



Original 'S' Cars FORUM UrS4, UrS6/S6 Plus, S2/RS2

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PS Pump R&R writeup (edited to add Bill the Cat's input)

Posted by: UrScubed on 2006-09-15 01:01:25

Account #: [101316](#)

Special tools required:

32mm wrench to hold pulley on PS pump (bicycle bottom bracket wrench shown)

Bolt to secure tensioner

A cut down 6mm allen with the short arm between 1" and 1 1/8" (not shown)

Parts required:

PS pump: 054 145 165 L (X at the end means rebuilt)

O-rings and/or copper seals for:

PS high pressure line

J-hose

Pump inlet

Lots o' Pentosin (at least 2 liters suggested)

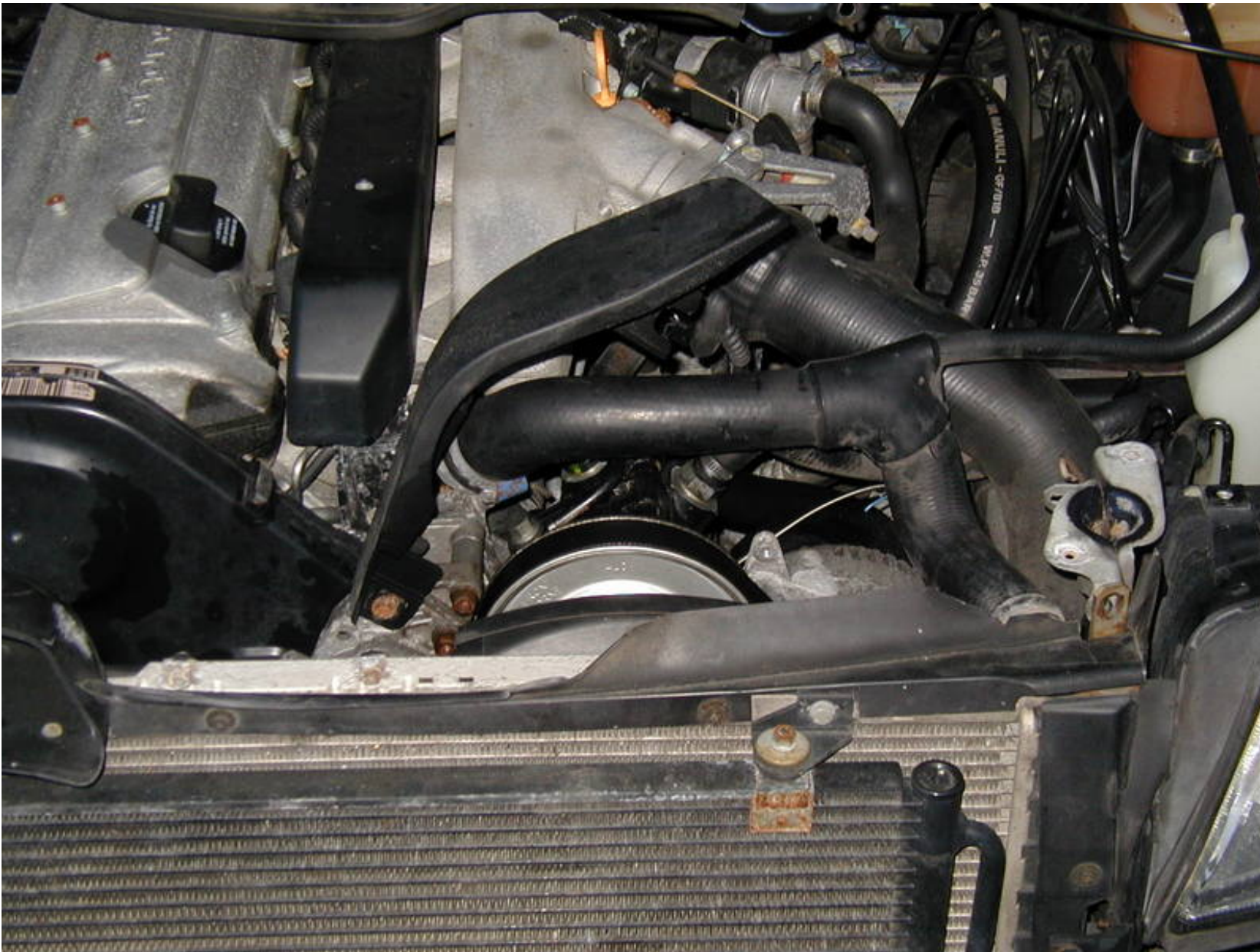
Estimated time: I've got it down to about an hour, but allow up to 4 for your first attempt.



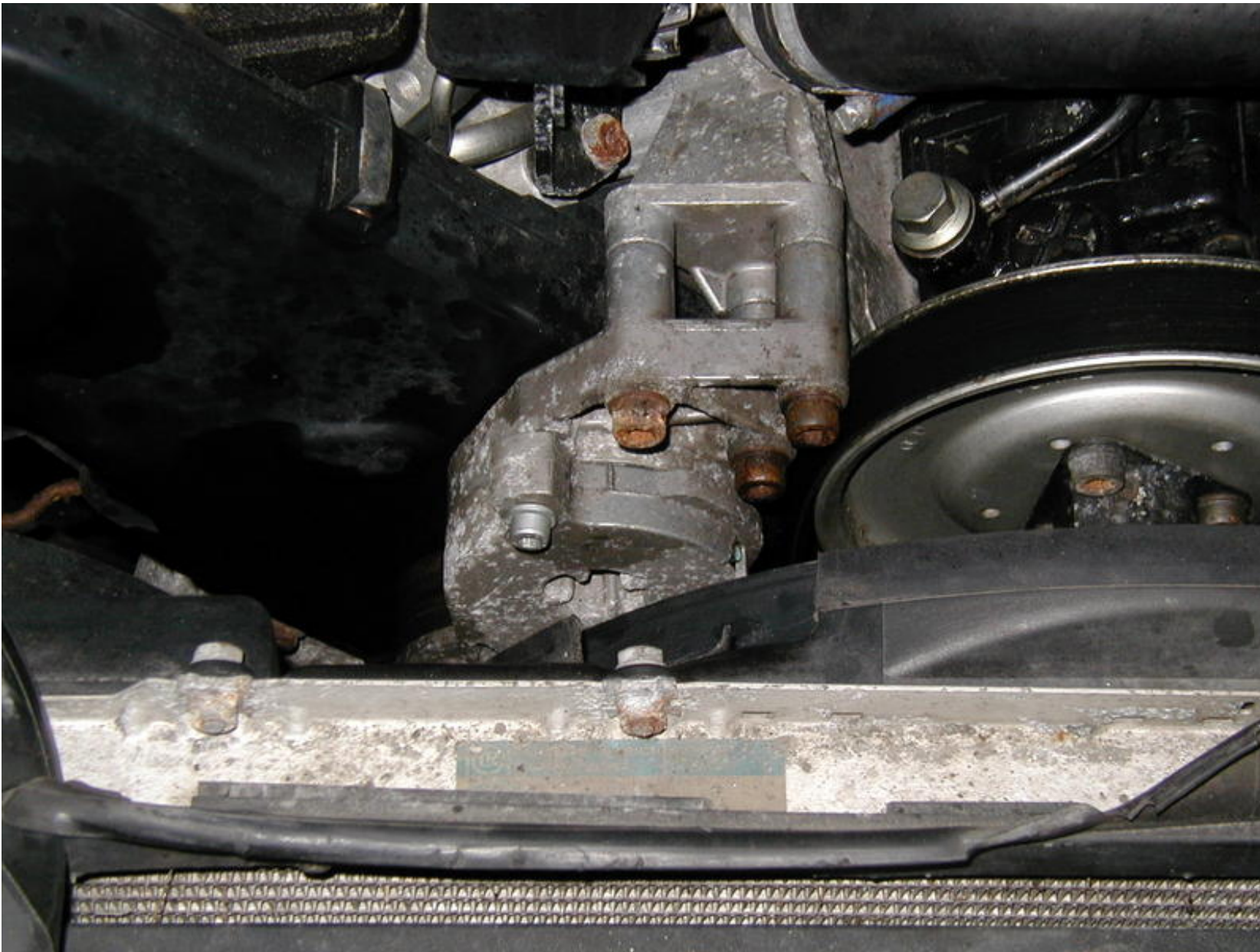
Start disconnecting the negative terminal- one of the PS pump bolts requires you to swing a ratchet right by the positive terminal of the alternator. Don't ask me how I know this. Next, pull the lock carrier. There should be 10 bolts (2 securing the radiator) & 2 phillips screws (headlights).



Pull the allen bolt that secures the belt cover (if you have one) and pivot it up and then pull forward to remove.



Pivot the serpentine belt tensioner and secure with the bolt shown above.



Use the 32mm open end and the cut down 6mm allen to remove the bolts securing the pulley to the PS pump. The shortened arm on the allen allows you to access the bolts without having to remove the clutch fan. Carefully remove the pulley and the hexagonal cover once all 3 bolts are out.



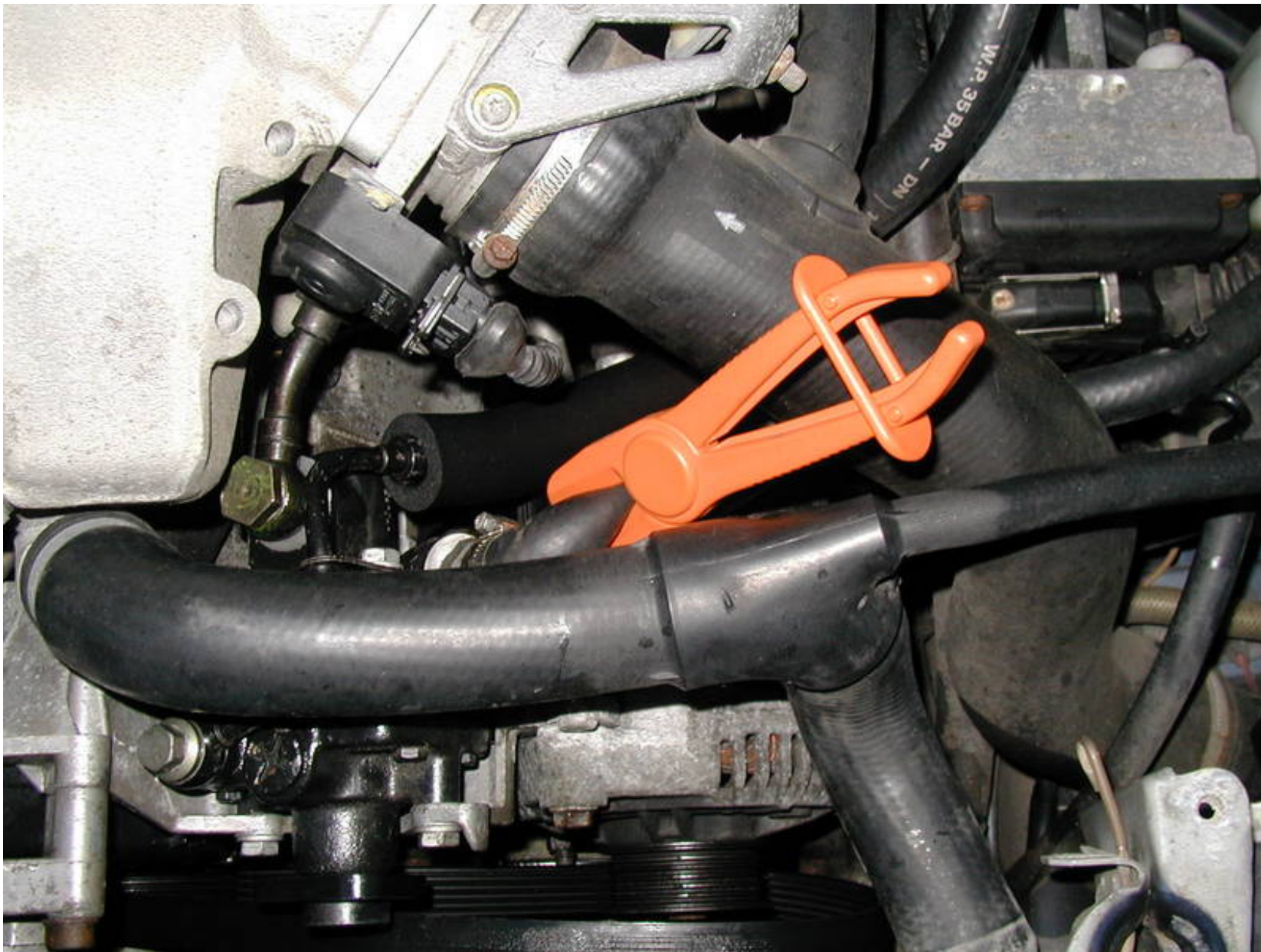
Once the pulley is removed, it's time to drain the hydraulic reservoir. Always remove the wire for the fluid level sensor before trying to unscrew and remove the cap.



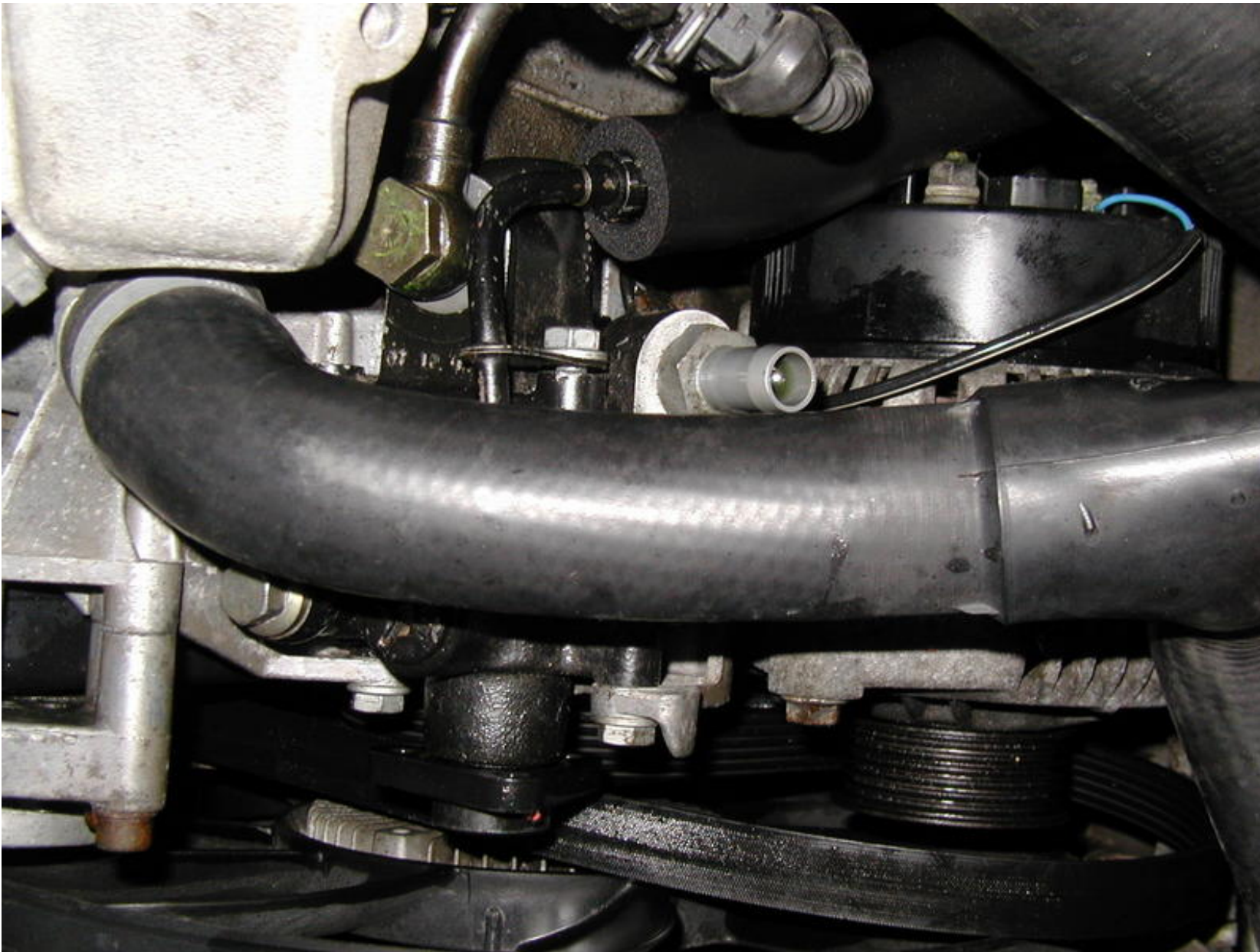
Once the cap is off, remove the filter. It just slides up and out. When the filter is out, use a turkey baster to remove as much fluid as possible. If the reservoir still has the factory crush clamps on the supply and return lines, take the opportunity to pull the reservoir and replace both with screw clamps.



If possible, pinch off the supply hose as shown, and then remove.



Once the supply hose is off, it's easier to pull the 2 high pressure hoses. Pull the J hose first and then the pump-to-rack hose. Bag the hose ends so they don't pick up any dirt while the pump is out.



Once the hoses are out of the way, pulling the 3 bolts that secure the pump is reasonably straightforward- the only headache is the one bolt low in the back, because it's difficult to see and swing a wrench on. You can see where it is from the picture below of the bracket. Bentley says to also pinch off and disconnect the upper radiator hose- this will make it easier to remove the pump, but IME you can get the pump out easily enough with the hose in place. Once the bolts are out, pull the pump- if the upper radiator hose is still connected, it will need to come out to the rear.

If the PS fluid has been leaking onto the serpentine belt, mark the direction on the belt, remove & wash in dish soap / laundry detergent, and also clean all pulleys with solvent. Replace the belt if there are ANY cracks while flexing backwards, or you do not know how long it has been there. While the pump is out, clean the area thoroughly to make it easier to find any leaks post-install.



Take the old pump to a bench and compare it to the new pump. You need to swap the inlet from the old pump to the new. Replace the copper washer with a new one.









Once the inlet tube is swapped, reinstall the pump. Prime both halves of the pump with the turkey baster, then reattach the supply hose and turn pump until fluid comes out both ports. If necessary, use your Mitvac or equivalent to help prime the HP side- you absolutely want to see fluid coming out of both ports before reconnecting the high pressure hoses, since these pumps do not last long if they're run dry. Once the pump has been successfully primed, reattach the high pressure hoses using new O-rings or copper seals.



The rest of the installation is the reverse of removal. Refill the system with fresh PS fluid and purge by turning the wheel lock to lock with the front end off the ground. Take the opportunity to flush the system while you're at it so your brand new pump won't have to deal with nasty old fluid.

89 Rallye Golf, 95.5 S6, 02 Mini Cooper S
Too many cars, too little time.

Thread:

- [PS Pump R&R writeup \(edited to add Bill the Cat's input\)](#)  - **UrScubed** 2006-09-15 01:01:25 (111 views)
 - [Many thanks for the writeup, well done!](#)  - **furtherad** 2006-09-15 15:02:04 (1 view)
 - [awesome work. great preview of what i'll be doing on sunday.](#)  - **cashguzzler** 2006-09-15 11:03:48 (2 views)
 - [A few extra thoughts -](#) - **Bill the Cat** 2006-09-15 02:19:14 (35 views)
 - [Thanks for the additions- agree with most...](#) - **UrScubed** 2006-09-15 10:27:38 (19 views)
 - [Glad to be of help.](#)  - **Bill the Cat** 2006-09-15 11:53:27 (3 views)
 - [Good job!!!!!!;-\)](#)  - **popdemonic** 2006-09-15 01:58:27 (7 views)
 - [excellent! *bookmarks*](#)  - **TRTW** 2006-09-15 01:08:56 (9 views)

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