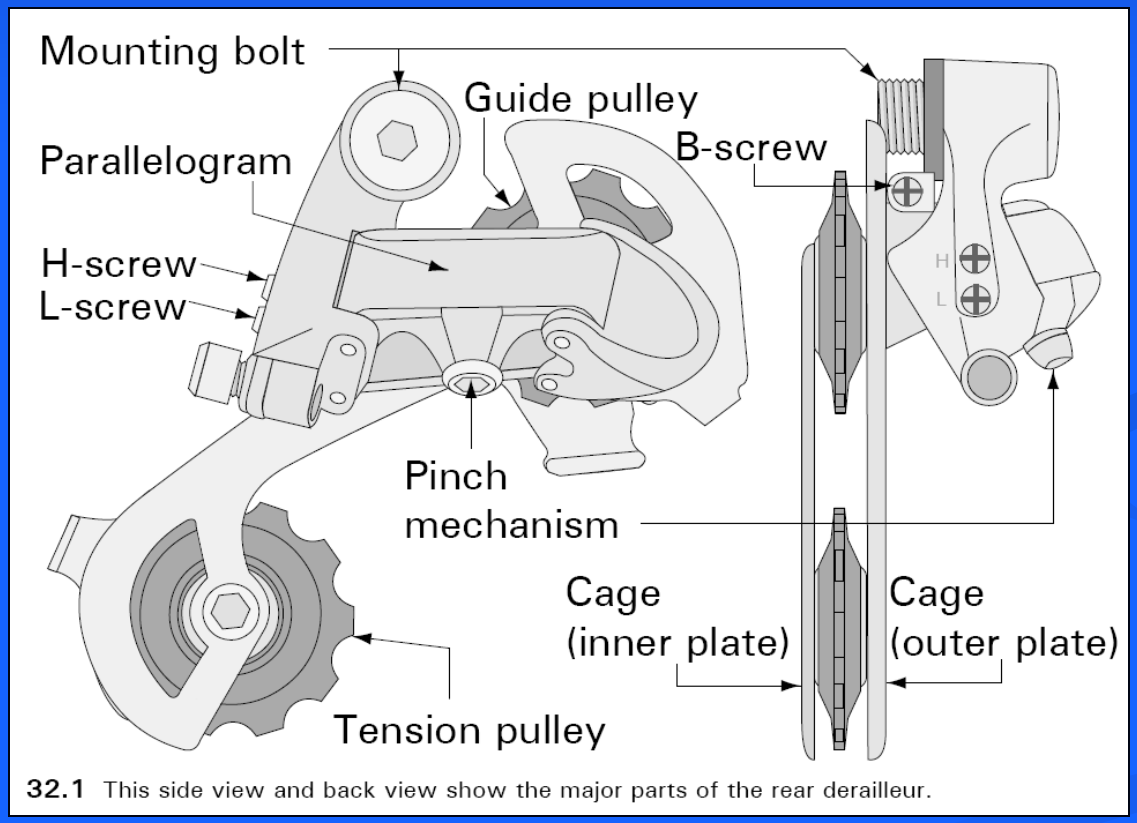
Derailleurs

Derailleurs

- derailleurs move the drive chain from one gear to the next

Rear Derailleur Action

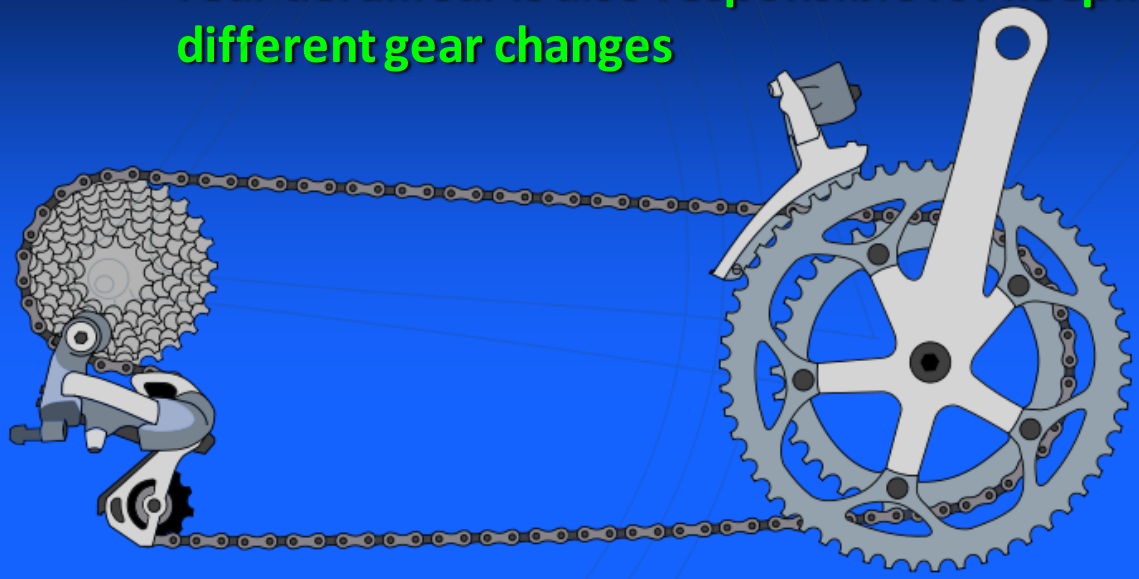
- pulling on shift cable moves derailleur toward low gear
- spring inside parallelogram moves derailleur toward high gear

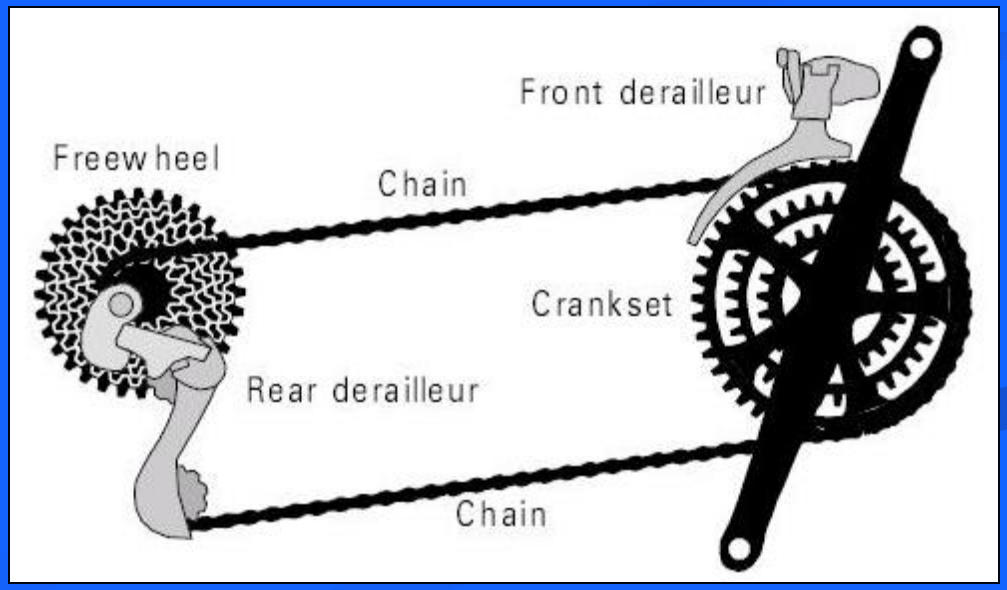


32.1 This side view and back view show the major parts of the rear derailleur.

Rear Derailleur Action

- rear derailleur is also responsible for keeping chain tension correct through different gear changes



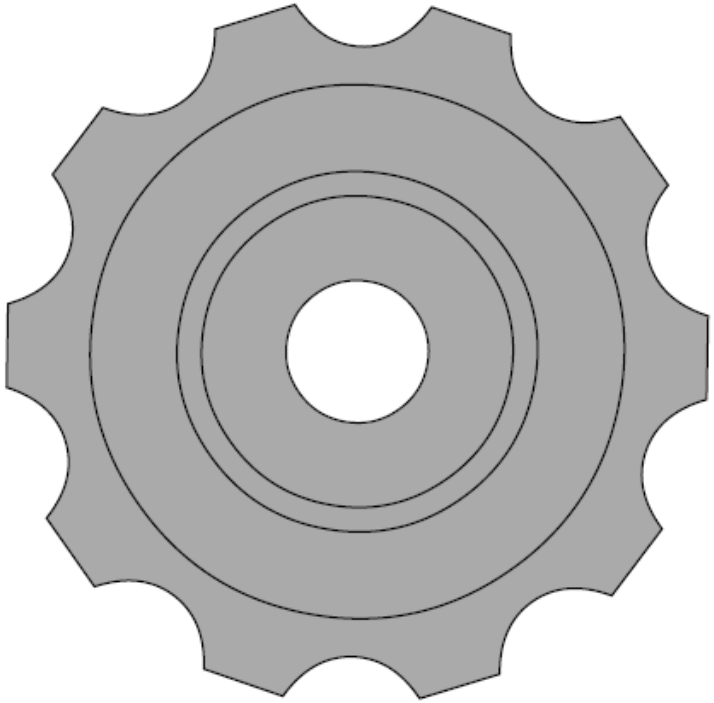


Derailleur Service

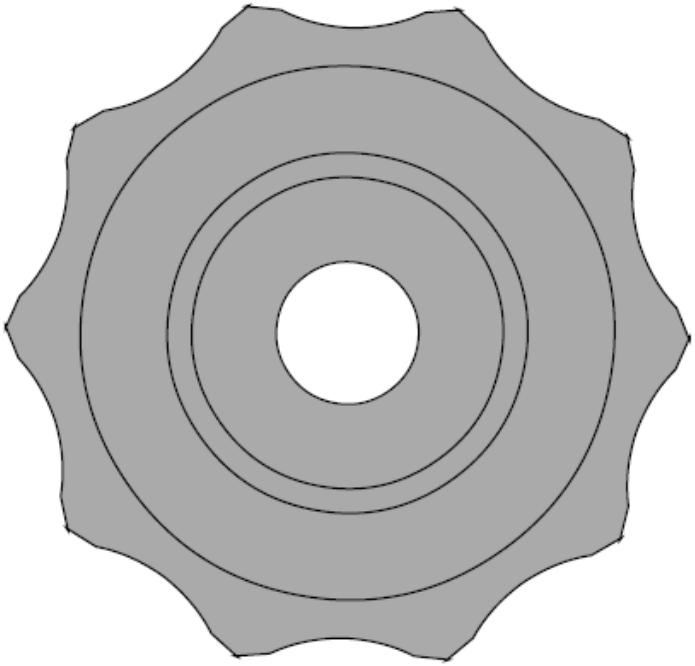
- wash derailleurs
  - ultrasonic or with parts washer

Inspect Pulleys

- guide pulley (top wheel) & tension pulley (lower wheel) should be inspected…



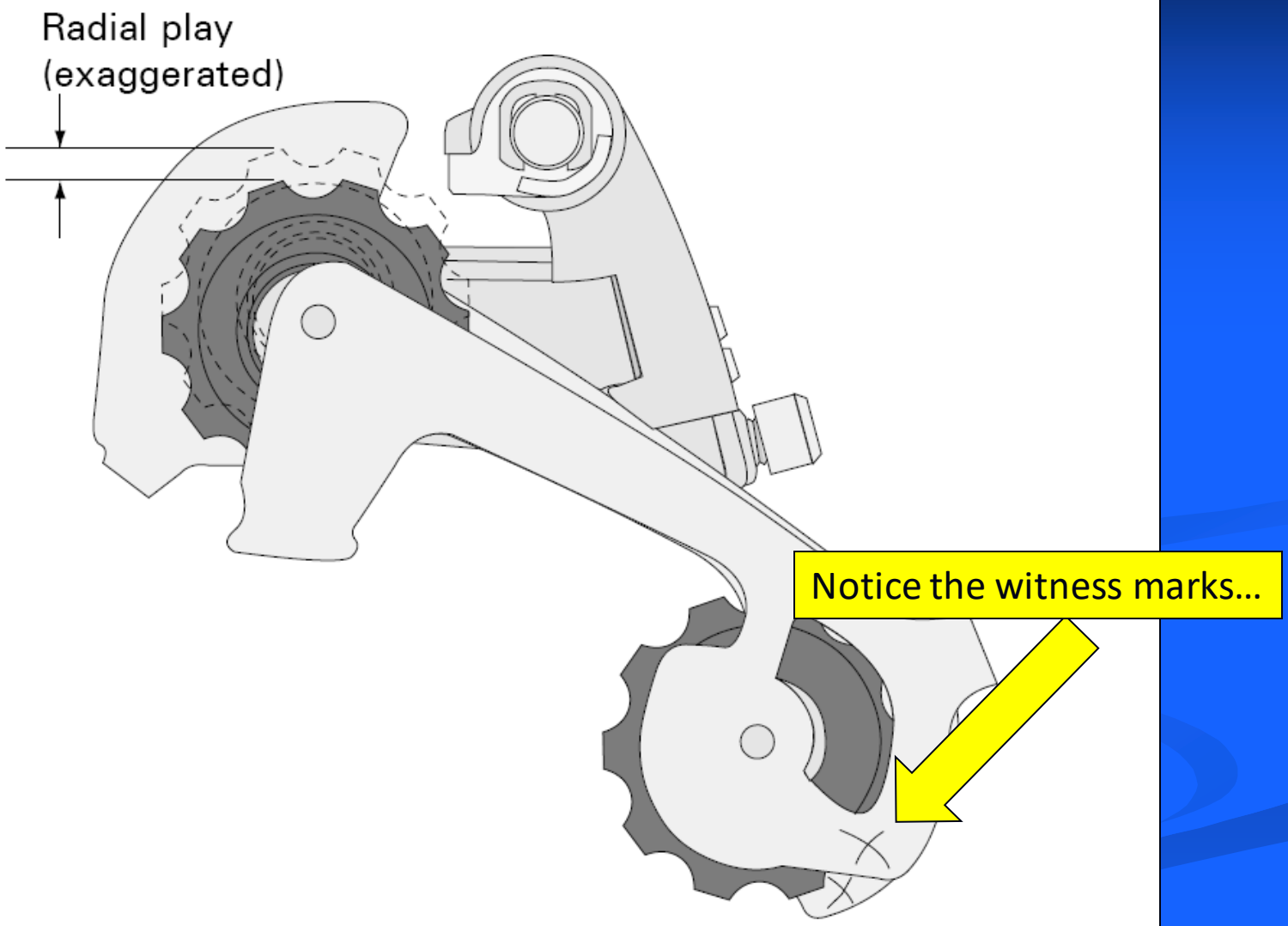
Fresh



Worn

32.29 A fresh guide pulley and a worn one.

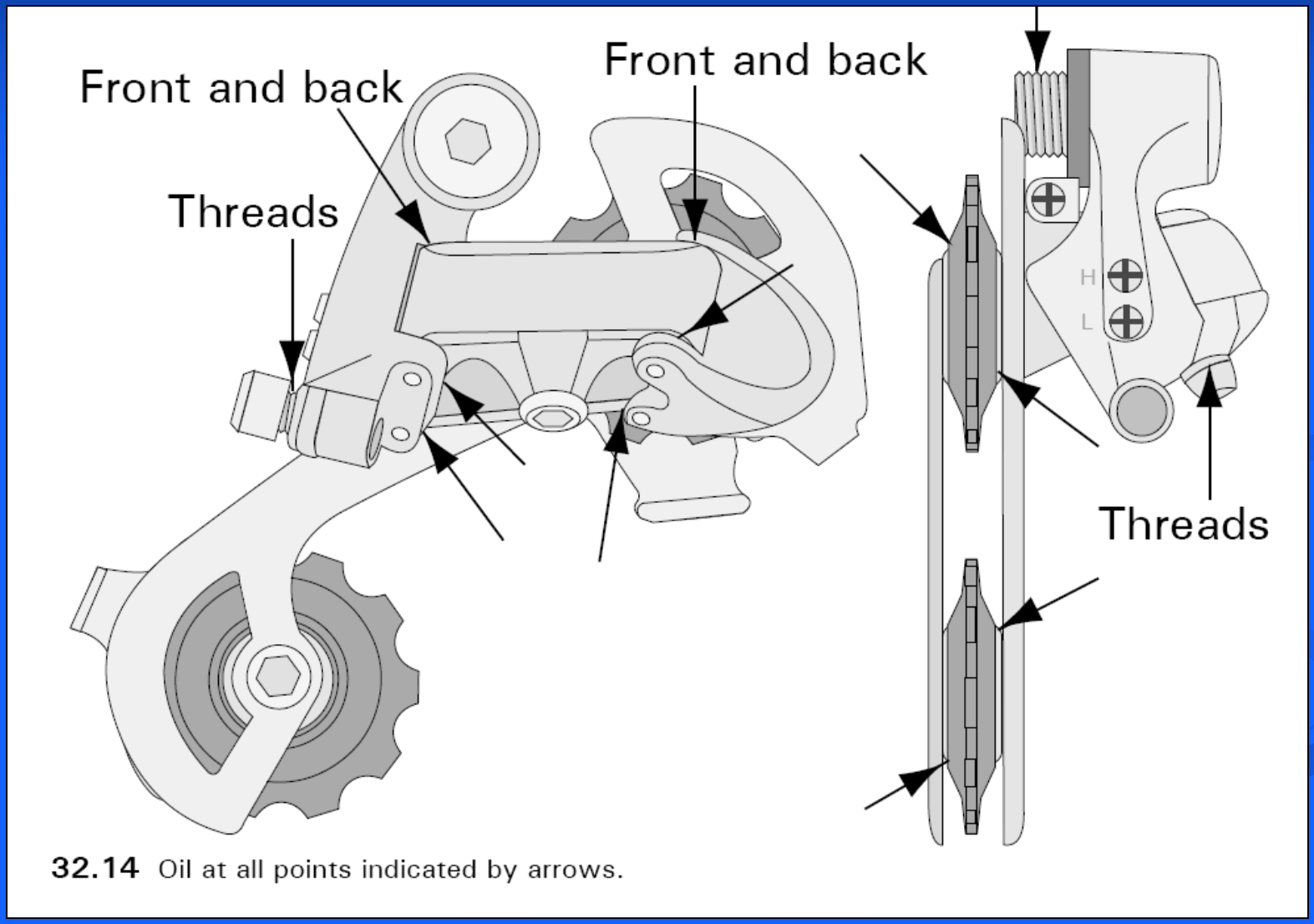
Check for Worn Pulley Bushings



32.30 If the pulley wheel can be moved up and down, the bushing and sleeve are worn out and the pulley should be replaced.

Derailleur Lubrication

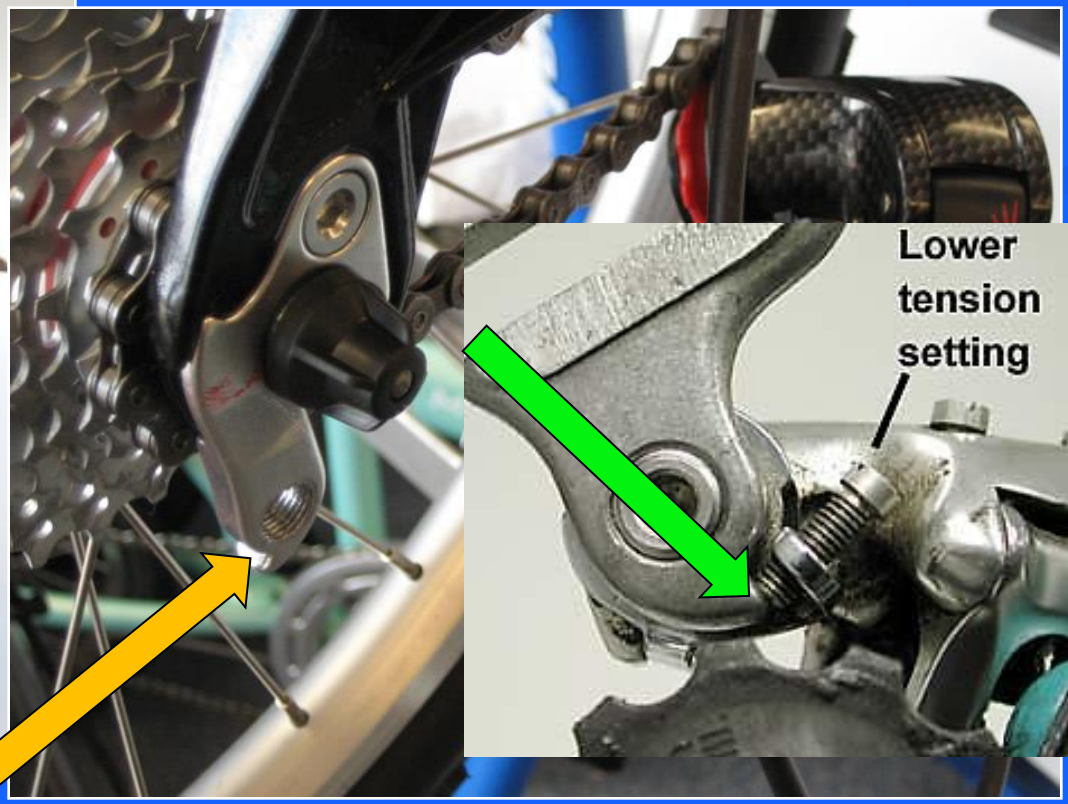
- use Tri-Flow on these points…
  - wipe off excess oil with a clean rag



32.14 Oil at all points indicated by arrows.

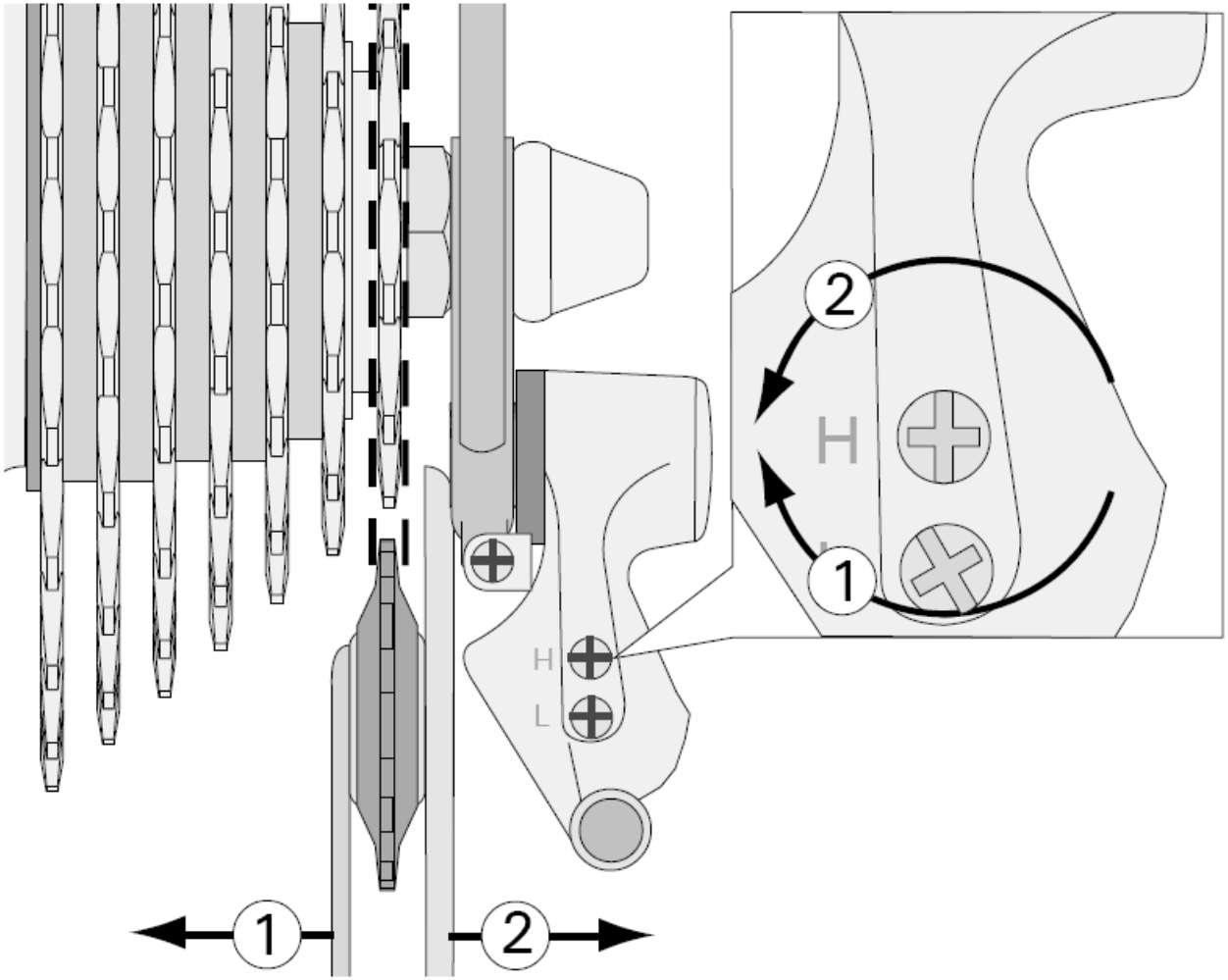
Mount derailleur to the frame

- derailleur should hang plumb in the vertical plane
- if it doesn't the derailleur or its hanger is bent
- some derailleurs have a "B" tension adjustment screw
- make sure screw sits on the hanger correctly during assembly



Adjusting Derailleur Limit Screws

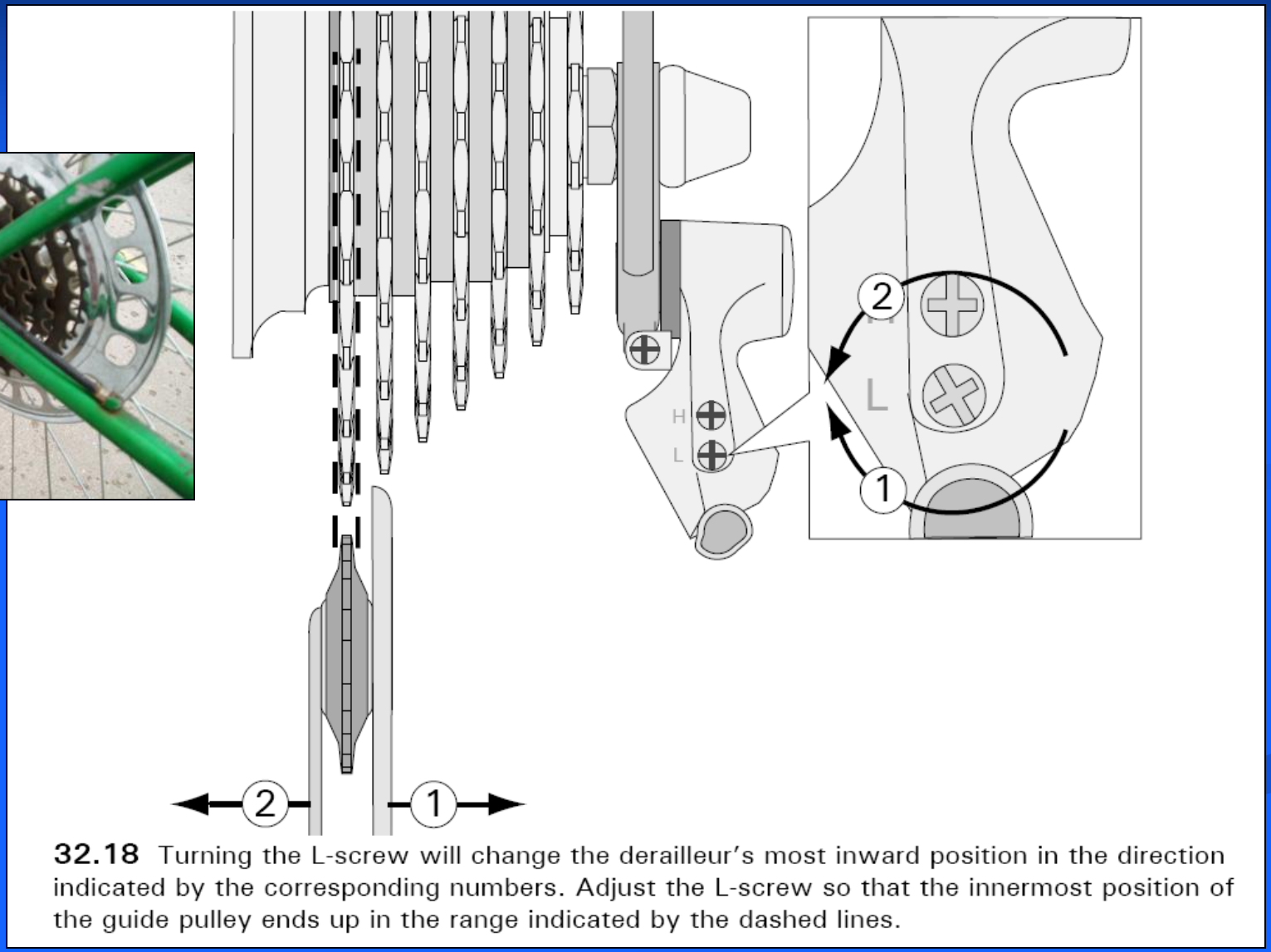
- high gear limit screw adjustment prevents chain from being pushed past the high gear sprocket (to the right)



32.17 Turning the H-screw will change the derailleur's outward rest position in the direction indicated by the corresponding numbers. Adjust the screw so that the guide pulley ends up in the range indicated by the dashed lines.

Low Gear Limit Screw

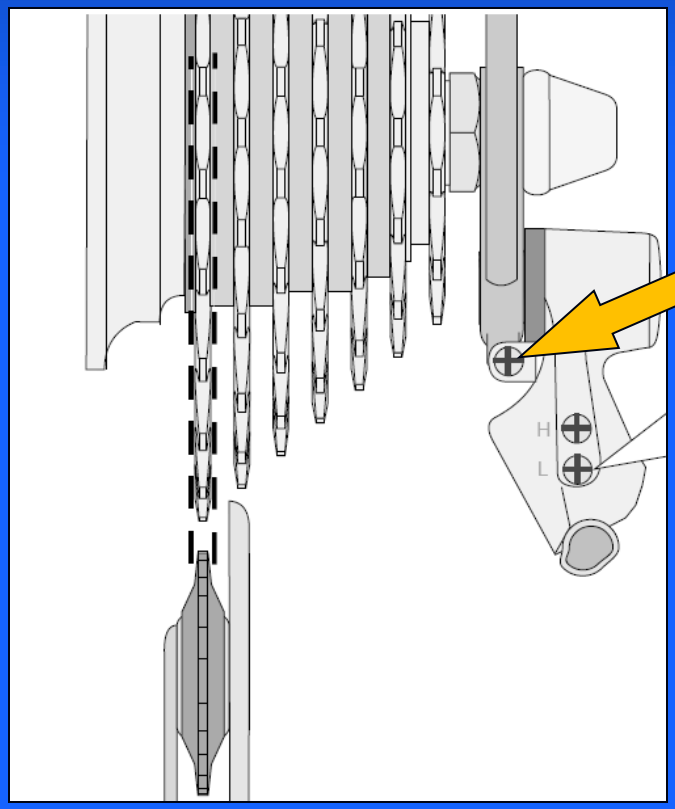
- low gear limit screw adjustment prevents chain from being pushed past the low gear sprocket (to the left)



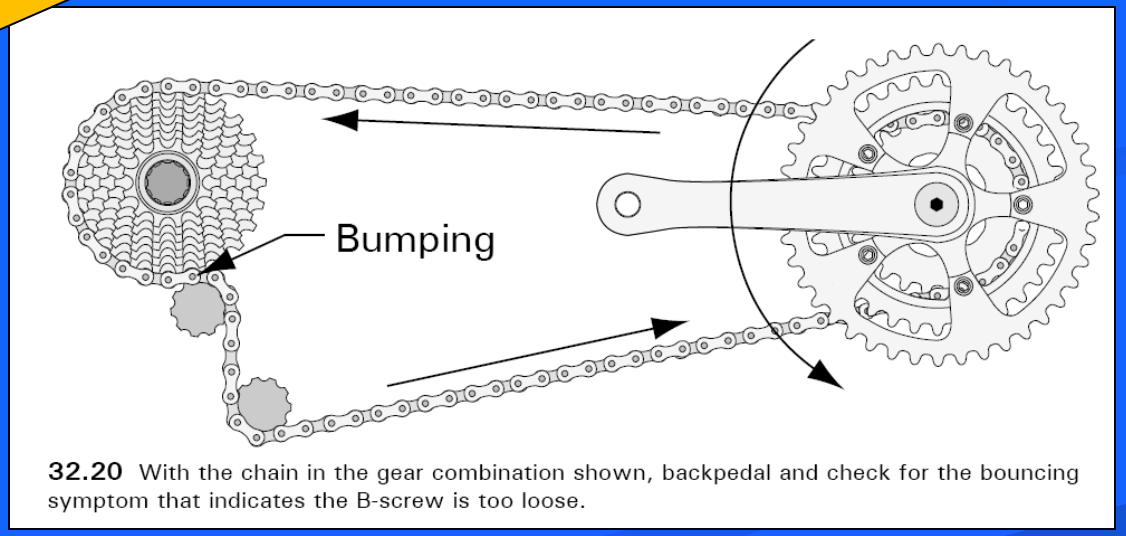
32.18 Turning the L-screw will change the derailleur's most inward position in the direction indicated by the corresponding numbers. Adjust the L-screw so that the innermost position of the guide pulley ends up in the range indicated by the dashed lines.

Body Tension Screw

- not all derailleurs will have a “B” tension screw
- this screw changes the derailleur *body* angle
- check this with the derailleur in low gear



B-Tension screw



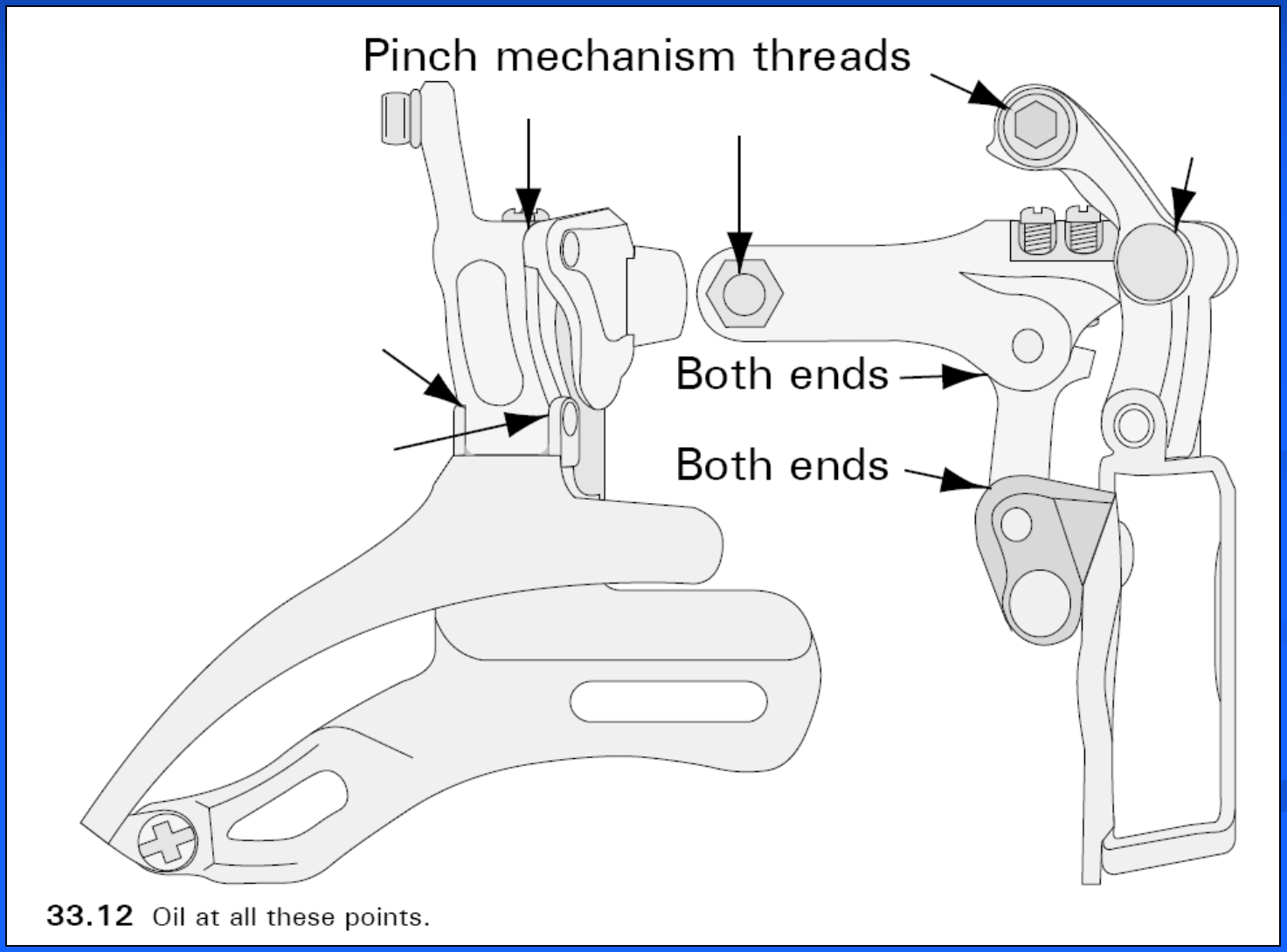
32.20 With the chain in the gear combination shown, backpedal and check for the bouncing symptom that indicates the B-screw is too loose.

Front Derailleur Action

- pulling on shifter cable pulls the chain onto a larger chain ring
- spring tension (in the derailleur) pulls the derailleur towards a smaller chain ring

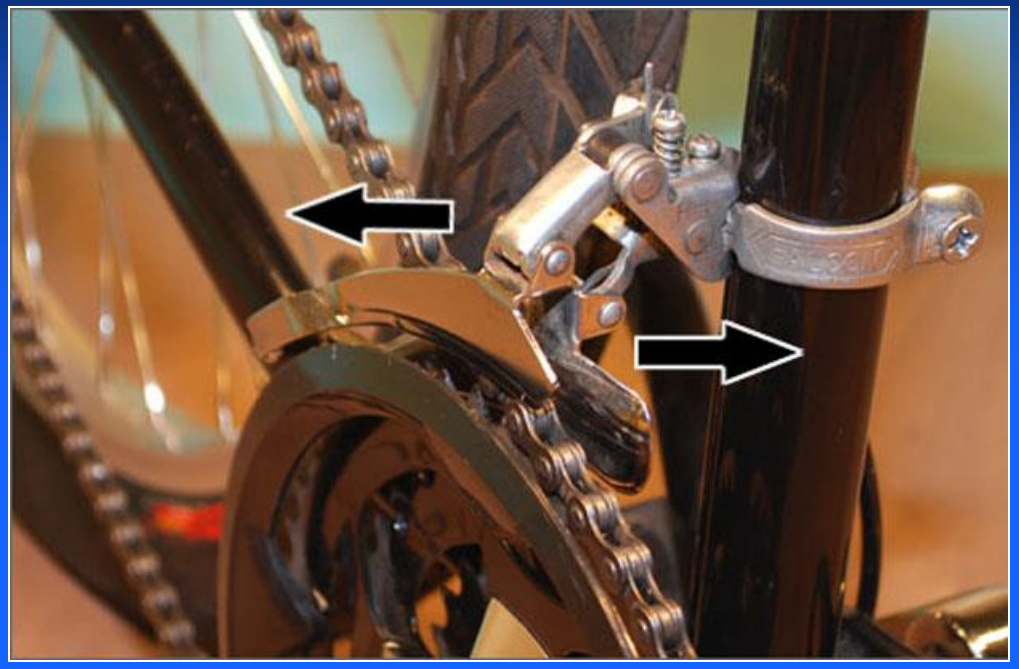
Front Derailleurs

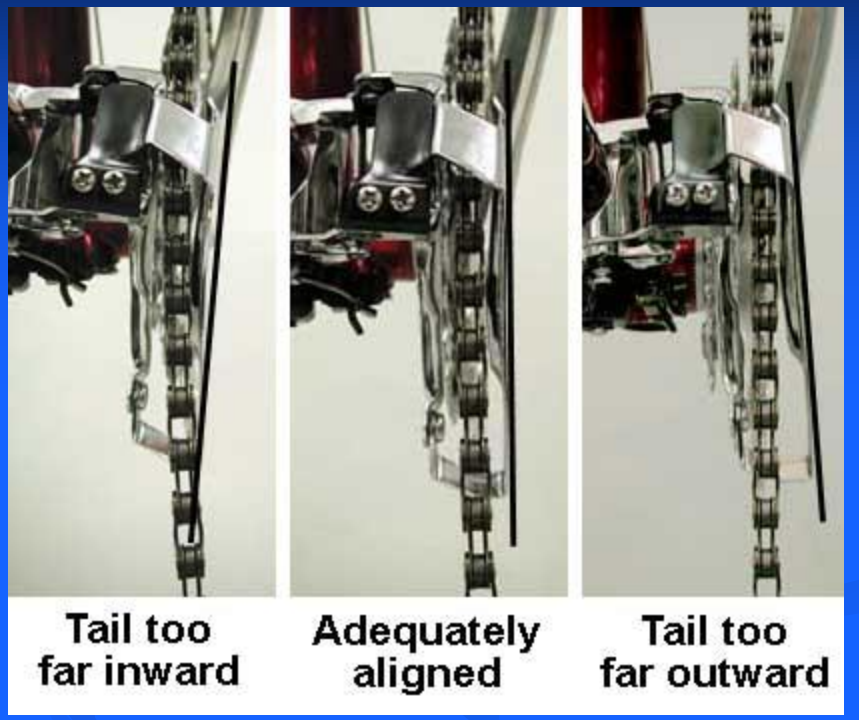
- clean, then lubricate front derailleur with Tri-Flow
- check pivot points for wear/looseness



33.12 Oil at all these points.

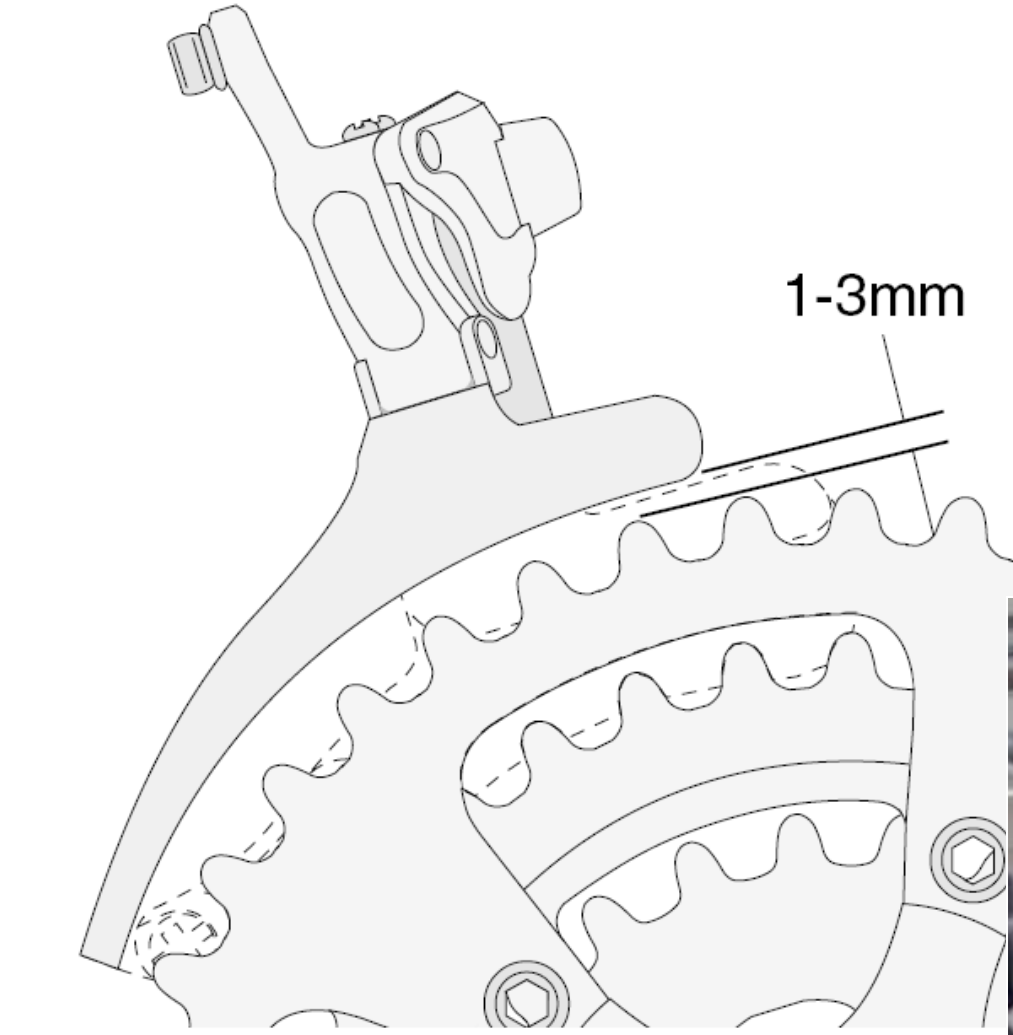
Adjust Derailleur Rotation on Seat Tube





Adjust Derailleur Height

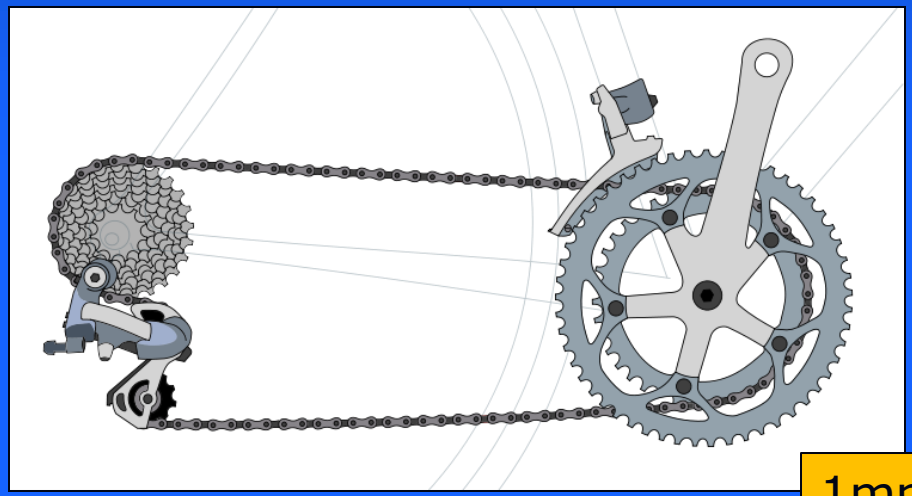
- derailleur outer cage should have approximately 2mm clearance above the large chain ring

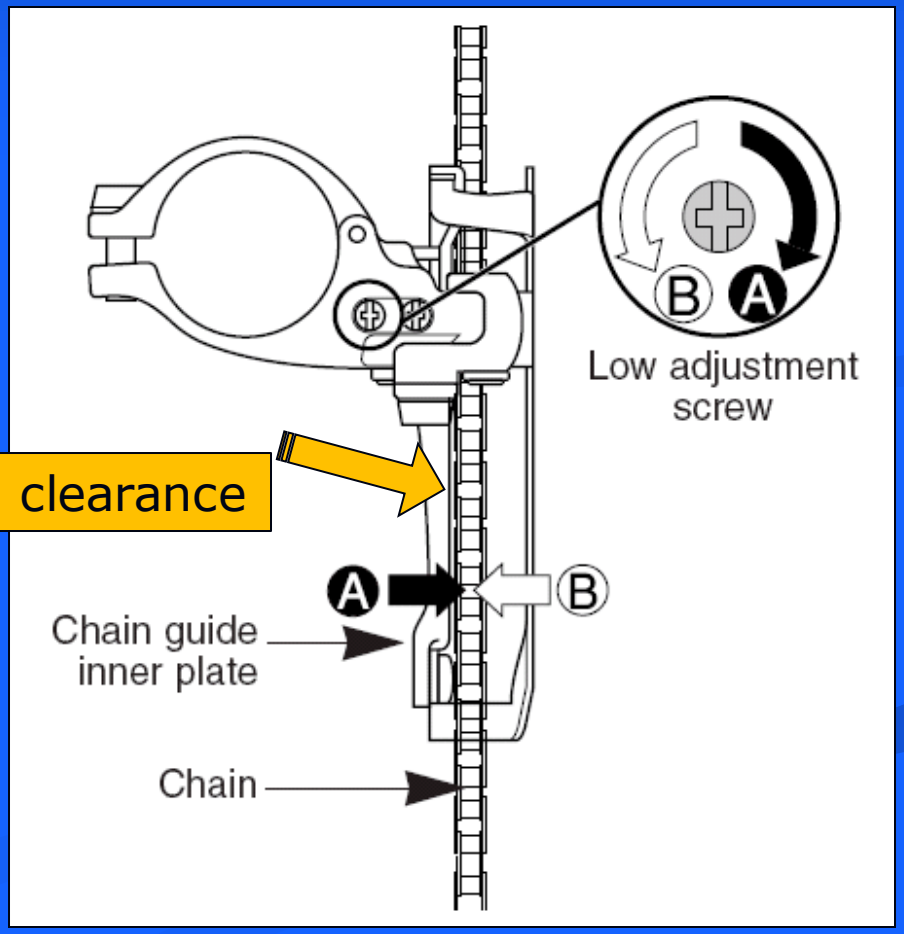


33.13 The correct range of derailleur height.

Front Derailleur Low Speed Limit Screws

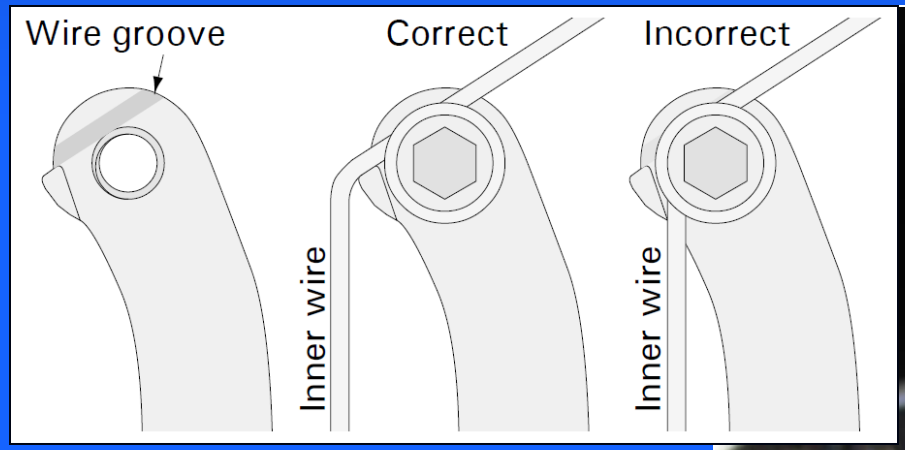
- adjust low speed limit screw…
  - shift chain to 1st gear on the rear
  - shift chain to low gear on the front
  - adjust so there is 1mm clearance between inner cage plate and chain

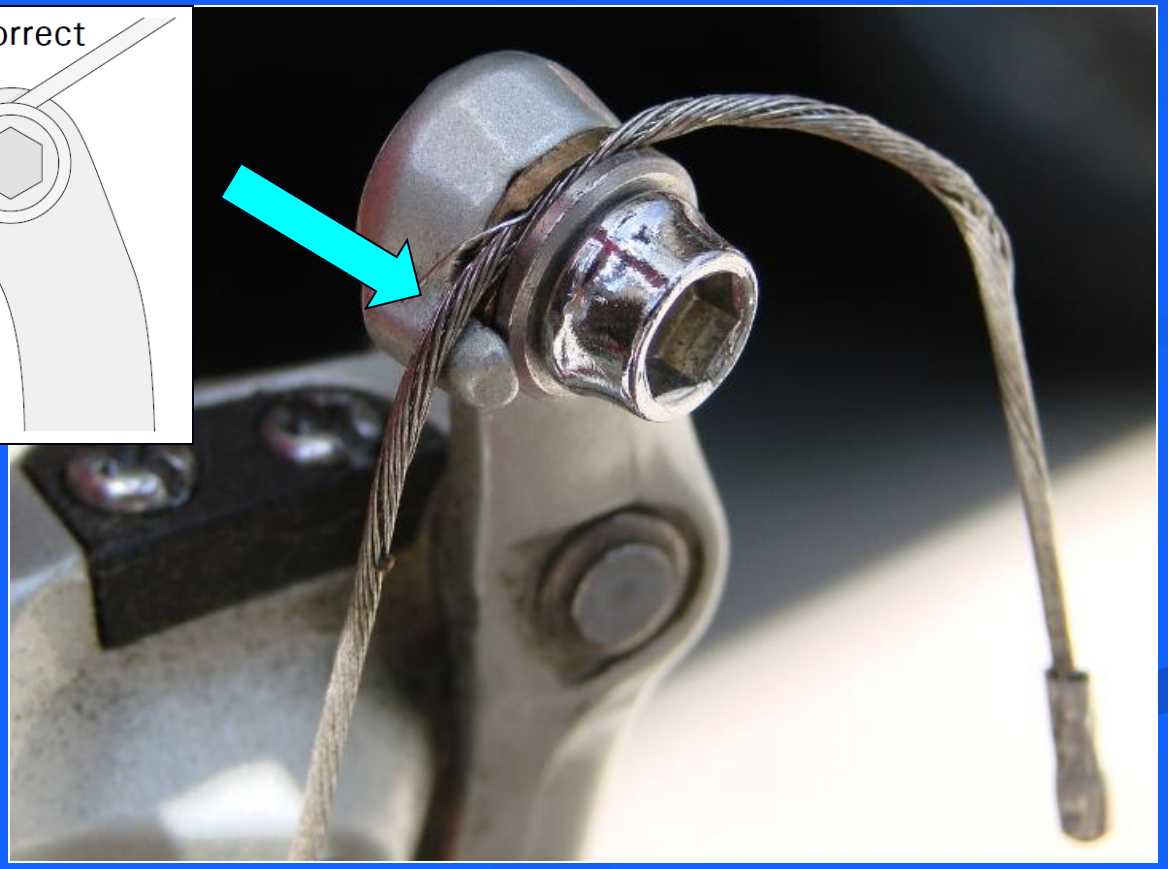




Install Derailleur Cable

- place a drop of oil on the pinch bolt threads
- route the cable correctly over the *leverage tab*
- look for a groove in the derailleur body the cables fits into
- with shifter in 1st gear, pull on the cable to remove all slack and tighten pinch bolt securely





Front Derailleur High Speed Limit Screws

- adjust high speed limit screw…
  - shift chain to high gear on the rear
  - shift chain to high gear on the front
  - adjust so there is 1mm clearance between outer cage plate and chain