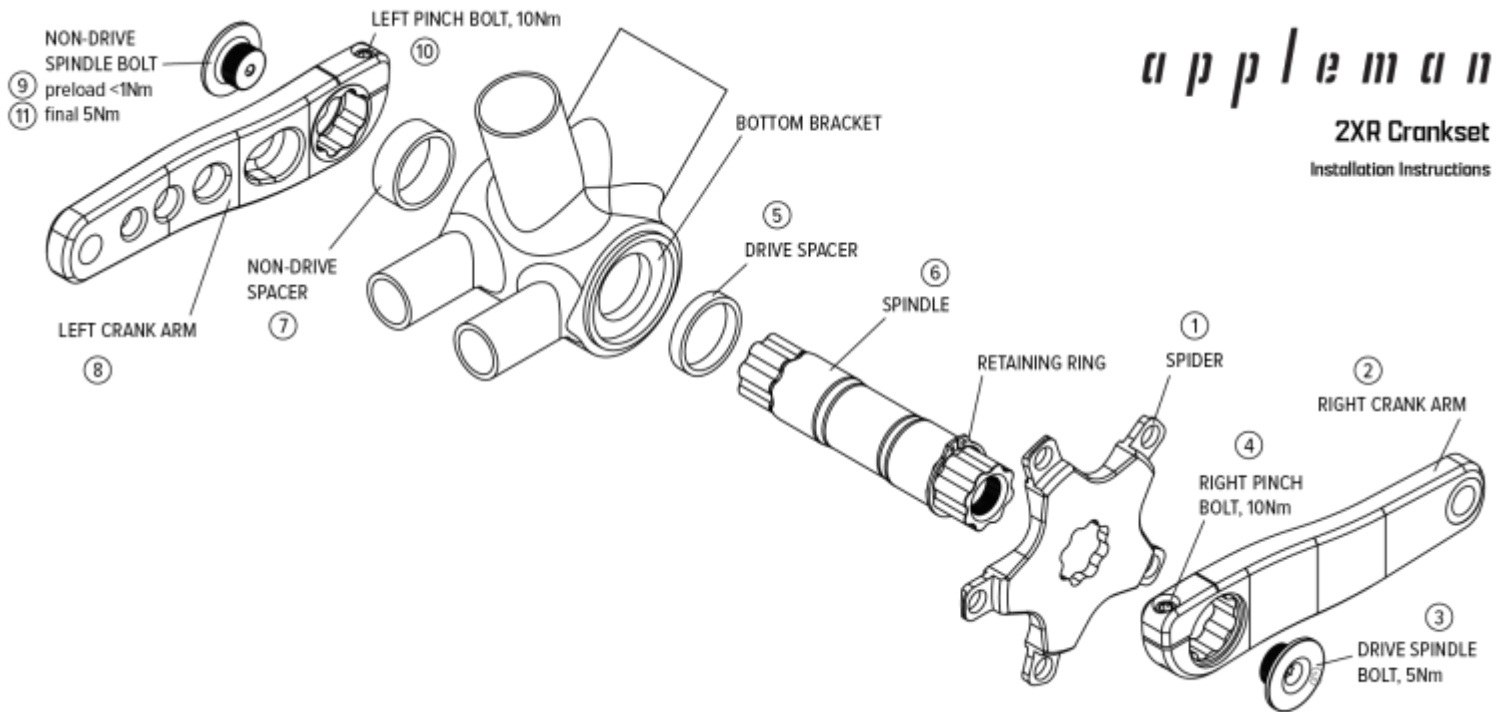


appleman

2XR Crankset Installation Instructions



NOTE: Grease all surfaces that touch each other during installation or use. Spindle lobes, bearing surfaces, threads, under bolt heads etc... Proper greasing will ensure durability and maintainability of the cranks. BONUS: pinch bolts, retaining ring, spindle bolt threads have factory grease applied.

- 1 - Slide SPIDER on RETAINING RING side of greased SPINDLE
- 2 - Slide RIGHT CRANK ARM on greased SPINDLE, align to markings on SPIDER
- 3 - Using a torque wrench, tighten DRIVE SPINDLE BOLT on SPINDLE to 5Nm
- 4 - Using a torque wrench, tighten RIGHT PINCH BOLT to 10Nm

IMPORTANT: Ensure that all bearing surfaces of SPINDLE have been greased

- 5 - Slide DRIVE SPACER on SPINDLE
- 6 - Slide the SPINDLE through the bottom bracket bearings and ensure the DRIVE SPACER/RETAINING RING is seated against the bearing seals

IMPORTANT: Ensure SPIDER and RIGHT CRANK ARM are on the drive side of the bike

- 7 - Slide on NON-DRIVE SPACER on SPINDLE
- 8 - Slide LEFT CRANK ARM on greased SPINDLE
- 9 - Gently tighten NON-DRIVE SPINDLE BOLT on SPINDLE to less than <math>< 1\text{Nm}</math> to apply a very light preload force to the bottom bracket bearings and prevent side to side play while riding. Do not overtighten as this could harm the bearings. If the NON-DRIVE

SPINDLE BOLT bottoms out, shims will be required, continue installation.

NOTE: Appleman 2XR Cranks have been designed with a built-in 1.5mm of play adjustment, but some frame/bottom bracket combinations may require shims.

- 10 - Using a torque wrench, tighten NON-DRIVE PINCH BOLT to 10Nm
- 11 - Using a torque wrench, Tighten Non DRIVE SPINDLE BOLT to 5Nm

IMPORTANT: Check for any side to side play of the crankset in the bottom bracket bearings by trying to slide it back and forth. Note the amount of movement.

If you have no play or side to side movement, then you have just successfully installed the Appleman 2XR Crankset! Woo woo!

- 12- If any movement side to side play is found repeat steps 5-11 but add sufficient number of 0.5mm shims (up to 5 shims) until play is removed.

TIP: Shims can be added equally to the left and right sides of the bottom bracket to keep the crankset centered with the bike

NOTE: adding excessive shims push out the crank arm from the spindle, reducing the engagement of the crank arm and spindle lobes. The full width of the crank arm lobes must engage with the spindle lobes.