

USE OF DANGEROUS 15-PASSENGER VANS



PRESENTED TO:

**THE BOARD OF EDUCATION
COWICHAN VALLEY SCHOOL DISTRICT No. 79**

OPEN BOARD MEETING

JANUARY 6, 2010

SUBMITTED BY:

**Bryan Murphy
On Behalf of CUPE BC and
Central Occupational Health and Safety Committee Representative**

Good evening, I want to thank you very much for this opportunity to address you, the Board of Education School District No. 79 (Cowichan Valley), on the potential danger that comes with the use of 15 passenger vans.

First, I would like to give you some background information about myself. My name is Bryan Murphy; I am a 29 year School District #68 (Nanaimo/Ladysmith) employee in the Transportation Department as a Mechanic/Bus Driver, Commercial Motor Vehicle Inspector, Drive Smart Trainer, Heavy Duty Equipment Trainer and graduate from the Pupil Transportation Management Level I to III (Washington State University). 22½ years were spent as Foreman and General Foreman. As General Foreman one of my tasks was to instruct the Drive Smart Training program to School Bus Drivers. These workshops were taught on professional development days. These courses included: pre-trip inspection, safe handling of large school buses, hazardous avoidance and how to effectively deal with constant interruptions while behind the wheel of school buses.

I'm also a very strong health and safety advocate and on our School District Central Health and Safety Committee. I'm on the CUPE BC Education Committee, as well as, sit as a CUPE BC representative for the Apprenticeship Working Group BC Federation of Labour.

During my safety campaign this year I have had numerous newspaper articles published on this subject (sources – CANWEST News Services, Nanaimo News Bulletin, Nanaimo Daily News and Creston Valley Advance).

Presently, I'm sitting on a CUPE National 15-passenger van working group in alliance with CUPE New Brunswick, doing presentations to school trustees, parent

advisory groups and general public on the defects and handling characteristics of 15-passenger vans.

My presentation today is to give you data on how dangerous and unstable these 15-passenger vans are and why I strongly believe that these vehicles pose a significant hazard to your students and the volunteer drivers. In the event a serious accident occurred your school district would face tremendous legal responsibilities at many levels, from the administrators to yourselves.

In 2008, the BC Ministry of Education approved the use of the 15-passenger vans for transporting students with the advice from the BC Schools Protection Program providing they use these vans with certain safety guidelines. **Transport Canada reported on their Fact Sheet TP 2436E July 2008 – “*the local school boards choose the means and type of transportation for school children that best suits their needs.*”**

My personal opinion, as a safety representative and mechanic and motor vehicle inspector, nothing has changed to improve the safe use of these vans. All the government has done is downloaded the responsibilities to each school district.

In my report are excerpts from the National Highway Transportation Safety Administration (NHTSA) from the United States of America. **For a number of years, this safety group has widely publicized how unsafe these 15-passenger vans are in driving maneuvers.**

At the end of my speech I will hand out copies of my presentation for your perusal. I will now list several main topics of importance in bullet form.

1. **HISTORY:**

- 15-passenger vans were originally designed to haul freight to be carried on the van floors.
- Manufacturers decided to install seats in these vans, to increase sales to consumer groups like churches, daycares, schools, universities and airport shuttle services.
- Automotive engineers never redesigned these vehicles to a higher safety standard to transport passengers.

2. **SAFETY:**

- If five or more passengers are riding in these vans the likelihood of roll-over increases dramatically because the rear of these vans extend 4 to 5 ½ feet beyond the rear wheels.
- Loading of 5 or more passengers, plus luggage and/or equipment increases instability during emergency maneuvers such as sudden turns to avoid pedestrians, vehicles or animals on the road.
- The increased load on these vehicles changes the centre of gravity, upward and rearward, causing the van to experience rear tire slide commonly known as fishtailing at acceleration or at highway speed.
- Fishtailing in turn increases roll-overs and devastating crashes.
- According to BC Law, it is unnecessary to have any professional driving experience to get behind the wheel of a 15-passenger van to transport students/passengers.
- **Note:** *15-passenger vans do not have roll-over stability that is similarly used in school bus construction.*

3. STATISTICS:

- Data from the National Highway Transportation Safety Administration (the “NHTSA”) in the United States shows that when carrying fewer than 5 passengers, 15-passenger vans rolled in 12.3% of crashes.
- When carrying five to nine passengers, vans rolled 20.8% of the time (16 of 77 crashes).
- With 10 or more aboard, vans rolled 34.5% of the time (23 of 65 crashes).

GRAPH:

<u>Passengers</u>	<u>Crashes</u>	<u>Rollovers</u>	<u>Rollover Ratio</u>
Less than 5	1,815	224	12.3%
5-9	77	16	20.8%
More than 9	65	23	34.5%

Percentage of crashes that are rollovers source NHSTA

4. FISHTAILING:

- Fishtailing is a dangerous stability problem (not noticeable to average drivers), becomes all too apparent in emergency steering situations, such as when a van drifts onto a shoulder of a roadway.
- In an emergency maneuver a sharp turn could likely cause a loss of control at higher speeds.
- These vans have never been tested fully loaded with passengers to see if they can safely conduct such a steering maneuver.
- Rear tire slide (commonly called fishtail) occurs when the maximum lateral friction (or traction loss) of the rear tires are reached. This condition is known as over-steer (a vehicle characteristic) common to these vans.

- Drivers unfamiliar to vehicle dynamics often mistakenly attribute this to driver over-correction, meaning that the driver has turned the steering wheel too sharply causing the driver to be unsure which direction the tires are facing.
- Most 15-passenger vans come equipped with single tires rather than dual rear tires. Dual rear tires would present more stability.
- The vans do not have adequate rear traction when fully loaded to safely perform emergency maneuvers without the danger of fishtailing or rear tire slide.
- Fully loading the van with passengers shifts the vans centre of gravity rearward and upward.
- The increased weight on the rear tires, combined with the high rearward centre of gravity, causes the van to lose traction in emergency maneuvers. The natural tendency for the driver is to over-steer to regain control which increases the likelihood of roll-over, including tragic consequences.

5. SAFETY RELATED SHORTCOMINGS:

- For almost 20 years, NHSTA has repeatedly urged vehicle manufacturers to use laminated safety glass in van construction.
- Using laminated safety glass enables the occupants to stay inside the vans in the event of roll-over and reduces ejection deaths from the vans interior.
- Industry opposition has succeeded in keeping the requirement for use of safety glass component out of the van construction.

6. EMERGENCY EXITS:

- Vans do not have as many emergency exits as school buses, and, unlike school buses, the van rear door is typically blocked by the rear seat.
- There are no roof or window exits in these vans.

7. **EMERGENCY SIGNALING:**

- Unlike school buses, vans are not equipped with flashing lights or “stop” arms to control traffic safety when they are stopped to pick up or disembark passengers.

8. **COMMERCIAL DRIVERS LICENCE:**

- A BC Class 4 Drivers license is all that is required to drive a 15-passenger van.
- This license can be obtained by anyone over the age of 19 who completes a written examination followed by a road test.
- **(No Specialized Training is required in order to operate a 15-passenger van).**

Nevertheless, conditions have changed little since the 1999 National Transportation Safety Board report published this lament: “While most states require that children can only be transported to and from school on buses meeting federal school bus crash-worthiness standards, some states either allow or do not prohibit the use of nonconforming buses for school-related activities, Head Start programs, child care facilities, and ‘for hire’ transport, despite federal guidelines to the contrary... When states and various school systems allow children to be transported in vehicles not meeting federal school bus construction standards, the federal intent of protecting school children is undermined.”

In 2001, Transport Canada studied heavily loaded passenger van rollover collisions in Canada. This was 9 years ago; we are long overdue for a 12 to 15-passenger van safety study, especially with all the recent publicity and fatality accidents that have taken place since 2001.

In Canada, only three provinces have banned the use of 15-passenger vans for student transportation, they are Quebec, New Brunswick, and Nova Scotia.

RECAP DANGEROUS FEATURES OF 15-PASSENGER VANS

STABILITY:

- **Automotive engineers have never redesigned these vans to meet higher safety standards**
- **Centre of gravity increases when loaded with passengers & cargo e.g. sports/music equipment/personal belongings all become projectiles and add to the weight**
- **Easily loses control at high speed maneuvers**
- **Rear tire slide (commonly known as fishtail)**
- **Single rear wheels rather than dual wheels**

CONSTRUCTION:

- **Roll-over protection non-existent**
- **Body protection is minimal (unibody (shell) design)**
- **No laminate safety glass on side and rear windows**
- **Large side window openings – too easy for passenger ejection**
- **Doors don't stay secure in accidents (poor hardware latching)**

SAFETY

- **Transport Canada reported on their Fact Sheet TP 2436E July 2008 –**
“the local school boards choose the means and type of transportation for school children that best suits their needs.”
- **No roof or window exits**
- **Rear door is blocked by passenger seat**
- **No outside cargo storage**
- **No warning lights or stop arms**
- **No professional training needed for drivers (operators can be inexperienced)**
- **Tire pressures are not monitored, ability to cause accidents**
- **Van maintenance not monitored by school district professionals**
- **Vans are not designated as hazardous vehicles**

In closing, I strongly urge the Board of Education to re-evaluate their decision to continue the use of 15- passenger vans for the purpose of transporting students. Student's safety is very important and should not be negotiable or compromised. What price do we pay for safety? Let's jointly strive to reach the highest bar of quality and protection when it comes to transporting your students and staff. There are other alternatives for student transportation.

Respectfully submitted for your consideration,

Bryan Murphy

Attachment: My Personal Resume & Qualifications

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Education

- **1974 - 1978** - Malaspina University College (now Vancouver Island University) Certificate in Automotive Mechanical Repair
 - Qualified to work as a mechanic in any jurisdiction in Canada.
- **March 1995** - University of Washington, College of Engineering Fleet Maintenance Management Course
 - Course addressed the proper maintenance of light duty trucks and utility vehicles, including 15-passenger vans, in a commercial fleet.
- **August 1995 - December 1998**, Central Washington University Certificate in Pupil Transportation Management
 - 3 year supervisory course covering American laws, rules and regulations governing pupil transportation.
- **October 1998** - University of Washington Shop Management Course
 - Course addressed proper vehicle maintenance and repair, including maintaining a repair history for the vehicle.
- **May 2001**: Malaspina University College (now Vancouver Island University) Commercial Vehicle Inspection Program
 - Certified as a BC Provincial Commercial Vehicle Inspector.

Employment Experience

- **June 1980 – present**: Bus Driver and Mechanic Transportation Department, School District #68 (Nanaimo-Ladysmith)
 - Inspect buses and safety related equipment.
 - Train drivers with respect to safe vehicle operation, hazard avoidance, and driving under inclement road conditions.
 - Perform maintenance to ensure buses meet provincial safety standards.
 - Teach seminars and workshops related to vehicle safety, including pre-trip vehicle inspections, preventative maintenance, and the ICBC Road Safe Program.
- **1993-1999**: Course Instructor Malaspina University College (now Vancouver Island University)
 - Developed and taught a training program addressing vehicle propane conversions.

- **1979:** Automotive technician
Lincoln-Mercury – Nanaimo, B.C.
 - Performed general vehicle maintenance and repair, including steering alignment and brake repair.
- **1973-1979:** Automotive Mechanic
MacMillan Bloedel, Kennedy Lake Division
 - Overhauled vehicles, including 15-passenger vans, to withstand harsh road conditions.

Work Related to 15-Passenger Vans

- **April 2008:** Reported to School Trustees for School District #68 (Nanaimo-Ladysmith) as Health and Safety Committee Member regarding the instability of 15-passenger vans, and other safety concerns with these vehicles.
- **October 2009:** Presented at the C.U.P.E. National Convention in Montreal on safety concerns with 15-passenger vans.
- **October 2009** to present: Created a nation wide working group to support the surviving family members and workers impacted by the 15-passenger van accident that occurred in Chatham, N.B. on January 12, 2008. The working group seeks to inform and educate the public with respect to the safety concerns associated with 15 passenger vans.
- **December 8, 9, 2009:** On behalf of CUPE BC and BC Federation of Labour attended Coroner's Inquest as a resource expert in support to Legal Defence Council representing Farm workers 15-Passenger Van Fatality Inquest.
- **December 14, 2009:** On behalf of CUPE BC did a presentation to the Policy Committee, School District #8 (Kootenay Lake) on the use of dangerous 15-passenger vans.

Industry Qualifications

- **1980 – present:** BC Class 2 Driver's Licence with Air Brake Endorsement.
- **May 1997:** Kal Tire Commercial Vehicle Wheel Service Certificate
 - Qualified to inspect and service tires used on commercial vehicles.
- **2002 – 2007:** Hunter Industries: Heavy Duty Equipment Trainer Certification
 - Qualified to instruct individuals on safe operation of heavy equipment such as forklifts, manlifts, boom trucks, and work platforms.
- **2002-2004:** Drive Smart Trainer Light Trucks and Automobiles
 - Qualified to instruct bus drivers with respect to safe operation of the vehicle, including driver awareness, hazard avoidance, and road condition training.