

# RACE TECH

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## FORK COMPRESSION & REBOUND GOLD VALVE INSTALLATION

### Triumph Tiger & Speed Triple 1050

FK code

<IP FMGV S2053C.doc> P. Thede © 2.4.14 4 pgs

**TOOLS REQUIRED:** Service Manual, common hand tools required for disassembly and assembly, TFSH 10 Shaft Holding Tool, TFBT 1014 Bleed Tool, TFSD 43 Seal Driver, Hi-strength Loctite (included), 400 grit (very fine) or finer Sandpaper.

**CAUTION: THIS PROCEDURE SHOULD ONLY BE DONE BY A QUALIFIED SUSPENSION TECHNICIAN. IF YOU ARE NOT FAMILIAR WITH THIS PROCEDURE, STOP! CONTACT RACE TECH OR A QUALIFIED SUSPENSION TECHNICIAN.**

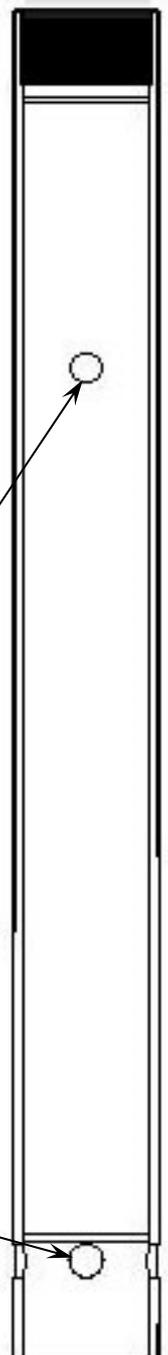
**These forks have compression in one leg and rebound in the other. They have serious problems that cause inconsistent damping and extreme harshness. This kit makes major changes to cure these problems. IT IS VITALLY IMPORTANT TO KEEP THE COMPRESSION AND REBOUND COMPONENTS SEPARATE. DO NOT MIX UP THE FORK PARTS.**

### DISASSEMBLY – Both Legs

- 1 **Disassemble the forks** and remove the cartridges.
- 2 **Remove the Base Valve assembly from the bottom of the cartridge. This will be replaced with a pre-assembled Base Valve.** Push the stock valve assembly up into the cartridge tube about 25mm (1"). This will allow access to the retaining clip. Remove it from the groove with a clip tool or small screwdriver. Screw the stock bottom bolt back into the base valve and pull the valve out.
- 3 **Remove the damping rod from the cartridge.** Slide the rod out of the cartridge tube.
- 4 **Lightly file the peening off the end of the shaft that holds on the nut.** Remove the nut and disassemble the valving stack. Lightly deburr the end of the shaft.

#### **COMPRESSION CARTRIDGE TUBE** (the one with (2) holes near the top)

Drill (4) 6mm (15/64") Holes, 27mm (1.06") from the bottom of the Tube. Deburr inside & out.

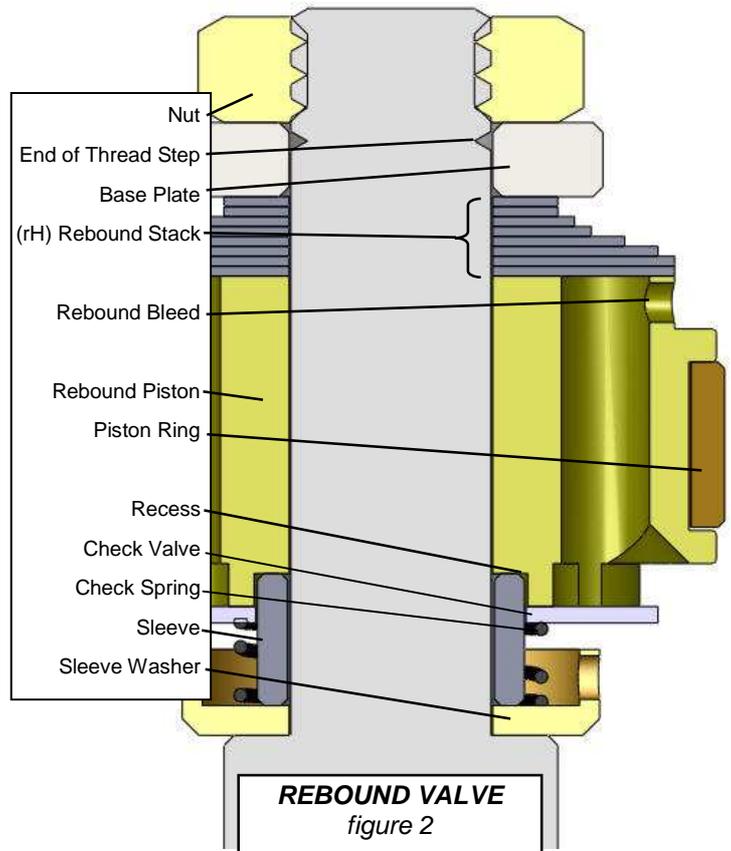


## VALVING

- To obtain custom valving settings for your particular application log on to [www.racetech.com](http://www.racetech.com), go to Digital Valving Search (DVS), 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.**

### REBOUND LEG (figure 2)

- The Rebound Leg is the one with (4) holes at the bottom. It looks like a standard cartridge. Install the Rebound Gold Valve on the Damping Rod.
- Assemble the Rebound Gold Valve on the Damping Rod.** Starting with the cupped washer, check spring, check plate, Rebound Gold Valve (the recess towards the check plate), **Rebound Valving Shim Stack (from DVS)**, base plate and nut. Use Loctite and torque the nut to 30 in-lbs (0.35 kgf-m).  
**Polish both damping rods with Scotch Brite or 400 grit (very fine) or finer sandpaper.** This will drastically improve bushing life and reduce friction. The important part is the lower half of the rod.
- Install the Rebound Damping Rod into its Cartridge Tube** (4 holes on the bottom only).



### Rebound Valving (on Damping Rod)

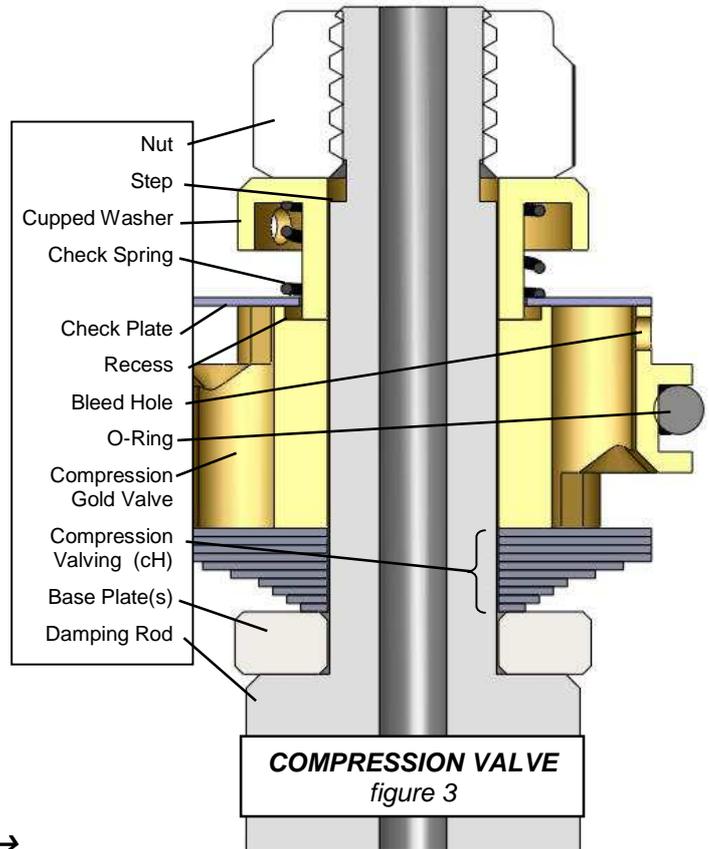
Slower →

rH16	rH17	rH18	rH19	rH20	rH21
(5) .15x17	(6) .15x17	(7) .15x17	(8) .15x17	(9) .15x17	(10) .15x17
.10x15	.10x15	.10x15	.10x15	.10x15	.10x15
.10x12	.10x12	.10x12	.10x12	.10x12	.10x12
.10x9	.10x9	.10x9	.10x9	.10x9	.10x9

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

### COMPRESSION LEG (figure 3)

- 9 **The Compression Leg is the one with (2) additional holes up at the top of the Cartridge Tube and no holes at the bottom (stock).** Drill four 6mm (15/64") Compression Holes, 27mm (1.06") from the bottom. Deburr inside and out.
- 10 **Assemble the Compression Valve on the Damping Rod.** The Piston and Valving will be reversed from the Rebound Leg (this is not a normal setup). Starting with the base plate, **Compression Valving Shim Stack (from DVS), Compression Gold Valve** (it is the same as the Rebound Gold Valve but is reversed on the shaft), check plate, (the recess towards the check plate), check spring, cupped washer, and nut. **NOTE: THE COMPRESSION LEG WILL NOT MAKE ANY REBOUND DAMPING.**
- 11 **Install the Compression Damping Rod into the Compression Cartridge Tube** (2 holes at the top + 4 holes on the bottom).



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#### Compression Valving (on Damping Rod) *Stiffer →*

cH12	cH13	cH14	cH15	cH16	cH17	cH18	cH19	cH20	cH21	cH22
(3) .10x17	(4) .10x17	(5) .10x17	(6) .10x17	(7) .10x17	(8) .10x17	(9) .10x17	(10) .10x17	(11) .10x17	(12) .10x17	(13) .10x17
(3) .10x9	(3) .10x9	(3) .10x9	(3) .10x9							

### BASE VALVE STACK

The Base Valves (on the bottom of both cartridges) are G2-R Compression Stacks; Pre-assembled. The Base Valve Valving Chart is provided for reference only; no assembly or adjustment needed.

cr1009 / cH33 Base Compression Valving
(2) .15x9
(1) .10x9
(3) .15x17
.10x15
.10x13
.10x12
.10x11
.10x10
.10x9
no bleed

## ASSEMBLY – Both Legs

1. **Install the Base Valve Assembly in the Cartridges.** Use the Pre-Assembled Base Valve Assembly provided in the kit to replace the stock Base Valve. They are identical. There is no need to revalve the new Base Valve Assembly. Insert the circlip that holds in the Base Valve and seat the Base Valve Assembly against the circlip.

2. **Reassemble the forks according to your manual.**

3. **Set the fork spring preload.**

*Follow the instructions in the Race Tech Fork Spring Kit.*

Note: You must have washers on both ends of the spacer. The spacer must not rest directly on the spring or cap. If you are not installing Race Tech Fork Springs reuse the OEM parts in their correct order.

4. **Install the fork fluid.** Pump the cartridge rod (the TFBT 1014 Bleed Tool is helpful) to bleed the air out.

**Set the oil level to the DVS value using USF-05 Suspension Fluid** with the fork and cartridge rod completely bottomed and the spring out.

5. **Install Fork Spring** with the Washer, Spacer, and Washer.

6. **Install the cap on the cartridge rod.** Use Loctite on the damping rod thread at the cap and torque it to manufacturers' specs. Set the Compression and Rebound Adjusters to DVS values (both of these are on the fork caps).

## FORK INSTALLATION

When the forks are reinstalled on the bike it is very important to **align the fork tubes on the axle** so they won't bind. First, tighten the axle all the way, and then pump the forks with the right-hand axle clamp loose. Finally, tighten the axle clamp.

***If you would like assistance please contact the Race Tech Technical Support Hotline 951.279.6655***

