



## **Data Summary: Line-Of-Road Failure – Train Separation**

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# **Synopsis**

## **Purpose**

The Line-Of-Road Failure – Train Separation (LORF-TS) data summary provides information on equipment involved in trains that experience a line-of-road emergency where the cause was identified as Train Separation.

## **Background**

A LORF-TS event occurs on a train separation where knuckles and drawbars are found to be intact, not to be confused with an air hose separation, broken knuckle or drawbar.

When a LORF-TS event occurs, the roads send the list of equipment on the train involved in the LORF-TS event, to the Railinc E-Train system.

A LORF-TS data summary is created on the listed equipment and sent to the EHMS system. The higher the counts of LORF-TS events reported on an equipment in a 12 month and up to a 36 month period; the greater the likelihood that a particular car is experiencing Train Separation related issues that leads to a line-of-road failure.

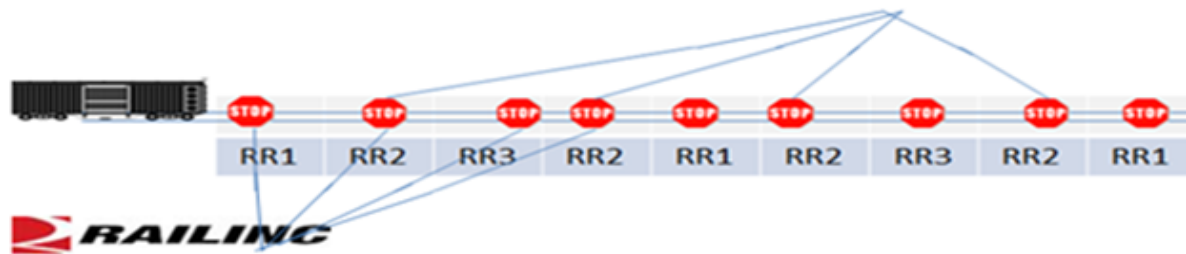
**Figure 1 – Bad Actor Identification for LORF-TS**

1

Trains experience multiple undesired emergency stops (UDEs) overtime on different railroads and the cause is found to be related to Train Separation

2

Individual railroads accumulate information to identify a specific car that has multiple TS events reported on it.



3

Line of Road Failure data and consist details are shared with Railinc. Railinc identifies the Bad Actor cars involved in TS events and provides LORF-TS data summaries for their study.

## Data Summary Elements

Element Name	Element Text	Element Description	Format	Aggregation Method	Correlation Based On	Action
Type	Type	Data Summary	TEXT			
Format Version	Format Version	Version of the data summary definition	NUMBER [1.0-999.99]			
CreationTMST	Date Opened	GMT timestamp for when the data summary was created and the time zone offset of the originating data location.	TIMESTAMP	Earliest		Update when data summary created
RR_DB_Key	Key from originating railroad	Database key from the originating railroad (or detector owner)	NUMBER [0 - 999999999]			
LastUpdateTMST	Date of last update	GMT timestamp for when the data summary was last updated (any change other than closing) and the time zone offset of the originating data location.	TIMESTAMP	Last		Update every time data summary is updated, including when it is opened.
DSType	LORF_TS	Data summary type	TEXT			
DS_Owner/Reporting_System	Who created the Data Summary	Company ID (from Railinc) of the owner/creator of data summary	TEXT			
EquipmentMark	Equipment Mark	Current equipment initial	TEXT			
EquipmentNumber	Equipment Number	Current equipment number	NUMBER [0 - 999999999]			
Location	Location	Location on equipment per EMIS nomenclature				
ComponentType	Component type	BASE	TEXT			
ComponentName	Part of the component location	BASE	TEXT			
ComponentValue	Value for the component location		TEXT			
State	Data Summary state	Current status of Open	TEXT			

TWELVE_MONTH_RAW_COUNT	12mo Raw Count	12 month Count of Unique LORF-TS events	NUMBER	Sum		Update every time data summary is updated, including when it is opened for LORF- TS events sent with 1 or 2 cars only. Based on a window of time from current date to the earliest reported event or 12 month window. 12 month window can be changed based on continuing data analysis.
THIRTYSIX_MONTH_RAW_COUNT	36mo Raw Count	36 month Count of Unique LORF-TS events	NUMBER	Sum		Update every time data summary is updated, including when it is opened for LORF- TS events sent with 1 or 2 cars only. Based on a window of time from current date to the earliest reported event or 36 month window.36 month window can be changed based on continuing data analysis.
TWELVE_MONTH_DISTINCT_PAIR_COUNT	12mo Distinct Pair Count	12 month count of distinct equipment connected to the end of equipment where the TS occurred	NUMBER	Max		Update every time data summary is updated, including when it is opened. Based on a window of time from current date the earliest reported event or 12 month window for LORF TS events sent with distinct pair counts only. 12 month window can be changed based on continuing data analysis.
THIRTYSIX_MONTH_DISTINCT_PAIR_COUNT	36mo Distinct Pair Count	36 month count of distinct equipment connected to the end of equipment where the TS occurred	NUMBER	Max		Update every time data summary is updated, including when it is opened. Based on a window of time from current date to the earliest reported event or 36 month window for LORF TS events sent with distinct pair counts only. 36 month window can be changed based on continuing data analysis.
LAST_LORF_TS_INSPECT_DT_1	Last LORF-TS Inspection Date	Date on which the most recent Inspection was performed after an LORF-TS event occurred.	DATE	Latest		Update each time a LORF- TS Inspection is performed on the car

LAST_LORF_TS_INSPECT_REASON_1	Last LORF-TS Inspection Reason	Last LORF-TS Inspection Reason	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_1	Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_REASON_CODE_1	Last LORF-TS Inspection Reason Code	Last LORF-TS Inspection Reason Code	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_1	Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_DT_2	2 <sup>nd</sup> to Last LORF-TS Inspection Date	Date on which the 2nd to Last Inspection was performed after an LORF-TS event occurred	DATE	Latest		Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_REASON_2	2nd to Last LORF-TS Inspection Reason	2nd to Last LORF-TS Inspection Reason	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_2	Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_REASON_CODE_2	2nd to Last LORF-TS Inspection Reason Code	2nd to Last LORF-TS Inspection Reason Code	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_2	Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_DT_3	3 <sup>rd</sup> to Last LORF-TS Inspection Date	Date on which the 3rd to Last Inspection was performed after an LORF-TS event occurred	DATE	Latest		Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_REASON_3	3rd to Last LORF-TS Inspection Reason	3rd to Last LORF-TS Inspection Reason	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_3	Update each time a LORF- TS Inspection is performed on the car
LAST_LORF_TS_INSPECT_REASON_CODE_3	3rd to Last LORF-TS Inspection Reason Code	3rd to Last LORF-TS Inspection Reason Code	STRING	Latest	LAST_LORF_TS_INSP ECT_DT_3	Update each time a LORF- TS Inspection is performed on the car
EVENT_TS_1	Last Event Timestamp	Date and Time of Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_1	Last Event Load/Empty Indicator	Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_1	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_1	Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the latest LORF-TS	STRING	Correlated	EVENT_TS_1	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.

EVENT_A_END_OF_EQUIPMENT_1	Last Event End of Equipment 'A'	Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_1	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_1	Last Event End of Equipment 'B'	Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_1	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_2	2 <sup>nd</sup> to Last Event Timestamp	Date and Time of 2 <sup>nd</sup> to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_2	2 <sup>nd</sup> to Last Event Load/Empty Indicator	2 <sup>nd</sup> to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_2	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_2	2 <sup>nd</sup> to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 2 <sup>nd</sup> to last LORF-TS	STRING	Correlated	EVENT_TS_2	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_2	2 <sup>nd</sup> to Last Event End of Equipment 'A'	2 <sup>nd</sup> to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_2	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_2	2 <sup>nd</sup> to Last Event End of Equipment 'B'	2 <sup>nd</sup> to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_2	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.

EVENT_TS_3	3 <sup>rd</sup> to Last Event Timestamp	Date and Time of 3 <sup>rd</sup> to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_3	3 <sup>rd</sup> to Last Event Load/Empty Indicator	3 <sup>rd</sup> to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_3	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_3	3 <sup>rd</sup> to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 3 <sup>rd</sup> to last LORF-TS	STRING	Correlated	EVENT_TS_3	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_3	3 <sup>rd</sup> to Last Event End of Equipment 'A'	3 <sup>rd</sup> to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_3	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_3	3 <sup>rd</sup> to Last Event End of Equipment 'B'	3 <sup>rd</sup> to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_3	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_4	4th to Last Event Timestamp	Date and Time of 4th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_4	4th to Last Event Load/Empty Indicator	4th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_4	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_4	4th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 4th to last LORF-TS	STRING	Correlated	EVENT_TS_4	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.



EVENT_A_END_OF_EQUIPMENT_4	4th to Last Event End of Equipment 'A'	4th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_4	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_4	4th to Last Event End of Equipment 'B'	4th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_4	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_5	5th to Last Event Timestamp	Date and Time of 5th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_5	5th to Last Event Load/Empty Indicator	5th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_5	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_5	5th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 5th to last LORF-TS	STRING	Correlated	EVENT_TS_5	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_5	5th to Last Event End of Equipment 'A'	5th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_5	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_5	5th to Last Event End of Equipment 'B'	5th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_5	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.

EVENT_TS_6	6th to Last Event Timestamp	Date and Time of 6th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_6	6th to Last Event Load/Empty Indicator	6th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_6	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_6	6th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 6th to last LORF-TS	STRING	Correlated	EVENT_TS_6	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_6	6th to Last Event End of Equipment 'A'	6th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_6	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_6	6th to Last Event End of Equipment 'B'	6th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_6	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_7	7th to Last Event Timestamp	Date and Time of 7th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_7	7th to Last Event Load/Empty Indicator	7th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_7	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_7	7th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 7th to last LORF-TS	STRING	Correlated	EVENT_TS_7	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.

EVENT_A_END_OF_EQUIPMENT_7	7th to Last Event End of Equipment 'A'	7th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_7	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_7	7th to Last Event End of Equipment 'B'	7th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_7	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_8	8th to Last Event Timestamp	Date and Time of 8th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_8	8th to Last Event Load/Empty Indicator	8th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_8	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_8	8th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 8th to last LORF-TS	STRING	Correlated	EVENT_TS_8	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_8	8th to Last Event End of Equipment 'A'	8th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_8	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_8	8th to Last Event End of Equipment 'B'	8th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_8	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.

EVENT_TS_9	9th to Last Event Timestamp	Date and Time of 9th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_9	9th to Last Event Load/Empty Indicator	9th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_9	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_9	9th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 9th to last LORF-TS	STRING	Correlated	EVENT_TS_9	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.
EVENT_A_END_OF_EQUIPMENT_9	9th to Last Event End of Equipment 'A'	9th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_9	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_9	9th to Last Event End of Equipment 'B'	9th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_9	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.
EVENT_TS_10	10th to Last Event Timestamp	Date and Time of 10th to Last Event	Date Time	Descending2		Update each time a new LORF-TS event occurs
LE_INDICATOR_10	10th to Last Event Load/Empty Indicator	10th to Last Event Load Empty Indicator	STRING	Correlated	EVENT_TS_10	Update each time a new LORF-TS event occurs
EVENT_PARTNERING_EQUIPMENT_10	10th to Last Event Partnering Equipment	The ID of the partnering equip connected to the equipment involved in the 10th to last LORF-TS	STRING	Correlated	EVENT_TS_10	Update each time a new LORF-TS event occurs and exactly two equipment are reported in the event.

EVENT_A_END_OF_EQUIPMENT_10	10th to Last Event End of Equipment 'A'	10th to Last Event End of Equipment 'A'	STRING	Correlated	EVENT_TS_10	Update each time a new LORF-TS event occurs and the end 'A' of that equipment is reported as being involved in the TS.
EVENT_B_END_OF_EQUIPMENT_10	10th to Last Event End of Equipment 'B'	10th to Last Event End of Equipment 'B'	STRING	Correlated	EVENT_TS_10	Update each time a new LORF-TS event occurs and the end 'B' of that equipment is reported as being involved in the TS.

## Data Summary Roll Up Example

HEADER	Element Name	Aggregation	RR1	RR2	RR3
	Type	DS	DS	DS	DS
	Format Version	1	1	1	1
	CreationTMST	08-04-2015 13:01	08-04-2015 13:01	08-06-2015 13:21	08-07-2015 13:40
	RR_DB_Key		772762	657646	346545
	LastUpdateTMST	08-08-2015 13:40	08-05-2015 13:01	08-06-2015 13:40	08-08-2015 13:40
	DSType	LORF_TS	LORF_TS	LORF_TS	LORF_TS
	DS_Owner/Reporting_System		RR1	RR2	RR3
	Equipment Mark	UP,NS,CSXT	UP	NS	CSXT
	EquipmentNumber (ID)	MAXL1234	MAXL1234	MAXL1234	MAXL1234
	Location				
	ComponentType	BASE	BASE	BASE	BASE
	ComponentName	BASE	BASE	BASE	BASE
	ComponentValue	BASE	BASE	BASE	BASE
	State	O	O	O	O
	12mo Raw Count	7	3	2	2
	36mo Raw Count	7	3	2	2
	12mo Distinct Pair Count	1	1	1	1
	36mo Distinct Pair Count	1	1	1	1
	Last LORF-TS Inspection Date	08-07-2015	08-07-2015	08-07-2015	08-07-2015
	Last LORF-TS Inspection Reason	LORF-TS Inspected and Released	LORF-TS Inspected and Released	LORF-TS Inspected and Released	LORF-TS Inspected and Released
	Last LORF-TS Inspection Reason Code	TI	TI	TI	TI
	2nd to Last LORF-TS Inspection Date	08-06-2015	08-06-2015	08-06-2015	08-06-2015
	2nd to Last LORF-TS Inspection	LORF-TS Inspected and Released	LORF-TS Inspected and Released	LORF-TS Inspected and Released	LORF-TS Inspected and Released

Reason				
2nd to Last LORF-TS Inspection Reason Code	TI	TI	TI	TI
3rd to Last LORF-TS Inspection Date	08-05-2015	08-05-2015	08-05-2015	08-05-2015
3rd to Last LORF-TS Inspection Reason	LORF-TS Repaired and Released	LORF-TS Repaired and Released	LORF-TS Repaired and Released	LORF-TS Repaired and Released
3rd to Last LORF-TS Inspection Reason Code	TR	TR	TR	TR
Last Event Timestamp	08-09-2015 13:40	08-09-2015 13:40	08-09-2015 13:40	08-06-2015 13:40
Last Event Load/Empty Indicator	L	L	L	L
Last Event Partnering Equipment	NS28458	NS28458		
Last Event End of Equipment 'A'	Y	Y	Y	
Last Event End of Equipment 'B'		Y		Y
2nd to Last Event Timestamp	08-08-2015 13:40	08-04-2015 13:01	08-06-2015 13:21	08-08-2015 13:40
2nd to Last Event Load/Empty Indicator	L	L	L	L
2nd to Last Event Partnering Equipment	UP0000281239			UP0000281239
2nd to Last Event End of Equipment 'A'		Y		Y
2nd to Last Event End of Equipment 'B'				Y

3rd to Last Event Timestamp	08-06-2015 13:40	08-04-2015 13:01		
3rd to Last Event Load/Empty Indicator		L		
3rd to Last Event Partnering Equipment		UP28458		
3rd to Last Event End of Equipment 'A'		Y		
3rd to Last Event End of Equipment 'B'				
4th to Last Event Timestamp	08-06-2015 13:21			
4th to Last Event Load/Empty Indicator	L			
4th to Last Event Partnering Equipment				
4th to Last Event End of Equipment 'A'				
4th to Last Event End of Equipment 'B'				
5th to Last Event Timestamp	08-05-2015 13:01			
5th to Last Event Load/Empty Indicator				
5th to Last Event Partnering Equipment				
5th to Last Event End of Equipment 'A'				



	5th to Last Event End of Equipment 'B'				
	6th to Last Event Timestamp	08-05-2015 13:21			
	6th to Last Event Load/Empty Indicator				
	6th to Last Event Partnering Equipment				
	6th to Last Event End of Equipment 'A'				
	6th to Last Event End of Equipment 'B'				
	7th to Last Event Timestamp	08-04-2015 13:21			
	7th to Last Event Load/Empty Indicator				
	7th to Last Event Partnering Equipment				
	7th to Last Event End of Equipment 'A'				
	7th to Last Event End of Equipment 'B'				
	8th to Last Event Timestamp	08-02-2015 13:21			
	8th to Last Event Load/Empty Indicator				
	8th to Last Event Partnering Equipment				

	8th to Last Event End of Equipment 'A'				
	8th to Last Event End of Equipment 'B'				
	9th to Last Event Timestamp	08-01-2015 13:21			
	9th to Last Event Load/Empty Indicator				
	9th to Last Event Partnering Equipment				
	9th to Last Event End of Equipment 'A'				
	9th to Last Event End of Equipment 'B'				
	10th to Last Event Timestamp	07-06-2015 13:21			
	10th to Last Event Load/Empty Indicator				
	10th to Last Event Partnering Equipment				
	10th to Last Event End of Equipment 'A'				
	10th to Last Event End of Equipment 'B'				

## Opening Criteria

A LORF-TS data summary will be created for equipment involved in a line-of-road failure emergency brake application event where the cause is identified as Train Separation. Once opened, the LORF-TS data summary will continue to aggregate event timestamps from subsequent line-of-road failures where the cause is identified as Train Separation.

## Closing/Reset Criteria

1. A LORF-TS data summary will reset for the following actions:
    - A predetermined period of time passes without subsequent LORF -TS events being reported on an equipment.  
Currently this time period is 36 months.
  2. LORF-TS Inspections:
    - LORF- TS Inspections reported on an equipment do not close or reset the Counts of the data summary.  
Inspections are used to indicate that an equipment has been reviewed for LORF- TS related issues.
    - When a LORF- TS inspection of types 'TI' or 'TR' is reported on the equipment, the LORF- TS data summary will remain open.  
The counts on an LORF- TS data summary will NOT be reset by a LORF- TS inspection
- A LORF- TS inspection is reported to EHMS. The inspections are listed below.
- TI - LORF TS Inspected and Released
  - TR- LORF TS Repaired and Released

## Additional Information

### Note 1:

EVENT\_TS\_n, LE\_INDICATOR\_n, EVENT\_PARTNERING\_EQUIPMENT\_n, EVENT\_A\_END\_OF\_EQUIPMENT and EVENT\_B\_END\_OF\_EQUIPMENT are cascaded (when a more recent one is found, it takes #1 position and #1 moves to #2, etc.). Once all timestamps for a group are populated, the oldest timestamp for that group rolls off. The data summary allows for the 10 most recent LORF-TS events.

### Note 2:

- LORF-TS events that are submitted with more than TWO equipment will NOT affect the Counts of the LORF-TS data summary and will only be populated in the Last 10 events section of the LORF-TS data summary
- LORF-TS events that are submitted with ONE or TWO equipment will affect the Counts of the LORF-TS data summary and will also be populated in the Last 10 events section of the LORF-TS data summary.
- LORF-TS 12 month and 36 month counts will only increment when LORF-TS events are reported with one or two equipment.

## **Appendix A – EHMS Display Information**

### **Opening Criteria Display Text**

Any LORF-TS event when train is in an emergency braking condition that was not operator induced and the cause was identified as Train Separation.

### **Closing Display Text**

A LORF-TS data summary will always remain open.