

RACE TECH

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FORK GOLD VALVE COMPRESSION AND REBOUND INSTALLATION HONDA GL1800 GOLD WING

<IP FMGV S2048C.doc> ©P Thede 6-15-22

TOOLS REQUIRED: In addition to the Service Manual along with common hand tools required for disassembly and assembly we recommend; TFOL 02 Oil Level Tool, TFBT 1014 Bleed Tool, TFSD 46 Seal Driver, Hi-strength Loctite (included), 400 grit (very fine) or finer Sandpaper, 8mm (5/16") drill and drill motor.

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.

CARTRIDGE LEG (RIGHT SIDE)

DISASSEMBLY

- 1 **Disassemble the forks** and remove the cartridge.
- 2 **Remove the compression valve.** Push the compression valves up into the fork about 25mm (1"). This will allow access to the retaining clips, remove them with a small screwdriver. Next screw the bottom retaining bolt into the base of the valves, pull them out.
- 3 **Remove the rebound rod from the cartridge.** Being very careful not to damage the rod or sealing bushing in 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 holding on the rebound valving and **disassemble the valving stack.** Lightly deburr the end of the threads.

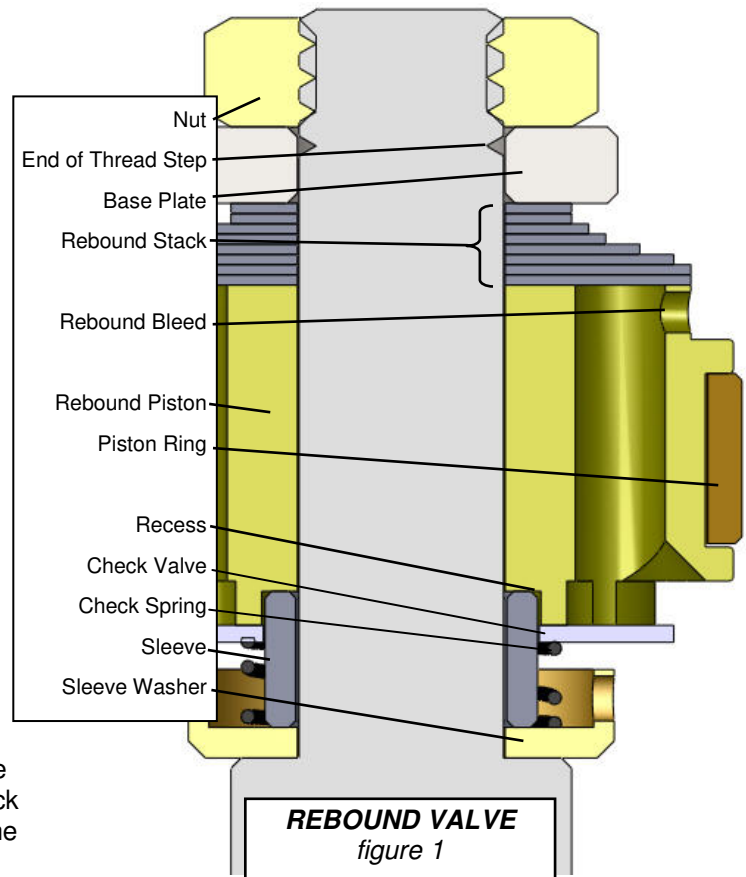
VALVING

- 5 **Assemble the Rebound Gold Valve.** Starting with the cupped washer, check spring, check plate, then the Rebound Gold Valve (with the recess towards the check plate). Note: bleed is already pre-drilled. Next install the Rebound Valving Shim Stack, then the Base Plate and the Nut. Use Loctite and torque the nut to 30 in-lbs (0.35 kgf-m). Next install the Piston Band.

Note: GOLD VALVES supplied in this kit come with bleeds PRE-DRILLED for the GL1800

Polish the damping rods with 400 grit (very fine) or finer sandpaper. This will drastically improve bushing life and will reduce drag as well. The important part is the lower half of the rod as that is the part that contacts the damping rod bushing.

- 6 Check the Compression Valving to match your DVS Setup Sheet.



ASSEMBLY

1. **Install the Gold Valve Compression Assembly** into the cartridge. Insert the circlip into the groove, screw the bolt back in and pull to seat the assembly on the circlip.
2. **Reassemble the forks according to your manual.**
3. **Set the fork spring preload.** Follow the instructions in your 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 the 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 using the TFBT 1014 Bleed Tool to bleed the air out. **Set the oil level using USF-05 Suspension Fluid** with the cartridge fork and cartridge rod completely bottomed and the spring out.
5. **Install Fork spring** with washer, spacer, and washer.
6. **Install the cap on the cartridge rod.** Use Loctite on the damping rod threads at the cap and torque it to manufacturers specs.

Race Tech Fork Springs in the appropriate rate are strongly recommended to realize the full benefit of this kit
Please see racetech.com/ProductSearch for spring rates.

RT Technical Support: 951.279.6655

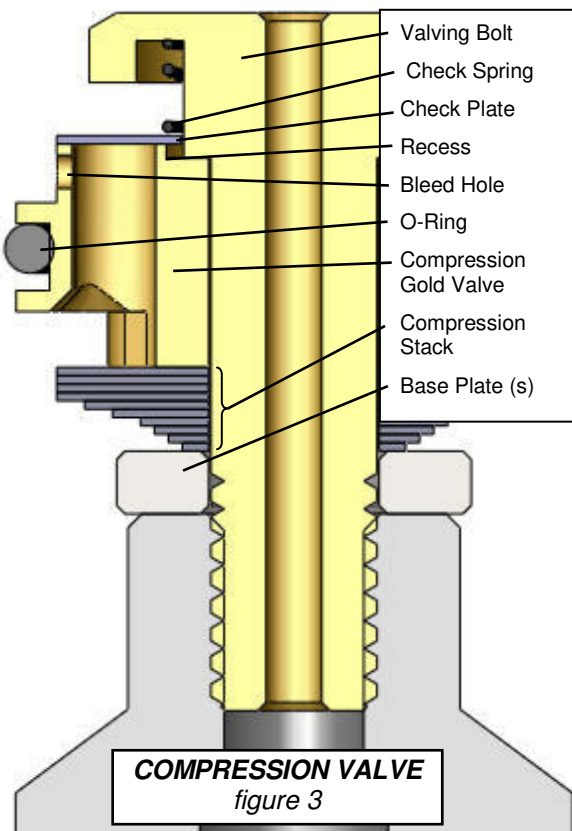
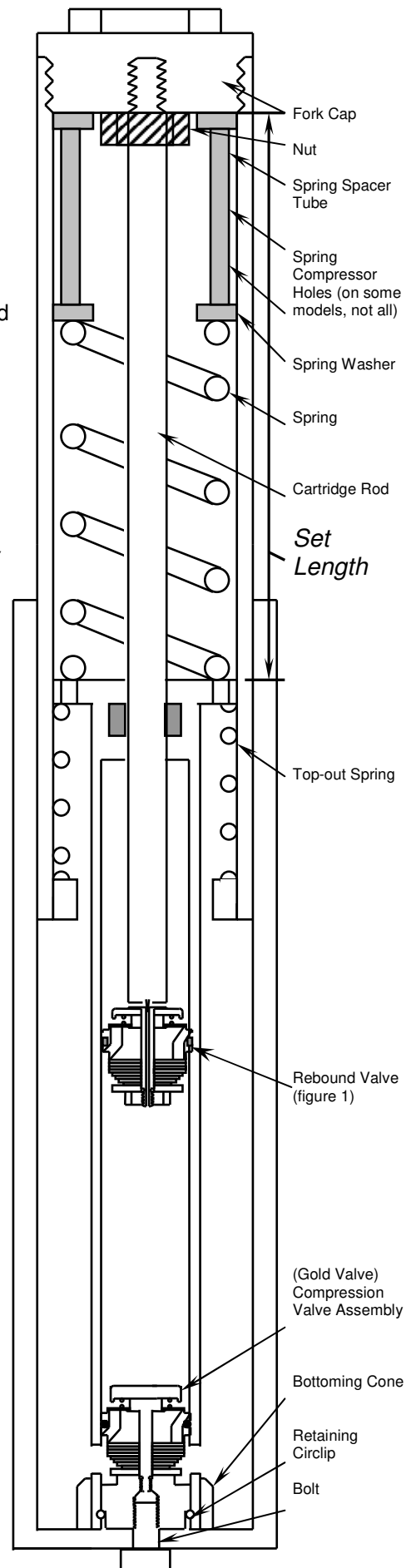


figure 2
Cartridge
assembly



DAMPING ROD LEG (LEFT SIDE)

DISASSEMBLY

- Remove the damping rod.** An air impact and a long Allen socket helps a lot. For stubborn bolts, use a drift and beat on the head of the damping rod bolt to jar the threads loose.
You will need to remove the Dust Seal, Circlip, Oil Seal, and Bushings as the Damping Rod will not slide out without complete fork leg disassembly. The fork tubes are "slide-hammered" apart after the Circlip is removed. Consult your owner's manual.
On the Damping Rod, remove the 2 large washers at the bottom of the damping rod along with the spring and circlips that retain them. You will not need these for reassembly, leave them out. (This disables the anti-dive and is no longer necessary)
- Enlarge the top set of existing compression holes in the damping rod to 8mm (5/16 inch) and add additional holes so you end up with four upper holes (2 sets of 2 holes) (figure 4). Leave the bottom set of holes alone.** When drilling the new holes, space them lengthwise 7/16" (10mm). The new set of holes must be 90° to the last set. Deburr the compression holes, inside and out. Do not modify the rebound holes.
- Set the Emulator Valving according to the DVS Setup Sheet.** Check the tightness of the jam nut on the Emulator.

ASSEMBLY

- Reassemble** the fork leg according to your manual. Remember to install the top-out spring and aluminum bottom-out cone. Use manufacturers specs for damping rod bolt torque.
- Set the fork spring preload** by making the correct length spacer. Consult the Spring Preload instructions in Product Search.

Preload is the amount the spring is compressed from fully extended when it is installed.

Set Length is the installed length of the spring (with the fork fully extended).

A Measure the Set Length:

- Drop the Emulator down the tube. It sits on top of the damping rod with the Emulator Valve Spring facing up and is held in place with the main fork spring (figure 4). Visually check to make sure the Emulator is sitting squarely on top of the damping rod.
- Extend the fork tube all the way. Use a Tape Measure and measure from the point the spring sits on the top of the Emulator to the top of the fork tube.
- Measure the Cap Height.
- Subtract the Cap Height from the distance to the top of the tube (step b). This is the Set Length.

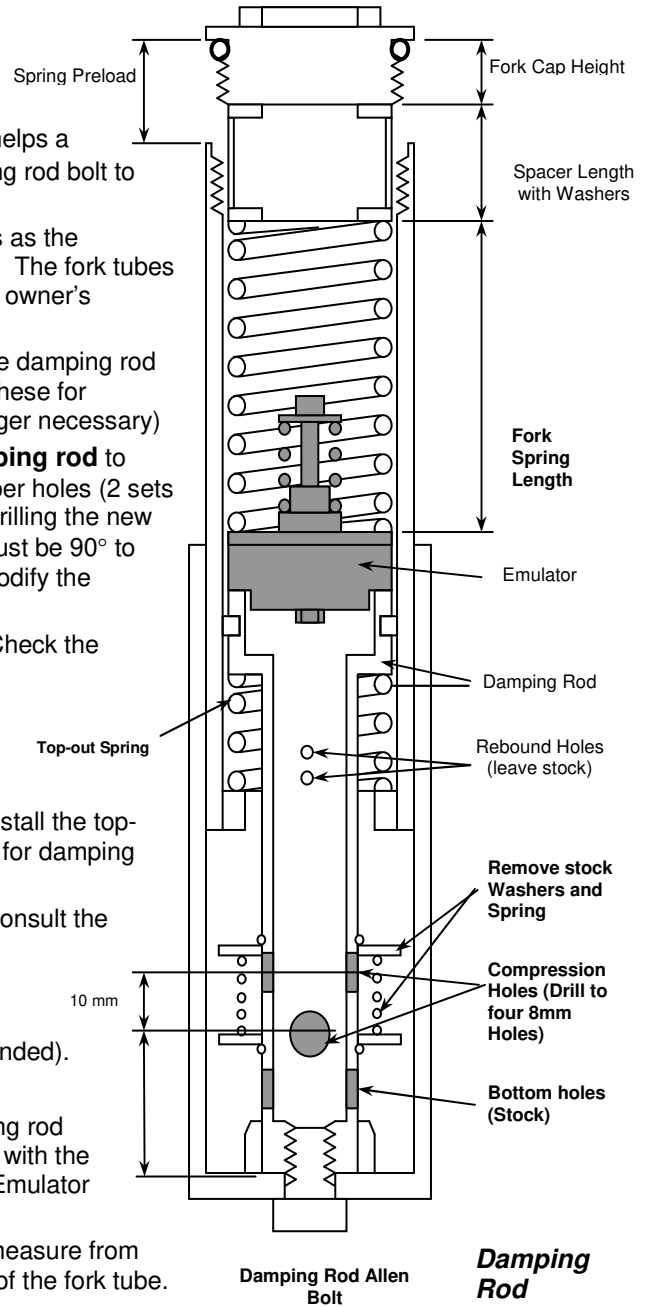
B Cut a spacer so the combined length of the spring, spacer and 2 spacer washers is 1" (25 mm) longer than the Set Length.

C Check the Preload. Insert the fork springs into the fork tube on top of the Emulator. Install a fork spring washer. Place the new spring spacer tube into the fork leg. Then install another washer.

Set the fork cap on the washer and measure from the top of the fork tube to the sealing lip on the fork cap ("preload" figure 1). This is a direct measurement of fork spring preload for this leg only.

Note: You must have washers on both ends of the spacer. The spacer must not rest directly on the spring or the cap.

- Reassemble the forks** according to the procedure in your manual. This will include installation of the Seals and Bushings. It is essential you use a Seal Driver (TFSD 46) or equivalent for proper installation.
- Install the fork fluid.** Bleed the fork by pumping the chrome tube. Install the Emulator and set the oil level according to the DVS using 15wt fluid with the fork completely bottomed and the spring out.



- 8 **Finish reassembly** by installing the spring, washers and spacer. Before you install the cap, re-check the spring preload. This will indicate whether the Emulator is seated properly. Install the fork cap and, with the forks off the bike, push on it, checking for any unusual drag or bind that would indicate an improperly seated Emulator.

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.