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to 2006 Honda CR-V > CR-V::Clinical Rounds

■ Timing Belt & Water Pump How To - Dial up Beware!!!

Community

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CR-V::Clinical Rounds Routine maintenance, problems, solutions and repair

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■ 10-04-2010, 09:12 PM

Racoon 💿

FFNC

FAQ

Site AdminHondaSUV Elder

Join Date: Apr 2002

Location: A cornfield near Music City...

Posts: 25,166

And special thanks to member etc for finding the online archive of this thread so that it could be restored.



The Racoon

Silver Moss Metallic 2006 CR-V EX 5 Speed (Gen 2.5) - 50,000 miles and counting Accessories: invisible bra, front splash guards, Weathertech Window Deflectors, floor mats, cargo cover, cargo tray, moonroof visor, iPod interface, NekkidTM spare. (more to come)



Shadow Mist - 2006 Honda CR-V

94 fuel-ups

driven by Racoon - Gas L4 SUV





Milano Pink 1999 CR-V EX 5 Speed (Gen 1.5) - SOLD at 127,997 miles





■ 10-02-2010, 08:40 PM

#<u>9</u>



4/6/2012 6:06 PM 1 of 63

Join Date: Apr 2002

Location: A cornfield near Music City...

Posts: 25,166

Comments and discussion from the original thread:

Quote:

Originally Posted by headknocker

There's a much easier way to hold the cam pulleys in position after you've removed the crankshaft bolt.

If you'll notice there's a hole in each the camshaft holders on the pulley side. When the engine is at TDC the holes in the camshaft holders and camshafts will align. Just put a 3/16" drill bit or 5mm punch into each of the holes.....voila!

Just remember to remove them after the belt is slipped over the pulleys.

Quote:

Originally Posted by sgtsandman

A Little addendum that was suggested by a fellow member. Tighten up the bolt on the idler pulley arm after getting the belts up and rotating the arm to vertical.

Quote:

Originally Posted by sgtsandman

Quote:

Originally Posted by **John Bennett**

What is the name of that tool?

It's called a counter holder kit. Fourth item down on this page.

http://shoptoolsshoptools.com/shopdi...t=Honda+Tools+

Quote:

Originally Posted by sgtsandman

You definitely need 1/2" tools for the puley bolt. I broke a couple of 3/8" extensions trying to break the bolt free the first time.

Quote:

Originally Posted by **sgtsandman**

Quote:

Originally Posted by Crabman

Awesome writeup and thread! Clearest and best illustrated that I've seen!
 I have been mulling over the idea of doing this job myself (my 2001 CRV is overdue and I've had some DYI experience).

I think you have given me the courage to try it.

Two questions however:

- (1) In your addendum, you refer to the idler pulley arm. Do you mean the A/C Compressor Belt Idler Pulley? This is the only belt that seems to have an idler pulley. (except the Timing Belt Tensioner Pulley, which I guess someone could refer to as an idler).
- (2) "THE BIGGIE";. Just how hard is it to remove the "infamous" Crankshaft Pulley Bolt?? I see that it is torqued to 130 ft-lbs (quite a bit). But you and other posters imply that Honda employs gorillas at the factory to torque this bolt. And seeing that this bolt is exposed to the elements, I start to worry that this bolt could be source of many problems (I've broken/sheared a fair number of bolts in my life often with serious consequences).

I see that you used a long breaker bar (24 in.?) and 1/2 inch sockets. I assume you used a 6 pt socket. I also see that you used a jack-stand as a support/fulcrum for the breaker bar/extension. Any other advice/tips?

Perhaps lots of holy-water (liquid wrench for the atheists out there)? Is it a two person job (one to jump up and down on the breaker bar and one to resist the torque on the special 50mm, crankshaft tool)? Seriously, I'd be interested in anyone's experience with this bolt.

Years of working on aircraft and military OCD are what drove me to be so particular about how I did the write up.

#1 Yes, the idler pulley is the tension pulley for the A/C belt.

#2 I used a 24" X 1/2" drive breaker bar with a 6-point socket. 3/8" tools will snap (did that) and 12 - point sockets run the risk of rounding out the bolt. Other than the jack stand, I didn't need anything else, nor did I need to soak the bolt in "holy water"

The pulley holder tool will dig into the ground for breaking the bolt free, so you don't need to worry about holding it then. When you torque it, it isn't that big of a deal to hold it in place. The handle that came with mine is pretty long though. I want to say about 30". Length is your friend.

When you loosen the timing belt tensioner pulley for the second time, make sure you use a 6-point socket. I had rounding out problems with the 12-point and had to switch over.

Quote:

Originally Posted by Stark Raving Dad

Well done on the write up, just want to add a bit if it helps, great. I invested years ago in a small air compressor and a 1/2" impact gun, 3/8 air wrench and a 1/4 air wrench. They have many times over. I just did my belt today in 90 minutes, my third CRV belt. Everything was laid out and ready to go.

I did not change the seals or idler, they were fine. When you get the belt on and before the main pulley or covers are on, undo the idler bolt. Slide the key back onto the crank and put the pulley on. Use the hex tool and ratchet to spin the crank 3 teeth counter clock-wise. Tighten the idler bolt, turn back the three teeth and the tension is usually perfect.

Quote:

Originally Posted by sgtsandman

On caution with air tools however, from 22 years of aircraft maintenance experience, it is rarely a good idea to use air tools to reassemble unless you have a torque gun or similar air tool to produces less torque than the recommended torque for the fastener being installed. Otherwise, only use air tools to disasemble, NEVER reassemble.

Quote:

Originally Posted by Wildcat Rudy

I got an SPX/OTC tool on eBay for the crank pulley, OTC-4731. You use it with a 1/2" breaker bar. Worked fine, and the \$29.95 price beat the \$77 the dealer wanted (and they didn't even stock it). None of the auto parts stores locally had it either.



With a shorter 1/2"-drive bar on the crank tool, I got the 24" breaker bar with a 3/4" air tool socket on the bolt and stepped on the handle. Heard a "crack", thinking I'd broken another wrench or socket...but it was the bolt that had broken loose! I had also heated it up with the propane torch a bit (but not too much--don't want to melt the belt or the crankshaft seal). After reading other horror stories online, I had visions of breaking a few more tools and still having a stubborn bolt to remove.

The only really bad nuts for me were on the upper engine mount. I had sprayed everything with some Loctite "deep freeze" product that was supposed to loosen the bolts, but I don't know if it worked well or not. I heated those with the torch and hit them with the impact wrench, and finally broke them loose. In fact, on one of them, the stud came unscrewed from the engine rather than having the nut come off...but it was the same end result anyway!

I had to redo the belt also, as I had lined up the camshaft pulleys incorrectly (wasn't wearing my glasses, and didn't put the drill bits into the camshafts as I'd done when I took the old belt off). It started and ran, but was very sluggish, so I knew timing was off. Sure enough--one tooth off on both cam pulleys. Fortunately, the tensioner got loose enough that I could slip the belt off of the cam pulleys and didn't have to take everything else off again (although I removed the power steering pump again to make more room).

I also used the "three tooth" tensioning as above--set everything for TDC, which makes the belt taut on the engine front side and between the two cam pulleys. The rotate it three teeth counterclockwise, which creates a little more slack on the engine rear side of the belt. Tighten up the tensioner adjustment bolt and it's good to go.

Finally: changing the thermostat was a lot more difficult to get at than some of the other

4/6/2012 6:06 PM

parts I removed while working on the timing belt. What a pain! But, it's done, and the snow's not flying yet! I just need a four-wheel alignment and I'm set.

Quote:

'Curly Q Links' posted this link to crank bolt removal information on the tegger.com site:

http://www.tegger.com/hondafaq/cranktool/index.html





■ 10-02-2010, 08:31 PM



Racoon 💿 FFNC Site AdminHondaSUV Elder Join Date: Apr 20 Location: A cornf Posts: 25,166

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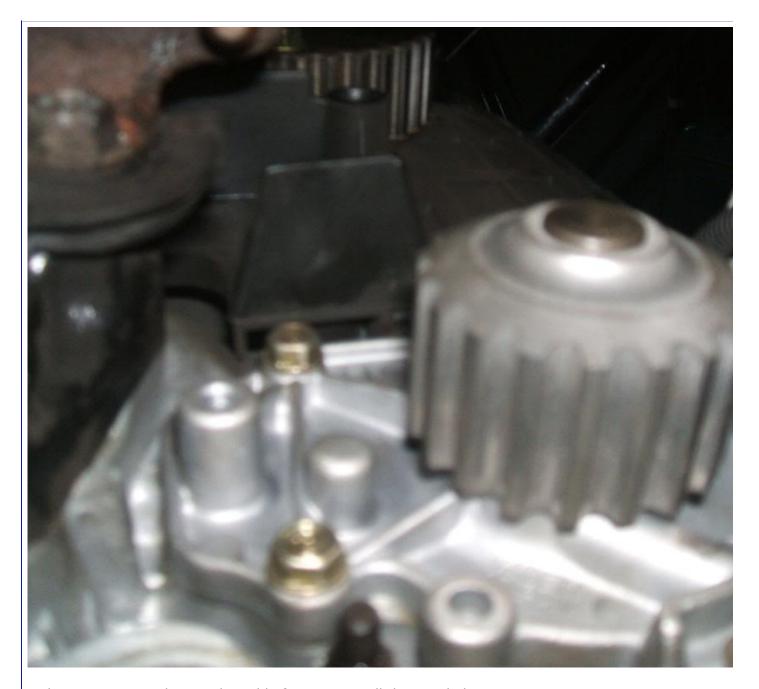
sgtsandman deserves all of the credit for the very valuable information in this thread.

Any errors in reposting this information are mine, and I take full responsibility for the errors. -- Racoon _____

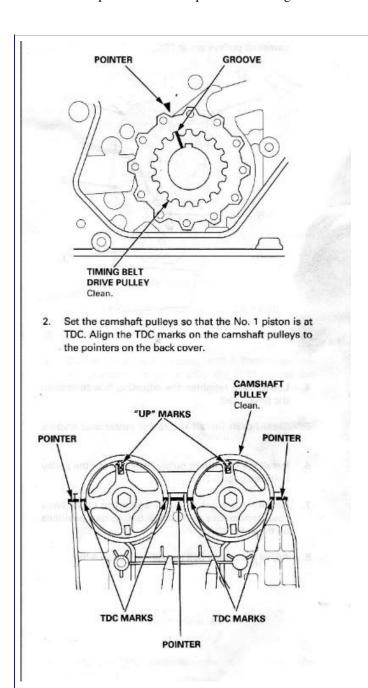
Okay, the disassembly is done, now we can start putting things back together.

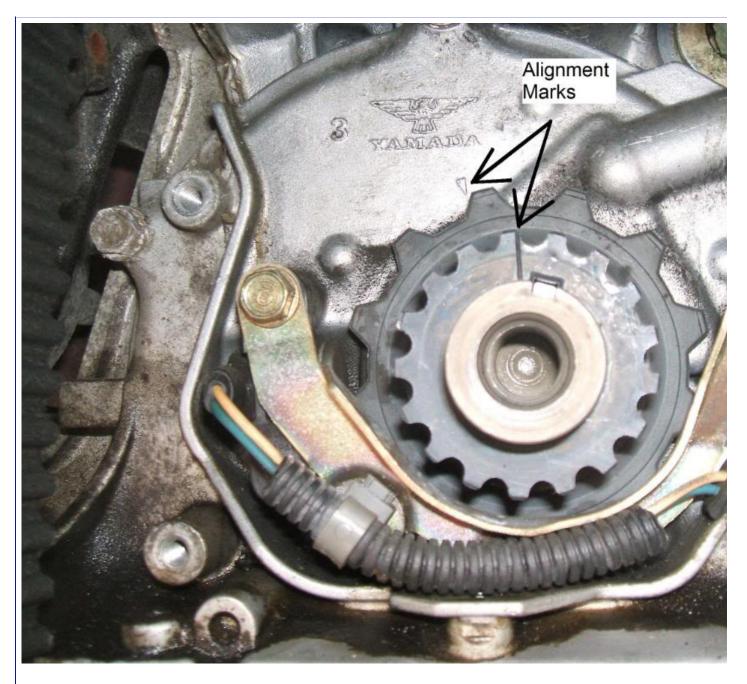
The torque for the water pump bolts is 12 N-m (1.2 kgf-m, 8.7 lbs-ft, or 104 in-lbs). The pump manufacturer recommended a star pattern.

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Make sure your marks are aligned before you install the new belt.





Make sure the tension pulley is down as much as it can go, the spring is installed, and the bolt is torque kgf-m or 40 lbs-ft).



■ 10-02-2010, 08:31 PM



10° 10° Racoon
FFNC

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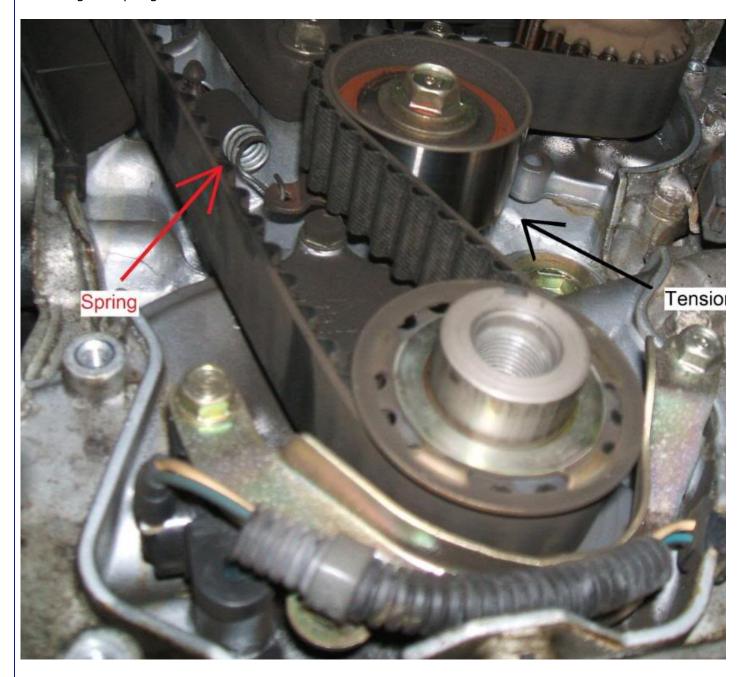
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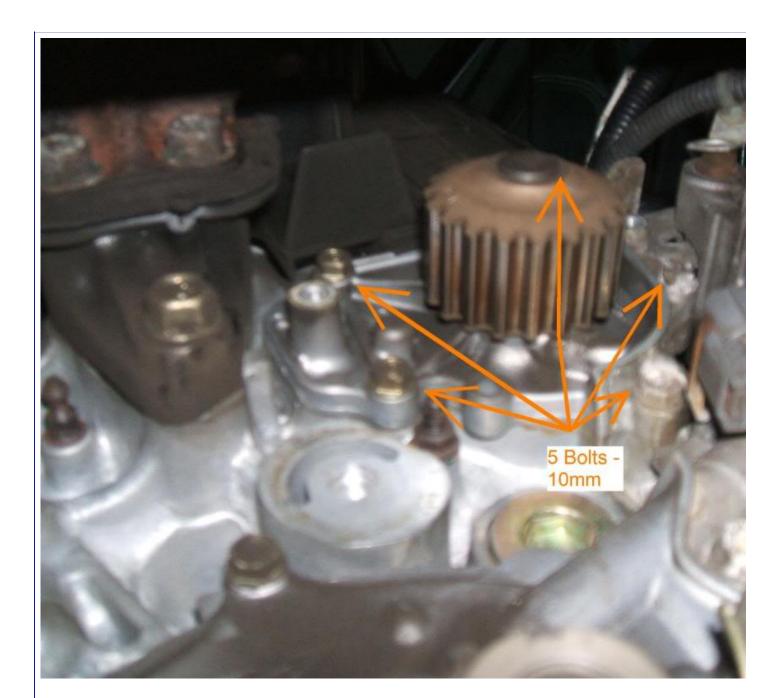
Any errors in reposting this information are mine, and I take full responsibility for the errors. -- Racoon

I replaced the timing belt tension pulley and the spring, so I just removed them to remove the belt. If y

that, it is best to remove the spring, loosen the tension pulley bolt, slide it as far down as it will go and up. Then replace the spring (needle nose pliers work well). It is difficult to get the tension pulley fully d removing the spring.



If you are replacing the pump, remove these bolts. Coolant <u>will</u> spill out after you knock the p





■ 10-02-2010, 08:30 PM



Racoon
FFNC

Site AdminHondaSUV Elder

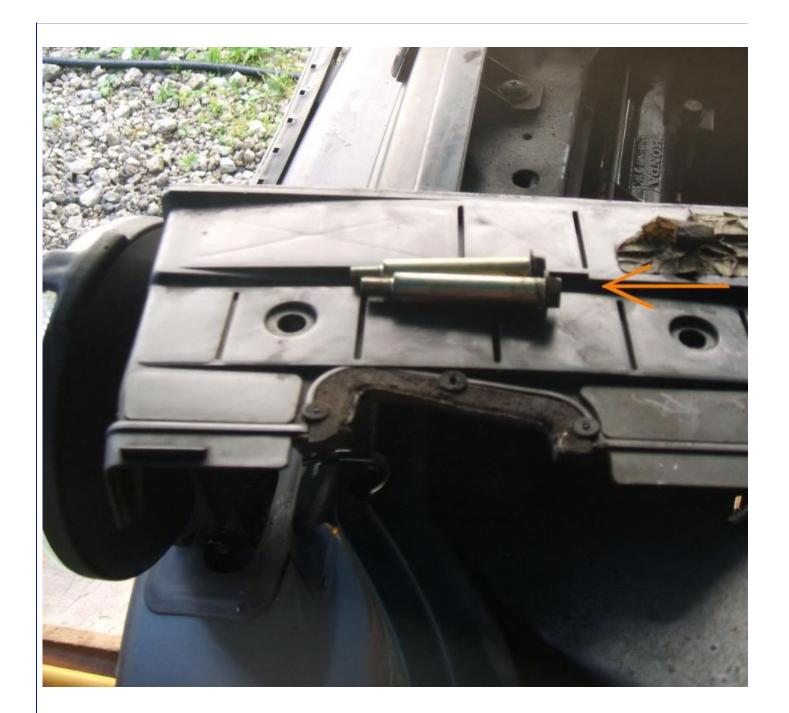
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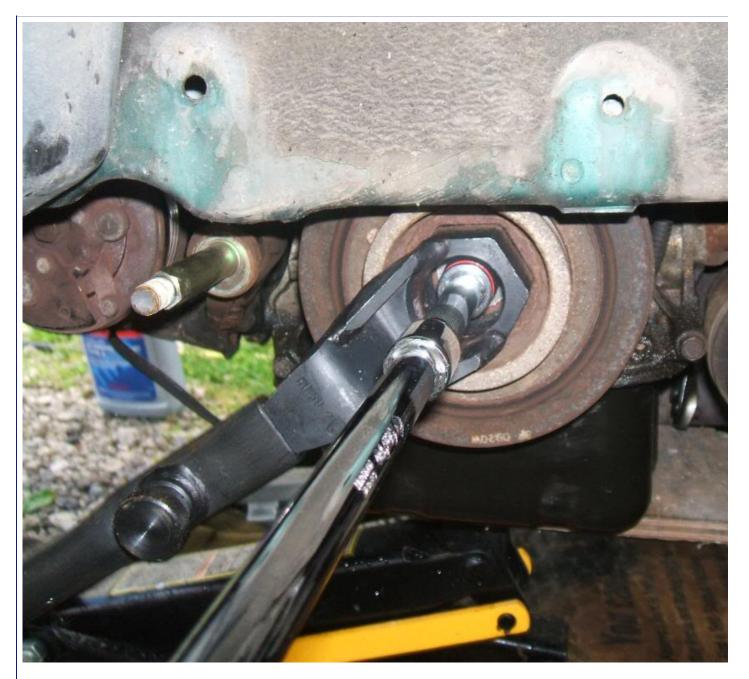
Remove the two middle cover bolts and cover.



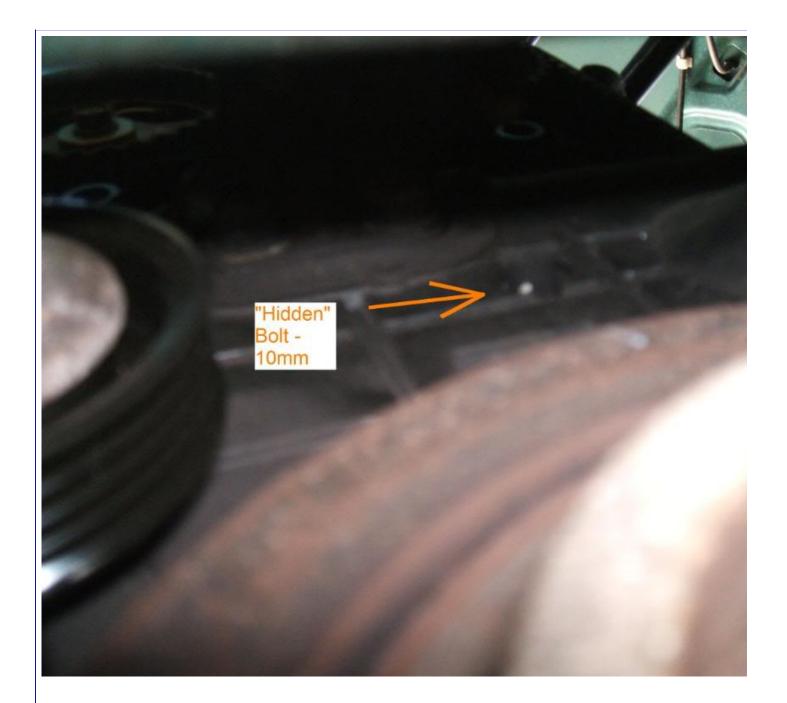


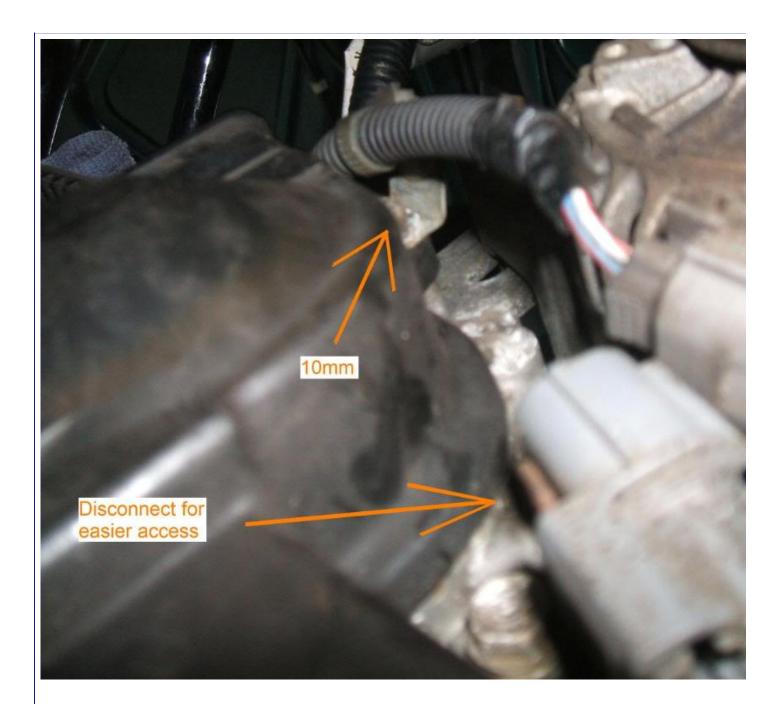
The crank shaft pulley will need to be removed. A special tool is needed to keep the engine from turning (50mm) or get it at Skyway Tools

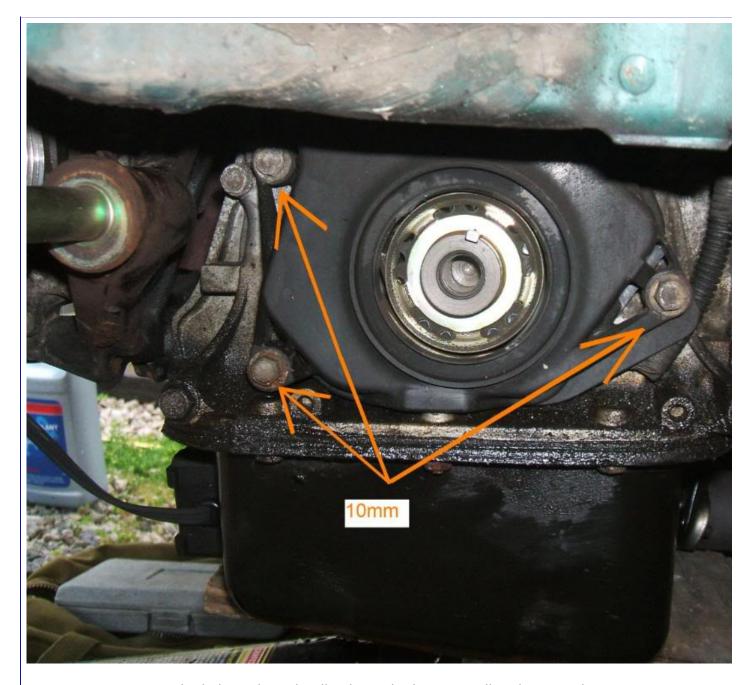




Now the lower cover can be removed. The engine speed sensor needs to be disconnected for easier acc mounting bracket.







Now you can remove the belt guide and pulley key. The key is small and easy to loose.



■ 10-02-2010, 08:28 PM



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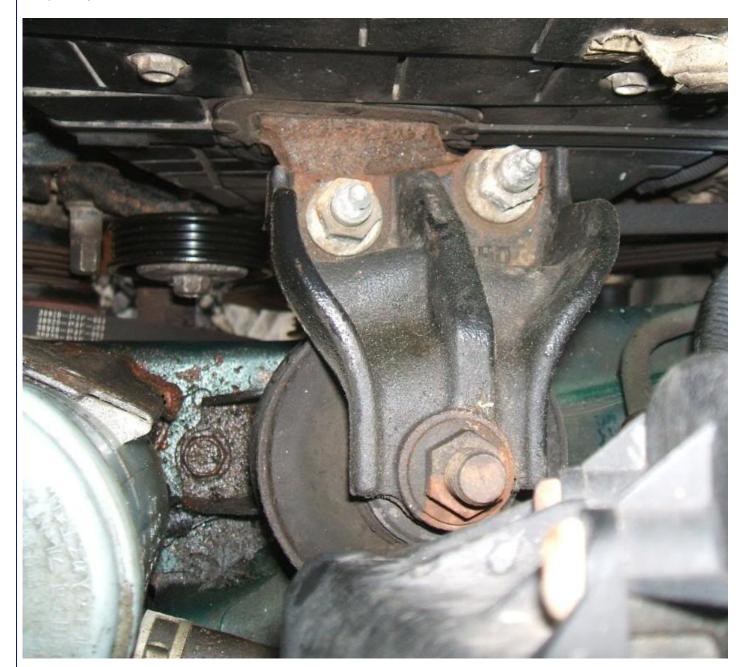
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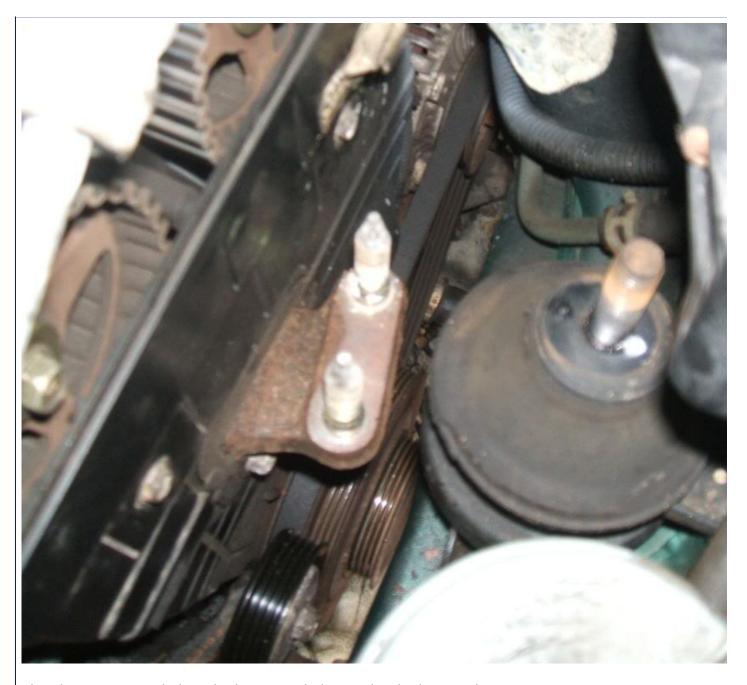
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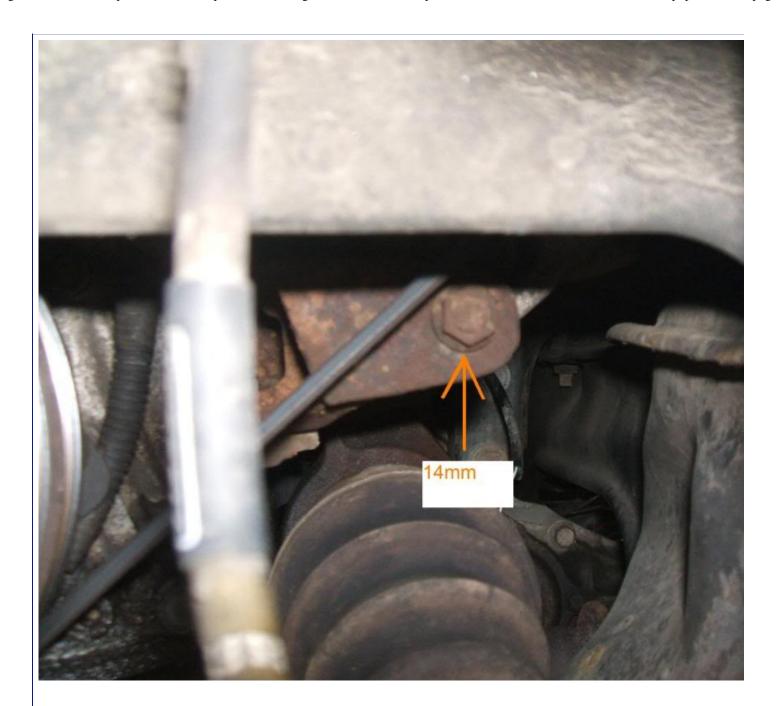
To remove the timing belt and for easier access to the alternator belt, the upper engine mount needs to

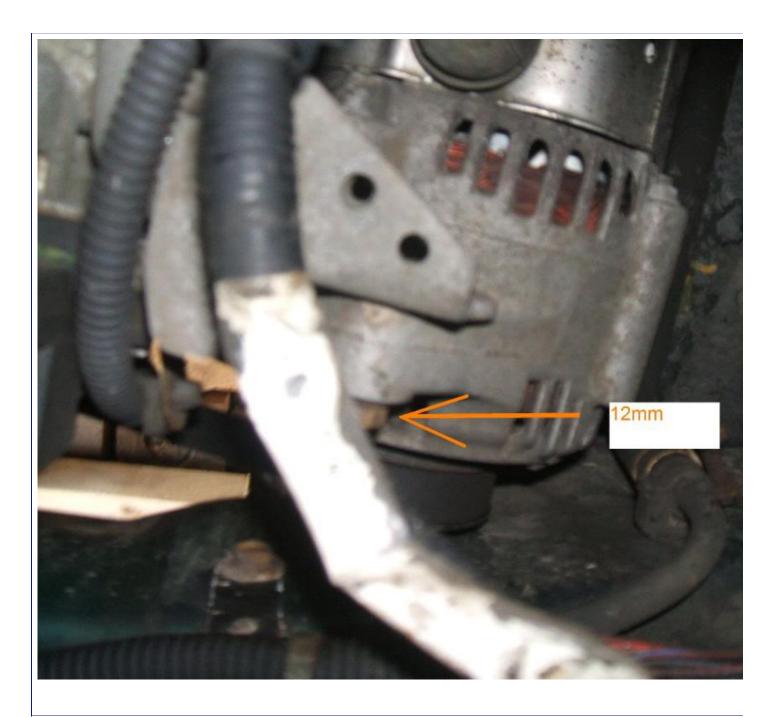
deep well).





The alternator pivot bolt and adjustment bolts need to be loosened.





■ 10-02-2010, 08:26 PM



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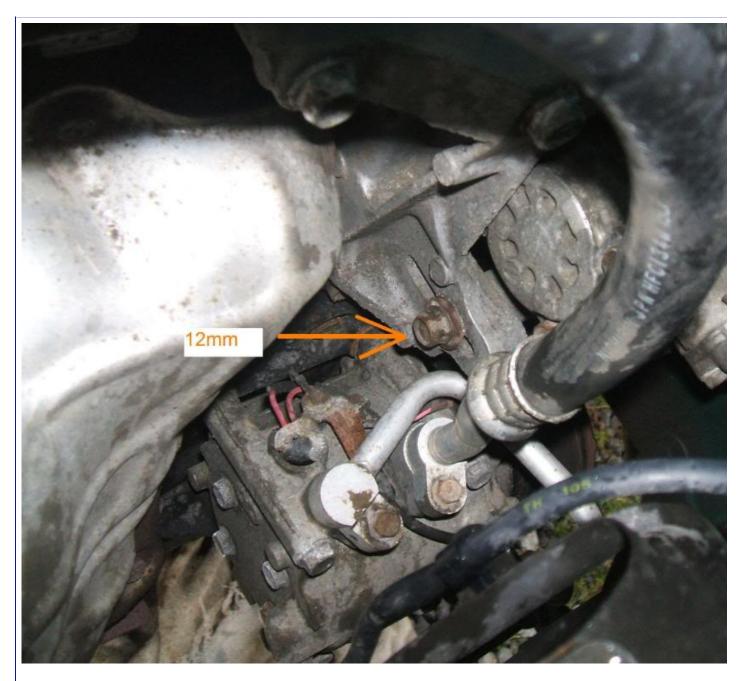
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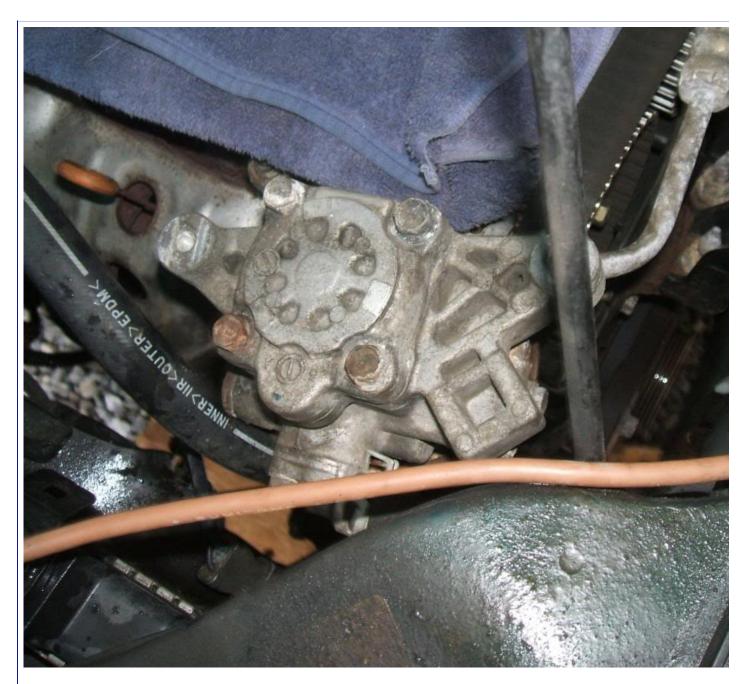
Now the fun begins. The drive belts need to be removed to access the middle and lower timing belt cov

First is the power steering.

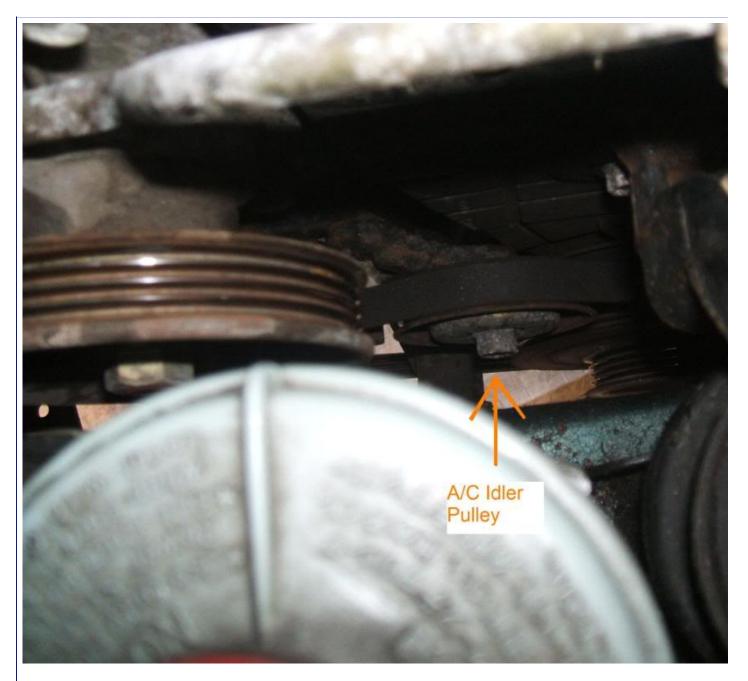




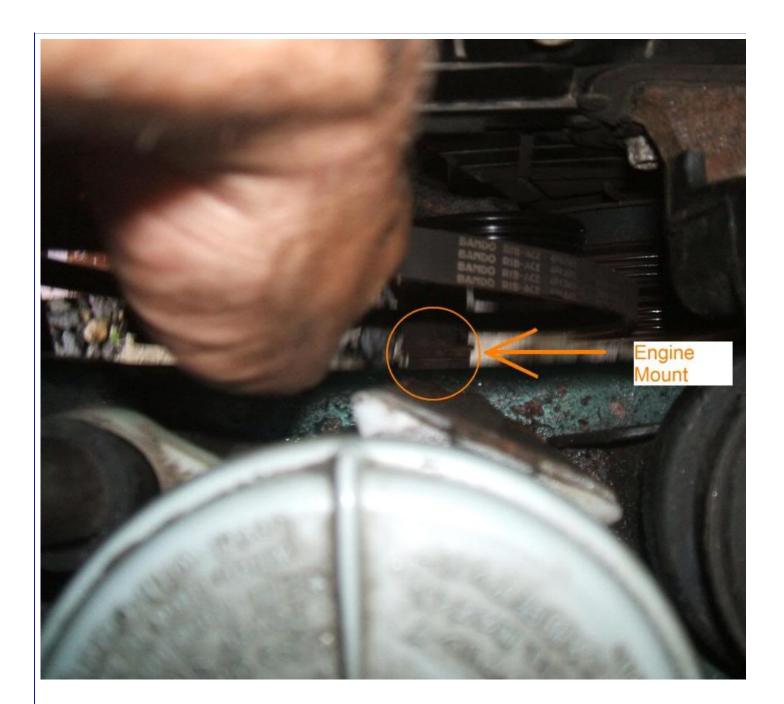
Due to space limitations, it would be best to move the power steering pump out of the way.

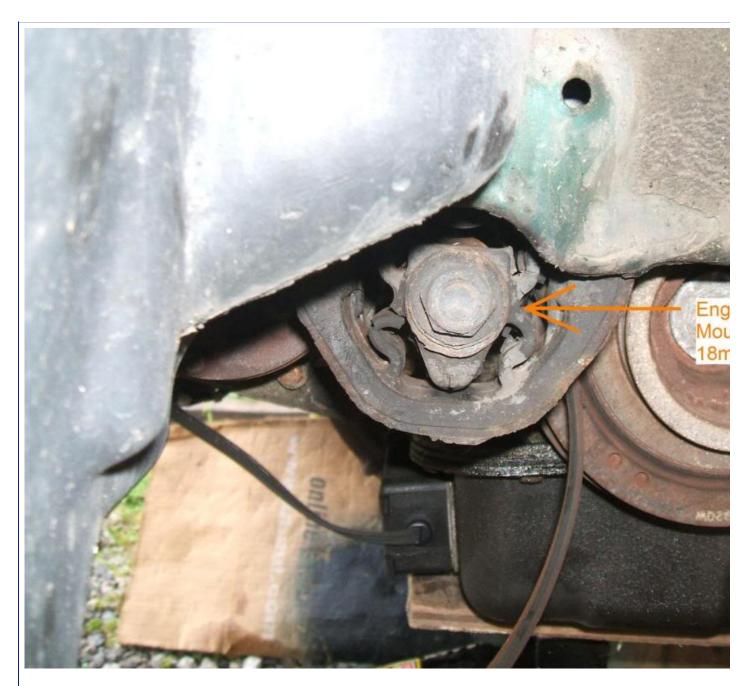


Now for the air conditioning belt. I chose to replace the a/c idler pulley while I was here. During the wir particularly nasty high pitched squeal until the engine warms up. It could be this or the exhaust header replaced the idler pulley and the heat shield is removed for now until I get some new bolts to remount i



Since I'm changing out all the drive belts, the left, lower engine mount needs to be removed.

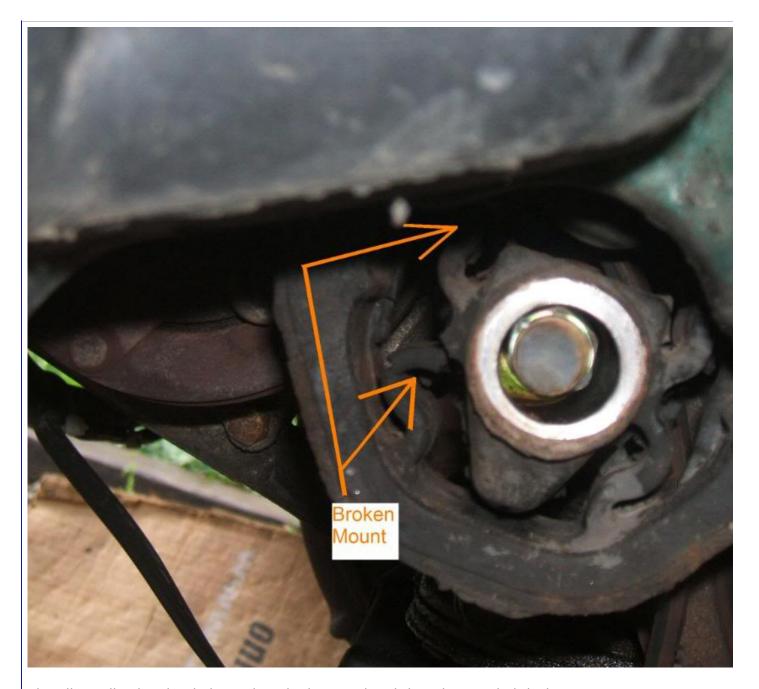




Also, since engine mounts are going to be removed, the engine needs to be supported. A floor jack with board works well for that.

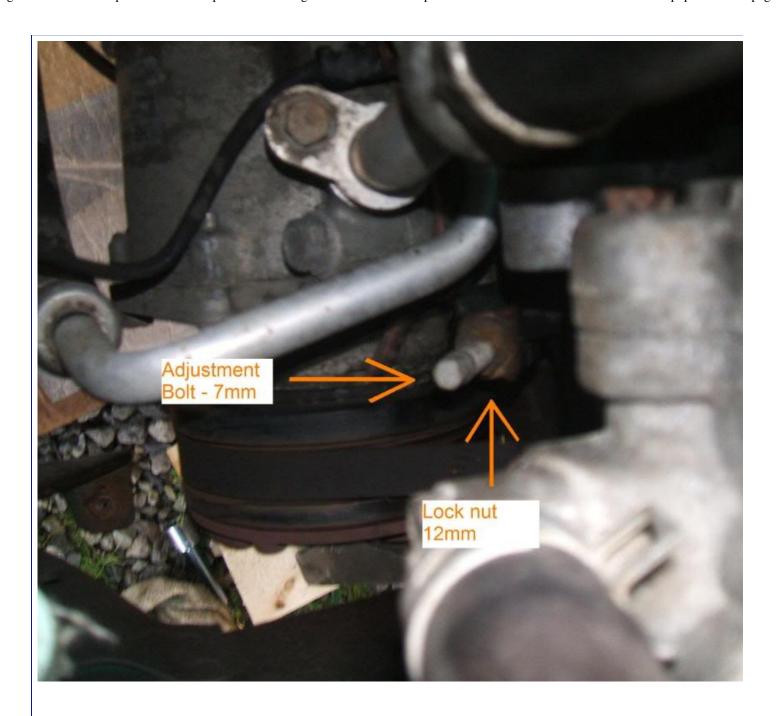


As Murphy's Law would have it, I need to replace an engine mount.



The idler pulley bracket bolt needs to be loosened and the adjusting bolt lock nut.





■ 10-02-2010, 08:25 PM



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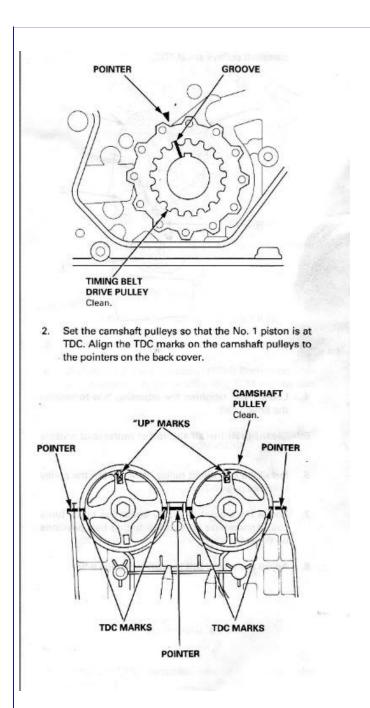
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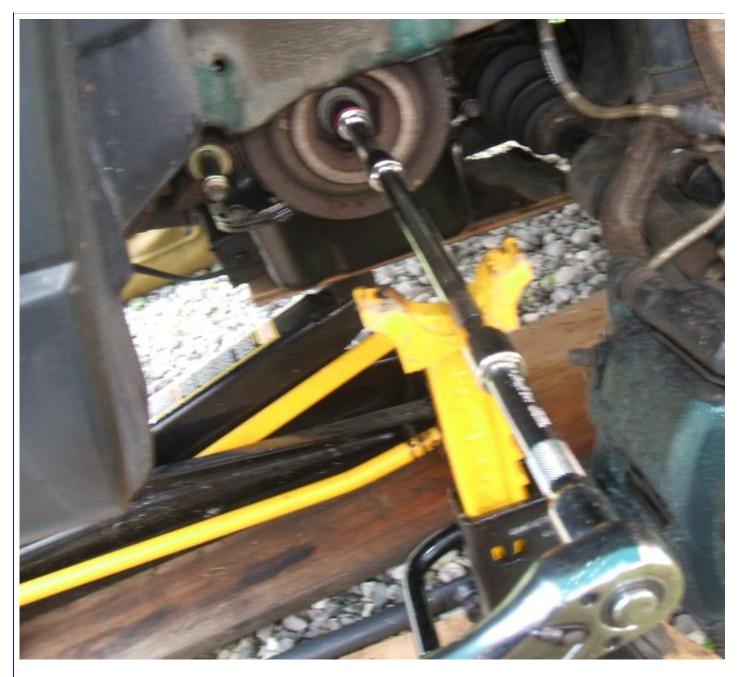
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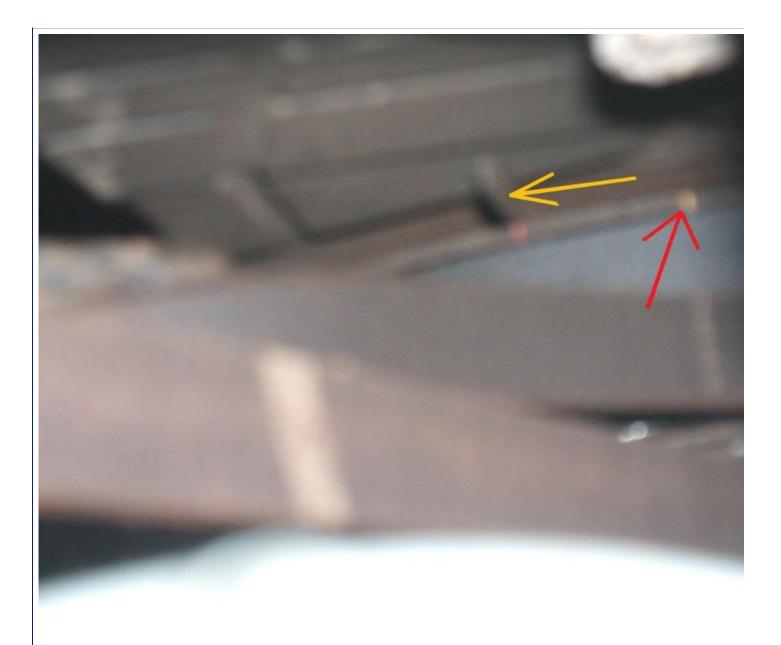
The cam shafts and crank shaft needs to be turned until the marks line up for #1 piston being at Top D







Align the white mark (red arrow) with the alignment tab (yellow arrow) on the crank shaft pulley and lc



Align the cam shaft pulley notches (yellow arrows) with the alignment markings on the back shield (red



■ 10-02-2010, 08:24 PM



Racoon o

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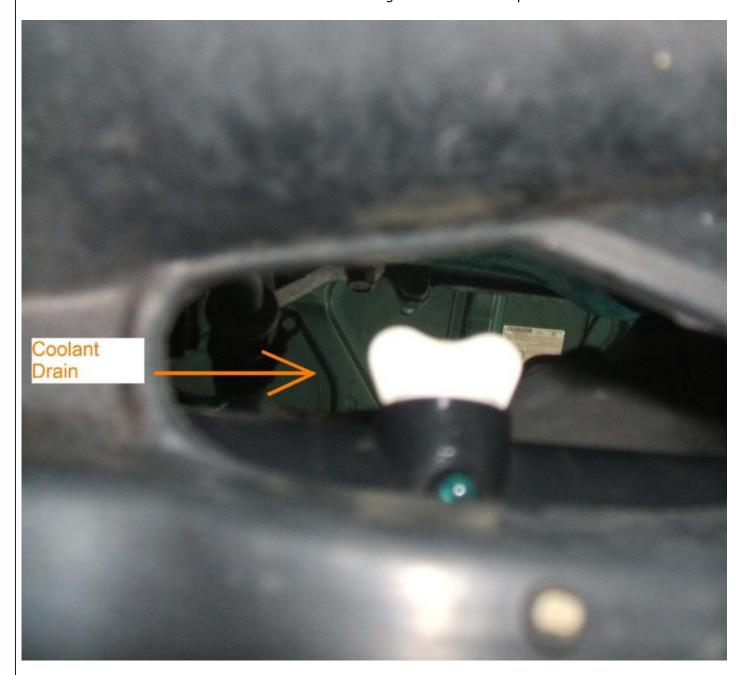
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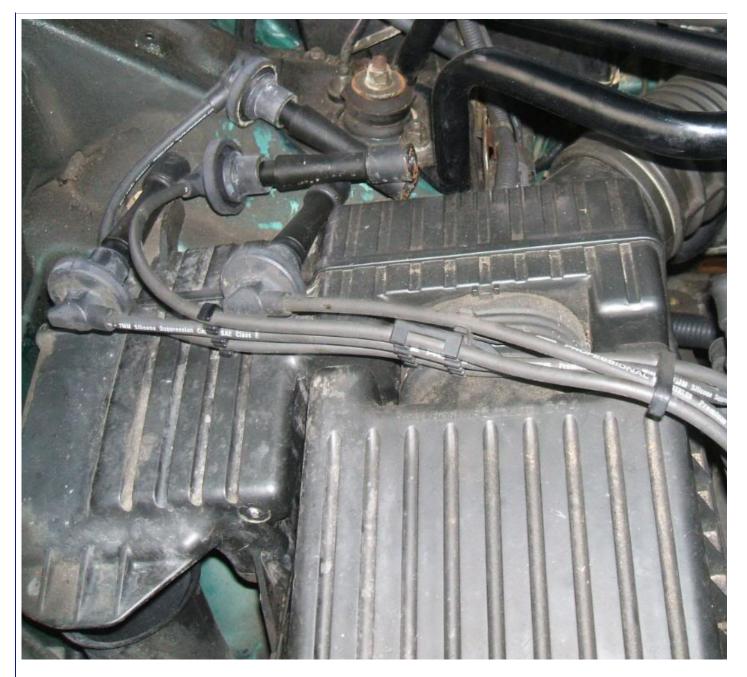
Some hold the opinion that the water pump should be changed at this time since you have to perform t

change it anyway. Others do not. I prefer the first opinion, so the next step is to drain the cooling syste

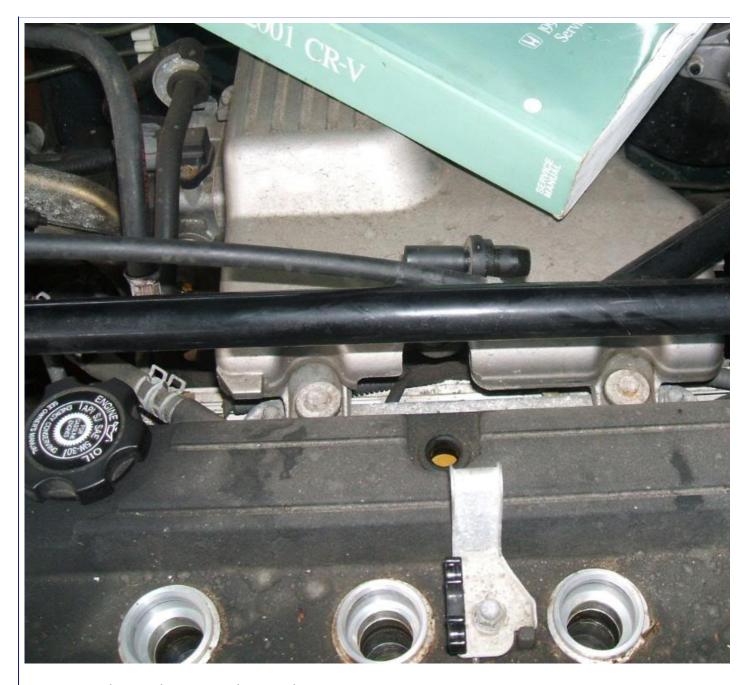
The coolant drain is located on the driver's side through this hole if the splash shield is still on.



Remove the spark plug wires and keep as many of the wire looms intact as possible to prevent confusic the wires.



Disconnect the PCV valve.



Disconnect the crankcase ventilation tube.

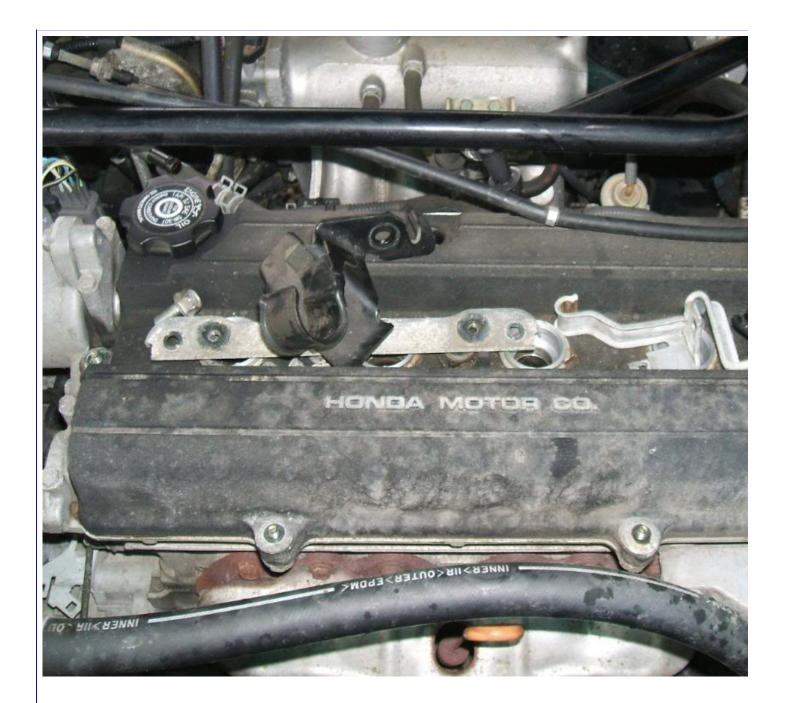


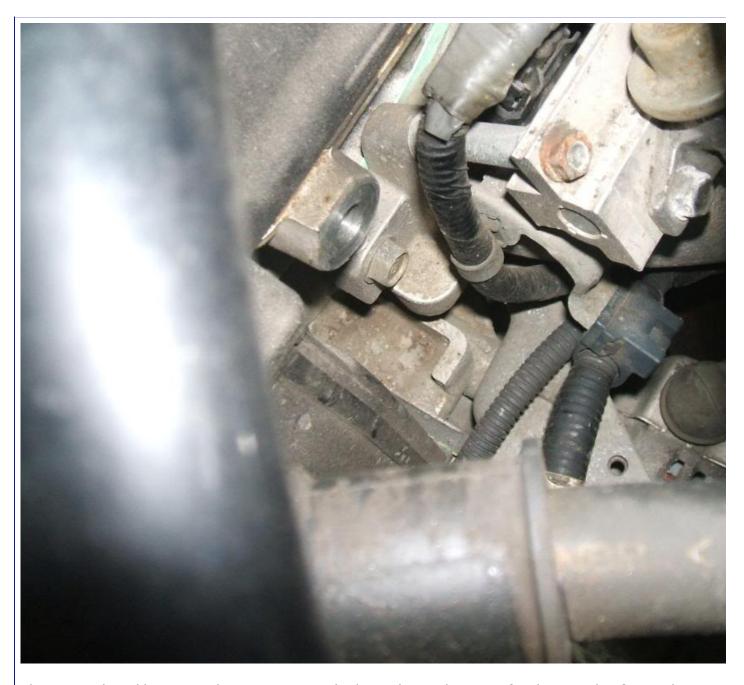
Remove plenum chamber (for those that have one).



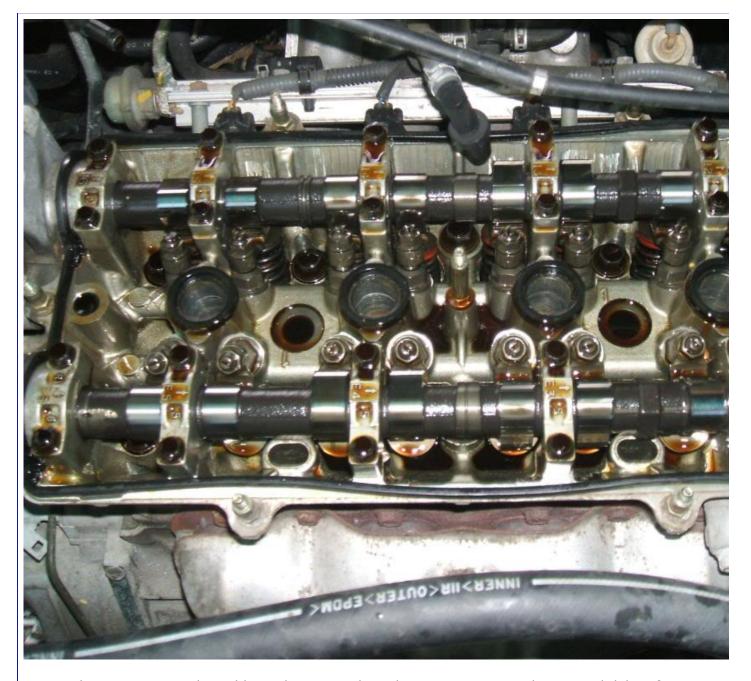


Remove valve cover by removing the nuts and the bolt for the power steering pump hose.





There is nothing like a nice clean engine! Too bad I can't say the same for the outside of it. Ha ha!



During the project, I used an old towel to cover the valve train to prevent leaves and debris from gettin

■ 10-02-2010, 08:13 PM



Racoon o

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Timing Belt & Water Pump How To - Dial up Beware!!!

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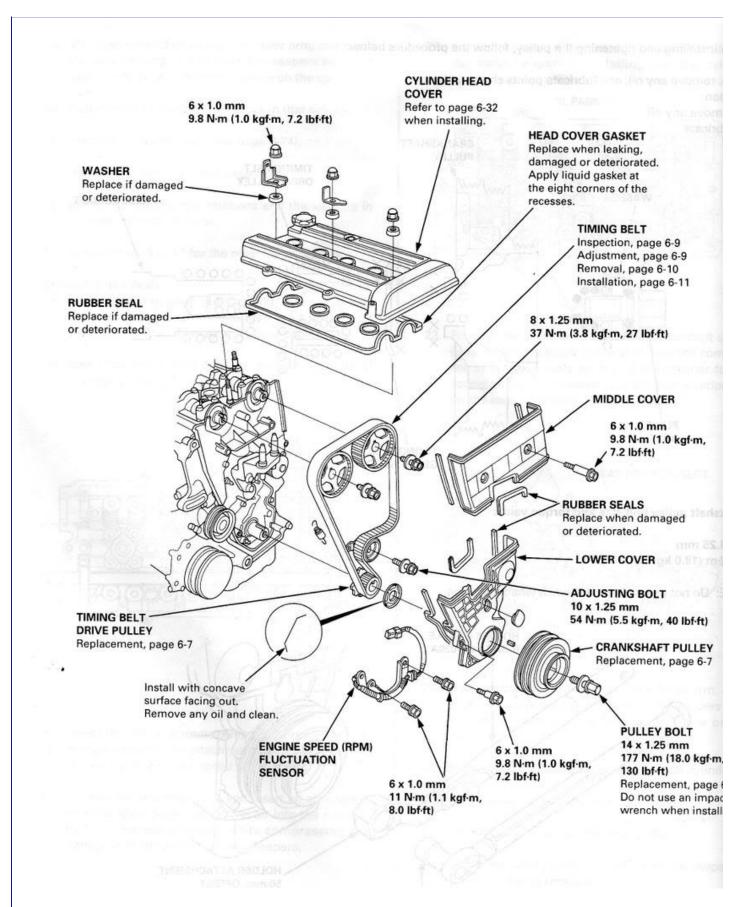
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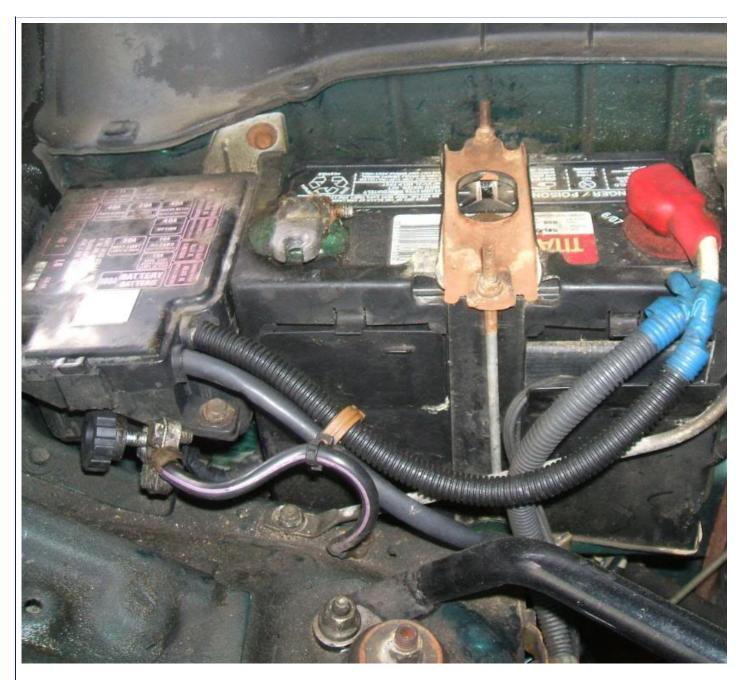
This procedure is good for the years 1997 - 2001. For those who like to do their own maintenance to sa satisfaction or both, this is perhaps going to be the most tedious task you will undertake. I used a belt High Quality Timing Belt Kits

Hopefully, with this thread and the information it contains, will give you the confidence and the ability t correctly the first time. Be warned, you will need a full weekend to complete this (two days possibly thr do this for a living. It personally took me three days and three tries to get it right, even with the Honda hand. There are some things that a manual will not convey for one reason or another.

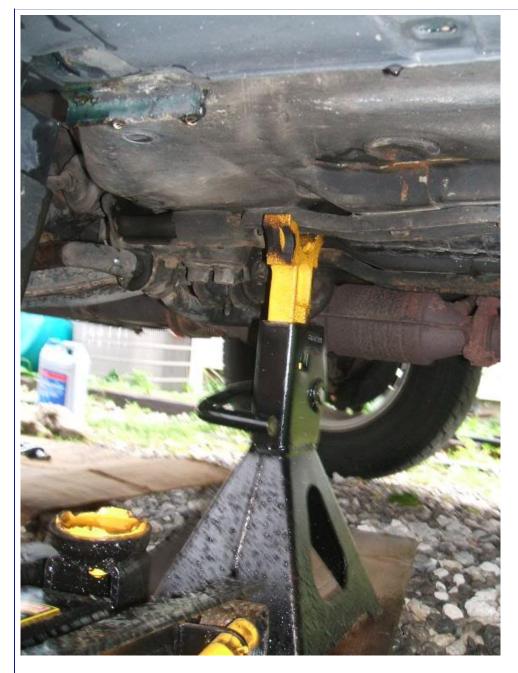
First, a schematic for the task at hand and some of the specifications that goes with it.



The first thing one should do before completing maintenance is to disconnect the battery.



Since the front left wheel will need to be removed to complete this task, you will need to get under the it will be a lengthy job; a jack stand will be required.



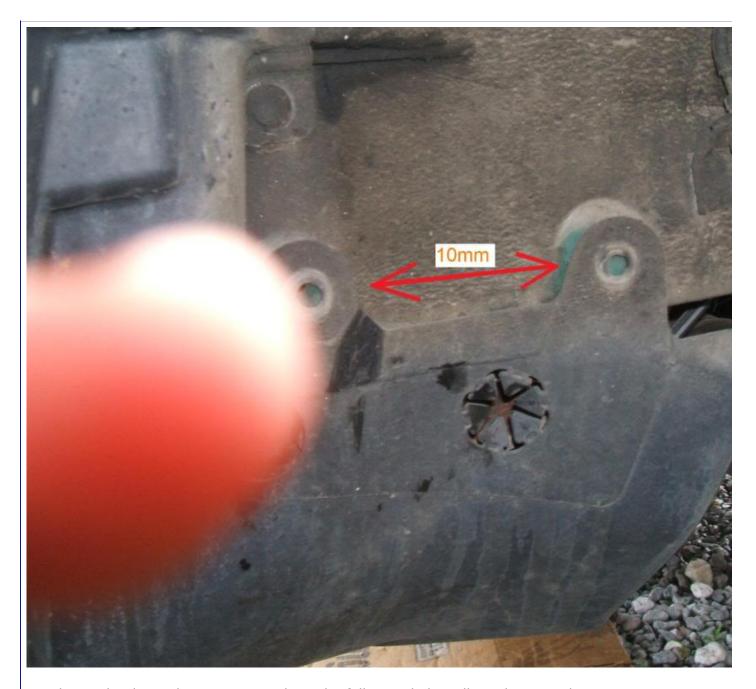
For those of you with a scrape plate, it and the splash shield will need to be removed to proceed.



The plastic 10mm fastener in the passenger side wheel well. A wrench or ratchet works better than a so tend to get stuck over time.



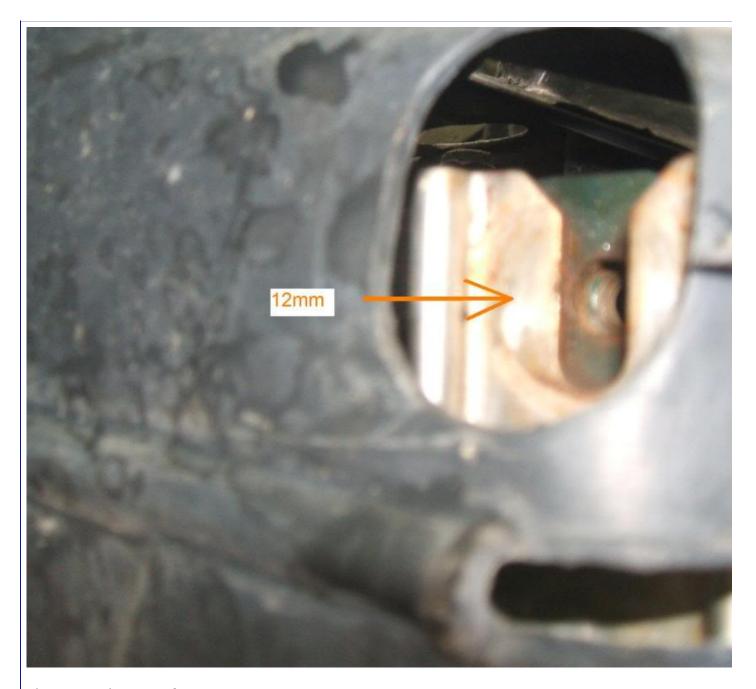
And the driver's side wheel well.



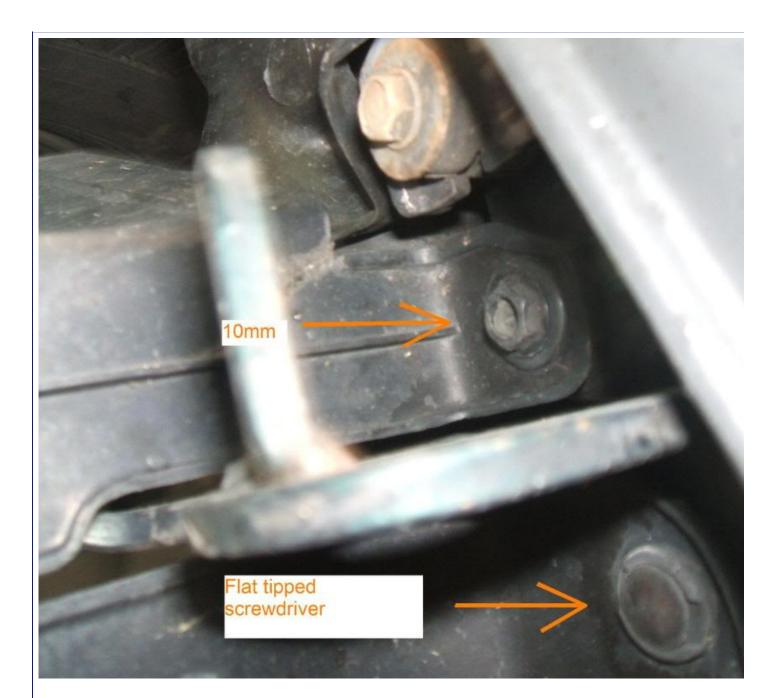
For those who do not have a scrape plate, the following bolts will need removed.







The rest is the same for everyone.





Splash shield removed.



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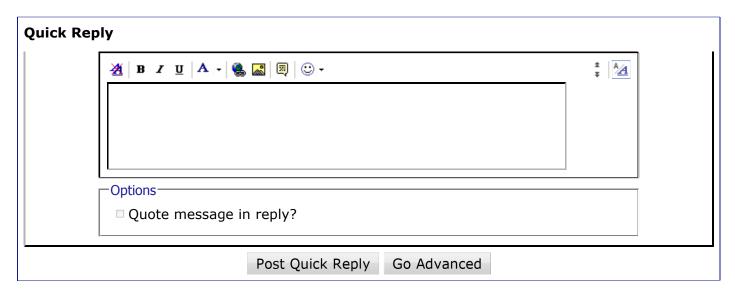
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