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FORK REBOUND GOLD VALVE INSTALLATION - DIRT 24mm 2011 KX450 & CRF450

FK code

<IP FRGV 2403w.doc> **FRGV 2403** P Thede © 12.4.15

TOOLS REQUIRED: In addition to the tools required for disassembly and assembly. TFHP 01 Holding Tool, TFSH 10 Shaft Holding Tool, 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.

DISASSEMBLY

1 **Disassemble the forks** and remove the cartridge.

2 **Remove the compression valve**. If you are installing compression Gold Valves at this time, follow the instructions for installation included in the kit.

3 **Remove the rebound rod from the cartridge.**

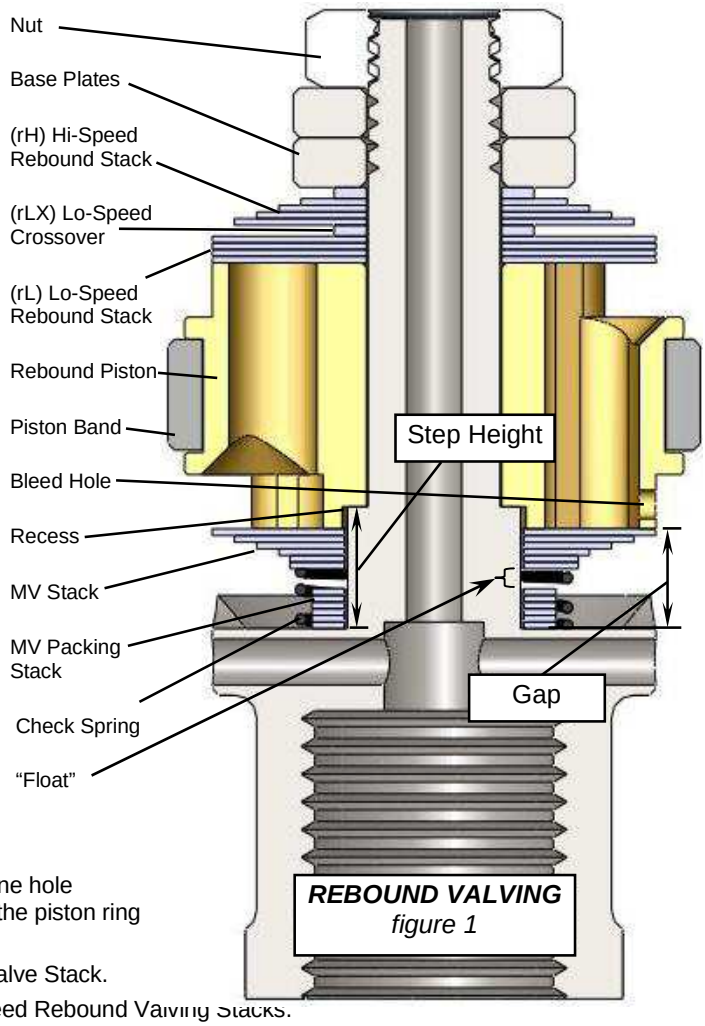
4 When the damping rod is removed from the cartridge extreme care must be taken so the thread (which is often razor sharp) does not cut the shaft seal. Carefully deburr both ends of the thread and pack the thread with grease.

5 **Once the rod is removed 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 thread.

VALVING

6 **To obtain custom valving settings** go to Digital Valving Search, insert your Access Code 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.

7 Select the Mid-Valve and Rebound Valving. Begin **assembling the Rebound Gold Valve**. Starting with the new Check Spring, MV Packing Stack and Mid-Valve Stack. There are two critical components of the Mid-Valve; the stiffness of the Mid-Valve Stack and the "Float". The Float is controlled by a combination of the thicknesses of the MV Stack (1.60mm—all stacks in this kit) and the MV Packing Stack.



REBOUND VALVING
figure 1

8 **If your Custom Setup requires a Rebound Bleed Hole**—drill one hole horizontally, through one of the port walls just above the step for the piston ring on the side with the recess.

9 Install the Rebound Gold Valve with the recess toward the Mid-Valve Stack.

10 Select and install the Lo-Speed, Lo-Speed Crossover and Hi-Speed Rebound Valving Stacks.

11 ***CRITICAL*— Make sure the Nut does not run out of thread and has full engagement.** If necessary use the additional Base Plates or shims included. Spacing shims must be larger than the last (smallest) shim. Use Loctite and torque the Nut to 30 in-lbs (0.35 kgf-m).

ASSEMBLY

12 **Reinstall the rod** into the cartridge being careful not to damage the shaft seal. Make sure there are no burrs on the thread and pack the thread with heavy grease before you insert it into the cartridge. Screw the Jam Nut onto the end of the Shaft all the way.

13 **Fill and bleed the cartridge. Set the oil level inside the cartridge to the recommended level (note – this level is more than the cartridge requires, excess will be drained off.)** Install the compression assembly and compress the damping rod completely. Pour out excess oil above the reservoir piston.

14 **Reassemble the forks**. Install the Fork Spring. Install the Cartridge and temporarily screw in the fork cap. Invert the fork and place the cap on the floor on a soft surface so the cap will not be damaged. Compress the fork so the Damping Rod extends through the bottom of the fork and slide the TFHP 01 Holding Tool between the Jam Nut and the Fork Bottom.

15 Use Loctite on the damping rod thread at the Rebound Adjuster. **Insert the Rebound Adjusting Rod into the Damping Rod** making sure it goes in all the way and registers on the Needle inside. There are two types; Showa – "D" Shaped Rod and KYB/WP Round Rod.

The Showa "D" Shaped Rod requires special attention. Slide the "D" Shaped drive rod on the Adjuster Bolt into the Rod. When you screw on the Adjuster Bolt, hold the Adjusting Screw in one place with a screwdriver. This will keep the "D" Shaped Rod from rounding out.

For the KYB/WP Round Rods back out the adjuster on the Adjuster Bolt before installing it on the Rod.

16 ***Torque the jam nut to manufacturers specs*** (typically 16 to 21 ft-lbs [21.7 – 28.5 NM]). Consult shop manual for specs. Remove the Holding Tool and tighten the Adjuster Bolt into the Fork Bottom.

17 Unscrew the Fork Cap and add the proper oil volume to the outer chamber (consult the Digital Valving Search at www.racetech.com for your specific bike). **Tighten the fork cap**.

18 **Set the compression and rebound adjustments** to the recommendation. This should be a good starting point. Enjoy!

Mid-Valve and Rebound Valving Selection - DIRT 24mm FRGV 2403

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

1. **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.

Build the Mid-Valve Stack

EXAMPLE:

The **Total Mid-Valve Stack** is MV111004 and MVP35.
Starting from the **recessed** Gold Valve piston face:

Mid-Valve Stack – MV111004 – 1.60mm thick

(4) 0.10x20
(1) 0.10x18
(1) 0.10x16
(1) 0.10x14
(1) 0.10x12
(2) 0.10x11
(4) 0.15x11

Mid-Valve Packing Stack – MVP35 - 1.55mm thick

(9) 0.15x12
(2) 0.10x12

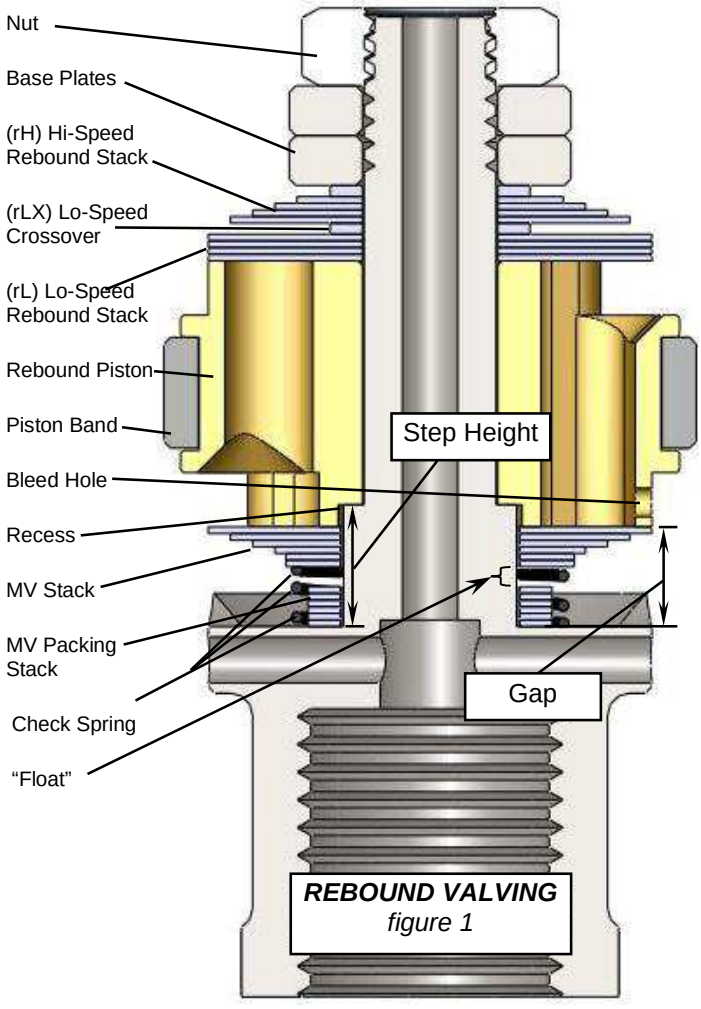
Float = Gap – Total Stack Thickness

For this example:

Step Height	4.50
Recess	— 1.00
Gap	= 3.50

MV Stack (all stacks this kit)	1.60
MVP Packing	+1.55
Total Stack Thickness	= 3.15

Gap	3.50
Total Stack Thickness	— 3.15
Float	= .35



REBOUND VALVING
figure 1

IMPORTANT NOTE

The overall thickness of the Mid-valve stacks are critical (0.05mm can make a difference). It is important to realize there are production tolerances in the thickness of all shims. To account for this, assemble the total stack and measure the overall stack thickness. Adjust the Mid-valve Packing Stack to correct for any errors in manufacturing.

Total Depth = 3.50 (standard for this model)

Example:
Measured Total Stack thickness = 3.20
Actual Float = 3.50 – 3.20 = .30 Float

If the Float required = .35 decrease the Total Stack Thickness by .05 by changing shims in the Packing Stack.

Build the Rebound Valving Stack

EXAMPLE TWO-STAGE:

Starting from the **flat** Gold Valve piston face:

Lo-Speed Stack
- (4) 0.10x20

Crossover
- (1) 0.10x11

Hi-Speed Stack
- (1) 0.10x18
- (1) 0.10x16
- (1) 0.10x14
- (1) 0.10x12
- (1) 0.10x11

EXAMPLE SINGLE-STAGE:

Starting from the **flat** Gold Valve piston face:

Lo-Speed Stack
- (4) 0.10x20

Hi-Speed Stack
- (1) 0.10x19
- (1) 0.10x18
- (1) 0.10x16
- (1) 0.10x14
- (1) 0.10x13
- (1) 0.10x12
- (1) 0.10x11

Note: This is the same as a two-stage stack but with **no Crossover**