

Guilt In 17-Yr-Old Driver's Fatal Collision of September, 2008 Is Evaluated

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An unidentified, 17-year-old male driver was convicted of careless driving in a Kitchener-area court on Tuesday in relation to a crash that occurred in September, 2008 on Wilmot Line near the intersection of Cedar Grove Road just north-west of Waterloo, Ontario. The crash took the life of his young passenger and girl-friend, 17-year-old Hayley Price-Geddes.

It has reported that the collision occurred in darkness when the Ford Escort attempted to negotiate a right curve. A police expert claimed the vehicle could have stopped if it had been going the posted speed limit of 60 km/h.

"Instead, it braked and skidded on the curve, slid sideways, continued into the ditch, flipped over and hit a tree with its roof. The impact bent the car and spun it around the tree."

These are curious comments. The collision occurred on a gravel road. It is quite unlikely that the police expert could have deciphered whether the tire marks he observed were from "skidding" due to braking or whether they were due to marginally-sliding sideways (yaw marks) in attempting to negotiate a curve. Such yaw marks are far more typical while skid marks are rare. I also say this because of the rapid rotation that must have occurred in order to bring the vehicle to a sideways position as it exited the road. When braking occurs it essentially equalizes the tire forces and the vehicle tends to plow in a straight line in the direction it was travelling. Such action does not induce large rotation rates.

I also say this because of the relatively short distances and sharp curve involved. We need to examine some photos to appreciate this. The case caught my curiosity so I attended the collision site yesterday and took some photos. The photo below is a view looking northward along the path that the Escort took as it approached the right curve.



I want to draw your attention to three, yellow, chevron markers that are in place to inform drivers that the road changes direction sharply to the right (more on this follow). What you should recognize is that this is a sharp curve or that the radius of the curve is very small. In such a case the distance needed to exit the roadway at the curve is very small. For example, if we look at the angle that the Escort travelled toward the impact with the tree, the distance from the normal travel path of a vehicle to the left edge of the road was about 6 metres. Then there was an additional 10 metres of distance through the under-brush to the tree. It would not be uncommon for drivers to travel 70 km/h on roadway that is posted for 60 km/h. In fact, the maximum speed must be set 10 km/h below the "design" speed of a roadway.

But let us use the 60 km/h instead to prove my point. At this speed a vehicle travels about 16.7 metres every second. Thus, even if the driver was travelling the posted speed the 16 metres travelled between its normal position on the road and its impact with the tree would take only one second. It should be incredible for the police expert to suggest that this young driver would decide to brake hard at this curve to come to stop in the available 16 metres. Why would any driver apply such hard braking rather than attempting to use the tire force to attempt to travel around the curve? So the idea posed by the officer to the court is illogical. Clearly the issue is whether, while attempting to negotiate this sharp curve at say, 70 km/h, a reasonable driver could have problems. Now let me draw your attention to those three chevrons I noted above.

Below is a photo showing my measurement tape placed on top of the east chevron which is the one closest to the vehicle's travel path and therefore the one that would be most exposed by the vehicle's head-lights. Then the photo after that shows the reading of about 125 centimetres above the ground.



Is there a problem? Well, let's look at the surrounding vegetation on this bright July day. Oh, and recall that the actual collision occurred in September or perhaps two, weed-growing months later than what I show here. The photo below shows my measurement tape identifying the tallest weeds in front of the noted chevron.



You should see that the weed height approaches about 100 centimeters. What will happen with this by September? Many of the weeds will grow much taller and block the view of the sign. But this is daylight and the sign appears visible. What would happen at night-time? Let me go on.

If you looked closely at the first photo you would have observed the position of the three chevrons that are to the left of the travel path of the approaching vehicle. Where would the vehicle's headlights be pointing as the vehicle is approaching the curve? Certainly not at the signs but to the right of the signs. Furthermore, the design of headlights is

such that illumination of areas to the left of the vehicle is reduced to prevent glare from blinding on-coming drivers. So not only are the headlights not pointing at the sign but the effectiveness of the headlights would also be reduced due to the positioning of these signs. And if the signs are masked by tall weeds then it is understandable that the signs may not be visible to the driver in time to warn him.

Further, let us look at the cross-slope of the road in the curve. I took some simple measurements using a four-foot carpenter's level and my measurement tape. Commencing from the right edge of the vehicle's travel path I took cross-slope measurements at one-metre intervals over to the left edge of the normal travel path of northbound vehicles. At the one metre mark the slope was 7.0 % to the right, at 2 metres it was 4.5%, at 3 metres 5.5%, at 4 metres 1.6%, at 5 metres it was level, at 6 metres 1.2% to the left.

So, if the driver was travelling with his left side wheels at about the 3 metre location the 5.5 % cross-slope would tend to pull him into the right curve. But if his wheels happened to stray to the 4, 5 or 6 metre locations the cross-slope would be 1.6, level or even a negative 1.2%. The negative 1.2% would mean that the road would be helping to pull the vehicle off its surface. Did the police investigators tell the court that this road feature existed? I can tell you from experience that the answer is almost always "No". This is evidenced by the reported comments of Justice of the Peace Zeljana Radulovic who wrote in her verdict:

"There is no other rational conclusion except that the accident occurred as the result of not taking due care and attention to the road condition, visibility on the road and adjustment of the speed according to those conditions." Well certainly. But the Justice is not an accident reconstruction expert. She cannot look at the photos of the site and ask important questions such as "Was the signage of a proper height and position? Was the road cross-slope unusual? Or was the posted speed correct for the very limited radius of curve?" An expert such as I attends such a hearing and the lawyers simply twist the facts and the Court determines that it has the ultimate right to make its decision regardless of an expert's 30 years of experience in the field. This is the status of our legal system.

Did anyone inform the court whether other collisions also occurred at this site? I will venture to say, probably not. But let me demonstrate. In another portion of the roadside I found another tree which is shown in the photo below.



Why is there a big scar on this tree some 15 metres into the brush? Below is a closer view.



Maybe the lawyers would conclude that a wandering bear (or elephant?) happened to work on it. But I know that this damage is from another collision. If someone had looked

around the tree they would have observed what I did. Some of the evidence is shown in the photo below.



This debris is not from an Escort's roof colliding with a tree. It is from the front end of a different vehicle. So now you can look at the tree damage and know what type of damage is caused to a tree from such an impact. But the Escort must have really caused a lot of visible damage to the tree that it struck if it was speeding - wouldn't it? Well let's take a look. Below is an overall view with my pen pointing to the area

containing the tree apparently struck by the Escort.



Now the view below is a closer view where we can see the actual tree and a wooden cross erected at the base of the tree as a monument to the tragedy.



I apologize to the family for showing this but it is necessary to prove a point.

Look at the tree. Where is the large scar that was evident in the previous impact I showed you? There is essentially nothing there. I looked closely. Yes there is a minor tear in the bark as shown below.



But surely this is minimal compared to the earlier tree damage that I showed you. The only other evidence on the tree is some glass fragments still clinging in the bark as shown in the photo below.



This is an example of persons making judgments about evidence they know nothing about. They looked at the damage to the roof of this Escort and observed the likely substantial intrusion into the occupant space and determined that the Escort must have been flying. It is evident from the newspaper article I read in Wednesday's Kitchener Record as was stated: "The extensive damage was part of a circumstantial case called to show that the driver - who can't be named because of his age - was speeding on the rural road when he came upon a sharp curve and lost control." But did anyone inform the court that the roof of an Escort is extremely soft? Government testing of roof strength requires that a slow compression of about 1 1/2 times the vehicle's weight be applied to a corner of the roof. What does that mean? A vehicle with ABS and maximum braking on a new asphalt surface can apply a force close to the "weight" of the test vehicle. Surely such a roof test is weak. But more importantly it is applied close to, or involves the support of the roof pillars. If a collision involves a pole or tree contacting the middle of the roof there is very very minimal protection because there is not structural substance there. Did the police expert inform the court of this fact? It is obvious from looking at the minor damage to the struck tree and comparing that damage to the damage caused by the frontal impact of the other nearby tree. Was the court informed of that? Would the court be capable of understanding that without expert assistance? No, instead the court wishes to use words to the effect that it knows exactly how this collision occurred and what caused it. There is no "other rational conclusion".

I feel very much sympathy for the family and friends of Hayley Price-Geddes. A beautiful girl who passed away in an unfortunate twist of fate. And I do not blame them for their possible anger at what they may believe is the responsibility of another similarly inexperienced boy. But motor vehicle collisions are far more complicated than the simple explanations that are brought forward. Their causes are from a multitude of influences. A roll of the dice where luck many times changes the outcome for the better or worse. Before we judge the actions of this young driver we should be appraised of all those influences not just those that we want to hear.