

Heater Hose Renewal

1995 XJ-6 4.0L NA

Tools Utilized (May be different than “Tools Req’d)

¼” Drive:

6mm and 10 mm sockets

6” and 14” Extensions

Nut-Driver

Ratchet

Universal

Extendable Mirror

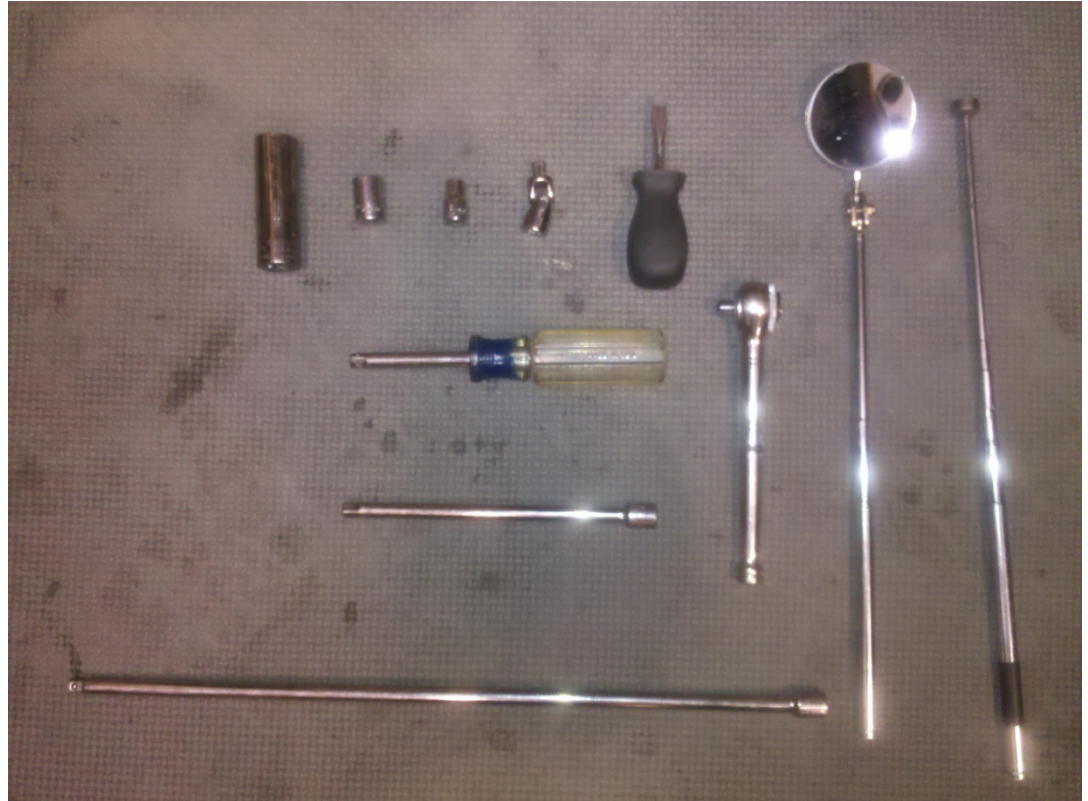
Extendable Magnet

Shortest spade-blade

Screwdriver I had

3/8” Drive:

15mm socket



Preparation

- Use the short screwdriver to remove the drain plug from the radiator side-tank, recessed in lower RHS mounting point
- Catch basin of some sort (I use a plastic bus-boy pan I've had for awhile) is highly recommended – it will need to be low-profile to fit under the radiator

Need to Bypass your Heater?

If any of your heater hoses (or the pump or valve) spring a leak and you need the car whilst you await parts, you can run a hose from the supply port on the head (Left Pic) to this one under the air-intake tube (Right Pic) and be back on the road, albeit sans heat. Not sure but I believe 5/8" ID X 36" would be sufficient.





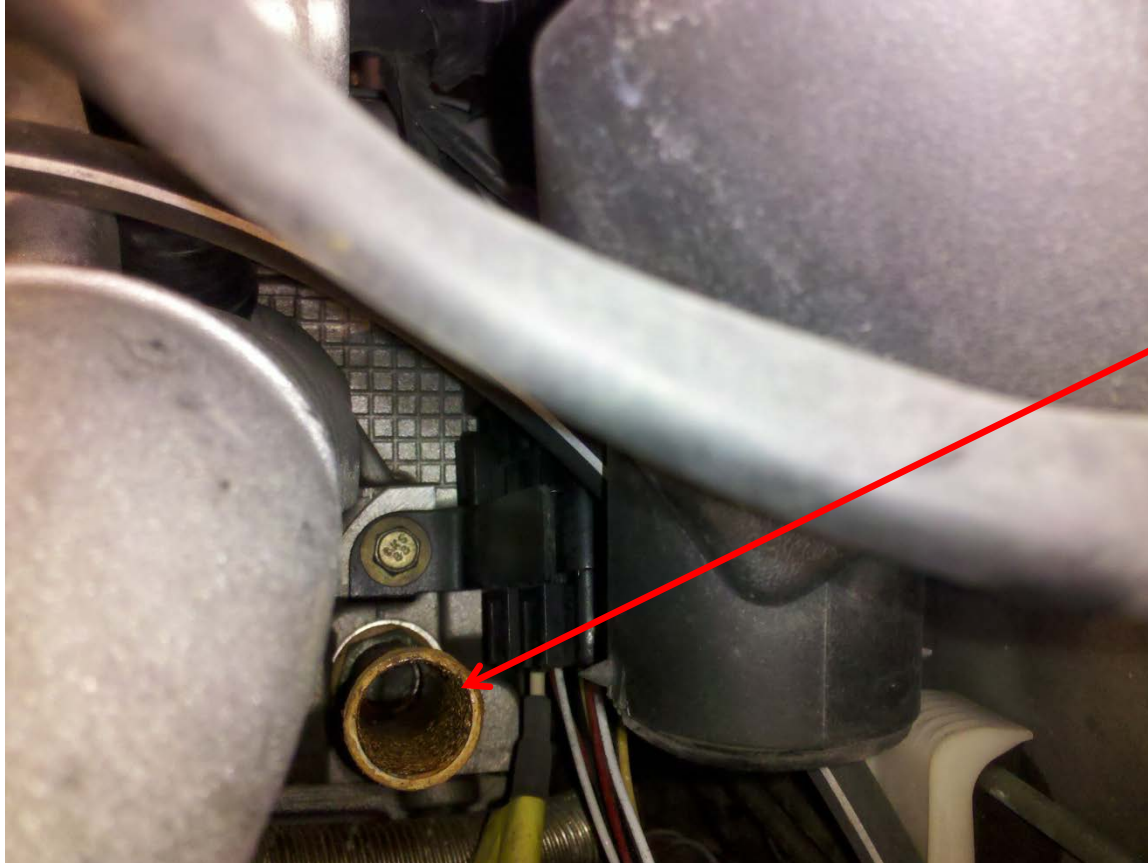
Ruh Roh!

The leak is clearly in the aft engine bay area. Quite a tangle of heater hoses back there, but it seemed more toward the center.



Found it!

Actually never saw this, but took a bunch of pictures with my phone of the area where I believed the leak to be. Standing in the sunshine looking at the phone-screen, I thought I may've seen a problem here. Once I brought it in and downloaded it to the computer, it was obvious.



LHS of the head, aft

The breached hose was attached to this port on the head that supplies the heater matrix.



The other end of the busted hose terminates in this puzzling connection to the strange hose with 4 endpoints.

Remove Air Box

Remove Aesthetic Cover



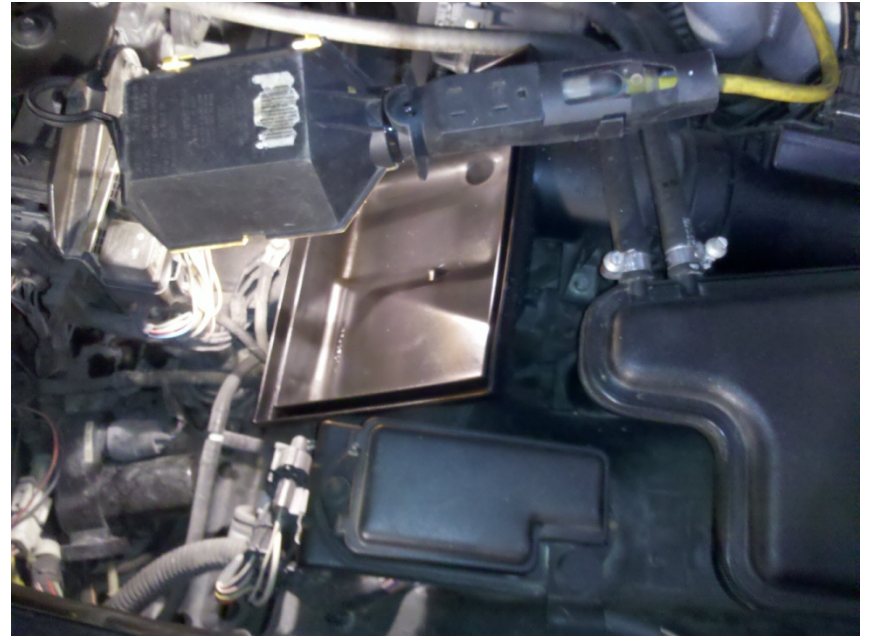
Remove Air Pump Hose



Remove Air Box

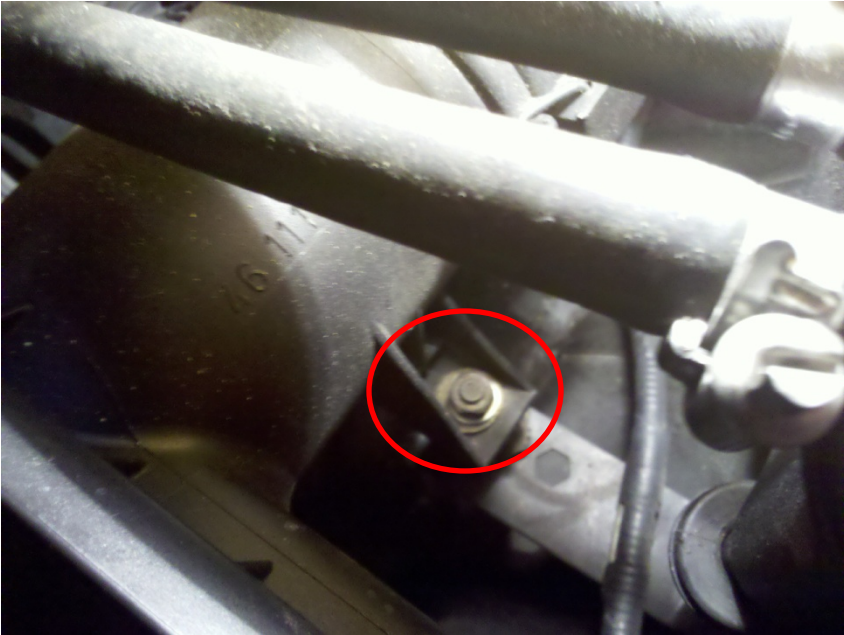
Disengage Spring Clamps

Remove Cover and Filter

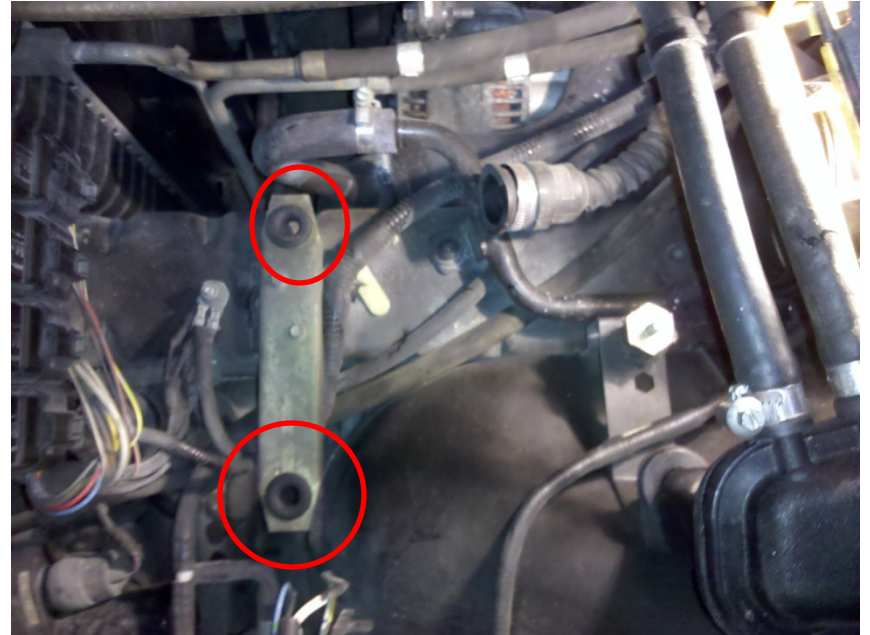


Remove Air Box

Remove Fixing Nut



Work Box out of Rubber Grommets



Displace Coolant Reservoir

Pull WxStrip, Plastic cover, and remove fixing nut



Remove locking clip and disconnect low-coolant sensor connector



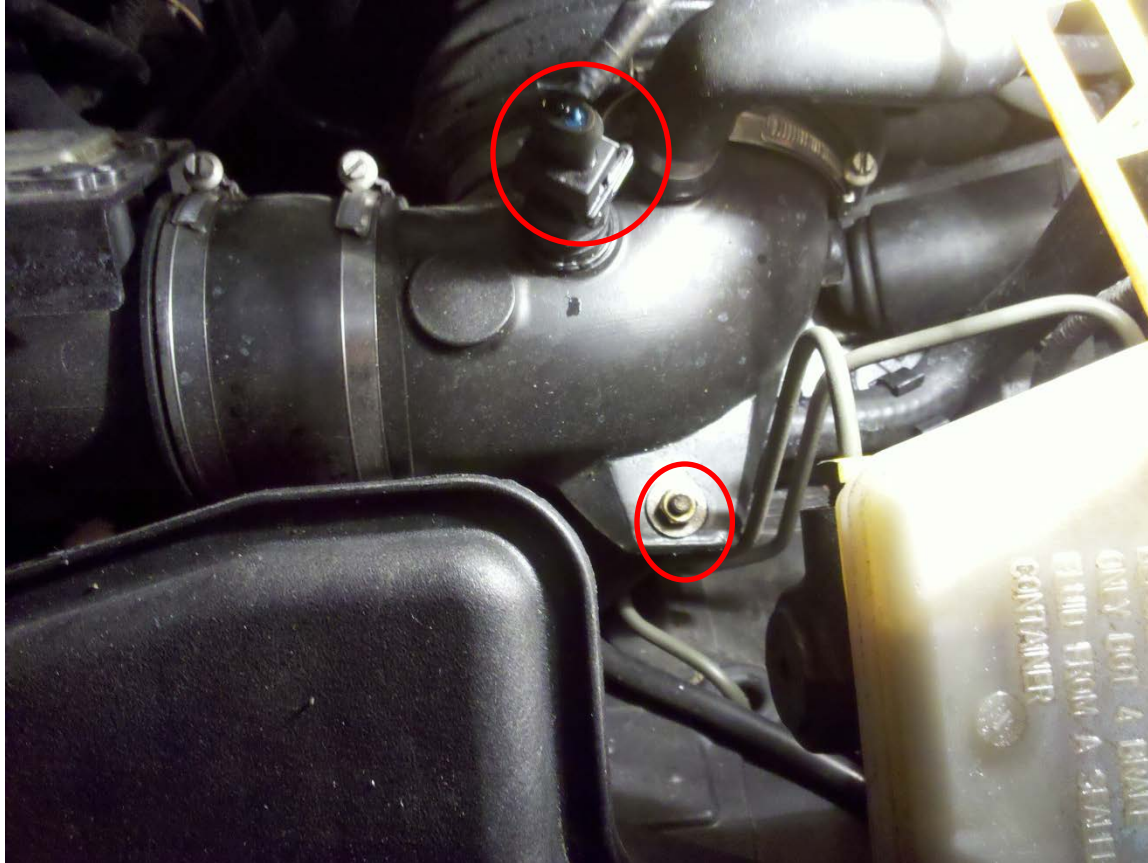
Displace Coolant Reservoir

**Lift Reservoir enough to
Disconnect this hose**



**I left the overflow hoses attached
and set it aside on the cam-cover**



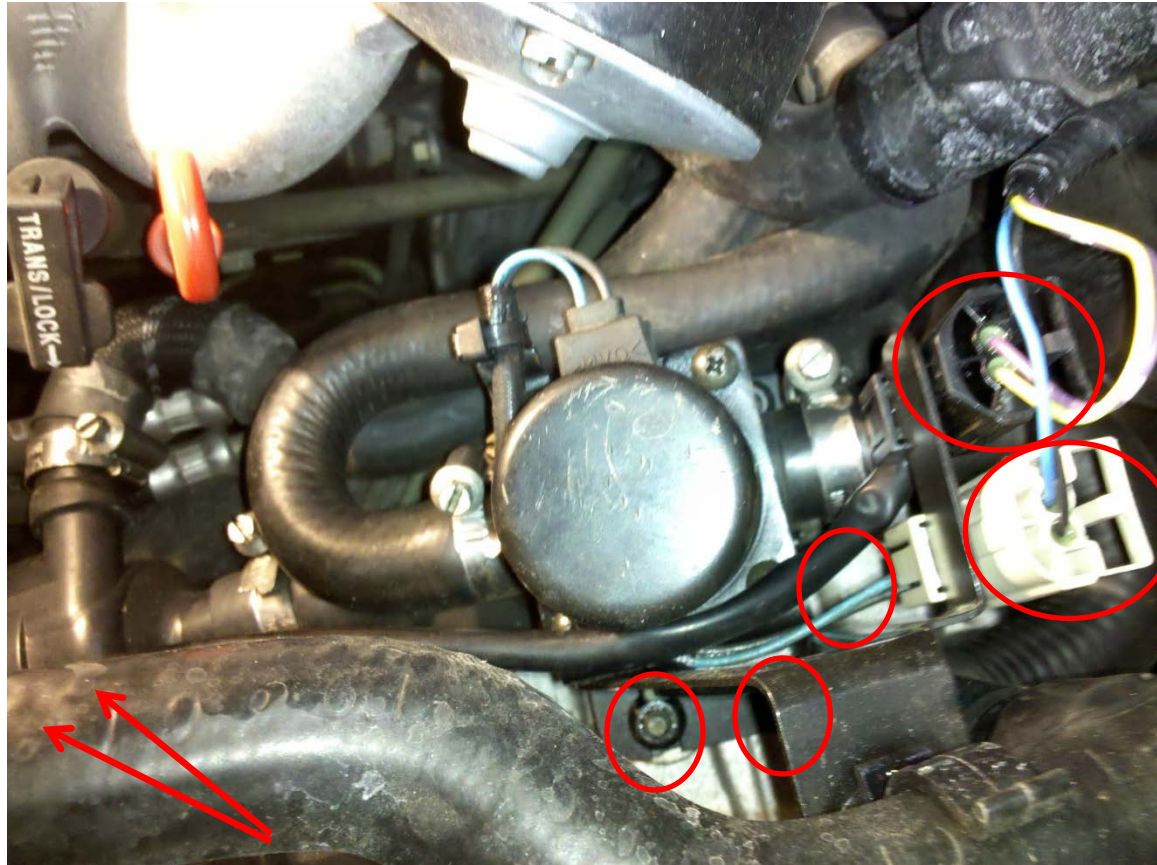


Displace MAF Sensor/Air Intake Tube Assy

Disconnect electrical connector, remove fixing nut, and loosen clamp at bellows/intake manifold interface. I rolled the entire assy up and over onto the intake manifold/cam-cover, leaving CCV hose attached.



Since I had replaced the Pump-to-valve hose last summer when I replaced the radiator and bypass hoses, and flushed & renewed the coolant, I was keen to leave that in place as an asy and just disconnect the affected hoses. After loosening the affected hose clamps, I determined that to be an unworkable plan



So I disconnected the electrical connectors and removed 3 fixing nuts from the valve bracket and two from the pump mounting (not shown) and removed it as an asy, connected by the hose.

Remove Hoses

Both sides of Heater core



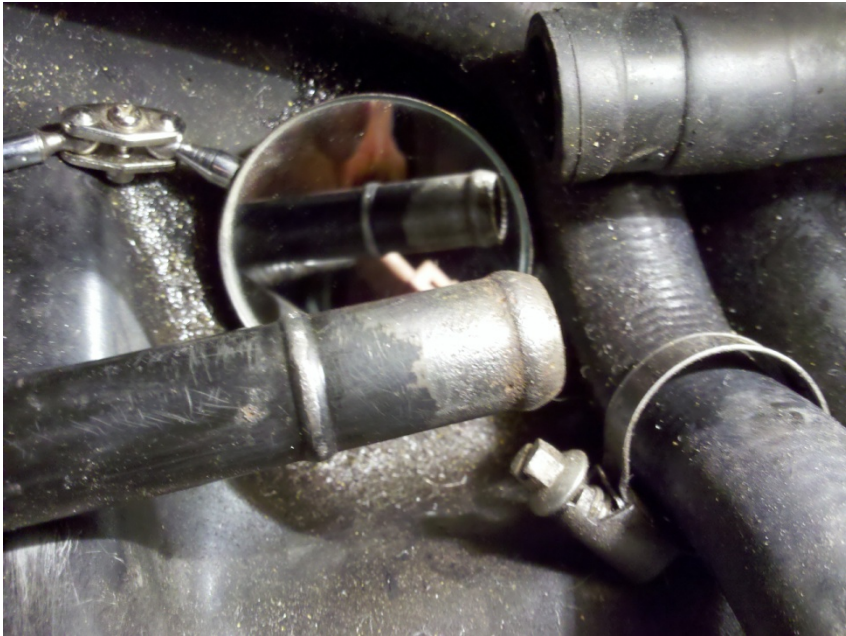
Forward end of 4-ended hose



Corrosion

Didn't snap a "before" but found the end of this tube well-rusted just like the other end of it last summer when I replaced the lower rad. hose

Mended it with a bit of 60-grit, then some 150, then steel wool followed by paint



Corrosion

- I didn't snap "after pics" but also attempted to clean up both heater core nipples and the nipple coming off the head with a strip of 150-grit sandpaper.
- Blew all the "dusties" off with shop-air, which spread the residual coolant around the work area fairly liberally.

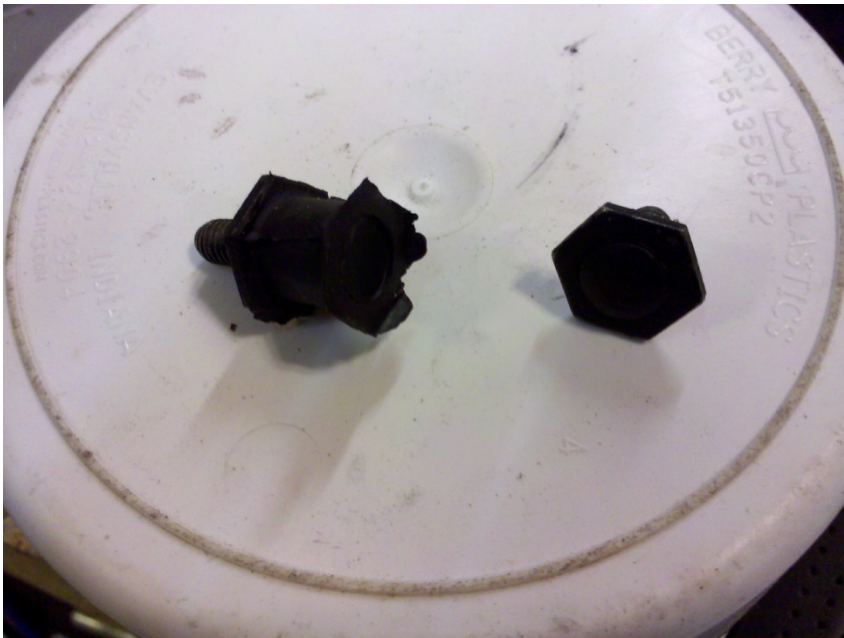
Intermission

- This disassembly and cleaning is as far as I got between getting home from work Tuesday when hoses were delivered, and time to clean up and strike for Krum where the high-schooler had a basketball game.
- Looked like a fortuitous break-point as it would allow the paint to cure – wish I'd noticed the separated iso-mount at that point – could've mended it after the game and allowed for an overnight cure!

Water-Valve Iso-Mount

Found the large piece on the left adrift on the inner fender Wed. evening when I thought I just had a put-it-back-together and refill coolant task.

I retrieved the smaller piece from here using the 15mm socket. No ratchet nor other means of mechanical advantage was required. It should've looked like this:





I mixed up a bit of 2-part epoxy, carefully clamped both pieces together, then suspended it over the kerosene heater I was using to make the shop habitable for middle-aged man work. Eventually, I had gone as far as I could without remounting the WV, so I took the heat gun to it all 'round and cured it up quickly

Installation

- Not much to show: I dab a bit of liquid hand-soap on the ID of each hose end and the OD of the nipples to ease installation. Also on the o-ring at the bizarre junction of the 4-end hose and the one that failed
- I assembled all hoses to the pump/valve asy, leaving the clamps just loose enough to rotate the hoses before placing the entire asy back to the fender. Re-installation of the fixing nuts is delicate due to lack of access. I use the magnet to get the threads started on each, then the 10mm socket with extension.
- Toughest connection, by far, was the one at the head. If you wear really big gloves because you need them (rather than to impress the ladies) good luck to you on this one. I rather suspect you may decide it is a good time to pull the intake manifold and clean the throttle-body, though.

Finishing

- After making all the hose connections, rechecking all clamps properly secured and double-checking the disturbed electrical connections, I somehow managed to remember that radiator drain plug!
- Noticed I didn't have as much Zerex G-05 as I thought left over from last summer's coolant renewals on the XJ and my son's F150, and managed to get to O'Reilly's 15 min prior to closing. By the time they tallied state & local taxes, one jug swallowed a \$20 bill and burped only jingling pocket change!
- Added 6.56L of Zerex G-05 and topped up with the slightly G-05-flavored distilled water I drained from the system.
- Lit the mill and brought it to operating temp whilst checking for leaks, finding none.
- Shutdown, topped up reservoir and did a coupla-miles test-drive. Good heat, good temps, no leaks.
- Later, after cleaning up and turning in, but before drifting off to sleep, I realized I couldn't conjure up any memory of re-attaching the air-pump hose to the air-box.
- I had left the bonnet open to remind me to check coolant level before the 70 mi. round-trip commute, so peeked in early next morning when I went to loose the dogs from their indoor kennel (it was coo'ooold that night) and found it was an easy mend – no need to take the Excursion to work again.