Evan Zabawski

I woke up this morning feeling as hazy as the smoke-filled sky.

The return of the hard-boiled tribologist

Or "The Case of the Pestilent Potassium"

IF YOU READ MY APRIL 2011 COLUMN, it's the return of Slick the private investigator. I woke up this morning feeling as hazy as the smoke-filled sky. Seems the smoke from a large, nearby forest fire is blotting out the sun.

That's not the only thing blotted out. I can't see through the door of my office on account of a big goon standing there. He tells me he's got a case for me, and the papers in his hands tell me it's not a case of scotch. The papers are a bunch of oil analysis reports from various hydrostatic gearboxes at his boss's pulp mill.

Every report tells the same story: high potassium combined with elevated particle count. The goon explains that he checks all the gearboxes at the mill by taking samples and performing particle count analysis. If any sample exceeds an ISO Code of 18/16/13, it is shipped to a third-party commercial lab for further testing. I doubt this goon can count that high without taking off his socks, but I keep that to myself as he could likely knock mine right off with one swipe of his giant mitt.

Now I know why they all have high particle counts in common, but why do they also have high potassium? The goon reads the slight rise in my eyebrow and tells me that his boss wants to hire me to answer the very question on my mind. I accept since snooping pays the bills, especially Bill, my bookie.

My mind is racing and I decide I need a drink to cool it off. I reach for the bottle on my desk while the goon reaches for the doorknob to let himself out. Just then I have an epiphany. Cool off...coolant...I quickly suggest to the goon that the potassium is coming from a coolant leak. Many coolants contain potassium sebecate or potassium nitrite or potassium silicate. Just knowing that may have made this my easiest case.

The goon threatens to give my head enough lumps to make me a phrenologist's dream for making such an obviously wrong suggestion—these gearboxes do not have cooling systems. The only other thought I have at the moment is that the potassium could be coming from bananas, but I'd be bananas myself to make this suggestion right now, so I decide to let the goon go and finish that drink I poured.

Bananas in a gearbox is not as crazy as it sounds. It's an old mechanic's trick used to quiet down a noisy gearbox. Old wives' tale or not, it is unlikely that the same thing was done to so many gearboxes at the same time. Besides, how do I know if thrashed bananas would even show up on the particle count? I have got to clear my head if I'm going to crack this case, so I decide to go for a walk.

Normally, exiting my building at this time of day would have me saluting the sun, but today the smoke made the sky as amber as my favorite scotch. Inspiration causes me to do an about-face and return to the office to place a call to the EPA and pour myself another drink. What can I say? I was doubly inspired, and speaking of which, let's make it a double.

The operator answers with a voice that hits an octave usually reserved for calling dogs. Her answers should lead to the sound of greenbacks slapping across my palm, and that's music to my ears. After all, I'm not an opera critic, I'm a private eye.

When I ask her if the EPA has performed a gas analysis of forest fire smoke before, she answers back by questioning if I am concerned about the smoke in my area. The way she asked it made me wonder if I should be, but I decide to leave that discussion for another time. She tells me she doesn't have an analysis for the current fire, but she does have one from a different fire last year, so I ask her to send it over.

The fax confirms my suspicions. Intense forest fires release potassium into the air, and since smoke is really just airborne particulate, it makes sense it was breathed into those gearboxes. I call the client and tell them the case is closed.

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