

RACETECH

FORK GOLD VALVE INSTALLATION VALKYRIE 20mm

FK code

TOOLS REQUIRED: (In addition to those required for fork disassembly.) In-lb Torque Wrench that accurately measures 0 to 50 in-lbs (0.58 kgf-m), 5mm Allen Wrench, Hi-strength Loctite (included), Metric Calipers, Metric Micrometer.

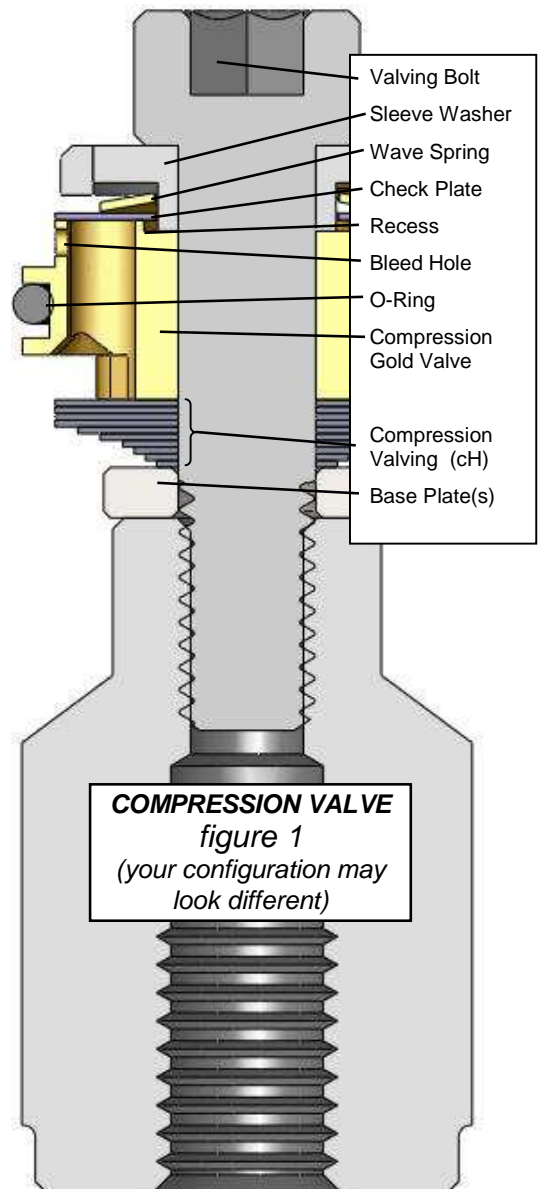
NOTE: The Valkyrie has a cartridge in the right leg only. It requires both a Compression and a Rebound Gold Valve as well as a spring. The left leg has only a spring and oil, no cartridge. The Damping Rod (left) leg may require special tools to disassemble. See your dealer if you require assistance.

DISASSEMBLY

- 1 **CLEANLINESS IS CRITICALLY IMPORTANT.** Completely **disassemble and clean your front forks.** If you are unfamiliar with this process, **STOP!!!! Do not proceed.** Seek out a qualified suspension technician to complete the installation.
- 2 **Remove the compression valve body** from the cartridge. Push the compression valve holder into the cartridge about 5mm (0.2") to allow access to the wire retaining clip. Remove the clip with a small screwdriver, it comes out easily. Once the clip is out, pull the holder out by screwing the bolt back in and pulling. Be very careful when holding the cartridge tube, it is very easy to dent or distort it.
- 3 Remove the Allen bolt and **disassemble the valving stack.**
- 4 Lay out the pieces in the order they come off the shaft. **Clean and inspect** all the original parts. Be careful to maintain the original order and orientation of the parts. (You may need some of the original valving for spacing purposes, do not discard.)

COMPRESSION VALVING

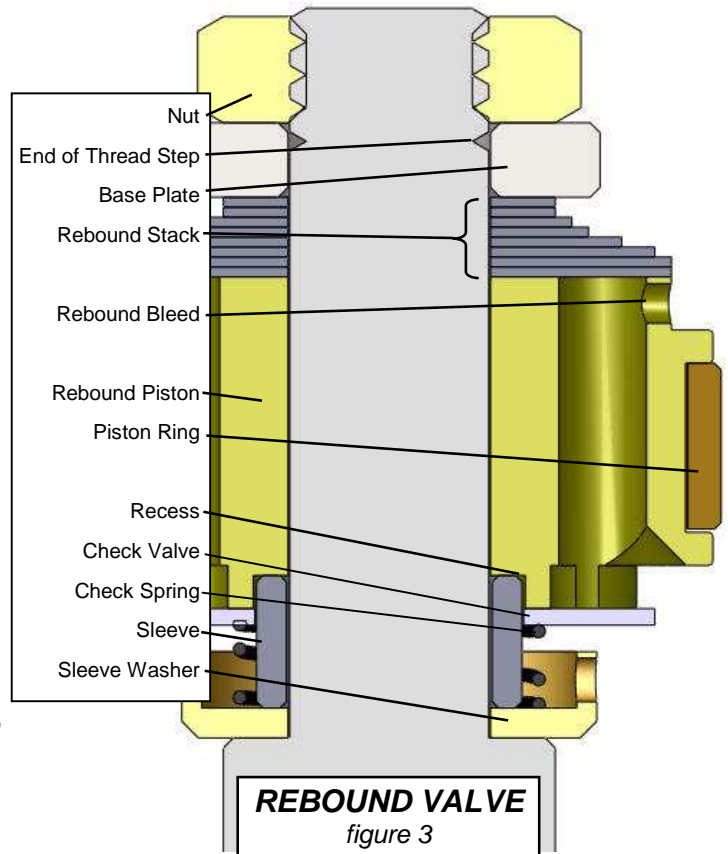
- 5 To obtain custom valving settings log on to **racetech** go to **Digital Valving Search**, insert your **Access Code** (printed on the top of the first page), input your **personal specifications** and print the custom setup information.
- 6 Take the Allen Bolt and install the Cupped Washer, Check Valve Spring Washer and Check Valve Plate. Install the O-ring on the Gold Valve and **place the Gold Valve on the shaft** (the side of the valve with the recess goes on first).
Please make sure there is already a low speed bleed hole in the Gold Valve. If there is not, please call.
- 7 **Install the valving** with the largest shim closest to the valve. Place the new base plate (thick washer) on the shaft.



- 8 **Inspect the check valve** (*large ID washer*) to make sure it is free and can move up and down against the spring.
- 9 Install the bolt into the holder and tighten it. **CAUTION! The threads can be damaged without extreme care. You must use Loctite. The 6mm bolt must be torqued with a torque wrench to 30 in-lbs (2.5 ft-lbs or 0.35 kgf-m), NO MORE! Do not take this step lightly.**
- 10 **Inspect the assembled stack.** Hold the compression stack up to the light and look for proper assembly. If there are any problems, disassemble the stack and look for burrs to surface and/or dirt in the valving. Reassemble and check again.

REBOUND GOLD VALVE

- A Remove the damping rod from the cartridge.
Disassemble the rebound stack. File the peening off the end of the shaft that holds on the nut. Lay out the parts in the order they come off the shaft. Clean them thoroughly.
- B **Assemble the Rebound Gold Valve** on the shaft. Starting with the cupped washer, spacer, check spring, check plate, Rebound Gold Valve [recess first, towards check plate], stock rebound valving [which is: (5) 0.10x17, (2) 0.20x17, (1) 0.20x10.5], then the base plate and the nut. Use Loctite and torque the nut to 30 in-lbs (0.35 kgf-m).
Please make sure there is already a low-speed bleed hole in the Gold Valve. If there is not, please call.
- C **Install the nut** and tighten it. **CAUTION! The threads can be damaged without extreme care. You must use Loctite. The 6mm nut must be torqued with a torque wrench to 30 in-lbs (2.5 ft-lbs), NO MORE! Do not take this step lightly.**
- D **Reassemble the cartridge installing the new piston ring.**



ASSEMBLY

- 11 **Install the compression assembly into the cartridge according to the procedure in your manual.** Install the retaining clip and seat the compression valve assembly.
- 12 **Reassemble the forks. Install the new fork springs** using the stock spacers. Completely disassemble the left leg which only has a spring and oil in it. Follow the procedure outlined in the service manual. You may need special tools. See your dealer if you require assistance.
- 13 Use Ultra Slick USF-05 (5w) and bleed the cartridge. Completely bottom the forks and the damping rod and **set the oil level** to 150mm (6") with the springs in.
- 14 **Install the cap.** Use Loctite on the damping rod threads at the cap and torque it to manufacturers specs.
- 15 When the forks are put on the bike it is very important to **align the fork tubes**. This is done by first tightening the axle all the way, then the tubes are aligned by pumping the forks up and down with the right-hand axle clamp loose. This will line the tubes up so they won't bind. Finally, tighten the axle clamp.

BUILDING the VALVING STACK - STREET 20mm

Welcome to the wonderful world of Gold Valving. To obtain your personal Custom Suspension Settings:

1. Log on to racetech
2. Go to Digital Valving Search (DVS)
3. Input your Access Code (on top of page 1) when prompted
4. Input your personal specifications
5. Print your DVS Custom Suspension Setup Sheet

Once you have your valving settings, build your valving stacks.

EXAMPLE:

The Total Valving Stack is cH33:

Starting from the Gold Valve piston face

Compression Stack – cH33

- (3) 0.15x17
- (1) 0.10x15
- (1) 0.10x13
- (1) 0.10x12
- (1) 0.10x11
- (1) 0.10x10
- (1) 0.10x9

NOTE: All measurements are metric (for inches divide by 25.4). The valving list starts at the piston face and goes towards the base plate. Valve specs are listed by (QUANTITY) THICKNESS x DIAMETER. A number in parentheses means quantity. If there is no number in parentheses the quantity is one. Example: (2).15x17 means quantity two, 15 hundredths of a millimeter thick by 17 millimeters in diameter.

FORK GOLD VALVE CHART - STREET 20mm

Chart #20S--054 © P Thede

STIFFER →

cH30	cH31	cH32	cH33	cH34	cH35	cH36	cH37	cH38	cH39
.10x17	(1).15x17	(2).15x17	(3).15x17	(4).15x17	(5).15x17	(6).15x17	(7).15x17	(8).15x17	(9).15x17
.10x15	.10x15	.10x15	.10x15	.10x15	.10x15	.10x15	.10x15	.10x15	.10x15
.10x13	.10x13	.10x13	.10x13	.10x13	.10x13	.10x13	.10x13	.10x13	.10x13
.10x12	.10x12	.10x12	.10x12	.10x12	.10x12	.10x12	.10x12	.10x12	.10x12
.10x11	.10x11	.10x11	.10x11	.10x11	.10x11	.10x11	.10x11	.10x11	.10x11
.10x10	.10x10	.10x10	.10x10	.10x10	.10x10	.10x10	.10x10	.10x10	.10x10
.10x9	.10x9	.10x9	.10x9	.10x9	.10x9	.10x9	.10x9	.10x9	.10x9

Shim Dimensions - (QUANTITY) THICKNESS x DIAMETER in mm (for inches divide by 25.4)

TUNING NOTES

- Damping is sensitive to vertical wheel velocity, not position in the stroke. If your valving needs to be stiffer, move to the right. This will improve bottoming resistance by increasing damping overall, making it stiffer through the entire speed range. If the forks are too firm, go the opposite direction, to the left.
- Spring rate is dependent mostly on rider and bike weight. Spring rate, pre-load and compression damping; affect dive, wallow and bottoming.
- Oil level can drastically alter bottoming resistance and only affects the last part of the travel (near bottoming). If you like the action, but the forks bottom too easily, raise your oil level by 10mm (0.4").