

Overview

A Line of Road Failure - No Cause Found (LORF NCF) event occurs when a train goes into emergency brake application that is not induced by the operator and where no cause can be identified. When a LORF NCF event occurs, the Class I Railroads send the entire consist of the train, in sequence order, to the Railinc E-Train system. Here, an algorithm is run to calculate an index based on how many unique car groupings the individual cars have been in across all roads that have seen that car in an event. The higher the index, the greater the likelihood that a particular car is experiencing brake related issues that leads to a line-of-road emergency brake application.

A LORF_NCF data summary is created for each car submitted with a LORF NCF event. When the Total Group Count (automated group count + manual group count) on a car reaches a threshold of 3 or greater, then a LORF NCF alert is opened on that car. See the screenshot below.

Data Summary Details	
Equipment ID: RAIL0000011000 Location: BASE Data Summary: LORF NCF Data Sumr	
Opening Criteria:	
Autoclose Criteria:	
Date of last bad detector read:	
Note: all times are Eastern Standard Time (EST)	
Name	Aggregation
Open Date	06-01-2017 04:01
Last Event Date	06-25-2017 13:01
Count of DS Creators	4
Score	4.0
Raw Count	5
Train Count	5
Road Count	3
Automated Group Count	4
Manual Group Count	0
Total Group Count	4
Loaded Count	0
Empty Count	5

The LORF NCF Alert coincides with an update to Rule 3 of the *AAR Field Manual* giving handling carriers cause to shop a car with an open LORF NCF Condemnable alert. This alert can be interpreted to mean that the given piece of equipment has a high probability of having some brake defect related to LORF NCF.

Security

Only Class I Railroads have access to LORF_NCF data summary information. All Class I's can also see the aggregate data summary. Only the submitting road can see their own road level data summary (e.g., RAIL can only see the RAIL road level data summary and not of any other road). The LORF_NCF data summary notifications are not available via the Equipment Health Management System (EHMS) as LORF_NCF data summaries have an additional level of security.

Subscriptions

Both Class I Railroads and Non-Class I Railroads can subscribe to receive LORF NCF alerts. The 'All Alert' subscription is currently available in EHMS and includes the LORF NCF alert which is still available via EHMS. The LORF NCF data summaries subscription (NCF, AHS, BSO, TS) that has the additional security around road level summaries, is available via the AIR Web Service (Push or Pull mechanism) to Class I Railroads only.

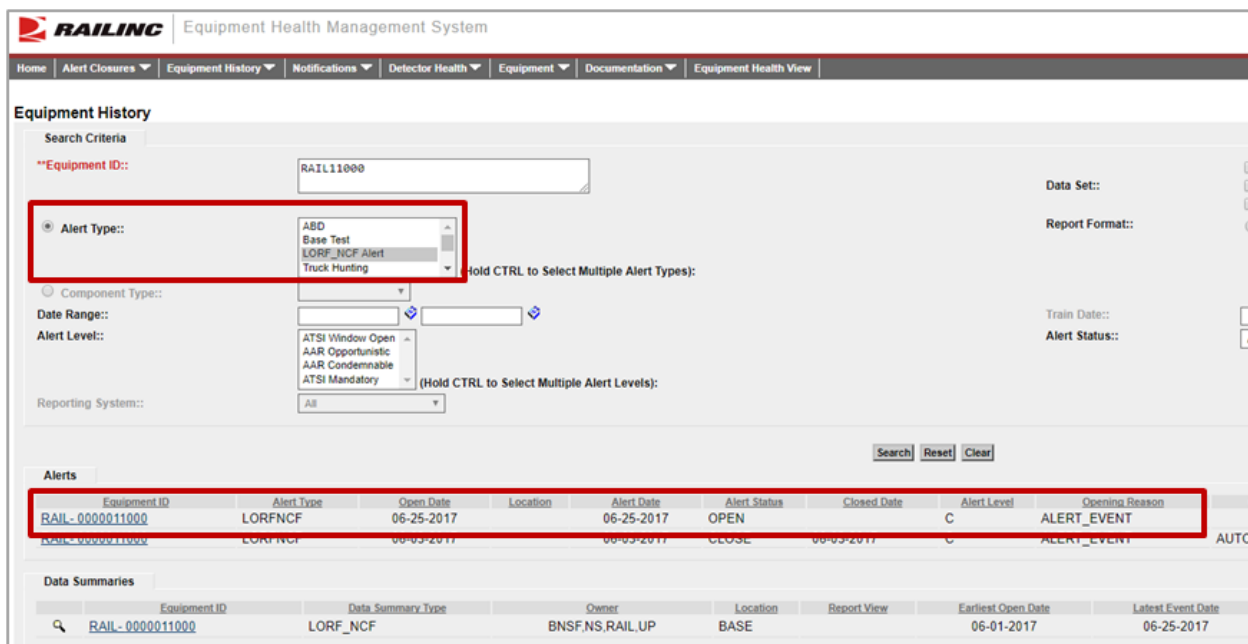
LORF NCF Inspection Reporting

The inspection of equipment pulled per the Alert/Rule 3 Chart A.14 Defect, require the repairing party to perform a thorough inspection of six brake components. Two new Job Codes 1130 and 1132 and a new Why Made Code 1A have been introduced to the Car Repair Billing (CRB) system for use with the LORF NCF Alert as part of the inspection process. First, the repairing party performs a Single Car Air Brake Test (SCABT) and reports the test with the correct Job Code and new Why Made Code 1A.

If the first test passes, the repairing party must then perform two additional secondary tests and report with the corresponding job codes:

- Job Code 1130 - second Service Stability Test
- Job Code 1132 – second Vent Valve Test

Closing LORF NCF alerts



The screenshot shows the RAILINC Equipment Health Management System interface. The search criteria section is highlighted with a red box, showing the following fields:

- Equipment ID: RAIL11000
- Alert Type: LORF_NCF Alert (selected)
- Component Type: (empty)
- Date Range: (empty)
- Alert Level: (empty)
- Reporting System: All

The Alerts table below shows the following data:

Equipment ID	Alert Type	Open Date	Location	Alert Date	Alert Status	Closed Date	Alert Level	Opening Reason
RAIL-0000011000	LORFNCF	06-25-2017		06-25-2017	OPEN		C	ALERT_EVENT
RAIL-0000011000	LORF_NCF	06-05-2017		06-05-2017	CLOSE	06-05-2017	C	ALERT_EVENT

The Data Summaries table below shows the following data:

Equipment ID	Data Summary Type	Owner	Location	Report View	Earliest Open Date	Latest Event Date
RAIL-0000011000	LORF_NCF	BNSF.NS.RAIL.UP	BASE		06-01-2017	06-25-2017

All LORF NCF alerts close when the TGC goes below 3 for the following reasons. For any one of these reasons the IQ Alert engine sends an Inspection Reason 'MK' auto-close trigger:

1. A LORF NCF inspection 'LI' – LORF NCF Inspected and Released is reported on the car.

- A LORF NCF inspection 'LR' – LORF NCF Repaired and Released is reported on the car. TGC and Score are reset to zero. The LORF NCF Alert is closed.

Data Summary Details	
Equipment ID: RAIL0000005291	Location: BASE Data Summary: LORF NCF Data Summary Data Summary
Opening Criteria:	
Autoclose Criteria:	
Date of last bad detector read:	
Note: all times are Eastern Standard Time (EST) Show Aggreg:	
Name	Aggregation
Open Date	07-01-2017 04:50
Last Event Date	08-24-2017 06:50
Count of DS Creators	1
Score	0.0
Raw Count	0
Train Count	0
Road Count	0
Automated Group Count	0
Manual Group Count	0
Total Group Count	0
Loaded Count	0
Empty Count	0

- If no LORF_NCF data summary inspection is performed and the car continues with no new LORF NCF events reported, then after 90 days the old LORF NCF events drop off from the data summary. This causes the Total Group Count to drop below 3 and the LORF NCF Alert to close on that car.
- If a car is deleted from Umler, then the LORF NCF Alert closes on that car. In this case an 'MK' Auto-close trigger closes the LORF NCF Alert.

Closures											
Equipment ID	Event Date	Location	Performer	Reporter	SPLC	Closure Type	Job Code	Why Made Code	Insp. Reason	Insp. Type	
RAIL-0000005291	09-05-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				
RAIL-0000005291	09-04-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				
RAIL-0000005291	09-02-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				
RAIL-0000005291	08-30-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				
RAIL-0000005291	08-28-2017		RAIL	AUTOCEPM-RAIL	000453778	Inspection			LR	LORF_NCF	
RAIL-0000005291	08-25-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				
RAIL-0000005291	08-24-2017		RAIL	IQ-RAIL	123456	Inspection			MK	LORFNCF	
RAIL-0000005291	08-24-2017	AXLE=03	NS	AUTOCEPM-UP	411000000	Repair	3334				

Once the inspection is complete, the repairing party is required to report an inspection on the LORF NCF data summary via the EHMS UI or web service that resets the Total Group Count (TGC) of the LORF_NCF data summary to zero and thus closes the LORF NCF alerts.

These factors do not close the LORF NCF Alert:

- Reporting of the Job Codes 1130 and 1132 or the Why Made code 1A to EHMS, Repair Service or Equipment Health View (EHV)
- The SCABT inspection reported to Umler
- Reporting of the SCABT Job Codes:
 - CRB does not send these Job Codes or Why Made Code to EHMS
 - LORF NCF Alert closures are similar to THD alert closure, i.e., you cannot close the THD or NCF alert through CRB job codes reporting

LORF NCF and Early Warning

Prior to July 10, 2017 when LORF NCF alerts were deployed to production, cars with a Total Group Count of 3 or above that were owned by participating roads and car owners had MA-0146 associated with them. Cars with an open MA-0146 will remain on the list until they fall below a Total Group Count of 2, or when the AAR instructs Railinc to remove all equipment from the MA-0146.

For more information, contact the Railinc Customer Success Center toll free at (877) 724-5462 or email at csc@railinc.com.

Last Updated: September 6, 2017