Do not do this procedure when the engine is hot. The hoses seem to come off easier if the engine is slightly warm, however.

It is best to do this procedure with the bike on its side stand. Raising the bike on a rear stand will increase splattering of coolant while draining. A pan may be placed next to the side stand to catch all fluid drained from the water pump. Have a bucket of water and a cloth ready to immediately wash any spills or spatters on the bike.

Do not run the engine without liquid in the system. The water pump can be damaged if run without fluid in it. Do not use any coolant that is not designed for use in aluminum engines. Suzuki recomends that different brands of coolant NOT be mixed together.

Some coolants are sold in concentrated form so that they may be mixed in proportion to distilled water according to specific needs. Fifty percent concentrated coolant to fifty percent distilled water is recomended for general purposes and also provides the best corrosion and cooling properties.

The procedure of emptying and filling the cooling system is simple, however after the system is flushed, it is not possible to drain every bit of the distilled water. The left over flush water in the system is enough to lean out the fresh coolant that will be added so that it will not have the maximum antifreeze and corrosion protection. The easy solution to this problem is to just drain the system and then fill it up with fresh coolant without bothering to flush with distilled water. Alternately, the coolant may be mixed with a higher proportion of concentrated coolant to compensate for the residual water in the system after flushing. Another approach would be to flush the system with fresh coolant and then drain to maintain the proper proportion of distilled water and coolant.

Remove left and right side/lower fairings and the oil cooler cowl.

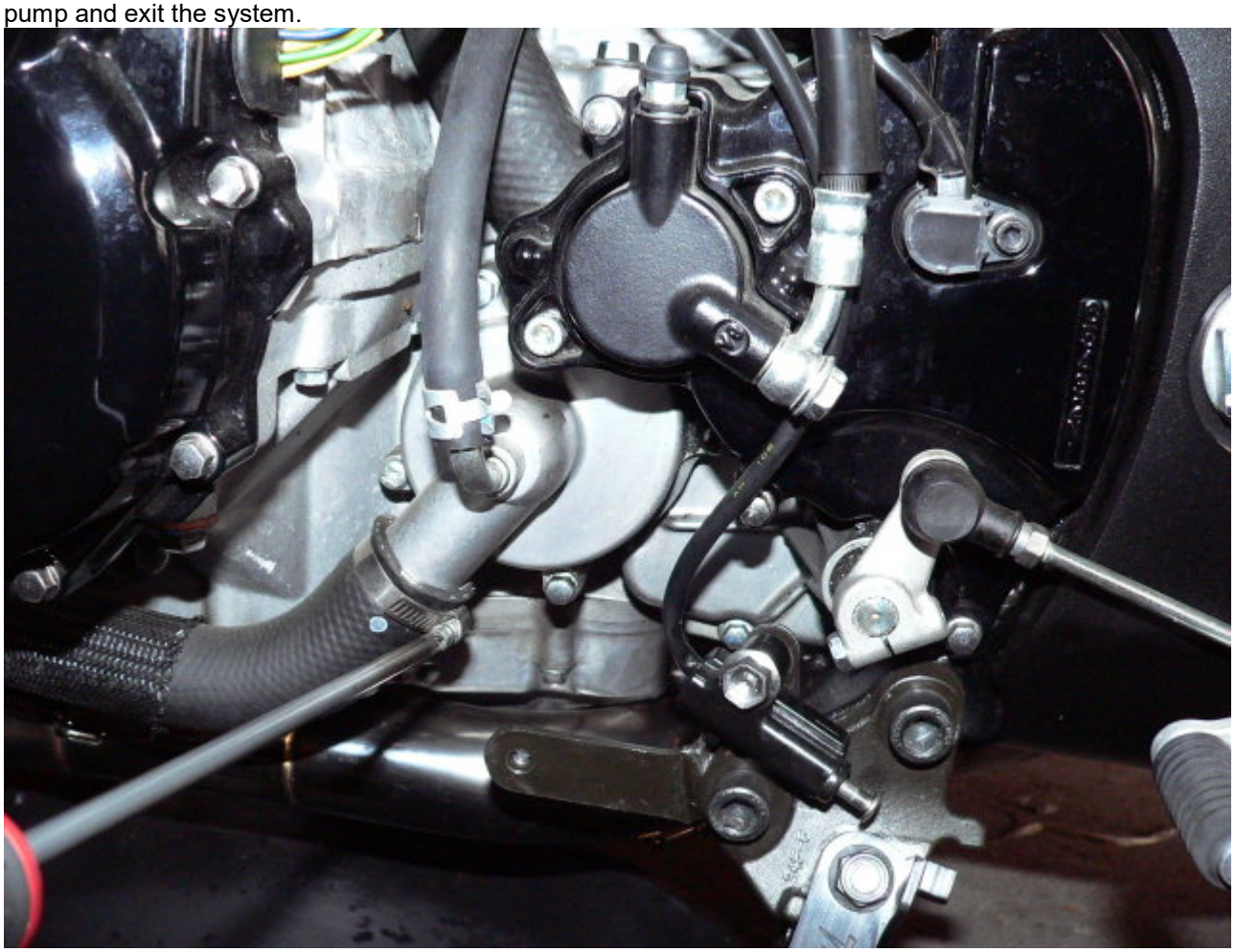
Have a pail of fresh water and a sponge handy at all times.

Tools:
- pail of fresh water and sponge
- 5 quart or larger drain pan
- phillips screw driver
- 10mm wrench
- sealable container
- nonpermanent thread locking agent
- distilled water
- funnel
- needle nose pliers
- fresh coolant (I used about 2 quarts and 22 oz total to fill the system)
- engine coolant tester
- 8mm open end wrench
- flashlight
- paper towel rubber band

Drain Coolant

1. Remove the radiator cap by turning it one half turn counter clockwise and then pressing while turning one half turn more counter clockwise.

2. Place a 5 quart or larger drain pan under the hose fitting nearest the water pump on the lower left side of the motorcycle. Remove the hose clamp with a phillips screw driver and pull the hose off slowly. Coolant is going to rush out. Drain all fluid from the hose and from the water pump. Tilt the bike as far off of vertical as possible a few times to each side to get to as much coolant as possible to run to the water pump and exit the system.



It may help to free a stuck hose by twisting it a bit on the fitting. Also, pushing the edge of the hose with your finger tips while you pull with the other hand seems to be a good technique.

3. Bring the drain pan to the right side and remove the hose clamp from the radiator return hose with a phillips screwdriver. Remove the return hose from the radiator fitting and empty the hose of coolant.

The hose fittings at the radiator are difficult to remove even after they are unstuck as described in step 2 above. A good technique is to â€œwalkâ€ the hose off the fitting by alternately pushing one side down and then the other.

4. Use a needle nose pliers to release the clamp on the small radiator hose. Pull the hose off of the fitting and drain the fluid that comes out.

5. Use a 10mm wrench to remove the coolant reservoir bottle from the right side of the radiator. Remove the stopper from the coolant reservoir and empty the reservoir bottle into the sealable container which you will use to contain the old coolant for disposal. Apply nonpermanent thread locking agent to the threads of the coolant reservoir screw. Reinstall the coolant reservoir to the radiator.

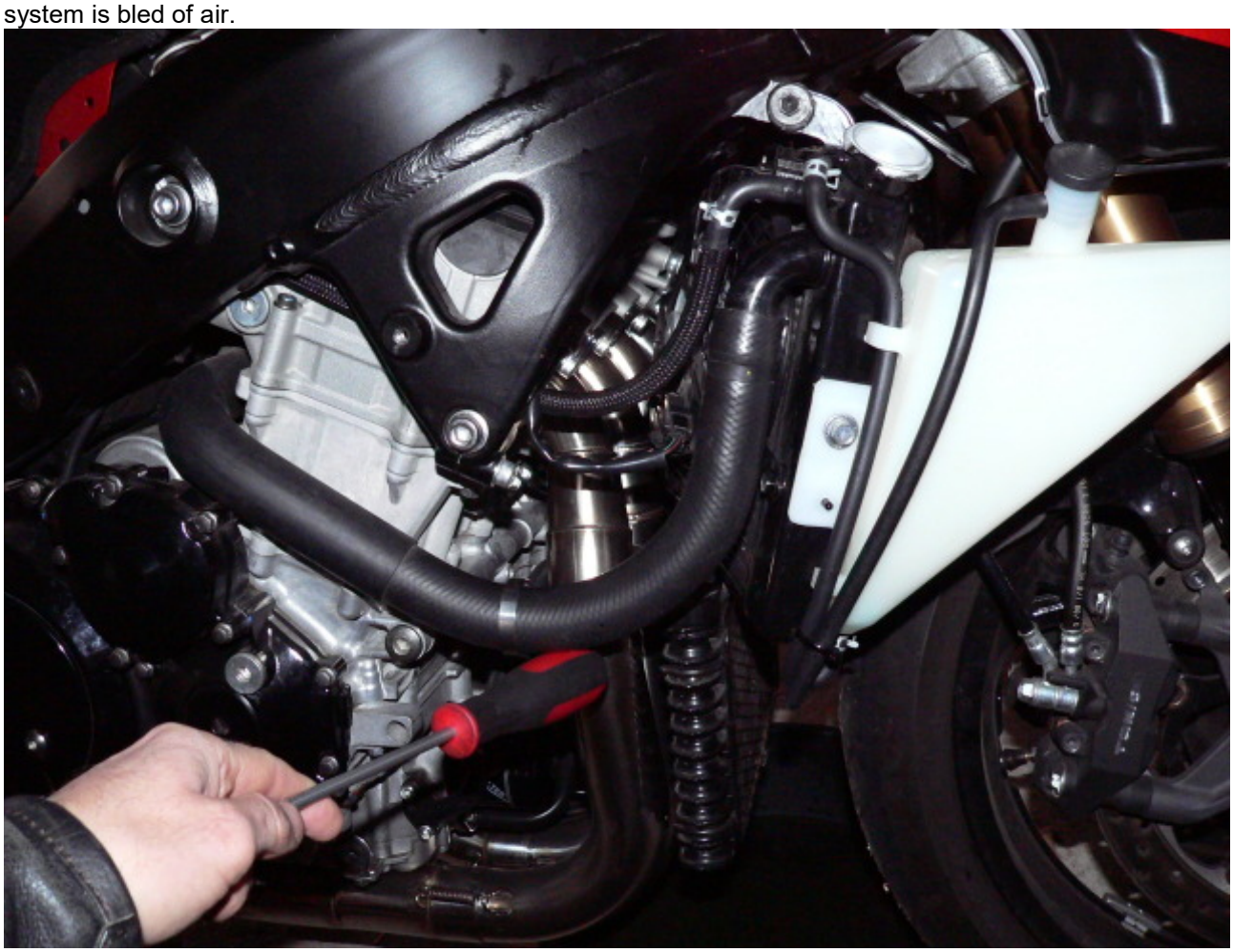
6. Wash all surfaces down with water, especially painted surfaces that might be damaged by prolonged contact with coolant.

Fill/Flush/Bleed Cooling System

7. Reconnect all hoses to the radiator but it is not necessary to clamp any of them as they will be getting removed again. You will use distilled water only for flushing the system. Flushing is a good opportunity to practice properly filling and bleeding air from the system when it is filled fresh coolant.

8. Slowly pour distilled water (never use tap water) through a funnel inserted into the radiator filler neck until the distilled water reaches the top of the filler neck. It is important to pour slowly to help avoid trapping air in the radiator. Tap all radiator hoses to release trapped air bubbles. Install the radiator cap and lean the bike as far as is safely possible to the left and to the right. Remove the radiator cap and fill it to the neck again. Repeat the leaning/filling routine until the coolant level will no longer drop.

9. Remove the radiator filler cap. Start the engine. Pour additional distilled water into filler neck as the system is filled by circulation. Be prepared to catch the water that drips out of filler neck as the water expands through warming up. Use the handle of a screw driver to tap all hoses to dislodge air. Watch radiator filler cap for air bubbles that may rise to the filler neck. If /when there are no air bubbles, the system is bled of air.



10. Repeat steps 1 through 9 using distilled water two or three more times until the fluid drains nearly colorless. Be especially careful to drain the system as thoroughly as possible after the final flush.

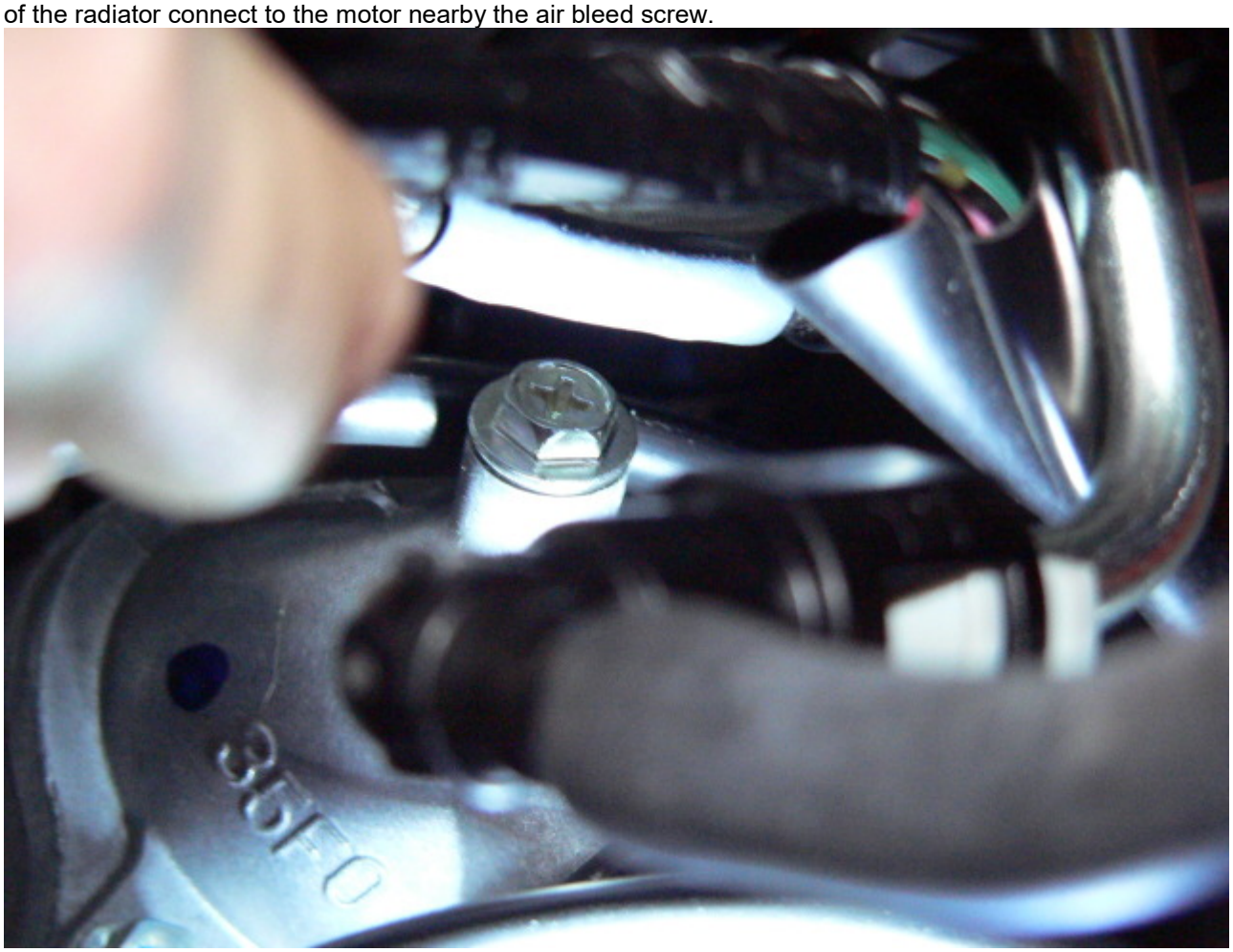
Replace Engine Coolant
11. Test the fresh coolant strength with an engine coolant tester before putting the coolant into the system.

12. Repeat steps 7-9 filling with fresh engine coolant and then bleeding the cooling system of air.

13. Fill the coolant reservoir to the F mark which is located on the side of the reservoir nearest the front fender.

The coolant reservoir level is supposed to checked with the bike vertical (although I doubt it matters at all as long as the bike is in the same position each time you check the reservoir level after filling it).

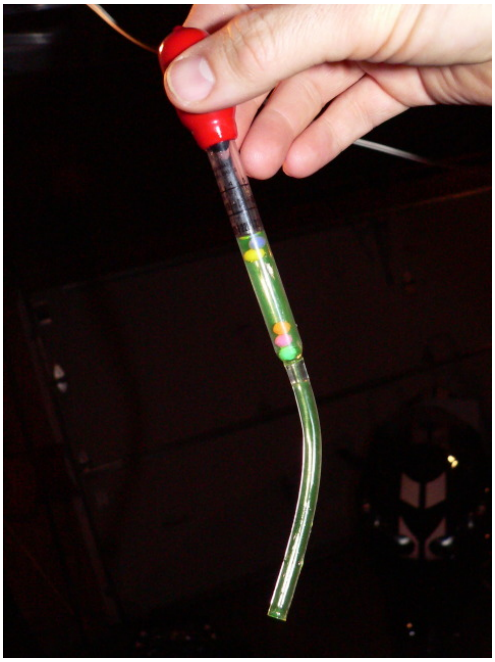
14. Install the radiator filler cap. Lift and support the fuel tank. In the fuel tank compartment, find the air bleed screw. It is a small flanged hex head screw with phillips cross slots. It is located in front of the fuel feed hose fitting that connects to the throttle bodies assembly. Also, the radiator hoses from the right side of the radiator connect to the motor nearby the air bleed screw.



Loosen the air bleed screw with an 8mm open end wrench. If liquid comes out simply tighten it back. You will probably not get any liquid to come out unless you run the motor. I do not feel it is wise to run the motor with the fuel tank elevated because the fuel pump may not be immersed in fuel when placed at such a sever angle.

15. Place a paper towel secured with a rubber band over the air bleed screw. Lower the fuel tank and start the motor. Use a flashlight to peer under the fuel tank, lifting it slightly. Engine coolant should weep from the air bleeder screw within 10 seconds of starting the engine. *Lift the fuel tank , remove the paper towel from the air bleeder screw and fasten the screw with 6-8 Nm.* Lower and secure the fuel tank.

16. Run the motor until the cooling fans come on. Allow the motor to cool down completely. Open the radiator filler cap and check the fluid level. Add coolant if necessary. Run the motor through a couple more heat cycles and check fluid level when the motor is cold. Also, check antifreeze protection level and adjust the strength of the coolant if necessary.



16. Install the radiator filler cap. Install fairings and oil cooler cowl. Done.