

# RACE TECH

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## FORK GOLD VALVE INSTALLATION - DIRT 30 x 7mm SACHS

<IP FMGV 300701w.doc> FMGV 300701 P Thede © 12.3.15

**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), Hi-Strength Loctite (included), Metric calipers and micrometer.

**NOTE:** Many riders require different fork springs. Please consult [www.racetech.com](http://www.racetech.com) or call Race Tech.

**CAUTION!** The thread can be damaged without using extreme care. They are made of aluminum and strip easily.

### DISASSEMBLY

D1 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

D2 Remove the nut.

D3 Disassemble the valving stack. 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 will need some of the original parts, do not discard.)

### VALVING SELECTION

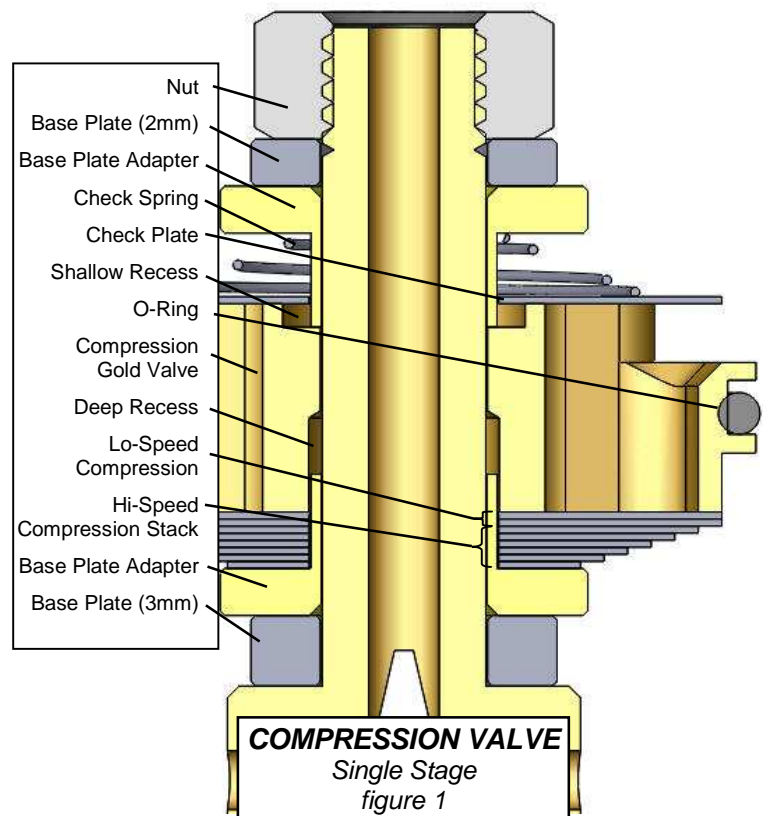
V1 To obtain custom suspension and valving settings log on to [www.racetech.com](http://www.racetech.com), go to Digital Valving Search, insert your Access Code (printed on the top of the first page), input your personal specifications and print the custom setup information. If you do not have access to the web contact our Technical Support Hotline 951.279.6655 for recommendations. Note: The Access Code is good for one limited-time use.

V2 Once you have selected your valving begin assembling the valve. (figure 1) Place the original 3mm thick Base Plate on the shaft of the compression holder. Next, install the Base Plate Adapter. This bushes the stock 7mm shaft up to 8mm.

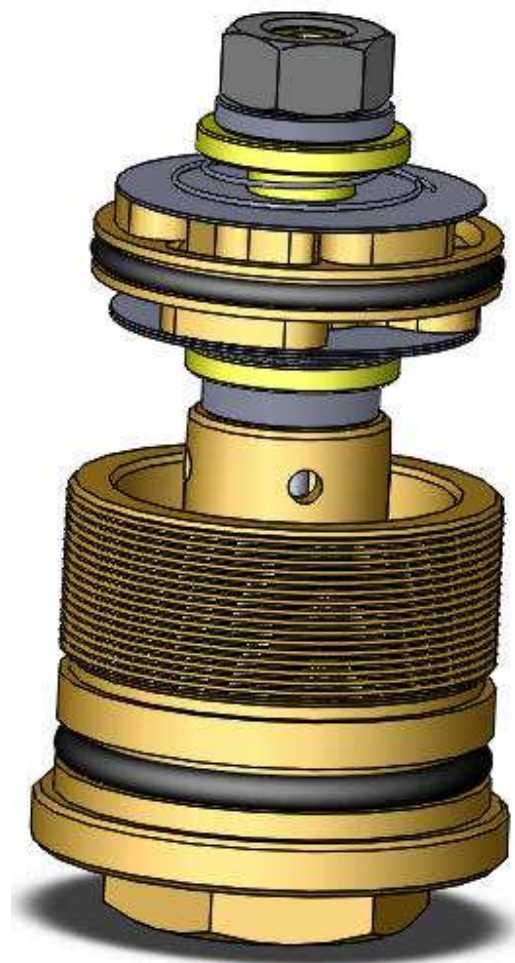
V2a **Single Stage Stacks** (figure 1) - A Single Stage Stack is a two-part stack made up of a combination of a **Lo-Speed Stack** and a **Hi-Speed Stack with NO Crossover**. Put the valving on the shaft in the order listed, starting with the smallest diameter shim of the Hi-Speed Stack. Then the Lo-Speed Stack gets placed on top of the Hi-Speed Stack. **You will not use a Crossover.**

V2b **Two Stage Stacks** (figure 2) - For Two Stage Stacks the total valving stack is made up of a **combination of a Lo-Speed Stack, a Lo-Speed Crossover and a Hi-Speed Stack**. Put the valving on the shaft in the order listed, starting with the smallest diameter shim of the Hi-Speed Stack. Then the Lo-Speed Crossover gets placed on top of the Hi-Speed Stack, then the Lo-Speed Stack ends up closest to the Gold Valve.

V3 Make sure the o-ring is on the Gold Valve. **Place the Gold Valve on the shaft** with the Deep Recess on the piston facing the valving (down).



- V4 **Place the Check Plate on the shaft**, then the original tapered spring (large diameter towards the Check Plate). Install a second Base Plate Adapter with the sleeve going into the Shallow Recess on the top of the valve. Be sure the sleeve fits into the recess in the piston and the plate is free.
- V5 Notice that the straight part of the 7mm shaft is exposed slightly. Install the 2mm thick Base Plate to cover the straight part of the shaft. This is critical. You must be very sure that **the Nut does not run out of thread** causing it to come loose or not damp properly. **Be sure that the nut has at least 4mm of engagement!!!**
- V6 **CAUTION! The threads can be damaged without extreme care. They are made out of aluminum and strip easily. To install the new nut you must use Loctite. The 7mm nut must be torqued with a torque wrench to 35 in-lbs (2.9 ft-lbs or 0.41 kgf-m), NO MORE! Do not take this step lightly.**
- V7 **Check your work.** For two stage stacks, hold the compression stack up to the light and look for the gap at the cross-over between the lo-speed and hi-speed stack (*the small shim near the top of the stack*). This gap should be visible, if it isn't, disassemble the stack and look for burrs to surface and/or dirt in the valving. Reassemble and check again.

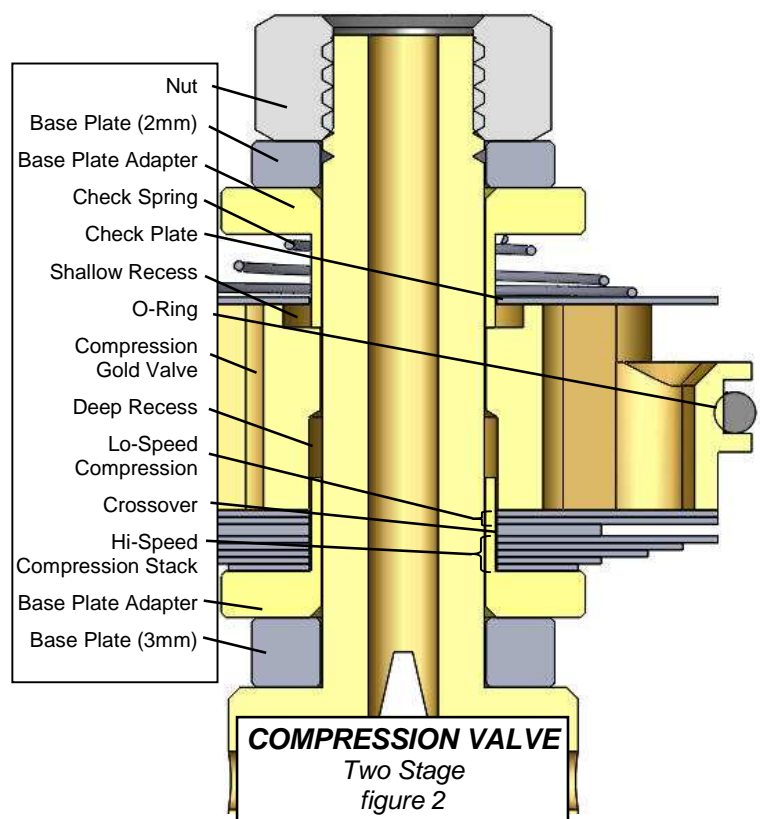


## ASSEMBLY

- A1 **Reassemble the forks according to the procedure in your manual.** Torque the compression valve body to manufacturers specs. For most forks this is 43 to 60 ft-lbs (58 - 82 NM). Consult owner's manual for specs. Bleed the cartridge and set the oil level using Ultra Slick USF-05 (5w).
- A2 Use Loctite on the damping rod threads at the cap and **torque it to manufacturers specs** (typically 16 to 21 ft-lbs [21.7 – 28.5 NM]). Consult owner's manual for specs.
- A3 Adjust the compression and rebound adjusters, spring preload, and oil level according to the Digital Valving Search Setup Sheet.
- A4 **Install the forks on the bike.** 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.
- A5 **If you have any questions** please call our Technical Support Hotline at 951.279.6655. Feel free to experiment and please call if you need us. Have fun!

### TUNING NOTES

- **Damping depends on vertical wheel velocity, not position in the stroke.**
- **If the forks feel too soft all the way through,** increase compression damping with the external adjuster. If that is not enough, change the compression stack internally.
- **The compression damping adjuster** controls the lowest speed damping and affects the entire range. NOTE: The closer to maximum damping (full clockwise) the more effect one click makes. In other words going from 3 to 2 out has a lot more effect than going from 14 to 13. Adjusters are numbered from all the way clockwise (the slowest or firmest setting).
- **Spring rate affects ride height, dive and bottoming.** Typical spring preload should be 3-5mm (0.1–0.2").
- **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 10cc or 10mm.



# **BUILDING the VALVING STACK - DIRT 30x8mm**

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

1. Log on to [www.racetech.com](http://www.racetech.com) and go to Digital Valving Search (DVS)
2. Input your Access Code when prompted
3. Input your personal specifications
4. Print your DVS Custom Suspension Setup Sheet

If you do not have access to the Internet contact our Technical Support Hotline 951.279.6655 for recommendations. Note: The Access Code is good for one bike, limited-time use.

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

**Single Stage** - made up of a Lo-Speed Stack and a Hi-Speed Stack. You will not use a Lo-Speed Crossover.

**Two Stage** - made up of a Lo-Speed Stack, Lo-Speed Crossover and a Hi-Speed Stack.

## **Example Single Stage (figure 1)**

Starting from the Gold Valve piston face:

### **Lo-Speed Stack**

(4) .15x27

### **Lo-Speed Crossover**

### **Hi-Speed Stack**

- (1) .10x27
- (1) .10x25
- (1) .10x23
- (1) .10x21
- (1) .10x19
- (1) .10x17
- (1) .10x15
- (1) .10x13
- (1) .10x12

## **Example Two Stage (figure 2)**

Starting from the Gold Valve piston face:

### **Lo-Speed Stack**

(4) .15x27

### **Lo-Speed Crossover**

(1) .10x20

### **Hi-Speed Stack**

- (1) .10x27
- (1) .10x25
- (1) .10x23
- (1) .10x21
- (1) .10x19
- (1) .10x17
- (1) .10x15
- (1) .10x13
- (1) .10x12

**OIL LEVEL, EXTERNAL ADJUSTERS, SPRING RATE, and PRELOAD are listed on the DVS on [racetech.com](http://racetech.com).**

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 parenthesis the quantity is one. Example: (2).15x30 means quantity two, 15 hundredths of a millimeter thick by 30 millimeters in diameter.

