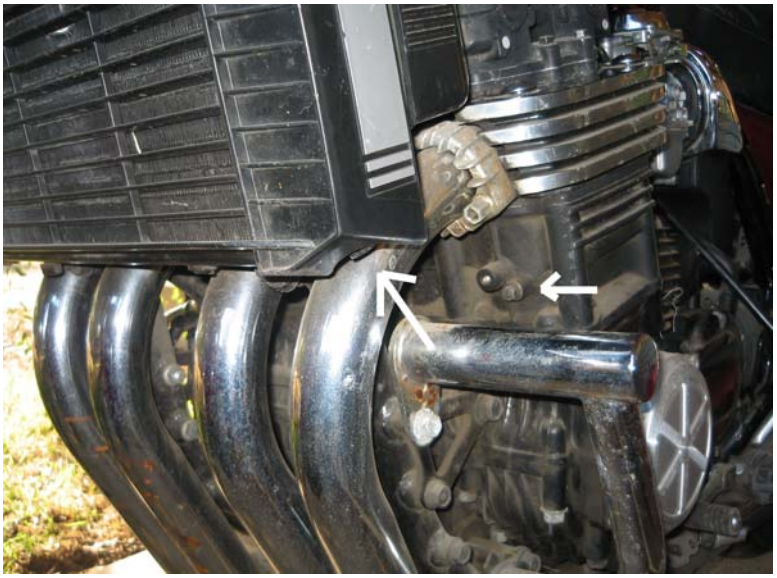
Flushing the coolant on your X

It's not difficult, just takes a bit of time. The hardest part is finding the drain bolts, because the pictures in the manual aren't the best.

You'll need:

12mm wrench/socket
10mm wrench
8mm wrench
If you have a torque wrench that can go as low as 2 ft-lb, that will come in handy too
largish drain pan
Funnel (if you can get the kind which has a removable flexible tube on the end, say, for adding transmission fluid, that works great. If the funnel itself is flexible, even better.
Obviously, you'll also want a fresh batch of coolant. Silicate free and phosphate free.
For obvious reasons, you'll be wanting to do this with a cold engine. Let's start by locating the drain bolts.



Locations of the two left drain bolts.

A better view of the radiator drain bolt. Funny that the bolt here is on the left side of the radiator, when the parts diagram shows it on the right side...

Right-side cylinder drain bolt

Right-side cylinder drain bolt (8mm) and radiator pipe drain bolt (10mm)

In case you've ever wondered where the coolant level indicator is, wonder no more.

Likewise for the radiator cap.

Now the fun begins. Per the manual: place an open container under the engine.

If you have the guard that goes over the radiator cap, remove it. It's held on by a 10mm bolt (or so I'm told... I don't have one).

Remove ye olde radiator cap.

Next, grab your 12mm and loosen the radiator drain bolt.

...keeping your funnel handy.

Finish removing the bolt. The trickle you see here will turn into a torrent, and you'll be glad you had the funnel. Trust me on this.

In the name of (insert deity of your choice here), what is that coming out of my engine?!?

Don't let the camera flash fool you – that stuff is much darker than it looks. Dark green, can't see through it... that ain't right!

Once the radiator is done, next up is the left cylinder drain bolt (8mm). The funnel likely won't fit in here, so if you have that flexible tube like I mentioned earlier, it will come in very handy.

..like so. Do the other two drain bolts the same way. You'll notice they have what look like copper washers, but are actually gaskets. If they're damaged, they need to be replaced.

Next up: the part where we actually flush the system. Now, I only have two arms and one drain tube, so I chose to put the drain bolts back in just a few turns. The manual calls for soft water, but distilled would likely be a better choice, as there are no minerals or salts or such to wreak havoc with the system. Plus, you can keep it onhand to top off your battery.

Pour the stuff in until you're up to the neck, then go around and pull the drain bolts one by one again. You'll probably want to do this procedure a total of two or three times, making sure you've drained all the water after each fillup.

Lastly, snug down all the drain bolts (see the note below) and add your coolant. Again, no silicates or phosphates. Premixed will save you the trouble of doing it yourself, if your locale allows. For those who reside in places that see colder temps, a better choice might be to get the concentrate and dilute with distilled water to a 60/40 coolant/water mix.

Fill it up to the neck, run the engine a minute or three, then check your coolant level. Top off as needed trough the reservoir cap, kneading the upper hose to work air out of the system..

Tightening the bolts: the main drain bolt for the radiator, if stock, is plastic, if you hadn't noticed already. As a result, you don't want to put too much torque on it. I'm told that the manual lists a torque spec TEN times the recommended amount.

Torque specs:	Cylinder drain bolts (2)	- 7.2 ft-lb (10 N-m)
	Radiator pipe drain bolt	- 5.1 ft-lb (7 N-m)
	Plastic radiator drain bolt	- 2.2 ft-lb (3 N-m)

Check the radiator itself next for bugs and other crap, not to mention bent fins. Bent fins block airflow, and reduce cooling effectiveness. Run the engine and check to see that a) the temp needle rises, and b) the fan comes on. If one or the other doesn't happen, then the switch/sending unit in question might be trapped in a pocket of air, and will need to be dealt with appropriately.

Three final steps:

1) Dispose of the old stuff appropriately, in accordance with local regulations.
2) Clean up the area and put your tools away.
3) Go riding!