

Rollover Fatality On Highway 402 At Colonel Talbot Road

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It is reported that a fatality occurred on Highway 402 near Colonel Talbot Road when an eastbound Suzuki rolled over. Police say the 24-year-old driver, Joshua Alderton of Sarnia Ontario, was not wearing his seat-belt and reminded motorists of the importance of buckling up.

The collision events commenced at the Colonel Talbot Road overpass of Highway 402. It would appear that the Suzuki was in either of the two eastbound lanes but the first evidence of its location was in the form of tiremarks that travelled into the centre median. The Suzuki then rotated clockwise back onto the road surface and then continued to rotate clockwise until it slid into the south ditch where it rolled over.

The photo below shows a westward view of the eastbound lanes of Highway 402 from just east of the Colonel Talbot overpass which can be seen in the background. The Suzuki was travelling toward the camera and exited the pavement just in the foreground of this view.



View, looking west, from the median side of the eastbound lanes of Highway 401 at the location where the Suzuki travelled off the pavement surface and into median.

It is noteworthy that the entrance ramp from Colonel Talbot Road onto Highway 402 is located here and therefore there is a strong possibility that a vehicle entering the highway may have contributed to the interference of the Suzuki, causing the driver to take evasive action, resulting the Suzuki entering the median.

The photo below shows an eastward view along the eastbound lanes of Highway 402 from a similar position as the photo above. The tire marks from the Suzuki are not readily visible at the edge of the median at this location but they will become visible shortly as we move further eastward. Our vehicle is parked on the south roadside in the distant background and the Suzuki travelled into the south roadside just in front of the parked position of our vehicle.



View, looking east, along the median side of the eastbound lanes of Highway 402 at the point where the Suzuki travelled off the pavement surface and into the median.

As we move further eastward along the median, the photo below was taken looking back toward the west where now the tire mark from the Suzuki should be visible in the grass. This tire mark is actually widening into two marks from the two left side tires of the Suzuki as it is beginning its clockwise rotation.



View, looking west, along the median next to the eastbound lanes of Highway 402 where a tire mark is visible in the grass indicating the exit of the Suzuki from the road surface.

The photo below shows a view looking east just slightly further east from the position shown in the photo above. Now the tire marks from the two left side tires of the Suzuki should be plainly visible in the grass as they diverge, indicating that the vehicle is rotating clockwise.



View, looking east, along the median next to the eastbound lanes of Highway 402 showing the tire marks, from the left side tires of the Suzuki, visible in the grass.

What is not readily apparent in the above photo is that there is a steep slope to the grass median that would normally pull the vehicle into the centre of the median. It is surprising therefore that the driver was capable of bringing the vehicle back out of the steep slope and back toward the road surface while the vehicle continued to rotate clockwise.



View, looking west, from a distance further east, along the median next to the eastbound lanes of Highway 402. Now the two tire marks from the left side tires have diverged substantially indicating the increased pointing angle of the Suzuki as it is rotating clockwise and out of control back toward the road surface.

If we turn around again to face eastward the photo below shows how the Suzuki continues its clockwise rotation as indicated by the diverging of the two tire marks caused by the two left side tires, and indicating that the vehicle is now returning toward the eastbound lanes of Highway 402 as it will soon cross the lanes and rollover in the south roadside.



View, looking east, as the two tire marks diverge, indicating the continuing clockwise rotation of the Suzuki as moves back onto the eastbound lanes and heads across the lanes to its point of rollover on the south roadside.

In the above photo you can see the position of our parked vehicle which was visible in the distant background of the previous photos. It is now easy to visualize how the Suzuki's motion toward the south roadside was just in front of our parked vehicle.

In the photo below we show another westward view taken from a position where the tire marks from the Suzuki can be seen crossing back onto the road surface as the vehicle heads toward the south roadside.



View, looking westward, as the tire marks from the Suzuki are crossing the eastbound lanes of Highway 402 and approaching the camera as the Suzuki is rotating clockwise and travelling toward the south roadside.

And the view in the photo below shows how the tire marks continue to cross the eastbound lanes of Highway 402 as the Suzuki heads toward the south roadside where it rolls over.



View, looking northwest, showing the tire marks of the Suzuki as they cross the eastbound lanes of Highway 402 and the vehicle travels toward the camera on its way to rollover in the south roadside.

The photo below takes us to the south side of the eastbound lanes where we can see the tire marks exiting the eastbound lanes and heading toward the south roadside.



View, looking east from the south shoulder of Highway 402 showing the tire marks as they exit the road surface and travel toward the south roadside where the Suzuki rolled over.

The photo below shows where the Suzuki entered the south ditch and began to roll over just after crossing into the grass area. The Suzuki would have been sliding sideways and leading with the driver's side when this roll began.



View of south roadside where the Suzuki entered the ditch and rolled over.

The photo below shows the first of several gouges produced in the earth as the vehicle impacted the rising side of the ditch and then settled on that rising bank.



View of the first of several gouges in the earth where the Suzuki rolled to rest.

The photo below shows the final rest position of the Suzuki.



View of gouges and debris on the slope of the south ditch at the final rest position of the Suzuki

One can obtain a general indication of the speed of the vehicle and the severity of the rollover event by measuring the distance that the vehicle travelled during the rollover. The photo below shows how an assistant holds the zero end of the measurement tape at the end of the visible tire marks at the edge of the grass and we extend the tape to an intermediate point on the slope of the ditch.



View showing measurement taken from the beginning of the rollover to an intermediate point on the sloped bank.

We can see below how the distance to the intermediate point is 18.5 metres.



View showing a distance of 18.5 metres read on the measurement tape at the intermediate point as we measure the distance of the rollover.

We then take a second measurement from that intermediate point to the final rest position of the vehicle as shown in the photo below.



View showing the assistant holding the zero end of the measurement tape at the intermediate point while the tape is extended to the vehicle final rest position in the foreground.

We can see in the photo below that the distance from the intermediate point to the Suzuki final rest position is about 18.2 metres.



View, showing a distance of 18.2 metres from the intermediate point to the Suzuki final rest position.

Adding the two measured distances ($18.5 + 18.2$) indicates that the vehicle travelled a distance of about 36.7 metres. This is no longer a low speed rollover but gets into the moderate range. Using a tumble number for the deceleration rate would provide a speed of about 68 km/h at the beginning of the roll.

However we must remember that prior to this rollover the vehicle was in a yaw for a considerable time and distance as it passed through the median and crossed the eastbound lanes. Normally, in an official investigation we would take detailed measurements and determine the precise distance of that travel along with its level of deceleration. But since this is simply an educational exercise that detail was not obtained. But from just walking through the evidence we expect that something like 100 metres of pre-crash yaw marks would not be unreasonable. With an average deceleration rate of about $0.3g$ over that distance, the speed loss would be in the range of 87 km/h. And when we combine the speed loss from yaw and roll (68 and 87) we

obtain an initial speed in the range of 110 km/h. So this would be the approximate speed of the Suzuki as it left the roadway and entered the median as shown at the beginning of this article. Obviously this is not an exact calculation but it simply illustrates the process that we would follow to evaluate the collision.

Because of the location where the Suzuki entered the median with respect to the entrance ramp from Colonel Talbot Road, it would be advisable for police to research the possibility that another vehicle was involved which might have interfered with the Suzuki's travel and causing the driver to take evasive action to avoid a collision.

Nothing has been stated however whether police are looking for a second vehicle that might have been indirectly involved in this crash.

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