



**DEUTSCHE  
HYDRAPRO**  
SUPERIOR BRAKING POWER

**Dear DOT Officer or To Whom It May Concern,**

This trailer is equipped with an electric-over-hydraulic (EOH) braking system. If you are testing with a Performance-Based Brake Tester (PBBT), please read the following.

A Performance-Based Brake Tester (PBBT) assesses a vehicle's stopping capability by measuring brake force at each wheel while the towing vehicle remains stationary on a set of rollers. During a typical test, the driver applies full brake pressure (for example, flooring the pedal), and the machine detects both the static weight on each axle and the braking force generated at each wheel.

From these inputs, the PBBT calculates a brake force-to-weight ratio for the vehicle and checks for left-to-right imbalances on each axle. Since the test assumes that "pedal to the floor" immediately produces maximum braking at the wheel ends, it reliably determines whether a conventional brake system meets the minimum efficiency threshold of 43.5% axle weight set by federal regulations.

Electric over hydraulic (EOH) brake actuators, however, do not provide full pressure directly from pedal input. Instead, they utilize an onboard controller that reads a vehicle accelerometer and modifies the brake actuator output to achieve proportional deceleration. On a PBBT, the rollers spin beneath the wheels, but the truck does not actually slow down, so the EOH controller perceives zero deceleration.

As a result, even if the pedal is pressed to the floor, the controller only generates enough pressure to meet its programmed deceleration target, which on a stationary roller is typically a very low value. Since the PBBT never experiences the high brake pressures that would occur during actual deceleration, it underestimates brake force and reports failing efficiency despite the hardware being fully capable. In short, because EOH systems modulate pressure based on sensed deceleration rather than direct pedal force, a PBBT run cannot replicate the full stop conditions needed for an accurate brake force measurement.

If you have any questions, please refer to my contact information below and give me a call.

My best regards,

**Russell Kipnis**

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