JIM CHASE
State Legislative Director

1910 N. 11TH ST., STE. 17
BISMARCK, ND 58501
(701) 223-0061
utu4nd@gmail.com

SHEET METAL | AIR | RAIL | TRANSPORTATION

SMART®

Transportation Division
Dakotas Legislative Board

MEMO TO: All Union Members

FROM: Jim Chase

DATE: November 18, 2019

RE: Emergency Brake Failures Warning

This memo is to alert and warn you about a situation that has been occurring in Mandan, North Dakota, which, as you know, is an inspection point for air tests on cycle trains. After a train inspection, we are required to set out bad order cars. It has been discovered while setting out these cars when the train is separated, with its angle cocks left fully open, that the train may fail to go into emergency either on the head end or the rear end. Most of these trains have distributive power, and we can see the rear air gauge drawing down at a service rate when it should be making an emergency application of the brakes.

After an exhaustive process of elimination by Mechanical Forces at Mandan, I was told that the main brake control valves on hundreds, if not thousands, of cars are not operating correctly. There is an expected life span on these valves which is being exceeded, and this has led to valves not going into emergency.

Initially BNSF was very proactive, prohibiting any train that would not go into emergency from leaving the terminal until the cars with the bad valves were removed from the train; however, their process has recently changed. We have been instructed now to draw the train down to zero brake pipe pressure before we separate the train to set out a bad ordered car, thus circumventing the process by which we are able to determine if the train will make an emergency application, should we actually need to do so after we leave the terminal.

I cannot overstate how dangerous this new procedure is; the ability of the train to go into emergency is paramount. There have been several incidents that illustrate the importance of the train's ability to go into emergency. When a coal train broke in two near Dengate, North Dakota, the train did not go into emergency. The rear of the train bled off, and the rear cars rolled backwards several miles. Luckily, there was not a train behind this train or carnage and deaths could have occurred. Several engineers have reported instances when a break-in-two has occurred during which the rear of the train did not go into emergency, the rear DP unit continued to pump air, and the rear of the train began to release and roll away.

This problem was formally reported to the FRA in February 2019, and we had a formal conference call on October 24, 2019. It was noted on the call that all cars equipped with (New York Air Brake) NYAB DB-10 service control valves have the potential to leak and thus may not allow the valve to go into emergency. There was discussion over the safe service life of these valves as most defective valves were over 20 years in service.

It was noted that BNSF had replaced about half of the suspect valves on cars owned by BNSF. It was also found that not just coal cycle trains were impacted, but all types of cars equipped with this NYAB-type brake valve. One of the problems with non-BNSF-owned (private) cars was that if the brake valve was found to be leaking as described in the 2013 AAR: Maintenance Advisory-New York Air Brake DB-10 Service Portion Leakage Caused by Cold Weather Operations, there was no way for the replacement of the brake valve to be billed to the private car owner. That is being rectified and should be in place in January 2020.

Several key points came from this call:

- Evidence of the symptom begins with increased brake pipe air flow from the controlling (lead) locomotive after a brake application has been initiated. Increased head-end air flow is caused by leakage from the bottom cover exhaust port of the DB-10 service portion on the brake control valve.

- When the air is set during an air test, if air is heard leaking out of the bottom of the valve, it is defective.

- If the person at the controls of the locomotive notes excessive air flow during application of the train brake, pay particular attention to an audible blow of air coming from the vent of any DB-10 service portion that may be in the consist.

It should be noted that the FRA witnessed a coal train in Mandan that did not go into emergency and they are recommending civil penalties under 232.103(i), which states:

> **"(i)** All trains shall be equipped with an emergency application feature that produces an irretrievable stop, using a brake rate consistent with prevailing adhesion, train safety, and brake system thermal capacity. An emergency application shall be available at all times, and shall be initiated by an unintentional parting of the train line or loss of train brake communication."

In review, when trains are operating in temperatures under 40 degrees Fahrenheit, rail cars equipped with New York Air Brake valves may not go into emergency in the event of a train separation or crew-induced emergency brake application.

While conducting an air brake test, if air is leaking from the air brake valve vent, the brake valve is defective. If the person at the controls of the locomotive notices excessive air flow while the air brakes are set, particular attention should be paid to brake valve leakage.