To:

- Transportation Supervisors
- Secretary-Treasurers
- Superintendents

**Strobe Light Pilot Project - Current Status -**

Representatives from Vehicle Standards and Inspections, Manitoba Highways and Government Services, and the Pupil Transportation Unit (PTU) met at the end of June, 2002 to assess the “strobe light on school buses” pilot project.

Among the facets of strobe light use discussed was the feedback obtained through school bus driver questionnaires, and letters submitted from advocate groups. In summary, these two sources of feedback primarily suggest that strobe lights do, indeed, increase the conspicuousness of the school bus during normal weather conditions, and increase its visibility during inclement weather.

Department representatives concluded, based on preliminary data, that strobe lights on school buses attract the attention of the motoring public, and in doing so, increase safety awareness around the school bus.

Work by staff is ongoing, and PTU will keep all school divisions apprised as the process of evaluation moves ahead.
Bill 14

Bill 14, The Public Schools Modernization Act (the legislation pertaining to school division amalgamation), was passed on July 17, 2002. Because of the new Act, school divisions affected by amalgamation must register their school bus fleets under their new names.

Division Names on School Buses

It should be noted that the school division name on the exterior sides of the bus must be the same name as the registered owner. Since school division names no longer include a number, it is strongly recommended that the former school division numbers be removed from all school bus vehicles.

School Bus Unit Numbers

Unit numbers above the service door and below the right rear tail light must remain in place for the time being.

2002 Blue Bird Rear Decals

A number of school divisions have reported that "Don't Pass When Red Lights Flashing" and "This School Bus Stops At All Railway Crossings" decals are either peeling or bubbling. If 2002 Blue Bird buses in your fleet are experiencing similar decal defects, please contact Fairway Bus Sales (attention Gerry, at 1-800-668-0200) to obtain replacement decals.

2002 Blue Bird Paint Defect

Several school divisions have reported interior and exterior paint peeling around the windows of the rear emergency door on the 2002 model year Blue Bird bodies. In the event that 2002 Blue Bird’s in your fleet have peeling paint, it is recommended that you obtain repair cost estimates from local body shops and submit the estimates to Fairway Bus Sales (attention Gerry, at fax number 204-346-9199) in order to receive warranty approval for the repairs.

School Bus Safety Articles

Two articles appeared in the June 2002 editions of the School Transportation Director which seem particularly appropriate given the timing of the strobe light pilot project review. The first article outlines the steps South Carolina is taking to lessen the incidences of illegal school bus passing; the other discusses bus stop liability and the idea to “make parents your partners in achieving safety for their kids.” Both articles can be found in Appendix A.

2002 School Bus Safety Week

October 20-26, 2002 is School Bus Safety Week - a time when everyone should take a moment to consider the importance of being careful on and around the school bus. PTU is again making available a variety of resource materials that can assist in informing school bus drivers, students, parents, and the community about school bus safety. A sample of available materials and an order form are included in Appendix B.

Emission Standards

An article in the June 2002 edition of Motortruck outlines the timeline for the upcoming engine emission standards, and sheds some light on the effects these controls will have on various diesel engines. The complete article can be found in Appendix C.
South Carolina Takes Charge on Illegal Bus Passing

South Carolina law enforcement officials say they’ll step up efforts against illegal passing of stopped school buses by motorists following the death of a second-grade girl who was fatally injured by a vehicle in Columbia while boarding her bus April 29.

A spokesman for the South Carolina Highway Patrol reports that, during the coming school year, state troopers will launch random patrols of areas in which people have complained that motorists are improperly passing stopped school buses.

Sid Gaulden, director of executive affairs for the South Carolina Department of Public Safety, announced the initiative shortly after the fatality, and following a newspaper article regarding motorists ignoring the law during a random survey of drivers’ performance.

The patrols will be made on an “occasional” basis, rather than daily, using unmarked vehicles that will follow school buses and radio officers who then will stop motorists and issue citations to them, Gaulden reported. Public Safety Department representatives and local safety officials will meet with bus drivers and Department of Education representatives to determine what areas appear to be experiencing the greatest number of violations, and will target enforcement efforts accordingly.

In Columbia, The (Columbia) State newspaper conducted an experiment to determine compliance with school bus passing laws, and found a number of violations. The newspaper followed 10 school buses in seven districts for a week, and reported seven violations, including cars passing buses on double lines and ignoring bus stop arms.

One school bus driver interviewed by the newspaper reported her own count of stop arm violations has been...
Standard School Bus Stop Laws

The National Highway Traffic Administration notes that laws regarding stopping for school buses vary somewhat from state to state, but lists the following as "standard rules."

- Motorists coming to a school bus from either direction must stop when the bus displays flashing red warning lights and extends the stop signal arm, showing that children are getting on or off the school bus.
- Vehicles may not pass until the flashing red lights and signals are turned off.
- Drivers traveling in the same direction as the bus are always required to stop.
- In some states, drivers moving in the opposite direction on a divided roadway also are required to stop.
- Never pass on the right side of the bus, where children enter or exit.

South Carolina Takes Charge on Illegal Bus Passing

commented on page 1

running between 14 and 21 per week.

Donald Tudor, director of the Office of Transportation in the South Carolina Department of Education, says the state hasn't conducted any study recently on school bus safety, but reports that violations are frequent — and that published accounts calculating 650 violations per day appear to be a "solid estimate."

Tudor says such violations anger him because it means drivers are disregarding the safety of the children who are getting on or off the buses.

"I think it's a combination of not understanding the law well, but mostly that people are just impatient," he says.

NHTSA's Concerns

The National Highway Traffic Safety Administration notes that although school buses are the safest way to get students to school, "an average of 33 school-age children die in school bus-related traffic crashes each year. Most of those killed are pedestrians, five to seven years old...hit in the danger zone around the bus...either by a passing vehicle or by the school bus itself."

NHTSA notes that young children are most likely to be hit because they "hurry to get on or off the bus, act before they think and have little experience with traffic, assume motorists will see them and will wait for them to cross...[and] don't always stay within the bus driver's sight."

The Lexington County Sheriff's Department has increased its continuing enforcement initiative to detect and deter motorists who ignore the law regarding passing stopped school buses.

'Operation Stop Arm'

"Operation Stop Arm" is an ongoing effort in Lexington, officials report, which utilizes unmarked police cars to follow school buses on their routes — with additional officers riding on the buses, using video cameras to document violations and to radio reports of violations to

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South Carolina Takes Charge on Illegal Bus Passing  

Continuing Program

Tudor notes that the Department of Education has a continuing program for getting information on school bus safety to the public, including sending information to parents, operating booths at fairs and public events, working with the Department of Public Safety on public service advertising campaigns, and holding meetings with local law enforcement agencies throughout the state.

Bus drivers also are involved, including alerting officials to particular areas where violations occur frequently, to allow law enforcement agencies to target those areas, he reports.

Officials also have installed brighter flashing lights and reflective tape on buses, in an effort to increase their visibility even more.

However, Tudor argues, the key to the problem isn’t the visibility of the buses, but the impatience of motorists. “We have education programs all the time, but the message somehow just doesn’t seem to get through,” he says.

The safety systems have become better, but the compliance of drivers with the law may have become worse, Tudor comments — adding that he hopes increased enforcement will result in more drivers obeying the law.

Contact: Donald Tudor, (803) 734-8244; Sid Gaulden, (803) 896-8755.

Westport Drivers Opt for UFCW

School bus drivers employed by Dattco Bus Company of Westport, Conn., voted 43 to 35 last month to have Local 371 of the United Food and Commercial Workers as their collective bargaining representative.

Westport school officials are playing down the development. “I think everything will remain the same,” Peter Isabelle, head for the transportation department for the Westport school system, told local reporters. “There will be no changes.”

Dattco has three years remaining on its transportation contract with the Westport school system.
How to Avoid Bus Stop Liability

There are several ways bus contractors and school districts can find themselves in danger over their choice of bus stops.

However, by carefully selecting school bus stops and by strictly observing policies against letting children off buses when they might be in danger or left unattended, school transporters can minimize their liability in this area, according to an attorney specializing in school transportation issues.

Peggy Burns, general counsel for Adams Twelve Five Star Schools in Colorado, advises contractors and school districts to take these factors into account when selecting bus stops:
- Visibility, lateral clearance, student access and control of other motorists;
- Allowing vehicles to pass as appropriate;
- Avoiding major thoroughfares or other conditions that might endanger students;
- Age of the children being transported; and
- Evaluation of options for locating sites.

In selecting bus stops, Burns says, transportation directors need to look carefully at requirements under state laws and regulations. In addition, they should visit bus stop locations to make sure that conditions are safe and haven’t changed since the site was selected.

Directors should visit stops at the time of day the buses will be there, she says, because lighting conditions change, and the sun could be in the eyes of a bus driver or students. Finally, she advises, school districts should train drivers on safe practices for getting students on and off their buses, including preventing injury to those students from motorists or other students.

Document Complaints

Don’t think that school districts and governments can’t be hauled into court over this issue, Burns asserts. For example, she says, in Murphy v. State of Connecticut, a mother sued the state, arguing that there was no paved shoulder or sidewalk for use by the students, and that there was a registered sex offender living in the area.

The mother presented testimony by a state trooper who said the stop should be changed, because of high traffic volume in the area. However, the school district was able to show that there was a grassy pathway that was used by students, that there had been no solicitations by the sex offender, and that while the traffic volume was high, police reports showed there had been no accidents in the area.

“The school district had done its homework,” Burns says. That illustrates the need to document parents’ complaints about bus stops, and to be prepared to explain why a particular site was selected, she notes. “Document those complaints... who called, to whom did they speak, when about what,” Burns says. “If their message needed to be relayed to someone else, document who took it. I know it takes time, but you’re more likely to be out of trouble if you do. Investigate any proposed option... You want to be able to state your rationale for selecting or rejecting a stop,” she explains.

Whenever safety is an issue, have a third-party expert examine the site and make recommendations, Burns suggests. “But if that expert says reject it, reject it,” she says, because if there ever is litigation over that stop, “someone will find that expert, and you know what they’re going to say.”

Involve Parents

Burns also recommends involving parents to promote bus stop safety before there is any controversy. Urge parents, through school newsletters and transportation department communications, to reinforce safe behavior by children when at, and when walking to and from, bus stops, she says.

The bottom line, according to Burns: “Make parents your partners in achieving safety for their kids.”

Contact: Peggy Burns, (720) 872-4004.
# School Bus Safety Week

- **October 20 - 26, 2002**

## Order Form

*(See Resource Material for Examples.)*

<table>
<thead>
<tr>
<th>Item</th>
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<th>French</th>
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<td>School Bus Drivers’ Guide to Safer Driving</td>
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<td>School Bus Safety Poster</td>
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<td>School Bus Safety Tips for Parents/School and Community Leaders</td>
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</tr>
</tbody>
</table>

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Please forward material to: (Address in Full)

**Name:** __________________________________________________________

**School Division:** ________________________________________________

**Address:** _______________________________________________________

**Town/City:** ____________________________________________________  **Postal Code:** __________________________

_________________________________________  ______________________________________

**Signature**  **Title**

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Please Return Form To:

Pupil Transportation Unit, Box 250, Rivers, MB  R0K 1X0

Phone: (204) 328-5402; Fax: (204) 328-5404
Engineering Change

By Rodney Campbell

The U.S. EPA has muscled engine manufacturers into meeting accelerated emission standards. With the government deadline just months away, we profile what the forced new product launches may mean for engine performance and reliability.

With the October 2002 deadline for stricter U.S. engine emissions standards now just a few months away, questions about the future direction of diesel power technology and cost remain top of mind for many Canadian motor carriers.

New emission standards imposed by the U.S. Environmental Protection Agency (EPA) apply to Caterpillar, Cummins Engine Inc., Detroit Diesel Corporation (DDC), Mack Trucks and Volvo Trucks North America. The EPA's new regulations require standards for oxides of nitrogen (NOx) and hydrocarbons (NMHC) in heavy-duty engines — 2.5-gram NOx+NMHC standards — which represent about a 40% reduction in emissions of NOx and NMHC compared to current engines.

At issue is the deadline of the standards, which the EPA accelerated by 15 months from January 2004, and how that may compromise the engines that meet the deadline.

In the late 1990s, the EPA claimed that five engine manufacturers had installed "defeat devices" on their engines, which enabled the engines to comply with emission standards for certification while not conforming during actual operation. The engine manufacturers argued that they had alerted the EPA to flaws in its testing.

Ultimately, the EPA and the engine manufacturers came to a compromise, and in 1998, the heavy-duty diesel engine manufacturers signed a consent decree with the
EPA and U.S. Department of Justice. In exchange for avoiding retribution for the alleged defeat devices, the manufacturers agreed to meet an earlier deadline for the new emission requirements.

International is not subject to the Oct. 1 deadline, explained an international spokesman. There are several reasons for this; namely, International focuses mainly on mid-range engines and the company was not perceived as having installed "defeat devices" on its engines, the spokesman said.

Also referred to as a "pull-ahead" provision, the consent decree took more than a year away from design, testing and development of new engines. That's as much time as some fleets have tested new engines for manufacturers prior to launch.

So, while new product launches from engine manufacturers typically promise better performance, more reliability, reduced maintenance and other user-friendly enhancements, many have raised questions about the integrity and cost implications of the new engines. Has there been enough time to fully test them, and will they perform as well as existing engines? Other concerns include the cost of the engines, which can be measured in more ways than one.

Costs are estimated by calculating engine cost, increased fuel costs, other operating costs, reliability, warranty costs and non-compliance costs (NCPs). For costs estimated by the EPA, see the chart on page 20.

One of the most outspoken critics of the new engines is U.S. fleet Schneider National. According to Thomas E. Vandenburgh, General Counsel at Schneider, the potential cost to society may be as much as $2 billion, as calculated in U.S. dollars.

"How will shippers and receivers react to a $2 billion tab without an increase in productivity?" he asked. "My point is..."(trucking) will take on the bill.

Stephen Laskowski, Manager of Policy Development at Ontario Trucking Association/Canadian Trucking Alliance, acknowledged that the shipping industry must be informed.

"The biggest impact will be the 2.4% reduction in fuel economy - that is pretty significant," Laskowski said. Declining comments about the engines themselves, he said OTA is "performing an education role to our members based on information provided by government."

The CTA has issued a two-page summary to members that details cost ramifications, including upfront and operating costs.

"Our next role is to educate the shipping community that we will have cleaner air but at a higher cost. That is probably our most significant role," Laskowski said.

"We need to communicate with shippers that cleaner air is everyone's responsibility," he said.

Earlier this year, much of the concern was generated by the lack of any certified engines for the looming October deadline. However, Cummins announced in early April that it had received certification from the EPA for its new engines, the first company to do so. All of the manufacturers have announced their intent to have EPA-certified engines available by October. Even Caterpillar, which did not anticipate meeting the October deadline and in February approached the EPA with a request that the deadline be postponed, announced in late March that it would meet the deadline.

Two technologies are being used to achieve the emission standards. Cummins, DDC, Mack and Volvo are using exhaust gas re-circulation, or EGR technology, while Cat is using a catalytic converter and other technologies it calls ACERT, for Advanced Combustion Emissions Reduction Technology.

EGR is a process which takes a small amount of exhaust gas from the exhaust manifold, sends it through a cooler to reduce the temperature, then blends it with fresh intake air before it goes into the combustion chamber. This lowers combustion temperatures and reduces emissions, while maintaining power and efficiency.

Putting the exhaust back into the engine creates a couple of drawbacks, including hotter operating temperatures which raises concerns over drain intervals and the durability of the engines.

All of the manufacturers presented their proposed solutions in March. To follow is what they have to say about how they are meeting the standards and what their products will offer.

Caterpillar
Cat says that the most popular ratings of its heavy-duty and mid-range engines will be available in October 2002. These engines will contain some of the technological advances of its ACERT technology. The company anticipates the engines will be fully certified by the EPA.

"The heavy duty C-10, C-12 and C-15 will be available after October 2002, as well as the mid-range 3126E," said Jim McReynolds, General Manager, Caterpillar On-Highway Engine Division.

The engines that will be available in October 2002 will contain some of the ACERT building blocks while retaining the other aspects of its current engines. Selected models will be released with full ACERT technology beginning in January 2003, with full production of all ACERT engines planned by October 2003, according to McReynolds.

"Rushing engines to market without sufficient testing will not help the customer, nor will it preserve environmental quality. We simply will not bring the full ACERT engine technology to market until it has been appropriately tested in the field," McReynolds said.

Cummins
Cummins first began field testing of the ISX engine, which relies on EGR technology, in December 1999 and will have accumulated more than 9.6 million km on-road vehicle field-testing and 115,000 hours of laboratory tests by October.

"We believe cooled EGR is the best technology for this standard," said Tom Kieffer, Executive Director - Marketing, Cummins. Kieffer also said the company has gotten positive feedback on its new ISX engines in blind field tests.

Kieffer agreed that the new engine will cost more, and, while he said he had heard industry comments of the engines costing US$$3,000 to US$$5,000 more, he said a truck OEM would have to confirm actual increase in cost since they are the ones who sell to the end user.

As for fuel economy, Kieffer said Cummins' new engines would be 3-5% less fuel efficient than current engines. However, Cummins said most truck owners will see no change from their current preventive maintenance intervals.

The ISX is designed to go up to 40,734 km in normal use and 56,328 km between service intervals in the case of light-duty applications.

"Performance of the new engines will be improved in terms of engine braking capability and overall engine responsiveness," said John Wall, Cummins Vice President and Chief Technical Officer.