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FORK GOLD VALVE INSTALLATION

DIRT WP 21mm

<IP FMGV 2150w.doc> **FMGV 2150** P Thede © 12-5-15

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), 3mm Allen Socket or 17mm Hex Socket, Hi-Strength Loctite (included), Metric Calipers, Metric Micrometer 0-25mm.

NOTE: Many riders require different fork springs. Please consult www.racetech.com or call Race Tech.

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 **There are two types of WP forks EARLY and LATE Model. LATE Model forks have the Compression adjustment on the top of one fork leg and Rebound Adjustment on the top of the other leg.**

EARLY MODEL - ***Remove the compression valving*** from the cartridge by unscrewing the holder from the bottom of the cartridge. This calls for a special holding tool but usually comes out very easily without one.

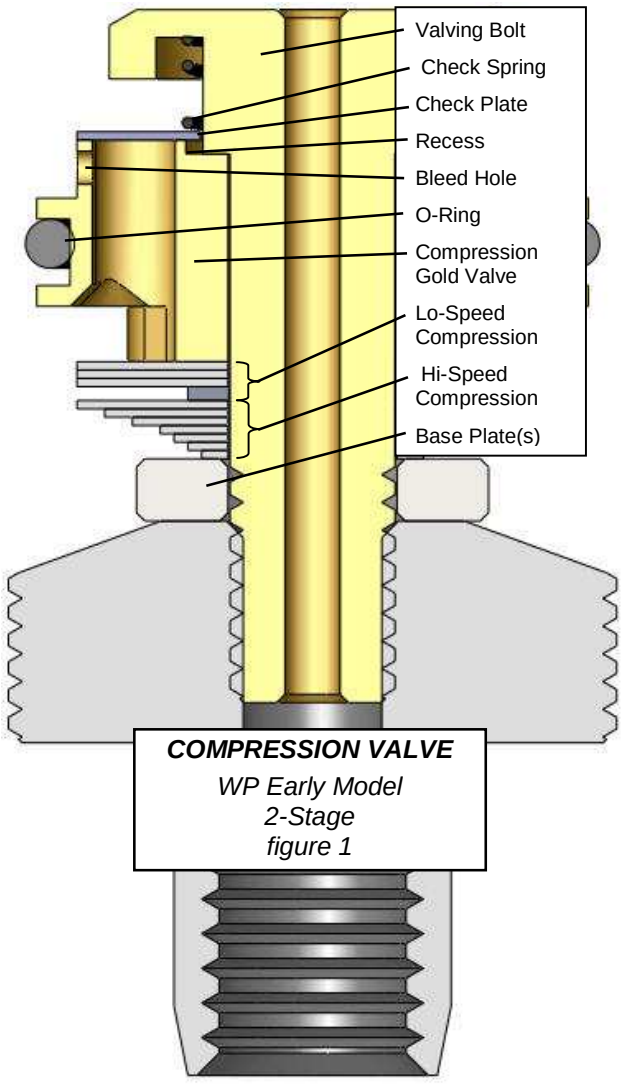
LATE MODEL - (NOTE: Be careful to keep all the parts from the Compression leg separate from the Rebound leg. Do not mix up the parts.) ***Remove the compression valve body*** from the cartridge. Push the compression valve holder into the cartridge about 5mm (0.2") to allow access to the wire retaining clip. Remove the clip with a small screwdriver, it comes out easily. Once the clip is out, pull the holder out by screwing the bolt back in and pulling. Be careful when holding the cartridge tube as it is easy to dent or distort.

D3 Remove the bolt (or nut) and ***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.

D4 **EARLY MODEL** – (figure 1) Put the new check valve spring on the bolt, then the new check valve plate (17mm OD by 8mm ID). ***Put the Gold Valve on the shaft*** with *the recess going on first).* Make sure the new o-ring is on the Gold Valve.

LATE MODEL – (figure 2) **You must drill a bleed hole in the Rebound Gold Valve. Drill one #57 (1.1mm) hole horizontally, through one of the port walls just above the step for the o-ring. Placement is not critical.**

The assembly order is the reverse of the Early Model because the valve body has the shaft built in to it. Put the Base Plates on the shaft, then the Hi-Speed Compression Stack, the Lo-Speed Compression Stack, the Gold Valve (recess up), the Check Valve Plate, the Check Spring and the Nut.



COMPRESSION VALVE
WP Early Model
2-Stage
figure 1

VALVING

V1 **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.**

V2 Once you have selected your valving **begin assembling the valve**. (figures 1 and 2) Place the original Base Plate *(thick washer)* on the shaft of the compression valve.

V2a **Single Stage**– figure 2 - Put the valving on the shaft in the order listed, starting with the smallest diameter shim of the Hi-Speed Stack and ending with the largest diameter closest to the Gold Valve. You will not use a Lo-Speed Stack.

V2b **Two Stage -** (figure 1 - your exact configuration may look slightly different.) - For Two Stage Stacks the total valving stack is made up of a combination of a Lo-Speed Stack and a Hi-Speed Stack. Put the valving on the shaft in the order listed, starting with the smallest diameter shim *(clamping shim)* of the Hi-Speed Stack. Then the Lo-Speed Stack gets placed on top of the Hi-Speed Stack starting with the small diameter *(crossover shim)* and ending with the largest diameter shim closest to the Gold Valve.

NOTE: On some models you will need to use the additional Base Plates provided to achieve the proper total valve thickness (check for full engagement of the threads). Also, you may end up with additional parts, don't worry.

V3 ***Put the valving on the shaft*** in the order listed. For Two Stage Valving start with the largest diameter shim of the Lo-Speed Stack. Then the Hi-Speed Stack gets placed on the Lo-Speed Stack starting with the largest diameter and ending with the smallest diameter shim closest to the Base Plate. For Single Stage Valving start with the largest diameter shim of the Hi-Speed Stack.

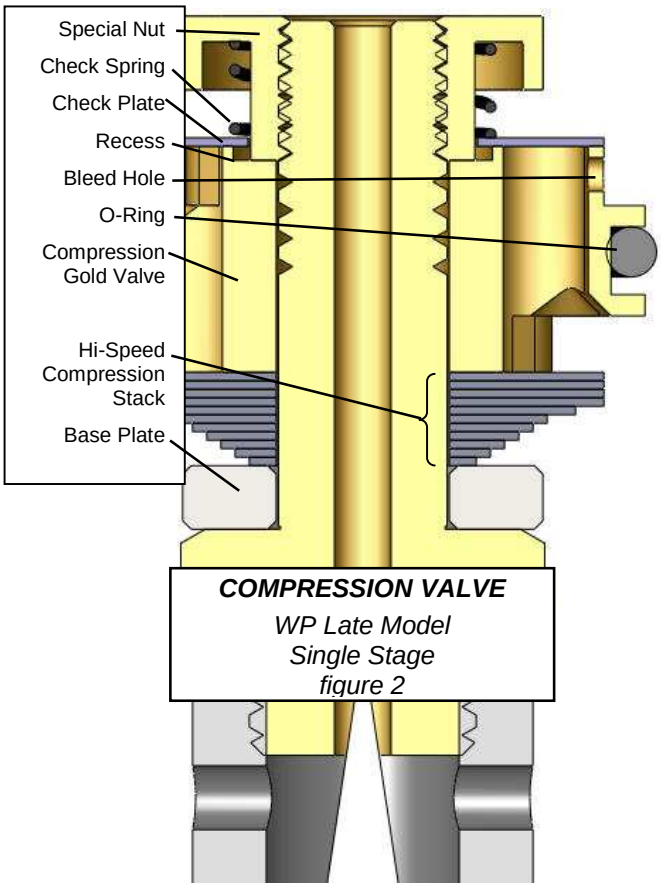
V4 ***Place the original base plate*** *(thick washer)* on the shaft. You will need to use the additional base plates provided *(thick washers)* to achieve the proper total valve thickness.

V5 ***Check to see that the check valve plate (large ID washer) is free*** and can move up and down against the spring.

V6 ***CAUTION! The threads can be damaged without extreme care. Install the bolt into the holder and tighten it. You must use Loctite. The 6 mm bolt must be torqued with a torque wrench to 30 in-lbs (2.5 ft-lbs or 0.35 kgf-m), NO MORE! Do not take 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 and look for burrs and/or dirt in the valving. Reassemble and check again.

V8 ***Install the compression assembly*** into the cartridge.



COMPRESSION VALVE
WP Late Model
Single Stage
figure 2

ASSEMBLY

A1 ***Reassemble the forks according to the procedure in your manual*.** Install the suspension fluid, bleed the cartridge and set the oil level.

A2 Use Loctite on the damping rod threads at the cap and ***torque it to manufacturer's specs***. 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.

If you have any questions please call our Technical Support Hotline at 951.279.6655.

NOTE: The Gold Valve is a Compression Valve. Do not use the Gold Valve on the Rebound. Do not use the stock triangular 2mm thick compression valving restrictor plate if there is one stock.

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).**
- If your valving needs to be stiffer, move to the right on the valving chart**. Moving to the right on the Lo-Speed Valving Chart will stiffen up Lo-Speed damping. This will improve bottoming resistance with minimum increase in harshness. Moving to the right on the Hi-Speed Valving Chart will increase damping overall, making it stiffer through the entire speed range particularly landing off jumps. If the forks are too firm, go to the left.**
- **Spring rate affects ride height, dive and bottoming**. Typical spring preload should be 2-5mm (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 10mm (0.4").**

BUILDING the VALVING STACK - DIRT WP 21mm

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 (your Code is printed on top of page 1 of these instructions)**
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 just a Hi-Speed Stack.

Two Stage - made up of a Lo-Speed Stack on top of a Hi-Speed Stack.

EXAMPLE Single Stage:

Starting from the Gold Valve piston face

Lo-Speed Stack

(1) 0.15x17
(2) 0.10x17

Hi-Speed Stack

(1) 0.15x17
(1) 0.10x15
(1) 0.10x13
(1) 0.10x12
(1) 0.10x11
(1) 0.10x10
(1) 0.10x9

EXAMPLE Two Stage:

Starting from the Gold Valve piston face

Lo-Speed Stack

(1) 0.15x17
(2) 0.10x17

Crossover

(1) 0.10x11

Hi-Speed Stack

(1) 0.15x17
(1) 0.10x15
(1) 0.10x13
(1) 0.10x12
(1) 0.10x11
(1) 0.10x10
(1) 0.10x9

OIL LEVEL, EXTERNAL ADJUSTERS, SPRING RATE, and PRELOAD are all listed on the Digital Valving Search on www.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 parentheses the quantity is one. Example: (2).15x17 means quantity two, 15 hundredths of a millimeter thick by 17 millimeters in diameter.