



# dispatches

## Technology applies the heat to unsafe trucks

By Dan Birch

At 87 per cent, it's got an accuracy rate to die for.

The "it" is thermal imaging technology, which hit Alberta highways and byways in recent years — and "it" has one main goal: to put the heat on unsafe transport trucks and other commercial vehicles.

The technology was first deployed as part of a 2004 pilot project by Alberta's Commercial Vehicle Enforcement Branch (CVEB). It makes use of infrared imaging and measurement cameras to appraise the condition of a vehicle's brakes, tires, axles, bearings and more, notes information from the CVEB.

In its first full year of operation (2006 to 2007), the branch's thermal imaging unit scanned approximately 22,000 commercial vehicles, singling out 1,000 for closer inspection. Of those, says unit coordinator Rob Sapinsky, almost 90 per cent had to be taken off the road for immediate servicing.

By boosting commercial vehicle safety, officials hope to see a comparable improvement in the safety of truckers and other highway users, Sapinsky says. Thermal imaging, he points out, can detect hazards, such as overheated brakes, that are not otherwise easily detectable. "By catching that defect before it becomes an issue that causes an accident or wheel-loss situation, it makes it safer for the drivers and all users of the highway," he adds.

So how does it all work? A unit camera, focused on the lower portion of a vehicle, measures the amount of infrared energy (heat) emitted by a truck's assorted parts and displays that information on a monitor. Overheated tires appear as blazing white spots; non-functioning brakes indicate no heat whatsoever.

"Nearly everything gets hot before it fails, making infrared cameras extremely cost-effective, valuable diagnostic tools in commercial vehicle enforcement applications," Sapinsky writes in a report recently released by the CVEB.

But thermal imaging alone can't do it all. Unit members represent just one part of a vehicle inspection team. After a member of the unit red flags a truck, the next step is to have an inspection officer get on the ground and take a closer look.

Since the thermal imaging unit became a permanent fixture of the CVEB in 2006, resources have been expanded from one specially equipped van and four trained operators to three vans and eight operators today. As such, Sapinsky expects the number of thermal inspections to rise dramatically in future.

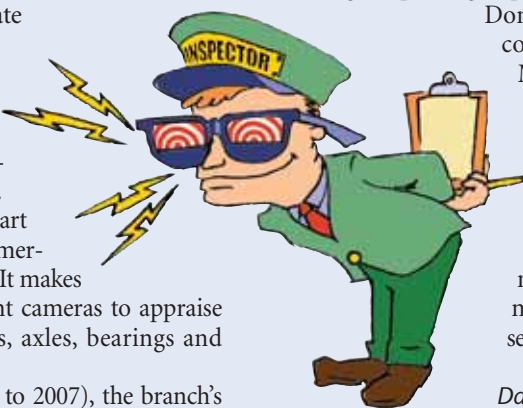
"Alberta is the first jurisdiction in Canada to utilize this technology in this fashion," he says, adding that some states south of the border adopted the approach at about the same time. In this

country, provincial transportation departments are keeping an eye on how unit efforts are panning out, Sapinsky suggests.

Mayne Root, executive director of the Alberta Motor Transport Association in Calgary, regards thermal imaging as useful because it efficiently identifies problem vehicles. However, Root cautions, the technology should not be viewed as a cure-all, since it can't tackle all transportation safety issues, including driver fatigue, speeding or proper load securement.

Don Szarko, manager of advocacy and community services for the Alberta Motor Association in Edmonton, the province's general vehicle organization, says the accuracy of thermal imaging is quite sound and expects it will get even better over time. Driving and commercial trucking is on the rise in Alberta, says Szarko, meaning anything that can be done to make roadways and vehicles themselves safer "has got to be a plus."

Dan Birch is acting assistant editor of OHS CANADA.



## Some female bosses offer hard, not soft, shoulder

By Jason Sahlani

New research shows that women who work under female supervision report as much as 20 per cent more psychological and physical symptoms than their male-managed counterparts.

Conducted by University of Toronto professor Dr. Scott Schieman, study findings were published in the September, 2008 issue of the *Journal of Health and Social Behavior*. Raw data comes from a 2005 survey of 1,800 people working in the United States, who were asked if they had experienced any psychological distresses (such as sadness, insomnia, anxiety or tension) or physical symptoms (including headaches, backaches or stomach pain) within the previous seven days.

"The reported levels of distress for women working under a single female supervisor were higher than women who worked under a single male supervisor," Dr. Schieman says. "Moreover, women who worked under a mixed-gender pair of supervisors [one male/one female] indicated a higher level of distress and physical symptoms than their counterparts with a male supervisor," he says, adding the differences were "statistically significant."

The response from men is another story. Men working under a single supervisor, regardless of gender, have similar levels of distress, but cite lower levels of distress and fewer physical symptoms when reporting under a mixed-gender managerial team.

While researchers Dr. Schieman and Ph.D.-candidate Taralyn