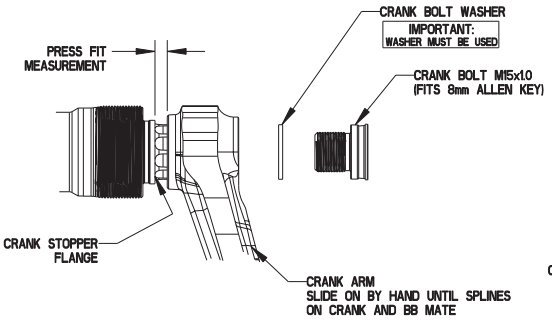
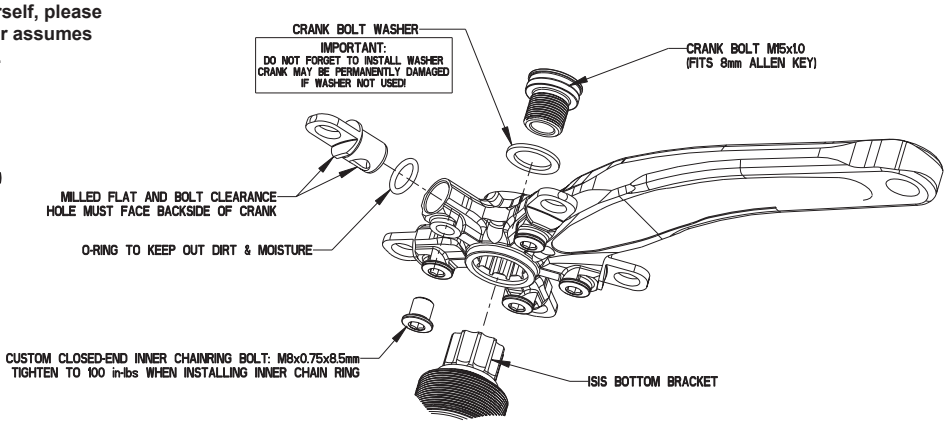
NORTH SHORE DH ISIS CRANK

We strongly recommend that you have a professional bike shop install and service your Race Face components. Improper assembly and/or adjustment will significantly compromise the strength and life span of this component. If you choose to install the component yourself, please follow the installation instructions carefully. NOTE: The rider assumes all risks upon installation and use of Race Face components.





PLEASE READ AND UNDERSTAND THESE INSTRUCTIONS, SERVICE REQUIREMENTS AND PRODUCT LIMITATIONS COMPLETELY BEFORE INSTALLING YOUR RACE FACE NORTH SHORE DH CRANKSET.

The ISIS DRIVE spline system is the new standard for strength, stiffness and performance for cranksets and bottom brackets. The ISIS DRIVE spindle end features 10-16mm long, tapering (one-degree) flutes ending at a hard stop flange. The ISIS DRIVE crank arm features a mating 10-flute socket with the same one-degree taper. The mating tapers guarantee a tight, creak-free interference fit between the two parts. The hard stop flange positions the crank consistently to achieve ideal front shifting performance. This, in combination with the super stiff oversize crank bolts, rigidly sandwiches the crank arm in place, eliminating any movement that is typical of traditional square taper interface systems.

The Race Face North Shore DH ISIS Drive Cranksets have been designed and engineered to be a simple, service free, install it and forget it system. Please follow these simple installation instructions to ensure proper operation and long life of your new cranks.

WARRANTY:

The Race Face North Shore DH crankset carries a lifetime manufacturer's guarantee against defects in materials and/or workmanship. This is limited to the original owner. Original retail purchase receipts must be supplied with any warranty claim so KEEP YOUR RECEIPT!

CHAINLINE:

Chainline is a measurement from the centerline of your frame to the tip of the middle chainring on the crankset. This measurement is important because front shifting performance is directly connected to the chainline measurement on your bike.

All Race Face crank models (Prodigy, Turbine LP, Next LP, North Shore XS) are designed to achieve a chainline of 48.5-49.5mm when installed on a standard ISIS Drive 113mm (81mm ISIS designation) spindle such as the Race Face Prodigy or XS model.

TOOLS REQUIRED:

1) 8mm Allen key (preferably with a long 6-8" handle)
2) Torque wrench with 8mm Allen head socket (preferred)
3) 5mm Allen key for chainring bolts
4) Waterproof grease

TORQUE SPECIFICATIONS:

Crank Bolts (initial 1" installation).....40 foot-pounds (54 Newton-Meters)
Crank Bolts (subsequent re-tightening).....35 foot-pounds (47 Newton-Meters)
Inner Chainring Bolts.....100 inch-pounds (11.3 Newton-Meters)

CRANK INSTALLATION:

1) Remove inner chainring bolts. These bolts are installed at the factory, but must be removed or at least unthreaded before installing the outer and middle chainrings.

2) Chainring Tabs (Lubrication): The chainring tabs are pre-installed at the factory with a coating of waterproof grease on the plug section that fits into the crank arm. This lubrication is necessary to prevent corrosion from metal on metal contact and should be maintained.

3) Chainring Tabs (Alignment): The tabs can be removed and re-installed easily when the inner chainring bolts are removed. This is the "replaceable" feature. Make sure all 5 tabs have the milled flat facing the backside of the crank arm and the inner hole roughly aligned with the inner chainring bolt holes.

Note: Each chainring tab has a small O-ring installed under the head. This O-ring mates with the chamfer on the crank's spider armholes to seal the spider arms from moisture.

4) Install outer and middle chainrings using standard chainring bolts and nuts. Tighten bolts alternately in a crossing pattern to eliminate uneven load on bolts. This is similar to fastening the lug nuts on your car wheels. Fastening torque should be about 100 inch-lbs.

Note: The chainring tabs are loose and may rotate slightly before you tighten your chainring bolts. This is a self-aligning feature of this system. Once the middle and outer chainrings are installed the chainring tabs will be rigidly fixed in place, both up and down and side to side. The chainring tab plugs and the crank's spider arm holes are machined to extremely tight tolerances of less than 0.05mm (0.002"). This in combination with the super-stiff tubular spider arms ensures that the chainrings will run straight and true. To eliminate loosening, we recommend use of loctite removable small thread locker on outer chainring bolt threads if steel bolts are used. If aluminum hardware is used, grease the threads and check them regularly. If titanium hardware is used, apply 'Finish Line Ti-Prep' anti seize compound to the threads, and check them regularly.

5) Install inner chainring; Apply grease to the threads of the supplied 8.5mm inner chainring bolts and then tighten to 100 inch/lbs. (11Nm). DO NOT OVER-TIGHTEN AS THIS MAY DAMAGE OR STRIP ALUMINUM THREADS IN CRANK ARM! Tighten bolts alternately in a crossing pattern to eliminate uneven bolt load, as per outer bolts. Note that no additional spacers are required.

Note: We have taken special care to ensure that these inner chainring bolt threads are a nice tight thread-milled fit. This will help to reduce the likelihood of stripped threads or loosening bolts. If you feel that your aggressive riding style demands it, it is OK to use "Loctite removable strength small thread locker" on dry clean threads instead of grease.

Do not substitute longer bolts for the 8.5mm bolts supplied. The extra length may bottom-out on the inside of the spider arm. This will damage your crank and may make it impossible to fully tighten your chainring. In this case short is good! If you need replacement bolts please contact your shop or call Race Face.

The inside holes on the chainring tabs are clearance holes for the inner chainring bolts to pass through. The inner chainring bolts do not "lock" the chainring tabs in place but they do limit the rotational movement. This is why they are removed when you install the outer rings, allowing the outer rings to self-align. The bolts are installed at the factory for shipping and display purposes to prevent the chainring tabs from coming out.

If you are using an aluminum inner chainring, be sure that it is the type with a recess for the chainring bolt head to fit into. Aluminum chainrings are relatively thick, and aluminum inner chainrings without this recess will decrease the amount of chainring bolt thread contact into the spider, increasing the chance of pulling the threads out or stripping them.

6) Inspect bottom bracket spindle. Make sure splines are in good shape, and free of burrs or sharp edges that may damage crank arm. Make sure the threads inside the spindle are in good shape.

7) Apply a generous amount of waterproof grease to all of the spline teeth on both ends of the spindle as well as to the threads on the inside of the spindle.

8) Slide the crank arm onto the spindle in a horizontally opposed relation. You will notice that the crank will not slide all the way onto the crank stopper at the end of the spline teeth on the spindle. This is okay and correct. There is a mating taper on the root of the spline flutes and on the mating splines in the crank arms. This taper creates a interference fit between the two parts, eliminating movement and creaks. The gap you notice after sliding the crank arm onto the spindle by hand is called the PRESS FIT MEASUREMENT.

Note: Crank bolts with washers are included with all Race Face ISIS Drive bottom brackets. ISIS Drive bottom brackets may be spec'd with either M12x1 or M15x1 bolt threads, depending on BB design and intended use. Both sizes are much stiffer and stronger than the conventional M8x1 bolts that are used with traditional square taper interfaces. Always use the crank bolts supplied with your bottom bracket. Do not substitute inferior crank bolts made of lower strength titanium or aluminum.

CAUTION: ALWAYS USE WASHERS UNDER THE HEAD OF THE CRANK BOLTS! SOME CRANK BOLTS MAY COME WITH BUILT-IN WASHERS AND SOME MAY COME SEPARATE. IF THE CRANK BOLTS ARE INSTALLED WITHOUT THE WASHERS, THE SOFTER ALUMINUM OF THE CRANK ARM SPLINE TEETH WILL BE PERMANENTLY DAMAGED, RENDERING THE CRANK ARM UNUSABLE. INSTALLATION OF CRANK ARMS WITHOUT WASHERS WILL VOID ALL WARRANTIES ON THE CRANK ARMS.

9) Using your 8mm Allen key, install the crank bolts into the spindle threads and tighten until the back face of the crank arm bottoms out against the CRANK STOPPER FLANGE on the BB spindle. We recommend an initial installation torque of 40ft.-lbs. (54 N.M.), however, this requirement may vary depending on the crank arm design and material. The most important thing is to make sure that the crank arm contacts the hard stop flange, not the torque required to achieve contact, however, exceeding 40ft-lbs, when the crank has already bottomed out against the hard stop flange may damage the mating face on the softer aluminum of the crank arm.

** The combination of the super stiff M12 or M15 bolt, along with the crank contacting the hard stop flange on the spindle creates a super rigid interface that does not allow the crank arm to move around the BB spindle, as is the case with traditional square taper interfaces. This, along with the extremely high torque load carrying capacity of the 10 flute splined interface eliminate all of the typical problems associated with the traditional square taper interfaces.*

10) Install your chain and pedals, and adjust your front derailleur to manufacturer's specs. You're ready to ride!

MAINTENANCE INSTRUCTIONS:

CHECK THE TIGHTNESS OF YOUR CRANK BOLTS AFTER YOUR FIRST RIDE, AND PERIODICALLY THEREAFTER. USE A TORQUE SPEC OF 35FT.-LBS (47 N.M.) FOR RE-TIGHTENING CHECKS.

Check and re-tighten if necessary, chainring bolts after your first ride and periodically thereafter. Pay special attention to the inner chainring bolts, as they are installed with lubricant. Riding with inner chainring bolts loose may damage or strip the threads in the aluminum spider. However, be careful not to over-tighten.

Removal and cleaning cranks and chainrings with solvent is perfectly safe. Removal and re-greasing of hardware will be required.

Chainring Tab Damage:

If you happen to bend or break a chainring tab, don't despair! Because these are removable they can be simply replaced. This type of damage is not covered under warranty but the cost is minimal, and it's better than replacing the whole crank arm.

When ordering a new chainring tab, be sure to specify compact or standard. They look the same but the thickness and offsets are different.

Important:

The Aluminum alloy used in Race Face North Shore DH cranks is extremely strong and durable, however it has poor resistance to corrosion. To fight this corrosion, the raw aluminum must be coated. We have selected to use anodizing for our coating for its extreme durability and good looks.

Do not attempt to remove the anodizing by chemical, heat, abrasive or any other means. Such actions will void any and all warranties. This will expose the aluminum to corrosion.

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