

Log 11-109

NATIONAL TRANSPORTATION SAFETY BOARD WASHINGTON, D.C.

ISSUED: December 16, 1977

Forwarded to:

Honorable William M. Cox
Administrator
Federal Highway Administration
400 Seventh Street, SW.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

H-77-32

In 1975, the Bureau of Motor Carrier Safety (BMCS) issued an Advanced Notice of Proposed Rulemaking, concerning the installation of tachographs in interstate buses, in response to a petition by the Sangamo Electric Company, a tachograph manufacturer.

The Sangamo Company, in supporting this petition, cited 1971 through 1972 BMCS statistics on some Class I common and contract carriers that used tachographs and some that did not. The users had an accident rate of 1.93 per million miles of intercity operations, a fatality rate of 7.23 per 100 million miles of operations, a bodily injury rate of 1.03 per million miles, and an average of \$4,716 in property damage per million miles. In contrast, statistics of the non-users showed 2.42 accidents per million miles of operation, 8.34 fatalities per 100 million miles of operation, 1.15 bodily injuries per million miles, and an average of \$5,699 in property damage per million miles.

The BMCS withdrew the Advance Notice of Proposed Rulemaking in 1976, thus denying the Sangamo Company's petition. In rejecting the petition, the BMCS cited industry data which indicated that the use of tachographs does not reduce the accident rate. Greyhound Lines, Inc., and the American Trucking Associations (ATA), Inc., supplied the following information:

ACCIDENT FREQUENCY RATE

PER MILLION VEHICLE MILES

<u>GREYHOUND:</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
New York (with tachographs)	9.34	8.70	7.71
Ohio (without tachographs)	3.93	4.85	4.07
Pennsylvania (without tachographs)	7.47	5.64	6.68
<u>AMERICAN TRUCKING ASSOCIATIONS:</u>		<u>1973</u>	
Current users of tachographs (13 fleets)	--	2.82	--
Former users of tachographs (15 fleets)	--	2.58	--
Non-users of tachographs (14 fleets)	--	2.52	--

Based on these figures the BMCS concluded that "factors other than use of tachographs can result in a good safety record."

The National Transportation Safety Board has investigated seven commercial vehicle accidents in which the vehicles involved had been traveling either at speeds considered too fast for conditions, or in excess of the legal limit. For example, in an accident investigated by the Safety Board at Seattle, Washington, the driver alleged that his speed had been 45 mph, whereas the tachograph record indicated that the speed had been 52 mph. The tachograph record made it possible to show that the vehicle's actual speed, only 2 mph above the posted speed did not permit safe negotiation of this particular curve when the pavement was wet.


The introduction of mechanical equipment to record the performance of man and machine is not without precedent within the transportation industry. In 1957, the Federal government required the installation, for accident investigation purposes, of Flight Data Recorders (FDR) on transport aircraft. These recorders document four significant flight parameters throughout the entire flight. Additionally, in 1967, Federal Aviation Regulations required the installation for similar purposes of Cockpit Voice Recorders (CVR) which record the voices of the cockpit crew on a 30-minute, continuous tape loop. In 1969, FDR's with 64 flight data channels were required on certain aircraft, including wide-bodied jets. The CVR and FDR together with other advancements such as the Airborne Integrated Data System and condition monitoring undoubtedly have played a significant role in the development of the outstanding safety record of the commercial aviation industry. Likewise, in the marine industry, course recorders have proved useful in analyzing ship operations.

In the denial of the Sangamo petition the BMCS chose to cite industry statistics which indicated that the use of tachographs does not reduce the accident rate. The BMCS apparently did not consider its own statistics which indicate that the use of tachographs might be significant. Further, no comparisons were made of types of vehicles, loads and weight distribution or weather and road conditions. The Safety Board believes that further study can resolve the issue of whether tachographs would reduce accident frequencies.

Therefore, the National Transportation Safety Board recommends that the Bureau of Motor Carrier Safety of the Federal Highway Administration:

Conduct scientifically controlled studies to determine the effects and merits of the use of tachographs on commercial vehicles in reducing accidents. (Class II, Priority Action) (H-77-32)

BAILEY, Acting Chairman, McADAMS, HOGUE, and KING, Members, concurred in the above recommendation.

A handwritten signature in cursive script that reads "Kay Bailey".

By: Kay Bailey
Acting Chairman

