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.

ASSEMBLY INSTRUCTIONS:

COMPATIBILITY SPECIFICATIONS:
** For use with 1 1/8" threadless steerer tubes only.*
- Fork Crown Race Diameter .....= 30.20 MM
- Head Tube Cup Press Diameter .....= 34.00 MM
- Upper Stack Height .....= 18.00 MM
- Lower Stack Height .....= 14.50 MM
- Total Stack Height .....= 32.50 MM

BEARING SPECIFICATIONS:
UPPER:
30 x 42 x 7mm, double contact sealed (68062RS)
- bi-directional, radial, retainer construction cartridge bearing

LOWER:
33.3 x 44.5 x 7.2mm, double contact sealed, custom-made
- uni-directional, angular contact, full ball construction cartridge bearing
- corrosion resistant cadmium plated races and stainless steel balls

STEER TUBE LENGTH FORMULA:
To determine what length of fork steer tube you require for use with your Race Face Thermo-SP headset, use the following equation:

Head tube length .....(X)
+ Headset total stack height .....(32.5mm)
+ Stem Height .....(Y)
+ Optional headset spacer(s) ....(Z)
- Compression Gap for Pre-load .....(2.0mm)

TOTAL STEER TUBE LENGTH REQUIRED = X+32.5+Y+Z-2.0

Note 1: The entire length of the steer tube must be UN-THREADED!
Note 2: After cutting the steer tube to length, remove all burrs from both the inside and outside of the top edge of the tube. This is necessary for ease of installing the BARBED NUT and the THERMOPLASTIC TOP RACE.

INSTALLATION INSTRUCTIONS:
1) Apply a light film of grease to the inside diameter of the CROWN RACE. This will prevent seizing and will allow for easier removal in the future. th is is especially important with aluminum steer tubes. Install CROWN RACE onto fork using a standard slide hammer to fit 1 1/8" steer tubes. Make sure that the bottom of the crown race is flush with the fork crown (i.e. no gap). SEE DIAGRAM #1

2) Install BARBED NUT into steerer tube. For best accuracy, use special tools manufactured by 'Dia-Compe' or 'Park', if available. If not, then install the M-6 allen head bolt into the barbed nut and tap into place with a hammer to depth of approximatel y 1 cm. SEE DIAGRAM #2

3) Apply a coating of grease to the portion of the headset cups that are to be pressed into the frame. SEE DIAGRAM #3.

4) Press the upper and lower headset cup/bearing/seal assemblies into the frame using a high quality bicycle cup press. Guide the cups carefully into the head tube to ensure that they are being pressed in straight. Make sure that both cups fit in flush with the faces of the head tube and there are no gaps.

Warning: Do not use cup press tools that make contact with either the inside races of the bearings, or the LOWER LIP SEAL. Use of such tools for installation will result in damage to these components and will dramatically reduce their performance and service life.

Note1: *We recommend use of models such as those made by 'Park Tool Co.'* as this design distributes the load across the entire surface of the headset cup rather than just the inside race, thus protecting the bearing races from damage during installation. SEE DIAGRAM #4.

Note2: For best results we highly recommend that a professional bike shop REAM AND FACE the head tube of your frame and install the cups for you.

5) Apply a light film of oil or grease to the following:
top race o-ring seal / upper cup o-ring seal / lower cup seal
* This will ease installation, and help to decrease friction between these seals And their mating parts.

6) Slide the fork's steer tube through the frame's head tube. Use caution when sliding the CROWN RACE through LOWER LIP SEAL. While holding the fork in position, slide the THERMOPLASTIC TOP RACE onto the steer tube and down until it makes contact with the upper bearing. * This will be a tight fit as is necessary for the function of this headset. Rotating the THERMOPLASTIC TOP RACE slowly while pushing down will make installation easier.

Note: To ease installation of the THERMOPLASTIC TOP RACE; file a small chamfer onto the outside diameter edge at the top of the steer tube. This will act as a "lead-in" for the o-ring.

7) Slide any OPTIONAL HEIGHT ADJUSTMENT SPACERS you require onto the steer tube. * We recommend using at least two - 5mm spacers during initial set-up. Remember, if it's too high, you can always cut the steer tube shorter, but if you cut it too short initially, you can't add material back on!

Note: "Optional height adjustment spacers" are not included with the Race Face headset. These can be purchased separately to suit your height requirements, or, any non-keyed 1 1/8" headset spacers can be used.

8) Install STEM onto steerer tube, but DO NOT tighten clamping mechanism yet.

9) Drop ALUMINUM COMPRESSION CAP onto top of steerer tube and install M-6 allen head bolt through top cap and thread into BARBED NUT previously installed into steerer tube.

10) Tighten M-6 allen head bolt, using a 5 mm allen key, until all play i s removed from the headset mechanism but it still rotates freely. You have now achieved correct headset adjustment.

Note: Do not over-tighten! This mechanism is designed for pre-load only. Over-loading the allen head bolt may damage the ALUMINUM COMPRESSION CAP, or cause the BARBED NUT to slip, or adversely affect the service life of your headset's bearings. This operation should create very little load on the allen key.

11) Line up stem straight with your front wheel, then tighten the clamping mecha nism on the stem to lock in headset adjustment and stem position.

THIS COMPLETES THE INSTALLATION! NOW GO RIDE YOUR BIKE!

SERVICE INSTRUCTIONS:
The design of the Race Face headset enables you to completely remove and re-install the fork of your bike in minutes and requires only 1 tool: a 5 mm allen key! Use this feature to frequently inspect your headset on the inside. This is especially important after a particularly wet ride or after cleaning your bike off with a high pressure water hose.

CLEANING THE SYSTEM:
1) Remove allen head bolt and ALUMINUM COMPRESSION CAP, loosen stem clamping mecha nism, and remove stem.

2) Remove OPTIONAL HEIGHT ADJUSTMENT SPACERS and THERMOPLASTIC TOP RACE, then slide fork out of head tube.

3) Wipe all headset surfaces, steerer tube, and inside head tube with a clean dry rag to remove any moisture form the headset/head tube area.

4) Re-install and re-adjust headset as per installation instructions, starting with step #5.

RE-GREASING THE BEARINGS:
1) Follow steps 1 to 3 above.

2) Remove the LOWER LIP SEAL from the LOWER CUP, using a small flat head micro-screw driver. Slide the flat h ead of the screw driver between the LOWER LIP SEAL and the LOWER BEARING, then carefully pry the seal free. Alternate side to side if required.

Note 1: Do not pry against the contact lip of the seal. This will cause damage that will adversely affect sealing quality.

Note 2: Use extreme caution when removing seal so as not to deform or damage it in any way.

3) With the bearings still in the cups, remove the exposed rubber seal on both the upper and lower bearings. This can be achieved using a small flat head mi cro-screw driver. Slide the flat blade of the screw driver under the inside edge of the seal (on upper bearing) or the outside edge of the seal (on lower bearing) and gently pry the seal free from the bearing, rotating around the bearing as you go.

Note 3: Do not bend or deform the seal in any way! This will make re-installation impossible!

4) The ball bearings inside the cartridges will now be exposed. Spread a generous amount of grease into the bearings, then re-install the rubber bearing seals. They will easily slip back into place with hand pressure.

Note: Use only top quality water-proof grease! we recommend brands such as "Bel-Ray", "Phil Wood", or "Moly-Slip". Generic white lithium-based grease is NOT recommended.

5) Re-install the LOWER LIP SEAL into the LOWER CUP. This may be accomplished either using the headset cup press tool, or by hand pressure. Make sure pressure is applied only to the outside edge of the seal, and that the seal is pressed in until it is completely flush with the bottom face of the LOWER CUP.

6) Re-install and re-adjust headset as per installation instructions, starting with step #5.

REMOVAL OF BEARINGS FOR REPLACEMENT:
Note: The ultra-lightweight bearings used in the Race Face Thermo-SP headset should be removed from cups ONLY when they are being replaced with new bearings. Removal of th ese bearings from the cups will damage or destroy them, rendering them un-useable.

1) Follow steps #1 and #2 from "Re-greasing the bearings" above.

2) REMOVAL OF UPPER BEARING:
With the UPPER HEADSET CUP still in the frame, use a medium sized (approx. 1/4") flat head screw driver to pry the UPPER BEARING from the UPPER HEADSET CUP. Press the flat blade of the screw driver into the gap between the bottom of the inside bearing race and the headset cup. You may tap the screw driver lightly with a hamm er to "wedge" it into place. Use a twisting action on the screwdriver to break the bearing free. Repeat this process back and forth between your starting position and a position on the opposite side of the bearing (180 degrees) until the bearing is free of the cup. (see diagram #5).

3) REMOVAL OF LOWER BEARING:
***Note:** The LOWER BEARING of the Race Face Thermo-SP headset is a uni-directional angular contact bearing. Removal of this bearing from the lower cup results in the destruction of this bearing!

a) Removal of Inside Race: With the LOWER HEADSET CUP still in the frame, use a medium sized (approx. 1/4") flat head screw driver to pry the inside race of the bearing out of the assembly. Press the flat blade of the screw driver into the gap between the bottom of the inside bearing race and the headset cup. Use a twisting action on the screwdriver to break the inside race of the bearing free. (see diagram #5).

***Note:** all of the ball bearings from the cartridge will fall out when the inner race is remove d, leaving only the outside race of the cartridge bearing inside the headset cup

b) Removal of Outside Race: Press the flat blade of the screw driver into the gap between the bottom of the outside bearing race and the headset cup. Use a twisting action on the screwdriver to break the outside race free of the headset cup. Repeat this process back and forth between your starting position and a position on the opposite side of the bearing (180 degrees) until the bearing is free of the cup. (see diagram #5).

INSTALLING NEW BEARINGS:
1) With both headset cups still in the frame, clean the inside diameter of the cups and the outside races of the new bearings (press-fit surfaces) by applying a small amount of acetone or de-greaser to a clean rag and wipe the surfaces. *Keep acetone or de-greaser away from the inside of the cartridge bearings!

2) Apply 3 or 4 drops of #RC609 (green) Loctite compound to the inside diameter of the cups where the bearings will press-fit into the cups. This will remove any gaps and create a good bonded fit.

3) Use a high quality headset cup press tool to press the bearings into their respective cups. Ensure that the bearings are pressed in smoothly and evenly, without excessively loading the inside races of the bearings. Make sure that the bearings are pressed-in until they bottom-out at the base of the cup. Since both the bearings are recessed into the cups, there will be gaps of 1.3mm (upper) and 3.0mm (lower) between the bearings and the top edges of the respective headset cups. Wipe away excess Loctite from all surfaces.

Note 1: In the absence of appropriate cup press tools it is possible to use the headset's own retention system to press the bearings back into the headset cups. (See assembly diagram). This will have to be performed without the LOWER LIP SEAL, and therefore disassembly will be required to install the LOWER LIP SEAL, as well as to wipe-away the excess Loctite.

Note 2: The upper and lower bearings are significantly different, making it impossible to interchange them. T he upper bearing is a bi-directional radial bearing, so it can be installed either way. The lower bearing is uni-directional, and must only be installed with the raised / chamfered inner race facing the crown race (i.e. facing down when installed on the bike).

4) Install the LOWER LIP SEAL into the LOWER CUP. This may be accomplished either using the headset cup press tool, or by hand pressure. Make sure pressure is applied only to the outside edge of the seal, and that the seal is pressed in unt il it is completely flush with the bottom face of the LOWER CUP.

5) Re-install and re-adjust headset as per installation instructions, starting with step #5.