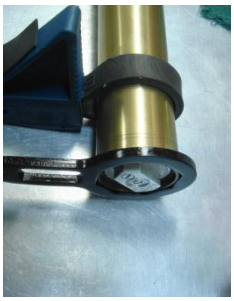
RIDE CONCEPTS INC.
TWIN CHAMBER FORK
T6 VALVE
INSTALLATION PROCEDURE

-Remove fork from motorcycle and carefully place fork flat onto a workbench. Ensure fork is very clean.



-Place rubber strap wrench around outer fork tube close to the top of the fork.

-Using the appropriate fork cap wrench, loosen the cartridge from the outer fork tube ¼ turn or until no longer tight. Keep it tight enough so that oil does not leak out.

-Using a wrench or appropriate compression housing tool, loosen the compression housing from the cartridge ¼ turn or until no longer tight. Keep it tight enough so that oil does not leak out.

-Mount the fork in a bench vice upside down and carefully hold the fork from the fork lug as shown.

-Loosen the rebound adjuster/lower cartridge rod mount assy.

Turn this rebound adjuster assembly counter clockwise until a slight click sound is made every revolution. This sound will indicate that it is at the end of the threads and ready to come apart.

-Remove fork from vice while continuing to hold the fork upside down.

-Carefully touch the lower part of the fork to a piece of wood on the shop floor. This piece of wood will prevent damage to the fork.

-Carefully compress the fork slightly approx 2". The rebound adjuster will protrude out of the bottom of the fork.

-While compressing the fork slightly by hand, install the appropriate clip tool onto the cartridge shaft as it protrudes out of the fork.

This will hold the shaft and rebound adjuster assembly out of the fork for easy disassembly.

I like to position the compressed fork under my bench vice as shown in the picture. Works great and is easier.

-Using the required wrenches, carefully loosen and remove the rebound adjuster from the shaft, and pull out the rebound adjusting rod.

-Find a suitable oil drain container. Flip the fork right side up, and allow the majority of the oil to drain out of the bottom of the fork into the container.

-Place the fork right side up into a large clean drain container like a cookie sheet, or large drip pan. I use a large Rubbermaid container placed close to a wall. This gives the fork somewhere to rest so that it can sit and drain while being in the drain container. Allow to drain for a few minutes.

-Using your fork cap wrench,
Loosen the cartridge from the outer fork tube, and let the fork tube slide down.

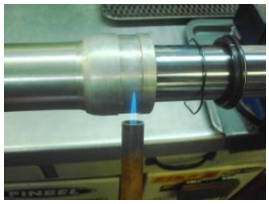
-Lift the fork cartridge out of the fork tube.

-Flip the fork tube upside down to help drain the oil from between the tubes and remove the main fork spring.

It's recommended to always remove the existing fork seals to clean and re-grease them, whether they leak or not. This will improve the function and lifespan of the fork seals.

-Using a small flat screwdriver, carefully remove the fork dust seal from the outer fork tube with a twisting motion.

-Remove the oil seal retaining circlip with a pick tool.



-Lightly heat up the outer part of the fork that houses the oil seal with a propane torch.
This will make it much easier to remove the seals and help prevent damage to the fork bushings.

-Remove the outter fork tube from the inner fork tube by quickly hyperextending the fork and pulling them apart. This will expose the oil seal and bushings.

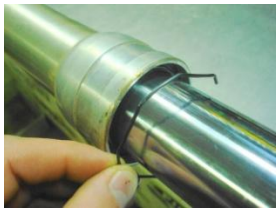
-Carefully remove the bushings and seals.
Replace as required if any parts show signs of wear.

-Clean all parts in a parts washer, spray with brakleen, and blow dry with compressed air.

-Install the bushings and seals onto the inner tube in the order shown. Be extremely careful to not damage the seal surfaces. Use quality seal grease on both the dust seal and oil seal.

-Place the outer tube back onto the inner tube.
-Using the proper fork seal driver, tap the outside bushing and washer into the outer fork tube.

-Place a small amount of seal grease on the outside of the oil seal to help install the seal, and install the oil seal with the seal driver.



-Reinstall oil seal circlip.

-Tap the dust seal into place with a plastic hammer.

-Place the fork cap wrench on the top of the fork cartridge. Using a wrench or appropriate tool, loosen the compression housing. A showa fork is shown.

-Compress cartridge fully and allow the compression housing to protrude out of the top of the cartridge.

-Carefully pull up on the compression housing and remove it from the fork cartridge.

-Clean with parts washer and blow dry with compressed air, this will make it easier to work with and disassemble.

-Using a file or sander, carefully remove original factory peening from nut as shown. Only remove enough material to make it easier to remove the nut. Do not remove too much material.

-Carefully loosen and remove nut, taking care to not damage any threads. You will be reusing this nut.

-Remove the complete compression piston and valving stack assy from its mount as shown.

-Take note of existing valving shims (if any) under this large washer. This is a compression bypass bleed stack. Only modify if spec sheet states a different stack than what is stock.

-Using a small thread file, clean the threads where the nut mounts. Ensure nut installs easily and the threads are in excellent condition.

-Thoroughly clean all related parts in a parts washer and blow dry with compressed air.

Ensure that the passageway down the center of the piston mount is open and clear of any debris.

-Assemble T6 Valve and valving stack exactly as shown on spec sheet, reusing the stock rebound check plate system. Use a digital calliper to measure all the valving shims, and install them in the appropriate location.
The spec sheet shows the valving stack in the exact physical layout needed for installation.

-Add shim washers under the stock large washer as shown on the top picture, until the piston assembly is mounted in the stock position. When installed in the appropriate position, the nut will fit in the same spot as it did originally. The second picture shows how it will look when properly assembled and shimmed.

-Once the spacer washers have been added (if required), remove the nut, and put a drop of red loctite thread locker on the threads where the nut installs.

-Snugly install nut, ensuring the rebound check plate functions properly.

-Remove rebound adjuster jam nut from the cartridge rod, and push cartridge rod out of cartridge.

-Clean cartridge rod/midvalve piston assy. and cartridge tube in a parts washer and blow dry with compressed air.

-Visually inspect midvalve system to ensure no parts are broken or worn.

If your spec sheet says to run the stock midvalve, then this midvalve system will not be disassembled.

-Using the appropriate wrenches, double check the midvalve nut to ensure it is tight.

-Put a very fine layer of seal grease on the cartridge rod, and reinstall the cartridge rod back into the cartridge tube. Repeat this process for both forks.

-If your supplied spec sheet says to modify the midvalve assy, then you will need to very carefully disassemble it.

-Remove the nut's peening the same way you did with the compression valve assembly.

-Using the required wrenches, disassemble the midvalve system, while taking extreme caution to not ruin the threads.

-Lay all the parts for the midvalve on a clean surface and inspect all components for wear or damage.

-Ensure that the nut easily threads back onto the midvalve mount. If not, clean the threads properly with a small thread file.

-Using a digital calliper, measure all the midvalve parts and write down the exact physical layout of all the parts in the midvalve.

-Change midvalve valving as per spec sheet requirements.

-Clean all parts very well, and blow dry with compressed air being very careful to not lose any parts.

-Reassemble midvalve using red loctite on the threads of the nut. Be very careful not to over tighten the nut or you could damage parts.

-Repeat this exact process for each fork midvalve.

-Allow the red loctite on the midvalve mounting nuts and both compression valve mounting nuts to dry for a minimum of 1hr before assembling the fork with oil. This will guarantee that the parts will never come loose during operation.

-Put a very fine layer of seal grease on the cartridge rod, and reinstall the cartridge rod back into the cartridge tube.
Repeat this process for both forks.

The fork cartridges will now be filled with oil and bled of any air.
I prefer to do this in the bench vice as I have an excellent pair of aluminum vice jaws from Race Tech that have the perfect cutaway for this task.

-Very carefully hold the cartridge in the bench vice. DO NOT over tighten the vice, you are only holding the cartridge in place.

-Install rebound adjuster jam nut back onto cartridge rod, and temporarily install the rebound adjuster. Fully extend the cartridge rod.

-Wrap a shop towel just below the 2 holes on the large end of the cartridge assy. I like to use a large reusable zip-tie for this.
These are bleed holes, and you will be bleeding the excess oil and air out of the cartridge from these holes.

-Using the recommended wt of oil, fill the cartridge up to just below these holes.

-Carefully stroke the cartridge rod in and out approx 2". Push the cartridge rod in slowly, and pull it back out fairly quickly. This will ensure the air from the rebound valving is released. You will feel this by hand as it is very obvious. Do this motion a few times until you can't feel any air in the lower part of the cartridge.

-Let the cartridge sit for a few minutes, as this will help any air bubbles come up to the top of the oil.

-Very carefully start inserting the compression valve assembly into the top of the cartridge. It may require slight side to side motion and slight downward pressure to assist installation in the cartridge.

On some cartridges and models, the compression valve may seem to only go in half way until it feels like it hydraulically stops, this is normal.
If this happens, continue to maintain downward pressure on the compression valve, while compressing the cartridge rod up into the cartridge approx 2".
This will bleed some extra oil out of the cartridge that is preventing the compression assembly from being installed.
The extra oil will come out of the 2 oil bleed holes.
When some extra oil is displaced out of the cartridge, you will feel the compression valve drop in much easier.
Repeat that step if necessary, until the compression valve will seat on its threads with downward hand pressure.

-Install and tighten the compression valve to the cartridge assembly using the required fork cap wrench and compression valve tool if required.

-Remove cartridge from vice and place the top of the cartridge over the oil drain container.

-Hold the cartridge parallel to the floor, while pointing one of the oil bleed holes downwards towards the container.

-Fully compress the cartridge by hand and make note of the excess oil coming out of the bleed holes.
The cartridge will bleed out the oil and air that it does not need, and retain the exact amount of oil that it needs to function.
Repeat this process a couple of times, ensuring all excess oil is removed.

-Repeat with other cartridge assy.

-Install fork springs back into the fork.
-Remove previously installed rebound adjuster.


-Align fork cartridge with the center of the fork spring, and carefully reinstall back into the fork. Tighten cartridge to outer fork tube by hand only.


-Flip fork upside down and place onto a piece of wood.


-Compress fork to let the cartridge rod protrude out of the bottom of the fork.

-Hold the cartridge out of the fork by either placing a fork clip tool around the cartridge rod, or place the slightly compressed fork under the bench vice like I do.


-Insert the rebound adjuster tube.
Make sure the flat side of the tube is installed in the correct direction; if it is not installed correctly the adjuster tube will not go in all the way as shown. Carefully turn the rebound adjuster tube with a small screwdriver until it falls into place. When installed correctly, this tube will be completely inside the cartridge rod as shown. A KYB fork does not have a flat side on the rebound adjuster tube.






-Install rebound adjuster onto cartridge rod by hand, ensuring the flat of the adjuster matches the rebound adjuster tube as shown.

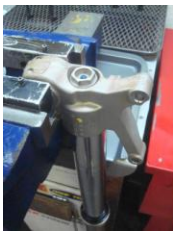

-Tighten by hand until the threads bottom out.

-Using the appropriate wrenches, tighten the jam nut up against the bottom of the rebound adjuster.


-Put a drop of blue loctite on the adjuster's threads.

-Remove fork clip, or remove fork from being compressed.

-Place fork lug into vice and tighten rebound adjuster to fork lug as shown.



-Remove fork from vice and turn right side up.

-Loosen outer fork tube from cartridge, and let fork tube fall to the fully compressed position.

-Place fork against a stable surface, in the upright position as shown.

-Fill a ratio rite or appropriate cc measuring device with the exact amount and wt of oil mentioned on your spec sheet.

-Pour this oil into the fork as shown.

-Lift outer fork tube back up into place and tighten using a strap wrench and appropriate fork cap wrench.

-Adjust compression clicker to recommended setting.

This will be clicks out from lightly seated.

-Adjust rebound clicker in the same manor.

-Ensure that fork air bleed screw is snug.

-Repeat process for both forks.

-Install forks on bike and ride!