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Vibration from rough idling engines can also weaken other types of hose reinforcements, again leading to premature failure with few outward symptoms.

In some cases you may be able to feel "voids", cracks or weak spots near the hose ends (this is where ECD failures tend to occur). Slight bulging of the hose ends may also occur near the connections.

Failure From Outside

Abrasion from sharp surfaces within the engine compartment can slowly rub through the outer cover of the hose, eventually causing it to burst. Cuts and nicks on the outside of the hose also contribute to premature failure, but oil contamination is the most common threat. The oil actually attacks the rubber compound.

I sometimes encounter resistance from customers to replace coolant hoses as a preventative measure. I would like you to consider three points. First, hose replacement will eliminate inconvenience. It seems that a hose never fails in your driveway or in my shop—it fails on the road, whether on a busy city street or a lonely country road. The cost of a tow usually exceeds the cost of the hose. Second, you can avoid a more serious (read expensive) repair. Today's modern engines, with aluminum cylinder heads, don't like being overheated. The cylinder head can warp with just one short trip into to red zone on the temperature gauge. By the time you realize that you have a cooling system failure, you may have warped the head—requiring removal and very costly repair. Finally, changing hoses is usually

fairly simple and relatively inexpensive. I often recommend hose replacement when other cooling system work has to be performed (like water pump replacement). Usually, in this situation, hose replacement adds little or no additional labor costs to the repair price.



The best way to check for internal damage to the hose due to ECD is to squeeze the hose near the clamps or connectors using the following procedure:

1. Make sure the engine is cool.
2. Use fingers and thumb to check for weakness, not the whole hand (see photo above).
3. Squeeze near the connectors. ECD occurs within two inches of the ends of the hose.
4. Check for any difference in the feel of the hose between the middle and the ends. Gaps and channels can be felt if the area is effected by ECD. If the ends feel mushy, chances are the hose is under attack by ECD.