

REPORT TO THE BOARD OF EDUCATION OF SCHOOL DISTRICT NO.46 (SUNSHINE COAST)

SECRETARY-TREASURER'S REPORT

Submitted by Secretary-Treasurer Weswick
November 13th, 2019

DISTRICT ENROLLMENT

Final enrollment figures for the district are now available. Information is provided in comparative charts following this report.

SCHOOL FIELDS

Staff have been working to improve school fields and enhance their overall condition throughout the District. Investments in recent years include the addition of a high-quality mower, top-dressing of fields, and restructuring grounds department staffing to provide for two full-time gardeners on an ongoing basis, a 100% increase. Future planned improvements include further modernizing grounds equipment and working with community partners and staff from local governments to consider both improved maintenance plans and strategic investments in field upgrades that support both students and the community.

SCHOOL BUS SMOKE CONCERNS

The district has followed up on concerns surrounding excess exhaust with our bussing service provider and maintenance staff. The issue is related to an "active regen" system on newer diesel buses, where the system actively burns the soot collected in the emissions filter. The following excerpt, from <https://stnonline.com/partner-updates/demystifying-the-complexity-in-school-bus-regen-issues/>, provides additional information on the subject:

"Beginning around 2007, school buses were equipped with diesel particulate filters, aimed at collecting soot to decrease exhaust emissions. Although DPF filters lead to cleaner emissions, the soot that builds up within them must be cleaned out. This is done through a regeneration, which is when the soot is literally burned off the filter. The engine heats up, the buildup combusts into ash, and carbon dioxide is released. Easy enough, right? Well, not quite.

Many regens, especially in the trucking industry, happen as passive regens, which occur automatically. The exhaust temperatures in the engines heat up high enough to burn all the soot off, 662 degrees Fahrenheit to be exact. Passive regens occur without any other aids like fuel dosing. Passive regen just happens naturally with high exhaust temperatures.

The problem is, with their stop-and-go nature, school bus engines don't get hot enough to regen on their own. This causes the DPF filter to get overloaded with soot, which is detected by pressure sensors in the engine. When the sensor is triggered, extra fuel is pumped into the diesel oxidation catalyst (DOC) to increase the temperature enough for a regen to automatically occur. This is known as an active regen. Just like passive regens, this occurs automatically so no action is needed from the driver or technician, and no warning lights are illuminated on the dashboard.

Here's a better way to put it in perspective. Consider a burning campfire for example. When burning wet wood, the temperature from your fire is lower, and the smoke is prevalent. A camper without the proper adherence to safety may revert to assisting the fire with the addition of lighter fluid. The lighter fluid (like extra fuel in an engine) causes a higher temperature burn and the smoke goes away temporarily. This is an active regen.

Comparatively, hard woods that have dried out need no assistance to burn with little smoke. The clean blue flame from this dry wood creates very little smoke since the fire is burning at higher temperatures. This is passive regen."