RACE TECH

FORK REBOUND GOLD VALVE INSTALLATION
DIRT 32mm 2015 KYB AIR

FK code

TOOLS REQUIRED: In addition to the tools required for disassembly and assembly. 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.
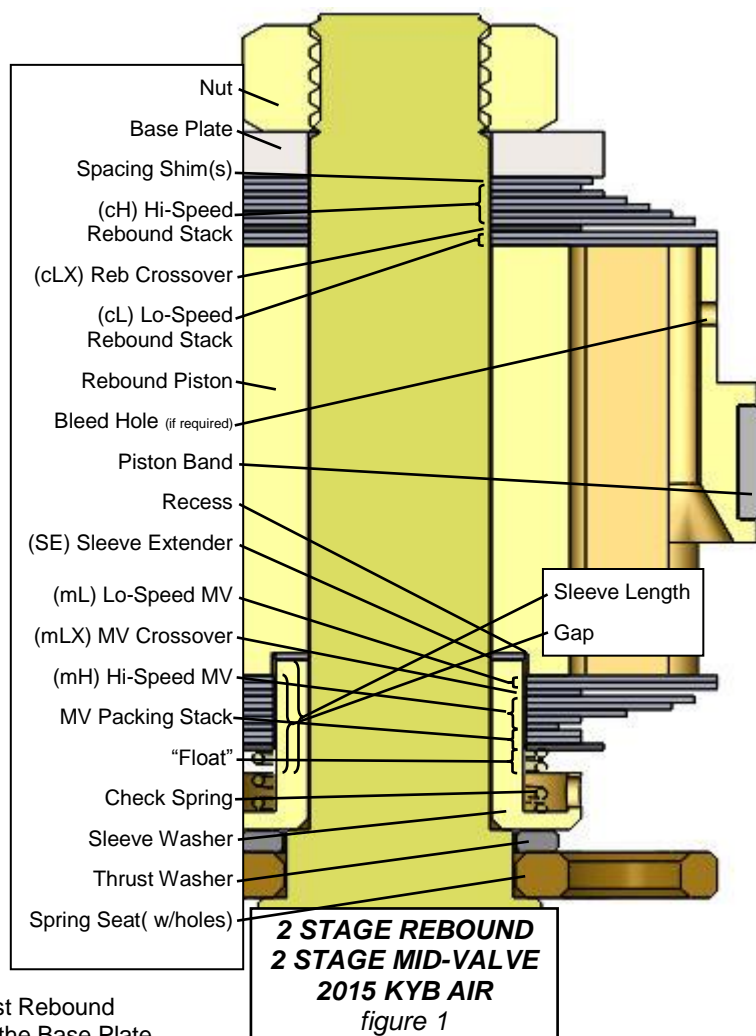
DISASSEMBLY

D1 **Disassemble the forks** and remove the cartridge.

D2 **Remove the compression valve**. If you are installing compression Gold Valves at this time, follow the instructions for installation included in the kit.

D3 **Remove the rebound rod from the cartridge.**

D4 **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

V1 Select the Rebound and Mid-Valve Valving. Begin **assembling the Rebound Gold Valve**. Starting with the Stock Spring Seat, Stock Thrust Washer, new Sleeve Washer, new Check Spring, MV Packing Stack, Hi-Speed Mid-Valve Stack, MV Crossover (if required), and Lo-Speed 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 thickness of the MV Stacks and the MV Packing Stack.

V2 Check to see if there is a Bleed Hole pre-drilled in the port wall. **Drill the Bleed Hole if not previously drilled only if called for in the DVS**. Install the Rebound Gold Valve with the recess toward the Mid-Valve Stack.

V3 Select the Rebound Stack. Install the Lo-Speed Rebound Stack, Lo-Speed Crossover (if required), Hi-Speed Rebound Stack, Base Plate and Nut. **CRITICAL**: Make sure the total valve assembly is the proper thickness and the nut gets full thread engagement but does not run out of thread. The Base Plate should cover the end of the thread. If it does not, additional shims (larger in diameter than the last Rebound Shim) can be added just below the Base Plate. Additionally the Base Plate provided can be used to take up space. Use Loctite and torque the nut to 45 in-lbs (0.53 kgf-m).

Nut
Base Plate
Spacing Shim(s)
(cH) Hi-Speed Rebound Stack
(cLX) Reb Crossover
(cL) Lo-Speed Rebound Stack
Rebound Piston
Bleed Hole (if required)
Piston Band
Recess
(SE) Sleeve Extender
(mL) Lo-Speed MV
(mLX) MV Crossover
(mH) Hi-Speed MV
MV Packing Stack
"Float"
Check Spring
Sleeve Washer
Thrust Washer
Spring Seat(w/holes)

Sleeve Length
Gap

2 STAGE REBOUND 2 STAGE MID-VALVE 2015 KYB AIR
figure 1

ASSEMBLY

A1 **Reinstall the rod** into the cartridge. Screw the Jam Nut onto the end of the Shaft all the way.

A2 **Reassemble the forks**. **Fill and bleed the fork leg by pumping the damping rod up and down. Set the oil level according to the DVS**.

NOTE: Upside-down KYB forks without a bleed hole in the inner (chrome) tube, require special care to set the oil level. There is a space between the inner and outer tube and without a bleed hole there is no way to know how much oil is in this space. To deal with this situation extend the outer tube all the way before setting the level, this will dump all the oil from this space into the inner tube. Do this two times, sucking out oil to the proper level each time.

A3 Install the Fork Cap all the way onto the Rod and **torque the jam nut to manufacturers specs** (typically 16 to 21 ft-lbs [21.7 – 28.5 NM). Consult shop manual for specs.

A4 **Set the compression and rebound adjustments and air pressure** to the DVS recommendations. This will be a good starting point. Enjoy!

Rebound and Mid-Valve Valving Selection DIRT 32mm FRGV 320802

Welcome to the wonderful world of Gold Valving. **To obtain your Custom Suspension Settings:**
1. **Log on to www.racetech.com and go to Digital Valving Search (DVS)**
2. **Input your Access Code (on top of page 1) 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.**

Once you have your recommended valving settings, build the Mid-Valve Stack.

MID-VALVE EXAMPLE ONLY (see your DVS):
The **Total Mid-Valve Stack** is **mL1002, mLX1010, mH144, MVP30 and SE50**.

Starting from the **recessed** Gold Valve piston face:
Sleeve Length 11 od – 3.50mm long (RT)
Sleeve Extender (if required) – SE50 – 0.50mm thick
> (2) 0.15x11x8 ID
> (2) 0.10x11x8 ID

Recess Depth - 1.00mm (std Gold Valve)
Lo-Speed Mid-Valve Stack – mL1002 - 0.20mm thick
> (2) 0.10x28x11 ID

Mid-Valve Crossover – mLX1016 - 0.10mm thick
> (1) 0.10x16x11 ID

Hi-Speed Mid-Valve Stack – mH150 - 1.10mm thick
> (1) 0.15x26
> (1) 0.15x22
> (1) 0.15x18
> (1) 0.15x16
> (2) 0.15x14
> (2) 0.10x16

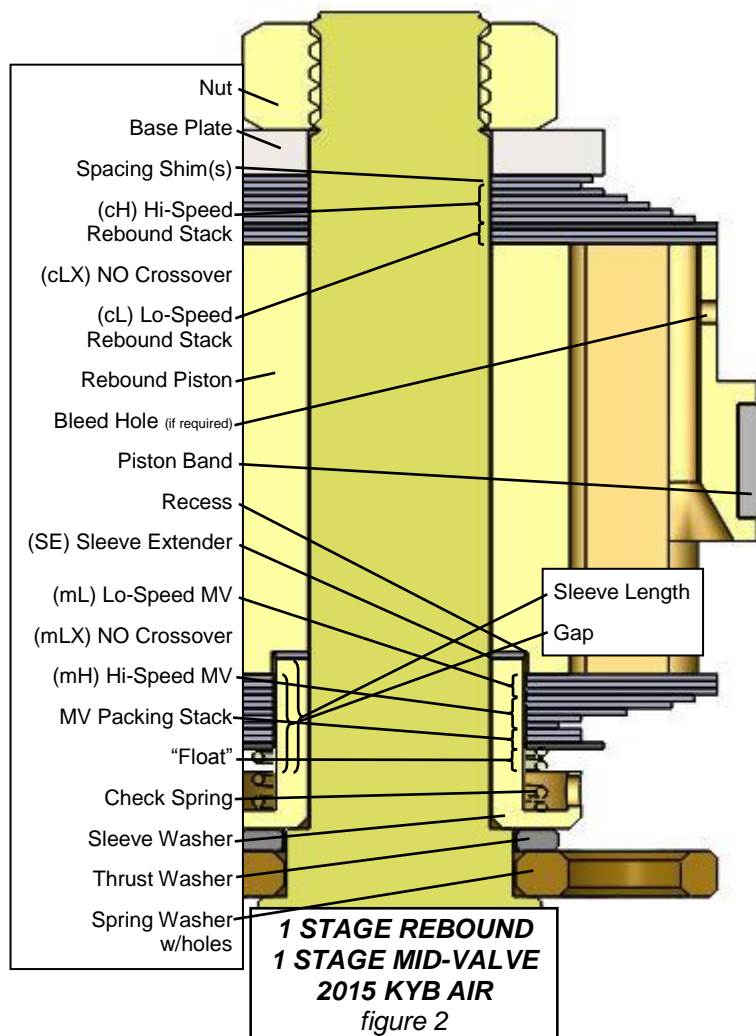*Mid-Valve Packing Stack – MVP80 - 0.80mm thick*
> (1) 0.15x16
> (1) 0.20x18

Float = Gap – Total Stack Thickness

Sleeve Length (RT)	3.50
Sleeve Extender (SE10)	+ .10
Recess (std Gold Valve)	— 1.00
Gap	= 2.60

Lo-speed MV Stack (mL1002)	.20
MV Crossover (mLX1016)	+ .10
Hi-speed MV Stack (mH150)	+ 1.10
MVP Packing (MVP80)	+ .80
Total Stack Thickness	= 2.20

Gap	2.60
Total Stack Thickness	— 2.20
Float (example only - see your DVS)	= .40

Nut
Base Plate
Spacing Shim(s)
(cH) Hi-Speed Rebound Stack
(cLX) NO Crossover
(cL) Lo-Speed Rebound Stack
Rebound Piston
Bleed Hole (if required)
Piston Band
Recess
(SE) Sleeve Extender
(mL) Lo-Speed MV
(mLX) NO Crossover
(mH) Hi-Speed MV
MV Packing Stack
"Float"
Check Spring
Sleeve Washer
Thrust Washer
Spring Washer w/holes
Sleeve Length
Gap

1 STAGE REBOUND
1 STAGE MID-VALVE
2015 KYB AIR
figure 2

CHECK THE FLOAT WITH A FEELER GAUGE - These calculations have already been done in your recommended DVS Setting. **However, *Float is critical! There are production tolerances on every component that affects Float. It is best to measure the Float with a Feeler Gauge after the Rebound/Mid-Valve is assembled. Adjust the MV Packing Stack thickness to compensate for these errors and create the correct Float.***

FORK MID-VALVE GOLD VALVE CHART - *DIRT 32mm*

<FR322801-150206> © R Brown, P Thede 2-6-15

LO-SPEED MID-VALVE (11mm ID)   STIFFER →

mL1001	mL1002	mL1003	mL1004	mL1005	mL1006*	mL1007*	mL1008*	mL1009*	mL1010*
(1).10X28	(2).10X28	(3).10X28	(4).10X28	(5).10X28	(6).10X28	(7).10X28	(8).10X28	(9).10X28	(10).10X28
mL1501	**mL1502**	**mL1503**	**mL1504**	**mL1505***	**mL1506***	**mL1507***	**mL1508***	**mL1509***	**mL1510***
(1).15X28	(2).15X28	(3).15X28	(4).15X28	(5).15X28	(6).15X28	(7).15X28	(8).15X28	(9).15X28	(10).15X28

LO-SPEED MID-VALVE CROSSOVER   STIFFER →

mLX1014*	mLX1016	mLX1018*
.10x14	.10x16	.10x18

HI-SPEED MID-VALVE   STIFFER →

mH131	mH132	mH133	mH134	mH135	mH136	mH137	mH138	mH139	mH140
.15x28	.15x28	.15x28	.15x28	.15x28	.15x28	.15x28	.15x28	.15x28	.15x28
mH141	**mH142**	**mH143**	**mH144**	**mH145**	**mH146**	**mH147**	**mH148***	**mH149***	**mH150***
.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.15x26
.10x22	.10x22	.10x22	.10x22	.10x24	.10x22	.10x24	.10x24	.10x24	.15x22
.10x18	.10x18	.10x18	.10x20	.10x22	.10x20	.10x22	.10x22	.10x22	.15x18
(2).15x13	.10x14	.10x16	.10x18	.10x20	.10x18	.10x20	.10x20	.10x20	.15x16
.10x16	(2).15x13	.10x14	.10x16	.10x18	.10x16	.10x18	.10x18	.15x18	(2).15x14
(3).15x16	(3).15x16	(2).15x13	.10x14	.10x16	(2).15x14	.10x16	.15x16	.15x16	(2).10x16
		(2).10x16	(2).15x13	.10x14	(2).10x16	(2).15x14	(2).15x14	(2).15x14	
		.15x16	.10x16	(2).15x13	.15x16	.10x16	(2).10x16	.15x16	
			.15x16	.15x16		.15x16			
mH151*	**mH152***	**mH153***	**mH154 ***	**mH155***	**mH156***				
.15x26	.15x26	.15x26	.15x26	.15x26	.15x26				
.15x22	.15x24	.15x22	.15x24	.15x22	.15x24				
.15x20	.15x22	.15x20	.15x22	.15x20	.15x22				
.15x18	.15x20	.15x18	.15x20	.15x18	.15x20				
.15x16	.15x18	.15x16	.15x18	(2).15x16	.15x18				
(2).15x14	.15x16	.15x15	.15x16	.10x16	(2).15x16				
.10x16	.15x14	.15x16	.15x15	.15x16	.10x16				
	.10x14	.10x14	.10x16	.10x16					

MID-VALVE PACKING (11mm ID)   THICKER (stiffer) →

MVP30	MVP35	MVP40	MVP45	MVP50	MVP55	MVP60	MVP65	MVP70	MVP75
.10x16	.15x16	2).10x16	.10x16	2).15x16	2).10x16	.10x16	3).15x16	2).10x16	.10x16
.20x18	.20x18	.20x18	.15x16	.20x18	.15x16	2).15x16	.20x18	2).15x16	3).15x16
			.20x18		.20x18	.20x18		.20x18	.20x18
MVP80	**MVP85**	**MVP90**	**MVP95**	**MVP100**	**MVP105***	**MVP110***	**MVP115***	**MVP120***	**MVP125***
4).15x16	2).10x16	.10x16	5).15x16	2).10x16	.10x16	6).15x16	2).10x16	.10x16	7).15x16
.20x18	3).15x16	4).15x16	.20x18	4).15x16	5).15x16	.20x18	5).15x16	6).15x16	.20x18
	.20x18	.20x18		.20x18	.20x18		.20x18	.20x18	
MVP130*	**MVP135***	**MVP140***	**MVP145***	**MVP150***	**MVP155***	**MVP160***	**MVP165***	**MVP170***	**MVP175***
2).10x16	.10x16	8).15x16	2).10x16	.10x16	9).15x16	2).10x16	.10x16	10).15x16	2).10x16
6).15x16	7).15x16	.20x18	7).15x16	8).15x16	.20x18	8).15x16	9).15x16	.20x18	9).15x16
.20x18	.20x18		.20x18	.20x18		.20x18	.20x18		.20x18

SLEEVE EXTENDER (8mm ID)   LONGER (softer)→

SE10	SE15	SE20	SE25	SE30	SE35	SE40	SE45	SE50	SE55
.10x11	.15x11	2).10x11	.15x11	2).15x11	.15x11	2).15x11	3).15x11	2).15x11	3).15x11
			.10x11		2).10x11	.10x11		2).10x11	.10x11
SE60	**SE65**	**SE70**	**SE75**	**SE80**	**SE85**	**SE90**	**SE95**	**SE100**	
4).15x11	3).15x11	4).15x11	5).15x11	4).15x11	5).15x11	6).15x11	5).15x11	6).15x11	
	2).10x11	.10x11		2).10x11	.10x11		2).10x11	.10x11	

REBOUND EXAMPLE ONLY: (SEE YOUR DVS)

If the **Total Rebound Stack** is rL1005, rLX1014 and rH147.

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

Lo-Speed Stack – rL1005

(5) 0.10x28

Lo-Speed Crossover – rLX1014

(1) 0.10x14

Hi-Speed Stack – rH147

(1) 0.10x26
(1) 0.10x22
(1) 0.10x20
(1) 0.10x18
(1) 0.10x16
(2) 0.15x14

FORK REB GOLD VALVE CHART - DIRT 32mm

<FR322801-150206> © R Brown, P Thede 2-6-15

LO-SPEED REBOUND (8mm ID)   SLOWER →

rL1001	rL1002	rL1003	rL1004	rL1005	rL1006*	rL1007*	rL1008*	rL1009*	rL1010*
(1).10X28	(2).10X28	(3).10X28	(4).10X28	(5).10X28	(6).10X28	(7).10X28	(8).10X28	(9).10X28	(10).10X28

LO-SPEED REBOUND CROSSOVER   SLOWER →

rLX1013	rLX1014	rLX1015
.10x13	.10x14	.10x15

HI-SPEED REBOUND   SLOWER →

rH141	rH142	rH143	rH144	rH145	rH146	rH147	rH148	rH149*	rH150*
.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26	.10x26
.10x22	.10x22	.10x24	.10x22	.10x24	.10x24	.10x22	.10x24	.10x24	.10x24
.10x18	.10x20	.10x22	.10x20	.10x22	.10x22	.10x20	.10x22	.10x22	.10x22
.10x16	.10x18	.10x20	.10x18	.10x20	.10x20	.10x18	.10x20	.10x20	.10x20
.10x14	.10x16	.10x18	.10x16	.10x18	.10x18	.10x16	.10x18	.10x18	.15x18
(2).15x12	.10x14	.10x16	.10x14	.10x16	.10x16	(2).15x14	.10x16	.15x16	.15x16
	(2).15x12	.10x14	(2).15x13	.10x14	.15x14		(2).15x14	(2).15x14	(2).15x14
		(2).15x12		(2).15x13	(2).15x13				

BLEED HOLE (drill if necessary)   SLOWER →

2.8mm	2.6mm	2.4mm	2.2mm	2.0mm	1.8mm	1.6mm	1.3mm	1.2mm	1.0mm
#35	#38	#41	#44	#47	#50	#52	#55	#56	#60

* SHIMS NOT PROVIDED IN STANDARD KIT (please call)   Shim dimensions - (QUANTITY) THICKNESS x DIAMETER in mm