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**R. v. Sutherland (Alta. Q.B.)**

Between

Her Majesty The Queen, Appellant, and  
Kelly Sutherland, Respondent

[1994] A.J. No. 316

Action No. 9304-002S50101

**Alberta Court of Queen's Bench  
Judicial District of Grande Prairie  
Smith J.**Judgment: April 20, 1994. Filed: April 21, 1994.  
(7 pp.)*Motor Vehicles — Regulations of vehicles and traffic — Rate of speed, evidence and proof — Laser device — Whether appropriate instrument..*

Appeal by the Crown from the acquittal of an accused on a charge of speeding. At issue was whether the LTI 20-20 laser device was a dependable instrument for measuring the speed of a vehicle.

**HELD:** Appeal dismissed. The LTI 20-20 was not an approved speed measuring device under the regulations of any Act. The court agreed with Crown counsel that it could take judicial notice of the speed of light but not that if this was applied to a particular test of the machine and showed no velocity, that it meant that the machine must be working correctly for moving objects.

R.B. Smith, for the Appellant.  
R.M. Lewis, for the Respondent.

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**SMITH J.:—****SUMMARY:**

¶ 1 The core issue on this appeal is whether the LTI 20-20 laser device is a dependable instrument for measuring the speed of a vehicle. That is, are the circumstantial guarantees of trustworthiness present?

**FACTS:**

¶ 2 The accused was charged with speeding. He was acquitted. The Crown appeals.

¶ 3 The evidence is that of one police officer. The defense led no evidence.

¶ 4 The police officer testified that he used two methods to determine the accused was speeding. First, he was able to visually determine the accused was travelling over the speed limit. Second, he used the LTI 20-20 laser device to measure the accused's speed. He did so three times. The three readings were 101, 100 and 101 km/hr. The speed limit was 80 km/hr. The police officer had three days' experience with the LTI 20-20. He had taken the manufacturer's recommended training on how to use it. He testified the LTI 20-20 averaged a number

of pulses of light per unit of time, but there was no evidence of what that unit of time was. He employed the four recommended tests of the manufacturer to determine the machine was operating correctly prior to using it.

¶ 5 The police officer testified the first two tests show the LTI 20-20 is operating correctly. The third test shows the machine is adjusting appropriately for windage and elevation. There is no evidence on how the machine does this, but the police officer gave evidence that the laser beam falls with gravity and bends in wind.

¶ 6 The fourth test is called the constant velocity/zero distance test. One focuses the machine on a stationary object a known distance away and takes a reading. The machine emits a number of pulses and concludes the velocity is zero. It also records the distance.

¶ 7 There was also evidence that the machine compensated for the difference in recorded speed created by the axis of reading being different than the axis of travel of the automobile. However, how the device does this was not explained.

LAW:

¶ 8 The LTI 20-20 is not an approved speed measuring device under the regulations to any Act. The issue is, firstly, whether it provides sufficient circumstantial guarantees of trustworthiness to support a conviction, and, secondly, whether on all of the evidence the appeal should be allowed.

¶ 9 Three cases from this Court, all of which deal with the LTI 20-20, were referred to.

1. R. v. Kolthammer No. 9303 0090-56-01 (Alta. Q.B.)

¶ 10 This appeal from conviction was allowed. The Court found the fourth test recommended by the manufacturer would not constitute a test which one can describe as an approved test.

"If one looks at that test, that test no doubt establishes that stationary items are not moving but it does little more than that. To extrapolate from that, one has to extend science beyond logic, and consequently I do not believe that the test in this particular instance is one that one might consider to be properly an approved test.

If one looked at a clocking device, one would expect that that clocking device be compared to some form of absolute; in other words, another known clocking device that is properly working. One would not expect to compare that clocking device to something that is not measuring time."

2. R. v. Feraco No. 9304-0018-54-01 (Alta. Q.B.)

¶ 11 This appeal from an acquittal was dismissed. The court considered itself bound by R. v. Kolthammer. Although there was evidence of comparison of the LTI 20-20 to a radar device, the evidence relating to the radar readings was considered to be insufficient for various reasons. The Court's conclusion was that the LTI 20-20 could not stand on its own.

3. R. v. Alladina No. 9303-0465-53 (Alta. Q.B.)

¶ 12 This appeal from conviction was dismissed. However, this case is distinguishable because the machine in question was tested before and after against a radar unit that was properly working. The radar readings were found to be admissible. The Court determined this procedure satisfied the circumstantial guarantees of trustworthiness. It did not have before it the reasons in R. v. Feraco, but they may have been distinguishable on evidentiary grounds.

¶ 13 I agree with Crown counsel that I can take judicial notice of the speed of light. I disagree with Crown counsel's argument that if one applies the speed of light to the fourth test, one can extrapolate that the LTI 20-20 must be working correctly for moving objects. This reasoning works for stationary objects. When one introduces the further variable of movement, one has to assume that the clocking device is correctly measuring

the intervals of time between pulses of light during which some distance is travelled. For a stationary object this assumption is not required. Nor is the axis of movement relevant.

¶ 14 Therefore, I agree with the Court's comments in R. v. Kolthammer. The circumstantial guarantees of trustworthiness are not present.

¶ 15 Further, on all of the evidence, the test for a successful appeal has not been met. I find the verdict was reasonable and was supported by the evidence.

¶ 16 Therefore, the appeal is dismissed.

SMITH J.

DRS/DRS/DRS