

# BRAKE-SYSTEM TUNE-UP CHECKLIST (for bikes w/ rim brakes)

*Not all steps apply to all bikes.*

*Torques are minimum recommended in absence of manufacturer specifications.*

**Check-off items done to specification. Mark items with "NA" when not applicable, or "X" when problems could not be repaired and/or are in need of further attention.**

## EXISTING CONDITIONS

- Brakes operated and performance evaluated.

## DISASSEMBLY, CLEANING, AND INSPECTION

- Wheels removed if hubs are loose.
- Rim braking surfaces thoroughly cleaned.
- Rims inspected for damage.
- Brake cables removed and inspected for rust, frays, and kinks in the inner wire and housing.
- Brake levers inspected for damage.
- Brake calipers removed and cleaned.
- Brake caliper inspected for damage.
- Brake pads checked for wear.

## ASSEMBLY AND INSTALLATION

- Brake-caliper threads, pivots, and springs lubricated.
- Adjustable brake pivots adjusted for no play or binding.
- Brake-pivot nuts and/or bolts checked for security.
- Rims trued laterally to .5mm tolerance or better.
- Wheels stressed until true is stabilized.
- If hub adjustments are loose, hubs adjusted to have no free play secured in bike, but with free play when QR is loosened 45°.
- If hubs adjusted, all hub locknuts secured to 120in-lbs.
- Brake-pivot studs (if any) greased, Loctite 242 applied to mounting threads (except nylock nuts or bolts), & calipers mounted (70in-lbs for sidepulls, 25in-lbs for others).
- Brake levers set to original alignment (unless unacceptable) and secured (cast clamp: 35in-lbs, strap clamp: 60in-lbs).
- Brake-lever pivots, cable-anchor pivots and cable adjusters lubricated.
- New or existing brake housings sized. (Lever to frame piece: as short as possible to allow full normal fork rotation. All others: as short as possible without abrupt bends at ends, or interference with caliper motion.)
- Brake-housing ends finished with filing and end caps, wherever end caps fit (parts addtl.).
- Wheels mounted in proper alignment and security (front axle nuts 180in-lbs, rear axle nuts 240in-lbs).  
**OR** Q.R. skewers set so force is required through out the last 90° of closure and base of lever ends up parallel to dropout.

## BRAKE ADJUSTMENTS

- Brake-pad height set so top edge of pad is even with top edge of rim's braking surface (except U-brake and outer-pivot arm of dual pivot: set so bottom edge of pad is even with bottom edge of rim's braking surface).

- Brake pads set tangent (parallel) to rim.
- Brake-pad toe set to .5-1.5mm if needed to reduce squeal.
- Brake cables lubricated where they pass through housing.
- Brake cables routed correctly (no interference with other cables, or unnecessary bends) and cable-pinch mechanisms secured to 50in-lbs.
- Cantilevers only: Straddle-wire cable carrier set to clear tire by 35-45mm  
**OR** Link-unit set so alignment line on link-unit head points to bottom end of link wire ( $\pm 10$ mm).
- Brake-cable system stress tested by pulling brake lever firmly a minimum of ten times.
- Brake-pad clearance set to 1-2mm per side (looser if cable release is difficult, or tighter if lever clears grip/bar by less than 25mm when pads first contact rim).
- Brake pads centered to less than .5mm difference.
- Brake cables trimmed, soldered, and capped.
- Rim braking surfaces cleaned of lubricants.

## TEST RIDE AND INSPECTIONS

- Brakes checked for stopping power and squeal.

MECHANIC'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_