This publication contains briefs of selected railroad accidents occurring in U.S. Railroad operations during calendar 1981. The brief format presents basic facts, conditions, circumstances, and probable cause(s) in each instance. Additional statistical information is tabulated by types of accidents and casualties related to types of accidents, carriers involved, and causal factors.

Sequence Numbers:
- 83-12
- 83-20
- 83-28 through 32
- 83-37 through 43
- 83-45 through 48
- 83-50 and 51
- 83-54
- 83-56 through 60
FOREWORD

The National Transportation Safety Board is an independent Federal agency that serves as the overseer of safety in railroad, highway, pipeline, marine, and civil aviation transportation. The Safety Board was created by the Transportation Act of 1966 at which time it functioned as an autonomous agency under the Department of Transportation. In 1974, Congress enacted the Independent Safety Board Act which established the Safety Board as a totally independent agency of the Federal Government and broadened the Board's investigative role in the surface modes of transportation.

Under the Independent Safety Board Act, the Board has the authority to investigate, determine the facts, conditions, circumstances, and probable cause(s) of accidents, issue safety recommendations, conduct special studies on transportation safety, assess techniques of accident investigation, evaluate effectiveness of other government agencies with respect to transportation safety, and evaluate the adequacy of safeguards and procedures for transporting hazardous materials.

In accordance with the provisions of the Independent Safety Board Act of 1974, the NTSB has determined the probable cause of the accidents reported herein.

This publication contains the reports of 26 U.S. railroad accidents arranged in alphabetical order by railroad company name and tabulations of selected accident information including (1) types of accidents by carrier, (2) types of accidents by state, (3) casualties by types of accident and classes of persons, and (4) causal factors arranged by categories, types and numbers of accidents. These brief format reports are published quarterly on a calendar year basis and mostly include summaries of field investigations conducted by the Board’s former eight railroad field offices and the District of Columbia. (See figure 1.) As of January 8, 1982 there were seven railroad field offices; as of April 2, 1982 there were four railroad field offices. The briefs also contain data extracted from reports of investigations of major accidents which may be distinguished from the field investigations by the reference to the published National Transportation Safety Board major accident report under the probable cause section.

Care should be taken in interpreting the data contained in the five tables as they reflect only a three-month period and thus do not reflect an accurate long-term statistical distribution. At the end of each calendar year, an annual review of railroad accident data is published which contains tables and graphs compiled from that year’s accident data.

These Briefs are summaries of reports of the National Transportation Safety Board and are thereby subject to the limitation of 49 USC 1903(c):

No part of any report or reports of the Board, relating to any accident or the investigation thereof, shall be admitted as evidence or used in any suit or action for damages growing out of any matter mentioned in such report or reports.

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For those readers who wish more detailed information, the original factual reports for both field and major accidents are on file in the Washington, D.C., office of the National Transportation Safety Board and may be examined. These reports will be reproduced for a fee covering reproduction cost and postage. Orders for material also are subject to a user charge by the Board for special services, and such charge will be included in the bill.

Requests for reproduction should be forwarded to:

National Transportation Safety Board
Public Inquiries Section
Washington, D.C. 20594
National Transportation Safety Board

Railroad Field Offices

Effective June 1, 1984
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EXPLANATORY NOTES

Scope

The accidents included herein are those occurrences incidental to railroad operations which fall within the scope of Section 304 of the Independent Safety Board Act of 1974. As provided in that Section, the Board investigates and determines facts, conditions, circumstances, and probable cause of any railroad accident in which there is a fatality or substantial property damage, or which involves a passenger train. The following definitions, as set forth in Part 840 of the National Transportation Safety Board's regulations (49 CFR 840), effective April 1, 1976, and as amended August 14, 1980, are applicable.

Railroad - 840.2(a)

"Railroad" means any system of surface transportation of persons or property over rails. It includes, but is not limited to, line-haul freight and passenger-carrying railroads, and rapid transit, commuter, scenic, subway and elevated railways.

Accident - 840.2(b)

"Accident" means any collision, derailment, or explosion involving railroad trains, locomotives, and cars; or any other loss-causing event involving the operation of such railroad equipment that results in a fatality or the emergency evacuation of persons.

Joint Operations - 840.2(c)

"Joint Operations" means rail operations conducted on a track used jointly or in common by two or more railroads subject to this part, or operation of a train, locomotive, or car by one railroad over the track of another railroad.

Fatality 840.2(d)

"Fatality" means the death of a person either at the time an accident occurs or within 24 hours thereafter.

Substantial Damage - 840.3

"Substantial Damage" in nonfatal railroad accidents is defined as follows:

1. Damage of $150,000 or more to railroad and nonrailroad property; or
2. All accidents involving passenger trains.
Causes and Other Factors

In determining probable cause(s) of an accident, all facts, conditions, and circumstances are considered. The object is to ascertain those cause-effect relationships in the accident sequence about which action may be taken to prevent recurrence. Accordingly, for statistical purposes, where two or more causes or contributing factors exist in an accident, each is recorded with no attempt to establish a primary cause or factor. Therefore, in the causal factor tables, the figures shown may exceed the total number of accidents.
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<th>Collision</th>
<th>Derailment</th>
<th>Employee Fatality</th>
<th>Personal Fatality</th>
<th>Grade Crossing</th>
<th>Total</th>
<th>Max. Mat. (1) Involved</th>
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(1) Not included in total railroad accidents/Incidents investigated
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Note: "General Public" consists of all persons who are neither railroad employees nor passengers, including but not limited to persons on official business on the railroad, emergency forces, and members of the public not on railroad property.
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<th>DERAILMENT</th>
<th>EMPLOYEE FATALITY</th>
<th>PERSONAL FATALITY</th>
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**Causal Factors by Accident Type**

(Figures below represent a 3 month period)

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<th>Personal Fatality</th>
<th>Grade Crossing</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Non-Railroad Activities:</strong></td>
<td></td>
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<td>Vandalism, Malicious Mischief</td>
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<td>0</td>
<td>1</td>
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<td><strong>Natural Forces:</strong></td>
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<tr>
<td>Weather</td>
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<td>Moisture-Related Earth Slide/Movement</td>
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<td>0</td>
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<td>Roadbed Settlement</td>
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<td>Ice or Snow Buildup</td>
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<td><strong>System Design Inadequacies:</strong></td>
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<tr>
<td>Failure to Provide Backup/Redundant Operating Mode</td>
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<td>Lack of Information for Performing Necessary Train Operations Procedure</td>
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<td>SYSTEM DESIGN INADEQUACIES:</td>
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<td>DERAILMENT</td>
<td>EMPLOYEE FATALITY</td>
<td>PERSONAL FATALITY</td>
<td>GRADE CROSSING</td>
<td>TOTAL</td>
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<td>INADEQUATE SUPERVISION OF TRAIN OPERATION PROCEDURE</td>
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<td>Employee Fatality</td>
<td>Personal Fatality</td>
<td>Grade Crossing</td>
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<td>Equipment Failures</td>
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<td>Operating Practices</td>
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<td>Other (2)</td>
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<td><strong>14</strong></td>
<td><strong>2</strong></td>
<td><strong>0</strong></td>
<td><strong>1</strong></td>
<td><strong>22</strong></td>
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(1) Not included in total railroad accidents/incidents investigated

(2) "Other" includes human failure, damage from natural forces, vandalism, sabotage, system design inadequacies, failure of radio and radio components, and failure of cargo and cargo tiedown and/or blocking
REPORTED BY:  
ATCHISON TOPEKA AND SANTA FE Ry CO.

--TIME--    --DATE--    WEATHER    ------VISIBILITY------

HOUSTON, TEXAS    0450 CST    02/12/83    CLOUDY    DAY/5000 FT

TRAIN               RAILROAD               ------CLASS------  DIRECTION  ------OPERATING PHASE------    ---TRACK/NO---

1  ATCHISON TOPEKA AND SANTA FE Ry CO.  FREIGHT UNIT TRAIN    WEST    EN ROUTE    MAIN    001

**************************************************************************

ACCIDENT DESCRIPTION

TRAIN 1 DERAILED, RESULTING IN DERAILED CARS.  
SPEED OF TRAIN 1 WAS 640 MPH, ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

**************************************************************************

-------------------------- PROBABLE CAUSES --------------------------

1. OVER HEATED AXLE JOURNAL
2. FAILURE OF AXLE BEARING - BREMCO BEARING FAILED CAUSING DURHAM OFF JOURNAL

-------------------------- CASUALTIES --------------------------

NONE

-------------------------- PROPERTY LOSSES --------------------------

RAILROAD    NON-RAILROAD

$ 732,000    $ 0
**NATIONAL TRANSPORTATION SAFETY BOARD**
**WASHINGTON, D.C. 20594**

**BRIEF OF RAILROAD ACCIDENT #DENB03F0016**

<table>
<thead>
<tr>
<th>REPORTED BY:</th>
<th>ATCHISON TOPEKA AND SANTA FE RY CO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION:</td>
<td>OTTAWA, KANSAS</td>
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<tr>
<td>TIME:</td>
<td>1350 CST</td>
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<td>WEATHER:</td>
<td>CLEAR</td>
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<td>VISIBILITY:</td>
<td>DAY/8000 FT</td>
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<th>TRAIN:</th>
<th>ATCHISON TOPEKA AND SANTA FE RY CO.</th>
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<td>CLASS:</td>
<td>FREIGHT</td>
</tr>
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<td>DIRECTION:</td>
<td>WEST</td>
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<tr>
<td>OPERATING PHASE:</td>
<td>EN ROUTE</td>
</tr>
<tr>
<td>TRACK/NO:</td>
<td>MAIN 001</td>
</tr>
</tbody>
</table>

**ACCIDENT DESCRIPTION**

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK. SPEED OF TRAIN 1 WAS 060 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

**PROBABLE CAUSES**

1. FAILURE OF AXLE RUB DUE TO OVERHEATED JOURNAL BEARING

**CASUALTIES**

NONE

<table>
<thead>
<tr>
<th>PROPERTY LOSSES</th>
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<tbody>
<tr>
<td>RAILROAD</td>
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<tr>
<td>$ 621,000</td>
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</table>
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

REPORTED BY:
ATCHISON TOPEKA AND SANTA FE RY CO.

-----------------LOCATION------------------
RIO VISTA, TEXAS

---TIME---  ---DATE---  ---WEATHER---  ---VISIBILITY---
1600 CST  03/19/83  CLOUDY  DAY/5000 FT

TRAIN  --------------RAILROAD---------------
1  ATCHISON TOPEKA AND SANTA FE RY CO.

-----CLASS-----  DIRECTION  ---OPERATING PHASE-----  ---TRACK/NO---
FREIGHT UNIT TRAIN  WEST  EN ROUTE  MAIN  001

**********************************************************************************
ACCIDENT DESCRIPTION
**********************************************************************************

TRAIN 1 REAIRED, RESULTING IN DERAILED CARS. RESULTING IN DERAILED LOCO. RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK. SPEED OF TRAIN 1 WAS 043 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT; BRAKES WERE APPLIED.

**********************************************************************************
PROBABLE CAUSES
**********************************************************************************

1. FAILURE OF ROLLER BEARING - BENCO BEARING FAILURE CAUSED BURN OFF JOURNAL
2. OVER HEATED AXLE JOURNAL

**********************************************************************************
CASUALTIES
**********************************************************************************

NONE

**********************************************************************************
PROPERTY LOSSES
**********************************************************************************

RAILROAD  NON-RAILROAD
$2,700,000  $0
REPORTED BY: ATCHISON TOPEKA AND SANTA FE RY CO.

-------------LOCATION-------------
CASTLE ROCK, COLORADO

---------TIME---------     ---------DATE---------     WEATHER     ---------VISIBILITY---------
2225 MST      05/29/83      CLOUDY     DARK/6000 FT

TRAIN ---------------RAILROAD------------------
1 ATCHISON TOPEKA AND SANTA FE RY CO.

--------CLASS--------     DIRECTION     ---------OPERATING PHASE--------     ---TRACK/NO---
FREIGHT     SOUTH     EN ROUTE     MAIN       001

****************************** ACCIDENT DESCRIPTION ******************************

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK.
SPEED OF TRAIN 1 WAS 026 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

****************************** PROBABLE CAUSES ******************************

1. SYSTEM DESIGN INADEQUACY - EXCESSIVE L/Y FORCES CAUSED
   WHEEL CLIMB OVER RAIL

-------------- CASUALTIES --------------
NONE

---------- PROPERTY LOSSES ----------

<table>
<thead>
<tr>
<th>RAILROAD</th>
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<tr>
<td>$ 175,000</td>
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**REPORTED BY:**
BOSTON & MAINE CORP.

<table>
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<th>DATE</th>
<th>WEATHER</th>
<th>VISIBILITY</th>
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<tbody>
<tr>
<td>CHARLESTOWN, NEW HAMPSHIRE</td>
<td>1430 EST</td>
<td>02/05/83</td>
<td>CLOUDY</td>
<td>DAY/1000 FT</td>
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<table>
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<tr>
<th>TRAIN</th>
<th>CLASS</th>
<th>DIRECTION</th>
<th>OPERATING PHASE</th>
<th>TRACK/NO</th>
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<tbody>
<tr>
<td>1 BOSTON &amp; MAINE CORP.</td>
<td>FREIGHT</td>
<td>SOUTH</td>
<td>EN ROUTE</td>
<td>MAIN 001</td>
</tr>
</tbody>
</table>

**ACCIDENT DESCRIPTION**

TRACK COMPONENT FAILED; TRAIN 1 DERAILED, RESULTING IN SUBSTANTIAL RR PROPERTY DAMAGE. SPEED OF TRAIN 1 WAS 036 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

**PROBABLE CAUSES**

1. FAILURE OF RAIL DUE TO CORROSION
2. PROCEDURAL FAILURE - SPERRY CAR INSPECTION DID NOT DETECT SPLIT WELD

**CASUALTIES**

NONE

**PROPERTY LOSSES**

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
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<tbody>
<tr>
<td>$ 365,000</td>
<td>$ 0</td>
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</table>
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYC83PR016

REPORTED BY:
MOUNT & MAINE CORP.

---------------------LOCATION---------------------
ROCHESTER, NEW HAMPSHIRE

---TIME---  ---DATE---  WEATHER  ---VISIBILITY---
1045 EST   03/16/83   CLOUDY   DAY/1000 FT

TRAIN ---------------------RAILROAD---------------------
LOCAL FREIGHT

---CLASS-----  DIRECTION  ---OPERATING PHASE----  ---TRACK/NO---
1  BOSTON & MAINE CORP.  NORTH  SETOUT/PICKUP NOT IN YARD  MAIN  001

******************************************************************************

ACCIDENT DESCRIPTION
******************************************************************************

TRACK COMPONENT FAILED; TRAIN 1 DERAILED. RESULTING IN SUBSTANTIAL RF PROPERTY DAMAGE.
SPEED OF TRAIN 1 WAS 004 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

******************************************************************************

PROBABLE CAUSES

1. FAILURE OF SWITCH TIES DUE TO NORMAL DETERIORATION/WEAR

CASUALTIES

NONE

OTHER FACTORS

1. FAILURE OF RAILROAD DRAINAGE DUE TO NORMAL DETERIORATION/WEAR

PROPERTY LOSSES

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REPORTED BY:
BURLINGTON NORTHERN INC.

--------------------- LOCATION ---------------------
SOUTH BELLINGHAM, WASHINGTON

------------ TIME ------------- DATE ------------- WEATHER ------------- VISIBILITY -------------
2310 PST 01/09/83  RAIN  DARK/0500 FT

TRAIN ------------ RAILROAD ------------ CLASS ------------- DIRECTION ------------- OPERATING PHASE ------------- TRACK/NO -------------
1  BURLINGTON NORTHERN INC.  FREIGHT  EAST  ES ROUTE  RAIN  001

*************************************************************************
ACCIDENT DESCRIPTION
*************************************************************************

TRAIN 1 STRUCK OBSTRUCTION, RESULTING IN DERAILC0EQUIPMENT OBSTRUCTING TRACK.
SPEED OF TRAIN 1 WAS 030 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT; BRAKES WERE
APPLIED. VISIBILITY WAS AFFECTED BY TRACK ALIGNMENT.

*************************************************************************
PROBABLE CAUSES
*************************************************************************

1. MOISTURE-RELATED EARTH SLIDE/MOVEMENT
2. DAMAGE BY NATURAL FORCES - TRAIN STRUCK ROCK SLIDE CAUSED BY RAIN

*************************************************************************
CASUALTIES
*************************************************************************

NONE

*************************************************************************
PROPERTY LOSSES
*************************************************************************

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<td>$375,000</td>
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REPORTED BY: BURLINGTON NORTHERN INC.

---------LOCATION---------
ATMOL, IDAHO

--------TIME---------
0030 PST

--------DATE--------
02/24/83

----------WEATHER------
CLEAN

--------VISIBILITY------
DAY/9990 FT

TRAIN ----------RAILROAD----------
1 BURLINGTON NORTHERN INC.

--------CLASS--------
FREIGHT

---------DIRECTION------
WEST

---------OPERATING PHASE-----
EN ROUTE

---------TRACK/NO------
RAIL 001

__________________________ ACCIDENT DESCRIPTION ____________________________

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK.
SPED OF TRAIN 1 WAS 044 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

__________________________ PROBABLE CAUSES ____________________________

1. OVER HEATED WHEEL
2. DAMAGE TO WHEEL FROM TRAIN OPERATIONS
3. WHEEL PLATE FAILED DUE TO OVERHEATING

__________________________ OTHER FACTORS ____________________________

1. LACK OF INFORMATION FOR PERFORMING NECESSARY TRAIN OPERATION PROCEDURE
2. LACK OF INFORMATION FOR PERFORMING NECESSARY MECHANICAL PROCEDURE
3. FAILURE OF BRAKE CONTROL VALVE DUE TO MALFUNCTION OF CONTROL DEVICES

__________________________ CASUALTIES ____________________________

NONE

__________________________ PROPERTY LOSSES ____________________________

RAILROAD NON-RAILROAD
$225,000 $0
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYC83J0812

REPORTED BY:
CHESAPEAKE AND OHIO RY CO. (TME)

--------------------------LOCATION--------------------------
PITTSBURGH, PENNSYLVANIA

--------TIME--------DATE--------WEATHER--------VISIBILITY--------
10:55 EST 02/27/83 CLEAR DAY/UNKNOWN

TRAIN --------------RAILROAD-----------------------------
1 CHESAPEAKE AND OHIO RY CO. (TME)

--------CLASS--------DIRECTION--------OPERATING PHASE--------
YARD/SWITCHING WESY MOVER IN YARD

--------TRACK/NO--------
YARD 028

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

ACCIDENT DESCRIPTION * * * * * * * * * * * * * * * * * * * * * * * * *

TRAIN 1 STRUCK EMPLOYEE, RESULTING IN CASUALTY.
SPEED OF TRAIN 1 WAS 605 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

PROBABLE CAUSES * * * * * * * * * * * * * * * * * * * * * * * * *

1. FAILURE OF PERSONNEL TO RECOGNIZE IMPROPER OPERATING PROCEDURE AS HAZARDOUS
2. HUMAN FAILURE - CONDUCTOR STEPPED IN FRONT OF MOVING CUT OF CARS

--------CASUALTIES--------
FATALITIES 1
INJURIES 0

--------PROPERTY LOSSES--------
NONE

--------EMPLOYEES ON DUTY--------
1

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

PROBABLE CAUSES OF CASUALTIES * * * * * * * * * * * * * * * * * * * *

1. STRUCK BY TRAIN
REPORTED BY: COLUMBUS AND GREENVILLE RT. CO.

LOCATION: INDIANOLA, MISSISSIPPI

TIME: 0930 CST

DATE: 01/17/83

WEATHER: CLEAR

VISIBILITY: DAY/9990 FT

TRAIN: 1 COLUMBUS AND GREENVILLE RT. CO.

CLASS: LOCO

DIRECTION: WEST

OPERATING PHASE: RE-RAILING CAR

TRACK/NO: SIDING 001

ACCIDENT DESCRIPTION:

TRAIN 1 STRUCK SIDE OF TRACK VEHICLE, RESULTING IN CASUALTY.
SPEED OF TRAIN 1 WAS 010 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT.

PROBABLE CAUSES:

1. PROCEDURAL FAILURE - LOCOMOTIVE MOVED WITH BRAKES CUT OUT AND HIT CAR
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY FEDERAL REGULATIONS FOR RR POWER BRAKES AND DRAWMANS 232.20

CASUALTIES:

FATALITIES: 1
INJURIES: 0

PROPERTY LOSSES:

RAILROAD: $17,000
NON-RAILROAD: $0

PROBABLE CAUSES OF CASUALTIES:

1. STRUCK BY TRAIN
REPORTED BY:
CONSOLIDATED RAIL CORP.

LOCATION:
BOVIE, MARYLAND

TIME:
0415 EST
DATE:
11/19/82
WEATHER:
CLOUDY
VISIBILITY:
DARK/2900 FT

TRAIN

RAILROAD:

CLASS:
LOCAL FREIGHT
DIRECTION:
SOUTH
OPERATING PHASE:
EN ROUTE

TRACK/NO:
BRANCH 001

*************** ACCIDENT DESCRIPTION **********************

TRAIN 1 STRUCK TRAIN 2, RESULTING IN DERAILMENT.
SPEED OF TRAIN 1 WAS 005 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT. SPEED OF TRAIN 2 WAS 012 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT; BRAKES WERE APPLIED. VISIBILITY WAS AFFECTED BY TRACK ALIGNMENT.

*************** PROBABLE CAUSES **********************

1. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #277
2. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #937
3. INADEQUATE SUPERVISION OF TRAIN OPERATION PROCEDURE
4. FAILURE OF PERSONNEL TO DETECT OTHER TRAIN DUE TO INATTENTIVENESS TO DUTIES
5. HUMAN FAILURE - ENGINEER OF TRAIN 1 FELL ASLEEP

*************** CASUALTIES **********************

FATALITIES INJURIES
EMPLOYEES ON DUTY 0 1

*************** PROPERTY LOSSES **********************

RAILROAD NON-RAILROAD
1 384,000 0

*************** PROBABLE CAUSES OF CASUALTIES **********************

1. JUMPED FROM TRAIN
### National Transportation Safety Board
WASHINGTON, D.C. 20594

**Brief of Railroad Accident #NYC8311P13**

<table>
<thead>
<tr>
<th>Reported NCI:</th>
<th>CONSOLIDATED RAIL CORP.</th>
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<tbody>
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<tr>
<td>Time:</td>
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<td>Visibility:</td>
<td>DAY/0250 FT</td>
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<td>Train:</td>
<td>CONSOLIDATED RAIL CORP.</td>
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<tr>
<td>Class:</td>
<td>EAST</td>
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<td>Direction:</td>
<td>EN ROUTE</td>
</tr>
<tr>
<td>Operating Phase:</td>
<td>MAIN 001</td>
</tr>
</tbody>
</table>

**Accident Description**

SHIFTED LOAD STRUCK BRIDGE; SHIFTED LOAD STRUCK EMPLOYEES, RESULTING IN EMPLOYEE CASUALTY.
SPEED OF TRAIN WAS 020 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT; BRAKES WERE APPLIED.

**Probable Causes**

1. Failure of person to recognize unauthorized position on car as hazardous

**Casualties**

<table>
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<tr>
<th>Fatalities</th>
<th>Injuries</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
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</table>

**Property Losses**

NONE

**Probable Causes of Casualties**

1. Thrown from train
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT NYCR83FR017

REPORTED BY:
CONSOLIDATED RAIL CORP.

---------------LOCATION---------------
PHILADELPHIA, PENNSYLVANIA

----------TIME-- DATE-- WEATHER VISIBILITY------
1957 EST 03/24/83 CLEAR DARK/OOD0 FT

TRAIN

---------------CLASS--------- DIRECTION OPERATING PHASE------ TRACK/NO-----
CONSOLIDATED RAIL CORP.

1 FREIGHT EAST EN ROUTE MAIN

**************************************** ACCIDENT DESCRIPTION ****************************************

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK.
SPEED OF TRAIN 1 WAS 032 MPH, ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

**************************************** PROBABLE CAUSES ****************************************

1. FAILURE OF BRAKE RIGGING - BROKEN RING LET OPERATING ROD FALL UNDER WHEELS

**************************************** CASUALTIES ****************************************

NONE

**************************************** PROPERTY LOSSES ****************************************

<table>
<thead>
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<th>RAILROAD</th>
<th>NON-RAILROAD</th>
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REPORTED BY:
DENVER AND RIO GRANDE WESTERN RR CO.

------------------- LOCATION -------------------
TEXAS CREEK, COLORADO

----------------- TIME ------- DATE ------- WEATHER ------- VISIBILITY -------
2300 MST       03/29/03       CLOUDY       DARK/1000 FT

TRAIN ----------------- RAILROAD -----------------
1 DENVER AND RIO GRANDE WESTERN RR CO.

----------------- CLASS -----------------
FREIGHT

----------------- DIRECTION -----------------
EAST

----------------- OPERATING PHASE -----------------
EN ROUTE

----------------- TRACK/NO -----------------
MAIN 001

************************************************ ACCIDENT DESCRIPTION *************************************************

TRAIN 1 DERAILED, RESULTING IN DERAILED CARS
SPEED OF TRAIN 1 WAS 020 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

************************************************ PROBABLE CAUSES *************************************************

1. FAILURE OF TRACK CROSS ELEVATION DUE TO PREVIOUS REPAIR
2. FAILURE OF CROSS ELEVATION - EXCESSIVE RAIL JOINT HEIGHT CAUSED HARMONIC ROCK

************************************************ OTHER FACTORS *************************************************

1. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR MAINTENANCE OF WAY INSTRUCTIONS

************************************************ CASUALTIES *************************************************

NONE

************************************************ PROPERTY LOSSES *************************************************

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$243,000</td>
<td>$0</td>
</tr>
</tbody>
</table>
REPORTED BY:
ILLINOIS CENTRAL GULF RR

LOCATION:ゼー, LOUISIANA

--TIME-- 1205 CST --DATE-- 12/11/82 --WEATHER-- CLOUDY --VISIBILITY-- DAY 9000 FT

TRAIN ILLINOIS CENTRAL GULF RR

--CLASS-- LOCAL FREIGHT --DIRECTION-- NORTH --OPERATING PHASE-- INDUSTRY SWITCHING

--TRACK/NO-- INDUSTRIAL 055

-------------------------------------------------------------------------------- ACCIDENT DESCRIPTION --------------------------------------------------------------------------------

EMPLOYEE FELL FROM TRAIN 1, RESULTING IN FATALITY.
SPEED OF TRAIN 1 WAS 005 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT. VISIBILITY WAS AFFECTED BY TRACK ALIGNMENT.

-------------------------------------------------------------------------------- PROBABLE CAUSES --------------------------------------------------------------------------------

1. FAILURE IN COMPLYING WITH THE PROCEDURE FOR RAILROAD OPERATING RULE 226
2. FAILURE OF PERSONNEL TO RECOGNIZE IMPROPER OPERATING PROCEDURE AS HAZARDOUS
3. HUMAN FAILURE - FELL FROM TRAIN WHILE RIDING BETWEEN CARS

-------------------------------------------------------------------------------- CASUALTIES  --------------------------------------------------------------------------------

FATALITIES INJURIES

EMPLOYEES ON DUTY

1 0

-------------------------------------------------------------------------------- PROBABLE CAUSES OF CASUALTIES  --------------------------------------------------------------------------------

1. STRUCK BY TRAIN
REPORTED AT:
ILLINOIS CENTRAL GULF RR
--------------LOCATION--------------
VINE GROVE, KENTUCKY
--- TIME --- DATE --- WEATHER --- VISIBILITY ---
0220 CST 02/06/83 SHOW DARK/0500 FT

TRAIN -------------- RAILROAD -------------- CLASS -------------- DIRECTION -------------- OPERATING PHASE -------------- TRACK/NO --------------
1 ILLINOIS CENTRAL; GULF RR FREIGHT NORTH EN ROUTE MAIN 001

****************************************************************************** ACCIDENT DESCRIPTION ******************************************************************************
TRAIN 1 DROVE INSIDE OF TRACK RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK. SPEED OF TRAIN 1 WAS 028 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENTS BRAKES WERE APPLIED. VISIBILITY WAS AFFECTED BY TRACK ALIGNMENT.

****************************************************************************** PROBABLE CAUSES ******************************************************************************
1. PROCEDURAL FAILURE - AUTHORIZED SPEED TOO HIGH FOR CURVE ELEVATION
2. FAILURE OF TRACK ALIGNMENT DUE TO FORCES OVER DESIGN LIMITS

****************************************************************************** CASUALTIES ******************************************************************************
NONE

****************************************************************************** PROPERTY LOSSES ******************************************************************************
RAILROAD NON-RAILROAD
$ 300,000 $ 0
REPORTED BY:
METRO NORTH COMMUTER RR

LOCATION:
CROTON-ON-HUDSON, NEW YORK

TIME:
0724 EST

DATE:
02/12/03

WEATHER:
SNOW

VISIBILITY:
DAY/2500 FT

TRAIN

--CLASS--

--DIRECTION--

--OPERATING PHASE--

--TRACK/NO--

1
METRO NORTH COMMUTER RR
PASSENGER COMMUTER
SOUTH
EN ROUTE
MAIN 002

2
METRO NORTH COMMUTER RR
PASSENGER COMMUTER
SOUTH
LOADING/UNLOADING
MAIN 002

*************** ACCIDENT DESCRIPTION ***************

TRAIN 1 STRUCK TRAIN 2, RESULTING IN SUBSTANTIAL RR PROPERTY DAMAGE.
SPEED OF TRAIN 1 WAS 605 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENTS BRAKES WERE
APPLIED. TRAIN 2 WAS STOPPED; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

*************** PROBABLE CAUSES ***************

1. FAILURE OF PERSONNEL TO RECOGNIZE IMPROPER OPERATING PROCEDURE
   AS HAZARDOUS
2. FAILURE TO PROVIDE BACKUP/REDUNDANT OPERATING MODE
3. SYSTEM DESIGN INADEQUACY - COMMUTER TRAIN NOT
   EQUIPPED WITH SNOW BRAKES

*************** OTHER FACTORS ***************

1. WEATHER
2. ICE OR SNOW BUILDUP
3. FAILURE TO PROVIDE "FAIL SAFE" MODE IN KNOWN FAILURE MODE

*************** CASUALTIES ***************

NONE

*************** PROPERTY LOSSES ***************

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,000</td>
<td>$0</td>
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</table>
NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #FTWESPRE08

REPORTED BY:  
MISSOURI PACIFIC RR CO.

-----------------------LOCATION-----------------------  
ST. LOUIS, MISSOURI

----------TIME----------  ----------DATE----------  WEATHER  --------VISIBILITY--------
2330 CST  01/14/93  CLOUDY  DARK/0450 FT

TRAIN -----------RAILROAD-------------  ----------CLASS-------  DIRECTION  ------OPERATING PHASE------  ----------TRACK/NO------
1 ANTRAK  PASSENGER  SOUTH  EN ROUTE  MAIN  002

*****************************************************************************

ACCIDENT DESCRIPTION:  
TRAIN 1 DERAILED, RESULTING IN DERAILED CARS.  
SPEED OF TRAIN 1 WAS 024 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT; BRAKES WERE APPLIED. VISIBILITY WAS AFFECTED BY TRACK ALIGNMENT.

*****************************************************************************

-------------------------------PROBABLE CAUSES-------------------------------

1. FAILURE OF CAR/LOC0 UNDERFRAME DUE TO NORMAL  
   DETERIORATION/WEAR  
2. WHEEL CLINCH DUE TO AIR CUSHION DEVICE FAILURE

-------------------------------CASUALTIES-------------------------------

NONE

-------------------------------PROPERTY LOSSES-------------------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 32,000</td>
<td>$ 0</td>
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</tbody>
</table>
REPORTED BY: MISSOURI PACIFIC RR CO.

-----------------LOCATION-----------------  --TIME--  --DATE--  WEATHER  ------VISIBILITY------

WILLSBERG, TEXAS  0220 CST  03/14/63  CLOUDY  DARK/500 FT

TRAIN . --------------RAILROAD-------------  ------CLASS--------  DIRECTION  ------OPERATING PHASE-----  --TRACK/NO---

1 MISSOURI PACIFIC RR CO.  FREIGHT  NORTH  EN ROUTE  MAIN  001

**************************** ACCIDENT DESCRIPTION ******************************

TRAIN 1 DERAILED, RESULTING IN DERAILED CARS - RESULTING IN RELEASE OF TOXIC AGENTS.
SPEED OF TRAIN 1 WAS 617 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

************************ PROBABLE CAUSES ******************************

1. FAILURE OF WHEEL FLANGE - THIN FLANGE CAUSED WHEEL CLIMB OVER SWITCH POINT

************************ OTHER FACTORS ******************************

1. FAILURE TO PROPERLY COMPLY WITH PROCEDURE OF AAR INTERCHANGE RULE #41

************************ CASUALTIES ******************************

NONE

************************ PROPERTY LOSSES ******************************

RAILROAD  NON-RAILROAD

$ 56,000    $ 0
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594

BRIEF OF RAILROAD ACCIDENT #NYCSIB007

REPORTED BY:
SE PENNSYLVANIA TRANSPORTATION AUTHORITY

-------------------LOCATION------------------
PRIMO, PENNSYLVANIA

--TIME-- --DATE-- WEATHER ------VISIBILITY------
1045 EST 01/12/03 CLEAR DAY/1000 FT

TRAIN ------------------RAILROAD-----------------
1 SE PENNSYLVANIA TRANSPORTATION AUTHORITY

--------CLASS-------- DIRECTION --------OPERATING PHASE-------- ----TRACK/NO----
PASSENGER COMMUTER SOUTH EN ROUTE MAIN 002

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++ ACCIDENT DESCRIPTION +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

TRAIN 1 STRUCK EMPLOYEE, RESULTING IN CASUALTY.
SPEED OF TRAIN 1 WAS 315 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT; BRAKES WERE NOT APPLIED.

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

------------------------------- PROBABLE CAUSES -------------------------------
1. LACK OF SKILL/TRAINING
2. LACK OF EXPERIENCE
3. HUMAN FAILURE - CONTRACTOR EMPLOYEE HAD ONE WEEK ON JOB

--------------------------------- CASUALTIES ---------------------------------

FATALITIES INJURIES

PERSONS ON OFFICIAL BUSINESS 1 0

------------------------------- PROBABLE CAUSES OF CASUALTIES -------------------------------

STRAIGHT BY TRAIN
**NATIONAL TRANSPORTATION SAFETY BOARD**  
Washington, D.C. 20594

Reported by: Seaboard System Railroad  
Brief of Railroad No.: ATL-83-FR005

**Location:** Jacksonville (Belgrade), North Carolina  
**Time:** 1520 EST  
**Date:** 01-14-83  
**Weather:** Clear  
**Visibility:** Day/200 ft.

<table>
<thead>
<tr>
<th>Train:</th>
<th>Railroad:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Seaboard System Railroad</td>
</tr>
<tr>
<td>2</td>
<td>Local freight</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Direction:** North  
**Operating Phase:** En Route  
**Track No.:** 1

**Accident Description:** Train 1 struck side of schoolbus on grade crossing with railroad signs. Schoolbus had stopped, then lurched onto crossing in front of train. Speed of train was 20 mph. Bus driver was 17-year-old with 1 month part-time bus driving experience.

**Probable Cause:** 1. Bus driver failed to stop at grade crossing due to lack of bus driving experience.  
2.  
3.  

**Other Factors:** 1.  
2.  
3.  

**Fatalities:**  
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Injuries</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>32</td>
<td>Public on RR property</td>
</tr>
</tbody>
</table>

**Probable Cause of Casualty:**  
1. Schoolbus struck by train  
2.  
3.  

**Property Losses:**  
**Railroad:** $25  
**Non-Railroad:** $6,000
**REPORTED BY:**
SOUTHERN PACIFIC TRANSP. CO.

**LOCATION:**
HOUSTON, TEXAS

**TIME:**
1310 CST

**DATE:**
11/21/82

**WEATHER:**
CLEAR

**VISIBILITY:**
DAY/7000 FT

**TRAIN:**
1 AMTRAK

**RAILROAD:**

**CLASS:**
Passenger

**DIRECTION:**
EAST

**OPERATING PHASE:**
EN ROUTE

**TRACK/NO:**
YARD

**ACCIDENT DESCRIPTION:**
TRAIN 1 DERAILED.
SPEED OF TRAIN 1 WAS 0 TO 5 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

**PROBAE CAUSES:**
1. FAILURE OF STOCK RAIL DUE TO NORMAL DETERIORATION/WEAR
2. FAILURE OF CROSS TIES DUE TO NORMAL DETERIORATION/WEAR
3. FAILURE OF BALLAST DUE TO NORMAL DETERIORATION/WEAR

**CASUALTIES:**
None

**PROPERTY LOSSES:**

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 5,000</td>
<td>$ 0</td>
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</tbody>
</table>
REPORTED BY:
SOUTHERN PACIFIC TRANSP. CO.

------------------- LOCATION -------------------
FRESNO, CALIFORNIA

-- TIME -- 0915 PST
-- DATE -- 01/29/83
-- WEATHER -- RAIN
-- VISIBILITY -- DAY/1000 FT

TRAIN --------------------- RAILROAD ---------------------
01 SOUTHERN PACIFIC TRANSP. CO.

------------------- CLASS -----------------------
FREIGHT

------------------- DIRECTION ----------------------
WEST

------------------- OPERATING PHASE -----------------
EN ROUTE

------------------- TRACK/NO ---------------------
MAIN 001


---------------------------- ACCIDENT DESCRIPTION ---------------------------

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK.
SPEED OF TRAIN 1 WAS 044 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENT; BRAKES WERE
APPLIED.


---------------------------- PROBABLE CAUSES ----------------------------

1. POAIDED SETTLEMENT
2. PROCEDURAL FAILURE - SOIL SURVEY WARNINGS WERE IGNORED BY
   RAILROAD


---------------------------- CASUALTIES -----------------------------

NONE


--------------------- PROPERTY LOSSES ---------------------

RAILROAD $1,137,000
NON-RAILROAD $35,000
REPORTED BY:
SOUTHERN PACIFIC TRANSP. CO.

LOCATION

LOS ANGELES, CALIFORNIA

TIME
1715 PST

DATE
03/21/83

WEATHER
CLOUDY

VISIBILITY
DAY/2500 FT

TRAIN

SOUTHERN PACIFIC TRANSP. CO.

RAILROAD

FREIGHT

CLASS

DIRECTION
EAST

OPERATING PHASE
EN ROUTE

TRACK/NO
MAIN 001

ACCIDENT DESCRIPTION

TRAIN 1 DERAILED, RESULTING IN DERAILED EQUIPMENT OBSTRUCTING TRACK.
SPEED OF TRAIN 1 WAS 018 MPH; ENGINEER WAS NOT AWARE OF IMPENDING ACCIDENT.

PROBABLE CAUSES

1. VANDALISM, MALICIOUS MISCHIEF DUE TO A WILLFUL ACT OF THE INDIVIDUAL
2. SWITCH ON MAIN TRACK WAS VANDALIZED

CASUALTIES
NONE

PROPERTY LOSSES

Railroad: $77,000
Non-Railroad: $0
REPORTED BY:
SOUTHERN Ry CO.

---------------------LOCATION---------------------  ---TIME---  ---DATE---  WEATHER  ---VISIBILITY---
WILLIAMSBURG, GEORGIA  1205 EST  02/01/83  CLOUDY  DAY/990 FT

TRAIN ---------------RAILROAD-------------------  -------CLASS------  DIRECTION  ---OPERATING PHASE----  ---TRACK/NO---
1  SOUTHERN Ry CO.  FREIGHT  EAST  EN ROUTE  RAIN  001

*****************************************************************************

*************** ACCIDENT DESCRIPTION ***************************************

EQUIPMENT COMPONENT FELL FROM TRAIN 1; EQUIPMENT COMPONENT DRAGGED; TRAIN 1 DERAILED.
SPEED OF TRAIN 1 WAS 038 MPH. ENGINEER WAS AWARE OF IMPENDING ACCIDENT.

*****************************************************************************

-------------------- PROBABLE CAUSES -------------------------------

1. FAILURE OF AIR BRAKE RESERVOIRS DUE TO PREVIOUS DAMAGE
2. LOOSELY SECURED AIR BRAKE RESERVOIRS
3. FAILURE OF AIR BRAKE RESERVOIR - RESERVOIR DRAGGED UNDER CAR
   AND CAUGHT ON SWITCH

-------------------- CASUALTIES -------------------------------

NONE

--------------------- PROPERTY LOSSES ---------------------

<table>
<thead>
<tr>
<th>RAILROAD</th>
<th>NON-RAILROAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>$215,000</td>
<td>$0</td>
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</tbody>
</table>
REPORTED BY:
WESTERN PACIFIC RAILROAD COMPANY

---------- LOCATION ----------
WINNEMUCCA, NEVADA

-- TIME -- -- DATE -- WEATHER -- VISIBILITY ----
0453 PST 09/30/83 CLEAR DARK/5000 FT

TRAIN ------------ RAILROAD ------------ CLASS ------------ DIRECTION ------------ OPERATING PHASE ------------ TRACK/NO ______
1 WESTERN PACIFIC RAILROAD COMPANY FREIGHT EAST SETOUT NOT IN YARD SIDING 0B3
2 AMTRAK PASSENGER EAST EN ROUTE MAIN 0D1

事故详情

TRAIN 1 STRUCK STANDING CUT OF CARS, RESULTING IN DERAILED EQUIPMENT OBLITERATING ADJACENT TRACKS; DERAILED EQUIPMENT IMPINGED ON LOCOMOTIVE; TRAIN 2 STRUCK DERAILED EQUIPMENT; RESULTING IN DERAILMENT.
SPEED OF TRAIN 2 WAS 070 MPH; ENGINEER WAS AWARE OF IMPENDING ACCIDENTS; BRAKES WERE APPLIED.

--------------------- PROBABLE CAUSES ---------------------
1. FAILURE TO PROPERLY PERFORM PROCEDURE PRESCRIBED BY RR OPERATING RULE #1017
2. FAILURE TO PROPERLY SUPERVISE PERFORMANCE OF PROCEDURE PRESCRIBED BY RR OPERATING RULE #907
3. INADEQUATE SUPERVISION OF TRAIN OPERATION PROCEDURE
4. INATTENTIVENESS TO DUTIES
5. PROCEDURAL FAILURE - CREW BACKING TRAIN IN SPUR IGNORED REAR OF TRAIN

------------------- CASUALTIES -------------------

FATALITIES INJURIES
EMPLOYEES ON DUTY: 0 2

------------------- PROPERTY LOSSES -------------------

R/RR RR
$ 800,000 $

------------------- PROBABLE CAUSES OF CASUALTIES -------------------
1. THROWN FROM SEAT/POSITION IN COLLISION/DERAILMENT