chain off. (It shouldn't happen)
<b>Rear Derailleur:</b> Test for over-shifting; check hanger and cage for bends; check cable housing loop (gentle angle)
Push derailleur by hand all the way to <i>low gear</i> to check low limit screw;
In <i>highest gear</i> , check cable...there should be no tension nor slack
Scrape off accumulated dirt/oil/etc. from jockey wheels (narrow flat blade screwdriver works well)
<b>16. Handlebar Grips / Bar Tape:</b> Confirm h'bar plugs; h'bars centered in stem;
Should be snug and not ratty (worn/torn), sticky, icky, dirty; replace if necessary
Grips should not twist/move in normal use; for flat bar brake levers, shifters angled down 45deg from vertical
<b>17. Steering:</b> With front wheel parallel to frame, check brake alignment. Place fingers where the head tube meets the fork or stem. Apply the front brake and rock the bike front/back. There should be no bearing play.
Turn bars side-to-side to make sure fork turns freely. Not gritty/rough.
Tighten h'bar & stem bolts; Verify tightness of threadless stem securing bolts
Stem inserted so "safety line" isn't visible
<b>18. Saddle (Seat):</b> Replace/Add Seat Cover (snug fit) if worn/torn/cracked
Grease seat post; Seat post inserted past "safety line"
Saddle nose aligned with top tube/headset. Can't be twisted off-center. Tighten as necessary.
Saddle ~horizontal/parallel with ground, not pointed significantly up nor down
<b>19. Pedals:</b> Replace if cracked/bent; check for reflectors; remove toe clips; pedals should spin freely
Use pedal wrench to confirm tight at crank insert; tighten as necessary
<b>20. Reflectors: (Reflector Tape on tiny wheels)</b> ALL reflectors properly tightened
Front/Rear wheels (white)
Front h'bar (white) beneath bar not on top
Seat post (red) usually placed at top of seat post just under saddle
Pedals, all 4 sides (amber)
<b>21. Kickstand:</b> Tighten bolt (don't squash bicycle frame); check for proper "lean" angle – not vertical
Grease if creaky/squeaky, recalcitrant; bolt tightens with #8 hex or #14 wrench
Make sure kickstand clears the crank & spokes
<b>22 Test Ride</b>
<i>Make sure tires are inflated per tire sidewall notation at test time (both for volunteer test ride and QA test ride)</i>
Bike shouldn't pull to one side
Check effectiveness of rear brake. All bikes must skid. Fix if it doesn't.
Front brakes should effectively stop the bike, <i>but do not skid</i> . Endos hurt.
Shift through <i>ALL</i> gear combos including big:big / little:little, etc.; must shift SMOOTHLY and crisply;
Resolve any strange sounds

### **16. Reflectors:**

- Front, rear, wheels and pedals

### **15. Cables:**

- Replace rusted or seized cables
- Crimp caps on cable ends

### **14. Steering:**

- Check loose play by rocking bike with front brake applied
- Tighten bar and stem bolts

### **13. Brake calipers:**

- Grease stiff pivots
- Replace cracked, brittle or worn pads
- Center pads
- Check cable tension

### **12. Rims**

- True to ~1 mm

### **17. Grips/Bar Tape:**

- Replace if worn, gooey, filthy, etc. Use compressed air (no knives or liquids)

### **18. Brake levers:**

- Should snap back when released
- >20 mm clearance when squeezed

### **1. Frame and Fork:**

- Check for bends & cracks
- Tear down if defective/damaged

### **2. Seat:**

- Replace or add seat cover if worn or torn

### **3. Tires:**

- Recycle if worn, cracked or showing cords
- Reseat if wobbling

### **4. Hubs:**

- Adjust loose cones
- Inject grease if stiff
- Check lug nuts or skewers for torque

### **5. Derailleurs:**

- Replace if broken
- Straighten if needed
- Adjust cable tension & stops

### **6. Spokes:**

- Check for loose or broken spokes

### **7. Inner Tubes:**

- Replace if flat
- Valve stem perpendicular to rim

### **11. Cranks:**

- Wiggle crank arms to check for play
- Check for worn (hooked) chain rings

### **10. Pedals:**

- Replace if cracked or bent

### **9. Kickstand**

- Add if needed
- Ensure mounting bolt is tight

### **8. Chain:**

- Measure; replace if stretched or badly rusted
- Lube (tenacious oil)

