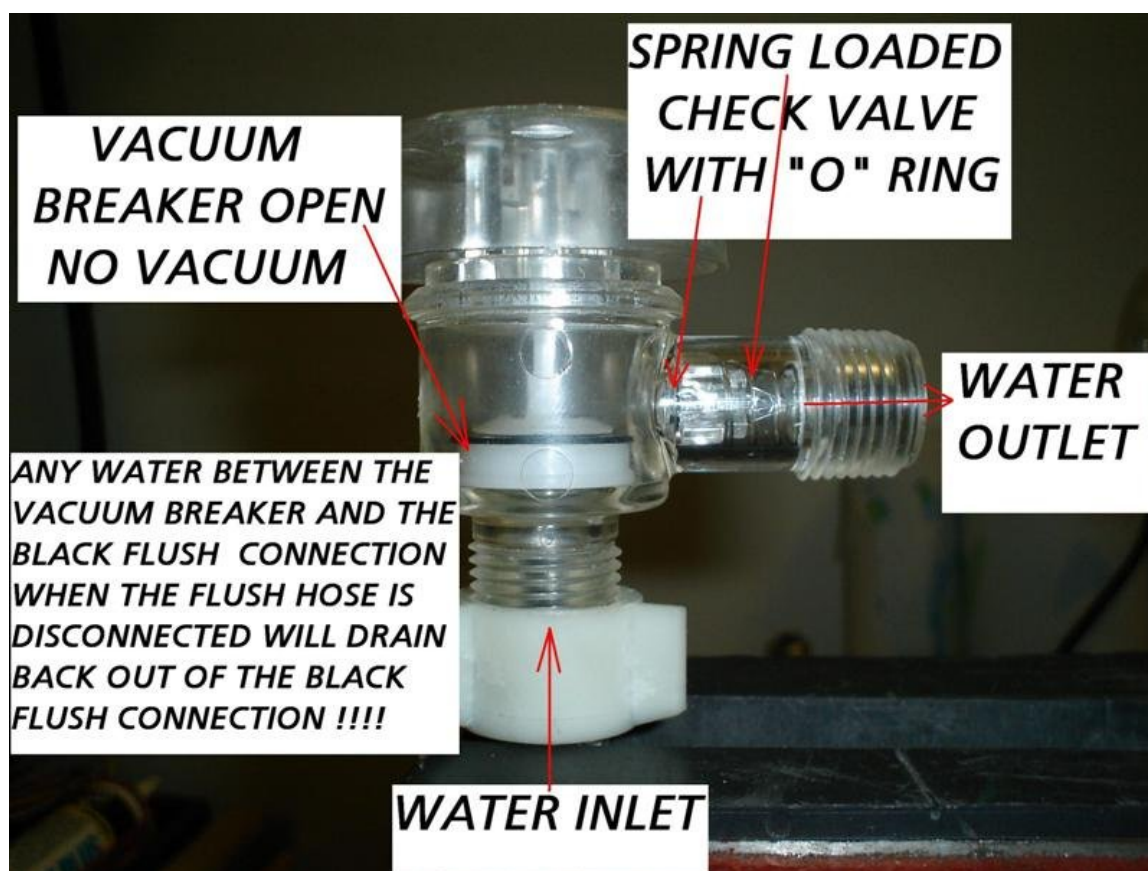




2010 43QGP Allegro Bus

2/28/2012

42 – FYI - **BLACK TANK FLUSH**. During my several dozen trips to Tiffin Motorhomes in Red Bay, AL, having observed Tiffin coach's during their build process (most of them on a diesel chassis), I think I have an good idea of how the Tiffin Black Tank Flush system is designed and installed. Tiffin's Black Tank Flush plumbing is both simple and effective. In most cases the system is fool proof, the few draw backs I see can be easily overcome. Tiffin uses a simple clear plastic vacuum breaker & check valve device, manufactured by Lakeview RV Supply Co. it is named model 1000 with a 1/2" inlet and a 1/2 " outlet connection. This device is usually located in one of three places, below a bathroom sink, behind the washer dryer or behind the shower connections outside access door. The location really depends on which place is nearest to the wet bay area.



The photo shows the device in its normal no pressure applied state. When water pressure is applied to the inlet side the vacuum breaker's white plastic disk is pushed up against the vacuum breaker's dome. When the disk is in the elevated position the vacuum breaker's dome outlet port which is normally vented to air is sealed by the disk. This seal prevents water from escaping from the vacuum breaker's dome portion of the valve. After the vacuum breaker is sealed, water pressure builds against the spring applied check valve and its "O" ring seat. When the water pressure rise's enough to overcome the check valves spring, water will flow through the check valves outlet port allowing the pressurized water to flow through the 1/2 inch hose to the black tanks "No Fuss Flush" device which has been inserted into the top of the black tank. That is just how simple the Black Tank Flush System really is.



There are a few **MINOR** drawbacks which can make a mess if Tiffin's production crew did not properly install the devices. I believe every owner should check this black tank flush system in advance of actually needing to flush the black tank.

First, check to make sure the vacuum breaker & check valve are operating correctly and mounted properly. Locate the vacuum breaker & check valve, as stated the device is usually installed in one of three places. If it is not behind the washer dryer and it is not under a sink then about the only other option is to look in any outside wall access (a 6" x 6" keyed door). It may be mounted in along with the shower connections. Once it had been located with the water turned off (no water pressure) on the black tank flush disconnect the two hoses. Remove the device so you can really look at it, turn the device upside down the white disk should drop to the low side, rotate the device upright and upside down a few times IF the disk does not move up and down smoothly it MAY cause a problem when you pressurize the black tank flush system. The disk MUST float freely up and down. If the disk does not float freely I have taken the device and shook it up and down enough times to wear any small burrs off the disk until it will consistently float freely. When you are ready to reinstall the device connect both hoses, the inlet hose has a straight connection (bottom of device) the outlet hose has an elbow connection (side of device). Once the two hoses have been connected hand tighten the two fittings.

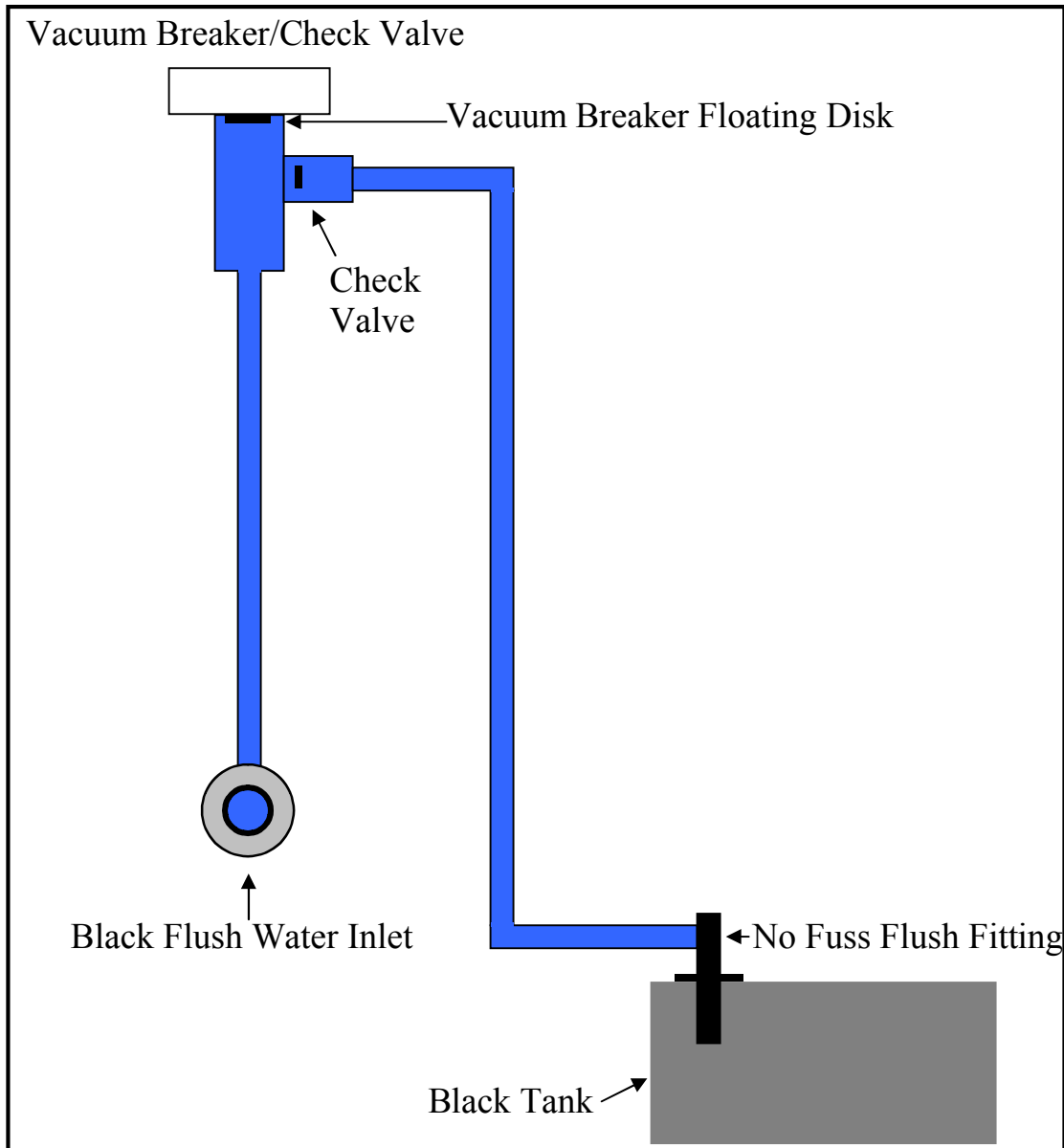
Second, make sure when re-securing the device it is mounted in an up-right position and cannot lean to the side. The above is critical but so easy to get correct. I use cable ties to mount the hoses and device upright.

Now we are down to the "NO FUSS FLUSH" device mounted in the top of the black tank. This device has a series of 1/16 inch holes which when under pressure will squirt water on the interior tank walls to flush the tank.

Third, sooner or later I suggest you find the No Fuss Flush device, remove the three screws holding it mounted in the top of the tank. Remove the device (yes, it is nasty) This is the point where I suggest you get a 3/32 inch drill bit and drill every hole in the device to the larger 3/32 inch size. The larger hole will better flush the tank and at the same time most likely prevent the flushing device from becoming plugged with human debris. When it becomes plugged the device will no longer be capable of doing its job, which is flushing the tank.

I had thoughts of inserting a photo at this point of the **NO FUSS FLUSH** device however I do not have a photo of a clean or unused device so we will pass on displaying a photo of a used device.

The Vacuum Breaker/Check Valve is located at least FOUR feet above the Black Tank **NO FUSS FLUSH** location. There is **NO WAY** for brown stuff to flow **UPHILL**, overcome a check valve in the vacuum breaker to get into the fresh water system.



This as previously stated this is a simple but effective black tank flushing system. Check the first and second points reference was made to, modify the third point as stated and the Black Tank Flush System will operate as designed and named, the **NO FUSS FLUSH**.

The vacuum breaker/check valve manufacturer does not recommend installing a check valve in the water line between the black tank flush hose connection (wet bay panel) and the vacuum breaker. Installing a check valve would maintain water pressure on the vacuum breaker preventing the vacuum breaker from its function which is to allow the water line below the vacuum breaker to vent to the surrounding air. Venting allows the water to flow back out of the short hose which can be messy, but it is **ONLY** water.