

# RACE TECH

1501 Pomona Rd, Corona, CA 92878 • 951.279.6655 • racetech.com

## STEERING DAMPER GOLD VALVE INSTALLATION 24mm

<IP CMGV 2401.doc> P Thede © 4.28.11

3 pages

**TOOLS REQUIRED:** (In addition to those required steering damper removal.) In-lb torque wrench that accurately measures 0 to 50 in-lbs (0.58 kgf-m), 10 mm wrench, Fine flat file, Hi-strength Loctite, Metric calipers, Metric micrometer 0-25 mm and Internal Retaining Ring Pliers.

### DISASSEMBLY

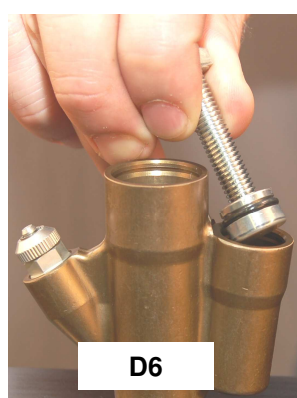
- 1 Remove Steering Damper from the motorcycle.

**NOTE:** If you are unfamiliar with this process **DO NOT PROCEED**. Seek a qualified technician to complete installation.

- 2 Clamp the Steering Damper in a Vise. Use Retaining Ring Pliers to **remove the Shaft Retaining Ring**.
- 3 Remove the Damping Shaft Assembly.
- 4 Pour out the old fluid and dispose of properly.
- 5 Next thread the M4x.7 removal bolt into the Reservoir Cap. Press down on the bolt to expose the Retaining Clip. **Remove the Clip, Cap and Spring**.
- 6 Next thread the M8x1.25 Bolt into the Floating Piston and **remove the Piston**.
- 7 Clean and dry all parts.

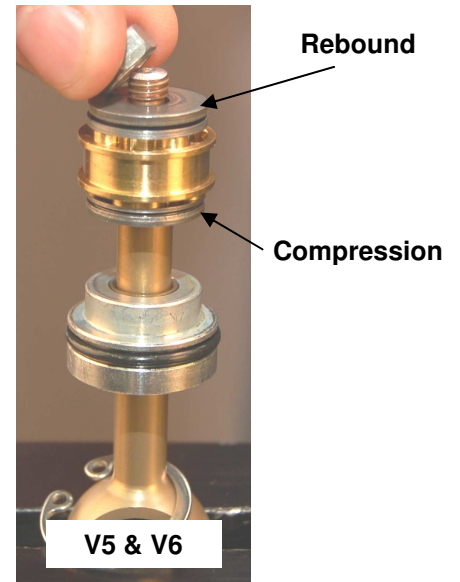
**CAUTION! THIS NEXT STEP IS CRITICAL AND SHOULD BE DONE BY A QUALIFIED TECHNICIAN**

- 8 File the peening that retains the Shaft Nut off flat. **Remove the Shaft Nut**. Once you have the Nut off, slightly chamfer the end of the shaft with a fine file and check to make sure that the thread is in good shape.
- 9 Disassemble the Valving Stack. Lay out the pieces in the order they come off the shaft. Clean and inspect all the original parts including the Shaft, Seals and Body. **Note: Rebuild parts are available at Race Tech.**



## VALVING SELECTION

- Starting with an empty shaft, **install the Circlip, Seal Head and stock Base Plate.**
- Select your preferred damping from the chart below. Use **C2 and R2** unless you have experience with this kit.
- Build the Compression Valving Stack** starting with the smallest diameter Shim and ending with the largest diameter Shim against the Gold Valve Piston face. Valving Stacks are listed from the piston face.
- Check to see there are no burrs on the Gold Valve Piston and the piston faces are flat. **Install the Gold Valve on the shaft with the larger ports facing down towards the compression stack.**
- Build the Rebound Valving Stack.** Valving Stacks are listed from the piston face.
- Reinstall the stock Rebound Base Plate and Nut.** Use Loctite 271 and torque the nut to 30 in-lbs.
- Hold the completed valving assembly up to the light and **visually inspect the stack.** Check for dirt or any irregularities in the stack. If anything looks abnormal, disassemble the valving and look for dirt, burrs on the valve or burrs on the shims. Once corrected, reassemble and inspect again.



### NOTE:

- The **Compression Valving** controls handlebar movement coming back to center.
- Rebound Valving** controls the bars as they move away from center.

### Compression Valving

slower →

C1	C2	C3
(3) .15x20	(4) .15x20	(5) .15x20
.10x19	.10x19	.10x19
.10x17	.10x17	.10x17
.10x15	.10x15	.10x15
.10x13	.10x13	.10x13
.10x11	.10x11	.10x11

### Rebound Valving

slower →

R1	R2	R3
(7) .15x20	(8) .15x20	(9) .15x20
.10x19	.10x19	.10x19
.10x17	.10x17	.10x17
.10x15	.10x15	.10x15
.10x13	.10x13	.10x13
.10x11	.10x11	.10x11

Shim dimensions - (QUANTITY) THICKNESS x DIAMETER in mm.

## REASSEMBLY

- 1 Reassemble the damper.** Make sure everything is clean. Clamp the shock body in the vise. Thread the M8x1.25 Bolt into the Floating Piston. Lightly grease the O-ring. Fill the reservoir completely with USF05 Suspension Fluid.
- 2 Insert the Reservoir Piston into the Reservoir** making sure the oil overflows (so there is no trapped air). Press it down to the bottom of the Reservoir Body. This will force the oil to the other side into the main Body. (R2)
- 3 Install the Reservoir Spring, Washer, Cap and Retaining Clip.** (R3)
- 4 Fill the main body** most of the way with fluid. **Install the damper shaft** holding the Piston Ring together as you insert it into the body. The shaft should go into the body relatively easily.  
**Bleed the bubbles** past the piston by stroking the shaft quickly and forcefully on compression and pulling up slowly on rebound. Quickly on compression to open the valving allowing the trapped air to get out. Slowly on rebound or bubbles will form behind the piston as you pull the shaft up.
- When you are done bleeding the shock and all the bubbles are gone, **fill the Body to the top with the fluid and compress the shaft completely. Push the Seal Head down the Shaft and into the fluid.** Once the O-ring seals on the body the Shaft will extend until it is up against the Seal Head.
- At this point it will be harder to push the Seal Head into the Body because the Spring in the Reservoir is being compressed. **Push the Seal Head in with force until the Retaining Clip Groove is exposed. Install the Retaining Clip onto the Seal Head.** (R6)
- Double check all Clips to make sure they are seated in the grooves.**
- At this point **compress the Damper** to make sure that it goes through its stroke easily and extends all the way. If it does not, stop, disassemble and repeat the process.
- Set the adjuster to 10 clicks out from all the way in.** This puts you in the middle of the adjuster range. Fine tune adjustments from here.
- Clean any excess oil off, lube the Heim joints and install onto the bike.

