

Northern Plains Rail Companies

Rail Safety Training





Job Briefing

Is there a sign in sheet?

- Fire Exits, Fire Extinguisher Locations, Meeting Place
- Whose calling 911?
- Someone going to meet the ambulance or fire truck?
- AED location?
- First Aid/CPR Qualified?
- Walkways clear of tripping hazards?
- Please **SHUT OFF YOUR PHONE** unless emergency or on break!!

Why I'm Here

RAILROADING IS **UNFORGIVING**.

YOU'RE SURROUNDED BY **STEEL**...
IN CAR BODIES, RAILINGS, WHEELS,
AND COUPLERS...

THIS ISN'T THAT SOFT **TRACK** YOU RAN
HURDLES ON IN HIGH SCHOOL, BUT
THE HARD **TRACK** OF STONE AND
TIMBERS THAT IS NO GOOD FOR YOUR
FEET AND KNEES...

THAT **LOAD** CAN SHIFT...THE **RADIO**
CAN FAIL...THAT **KNUCKLE** MIGHT
BYPASS.

THERE'S A **HAZARD** FROM EVERY
DIRECTION, SO YOU KEEP YOUR HEAD
ON A SWIVEL...

THE **WEATHER** ISN'T YOUR BUDDY
EITHER, AND THEN...

...THERE'S THE **BOSS**.

ONLY YOU CAN DECIDE TO BREAK THE RULES. CHANGE YOUR
CULTURE, AND GET...

Artwork compliments of John D. Brahaney
FRA

BACK 2 BASICS





Can't work on Railroad equipment and
not talk SOFA...

***SWITCHING
OPERATIONS
FATALITIES
ANALYSIS***



PROBLEM.....

Nationally there have been 245 fatalities in railroad operations since inception of recording statistics in 1992.

Average about 12 fatalities per year.

This figure based on records thru May 2023.

8 switching fatalities RECORDED IN 2022!!!

What about your industry?

SOFA vs. OSHA? How many fatalities per month?



SOFA - VS - OSHA

- *19 Total RR WORKERS KILLED IN THE USA IN 2022*
 - *Operations*
 - *Mechanical*
 - *Track*
- *According to OSHA statistics, there are an average of 13 on-the-job fatalities in the U.S. workforce each day.*
 - *All types of industry*



Industrial Rail Movements Include Employees On Top and Bottom of Equipment.





FACT...

- 18** deaths because of lack of communication.
- 26** deaths because of inadequate job briefings.
- 31** deaths because of Close Clearances.
- 19** deaths because of exposure to Main Line trains.
- 92** deaths because of shove movements
- 23** deaths because of slip, trip, or falls.
- 17** deaths because of unsecured cars moving
- 19** deaths because of being struck by free rolling cars

***37% of fatalities occurred during summer months
Let's start with communication first.....***



Communication

One -way communication

Sender



Receiver



FACT. 18 died because of lack of communication.

Sender  Receiver

Two way communication

Sender  Receiver



When communicating

1. Use the engine number or Track Mobile name
2. Provide compass direction if possible, East, West, North or South.
3. When communicating by radio instructions are to be repeated
4. Ensure no one is speaking and radio is clear before transmitting
5. Use "OVER" when a response is expected and "OUT" when you are done

Example: Switchman contacting the engine operator to initiate a move. "Engine 1234, Move forward or East 5 cars to a coupling OVER. **Operator** repeats "Engine 1234 Moving Forward or East 5 cars to a coupling. **Switchman** repeats "That is correct OUT" **(2-Way Comm)**



No movement is to take place until the instruction is clearly communicated and confirmed

Movement must stop in half the specified distance, if no further communication is received.



FACT- 26 deaths can be attributed to inadequate job briefings.

Conduct a Job Briefing/Tool Box Meeting

1. What is to be done
2. When is it to be done
3. Where is it to be done
4. How is it to be done
5. Who does what
6. Identify potential hazards that are present and need to be considered
7. Identify the safety precautions to be taken



Complacency is a huge safety concern – use job briefings/tool box meetings and the buddy system to combat complacency, maintain situational awareness (SA), and vigilance



FACT- 31 died from Close Clearances.

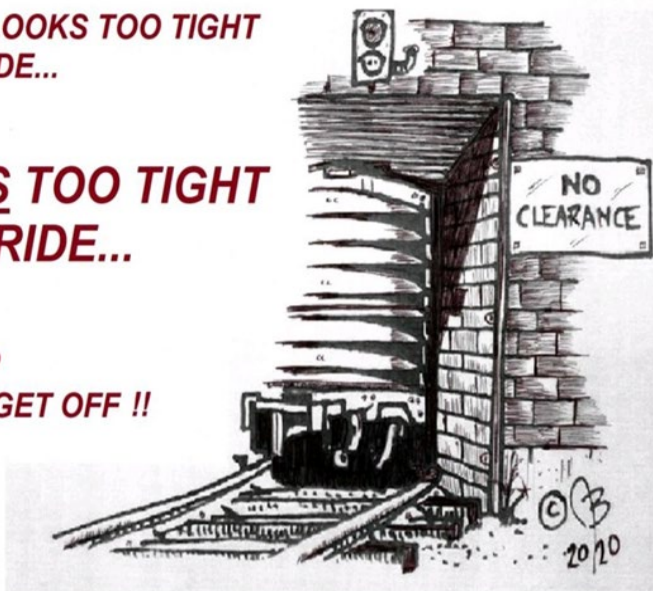
**T
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BACK 2 BASICS

**IF IT LOOKS TOO TIGHT
TO RIDE...**

**IT IS TOO TIGHT
TO RIDE...**

**STOP
AND GET OFF !!**



THE LIFE YOU SAVE MAY BE YOUR OWN.



Artwork compliments of John D. Brahaney FRA



DON'T FOUL THE SWITCH





FACT-19 died from exposure to ML trains.





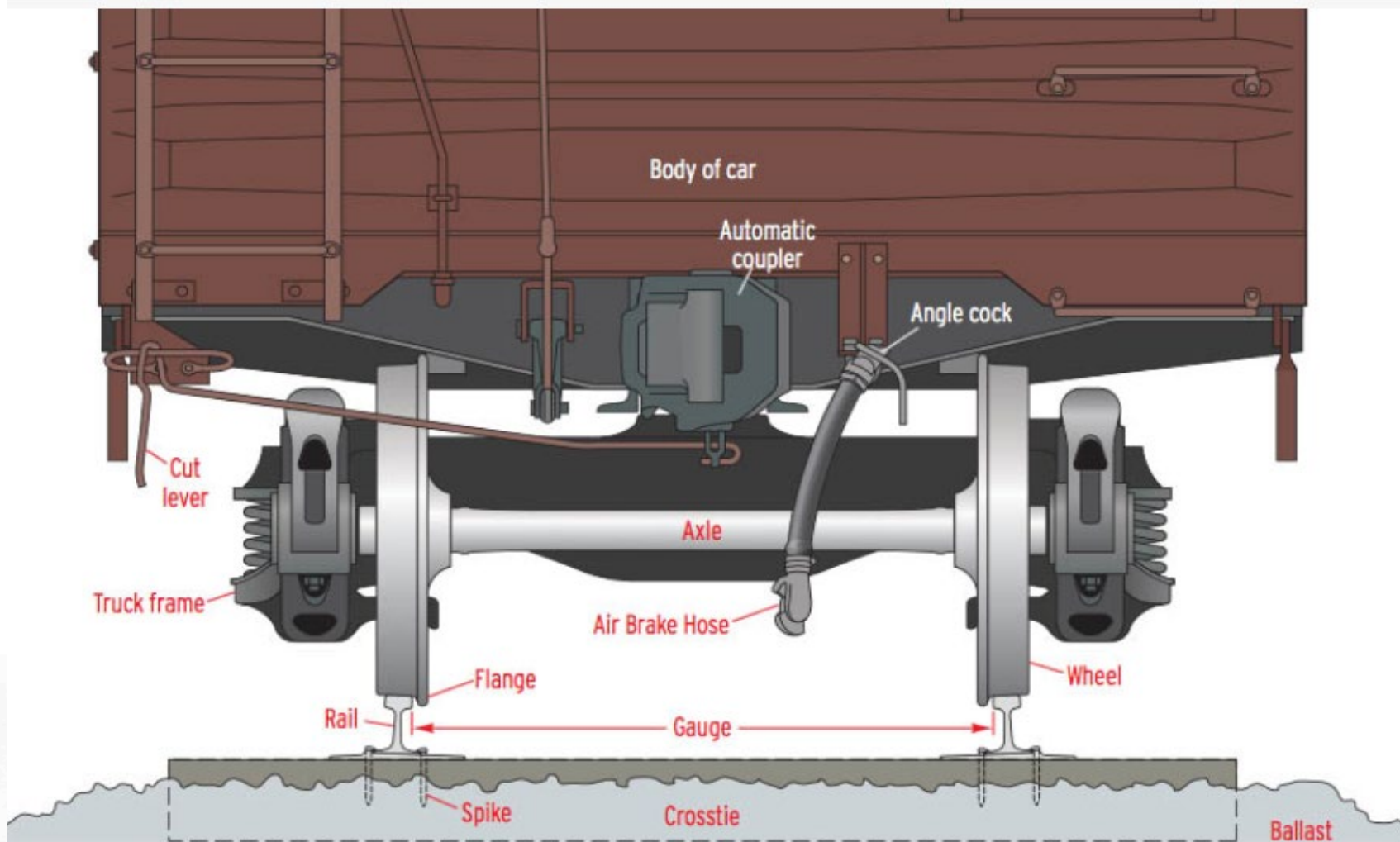
**Riding The Point? Be on the lookout !!!
...And Never Ride Into a Coupling!**





FACT- 92 died during shove movements.







Ensure Flangeways Are Clear





- ***What Do You Think Is The Most Dangerous Month For Fatalities Around Railroad Equipment?***



37% of fatalities occurred during summer months.

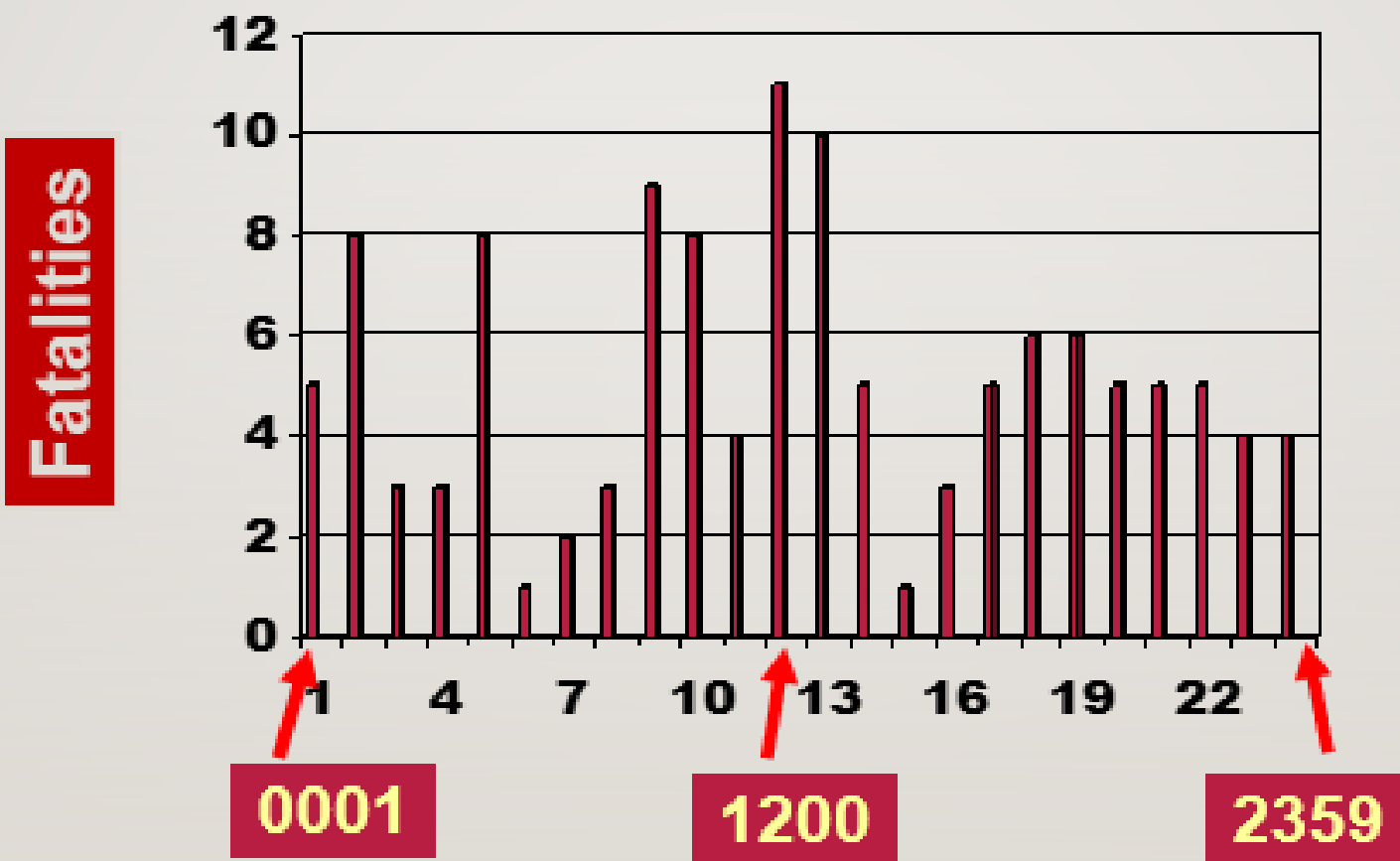
July is historically worst of summer months for fatalities

August is historically worst for severe injuries

What time of day ?

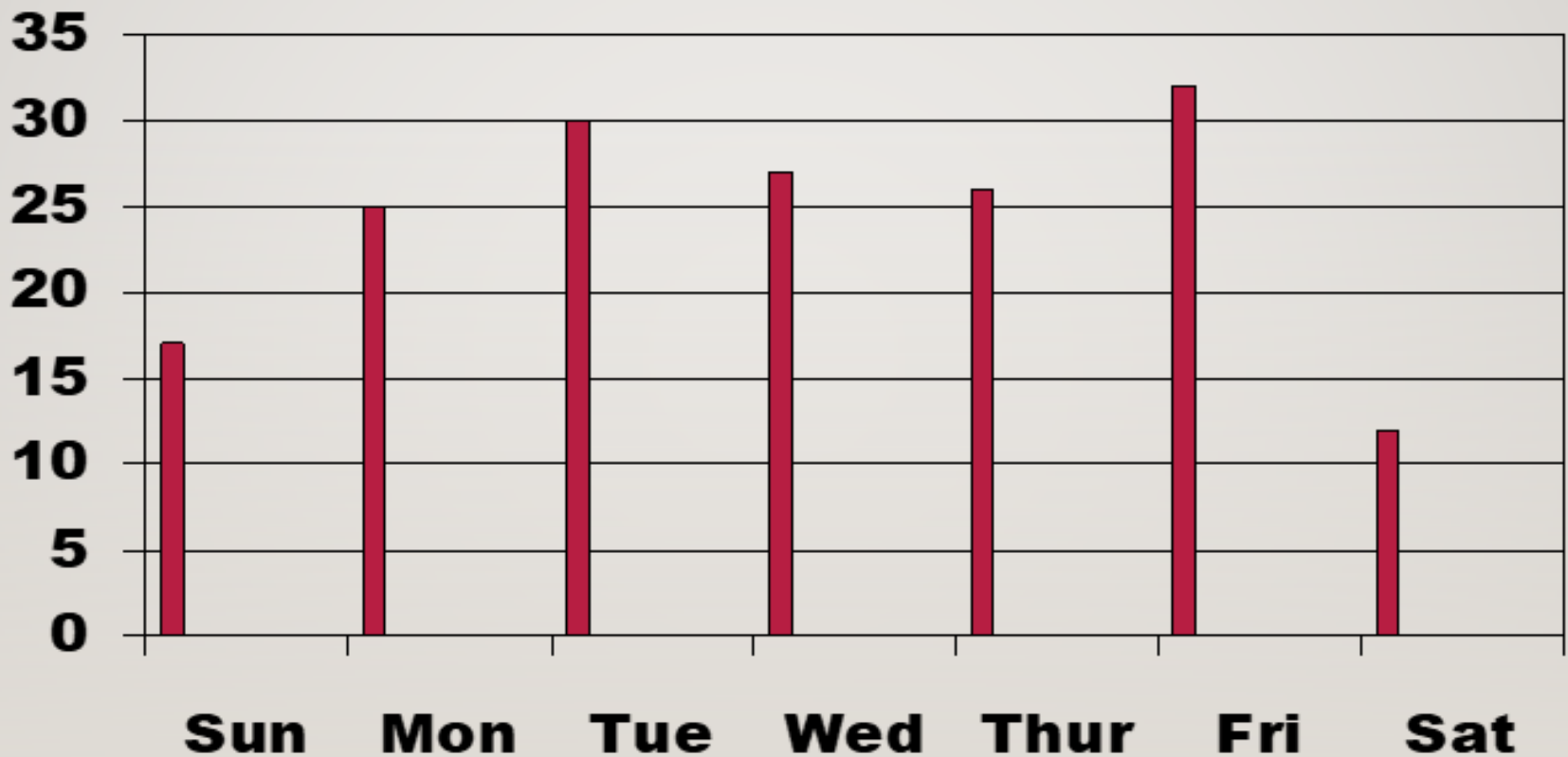


Fatalities by Time of Day





DAY OF THE WEEK





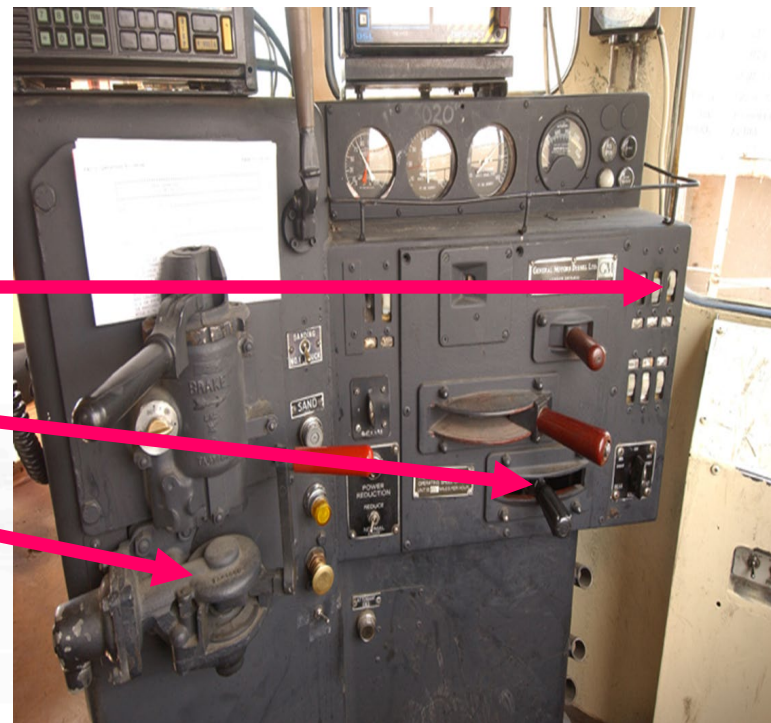
Types of protection- RED Zone



- The engine / RCM operator provides **3 Point Protection/Red Zone Set and Center** to prevent the unintentional movement of equipment by:

-

1. Opening the generator field switch
2. Placing the reverser in neutral
3. Fully applying the Independent Brake





* If required to go between equipment, the minimum safe distance required is one car length or 50 feet.



Do not enter the Red Zone without first requesting 3 Point Protection and confirming that it is in effect!

Enter the **Red Zone** to perform the required task. If possible have one foot inside the rail and one foot outside the rail



Step clear of the **Red Zone** before cancelling **3 point Protection**

Cancel the **3 Point Protection** and confirm cancelled



Hasp, Lock, or Keeper Equipped Switch





Track Gauge 56 ½ is Standard...58 is OOS





Derailment prevention



The Cold effects the Rail

**10 Degrees Fahrenheit or below
requires an inspection.**

**Separated Joints of 2" requires
attention. Joints 3" or more are OOS.**



So Does The Heat.
Temperatures that exceed 85 degrees Fahrenheit require an inspection.





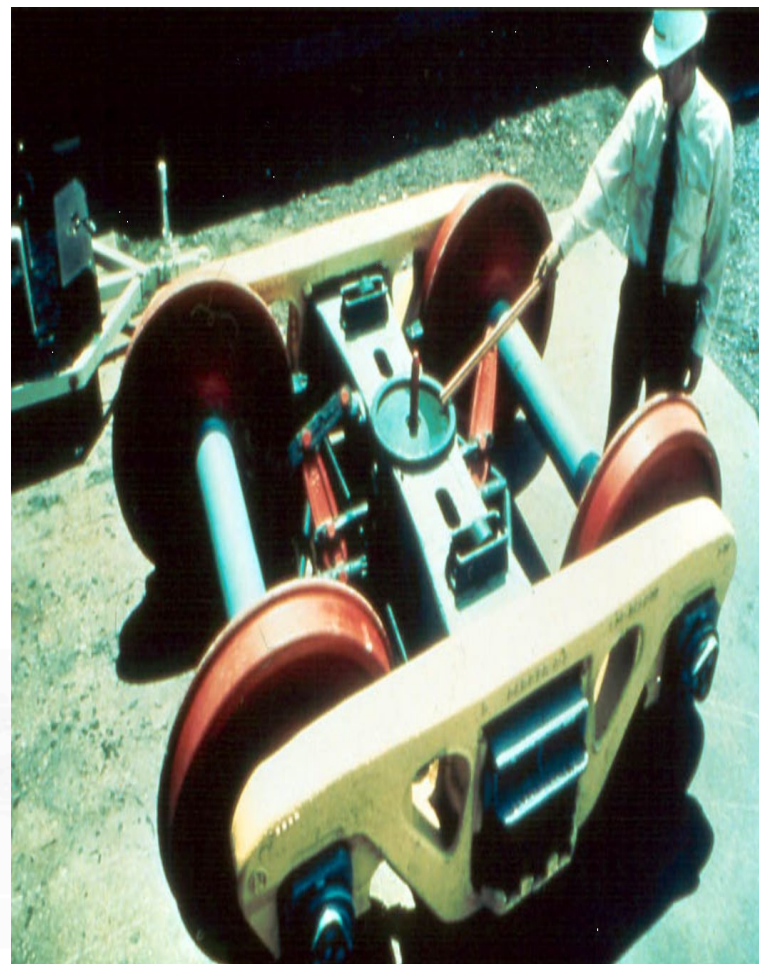
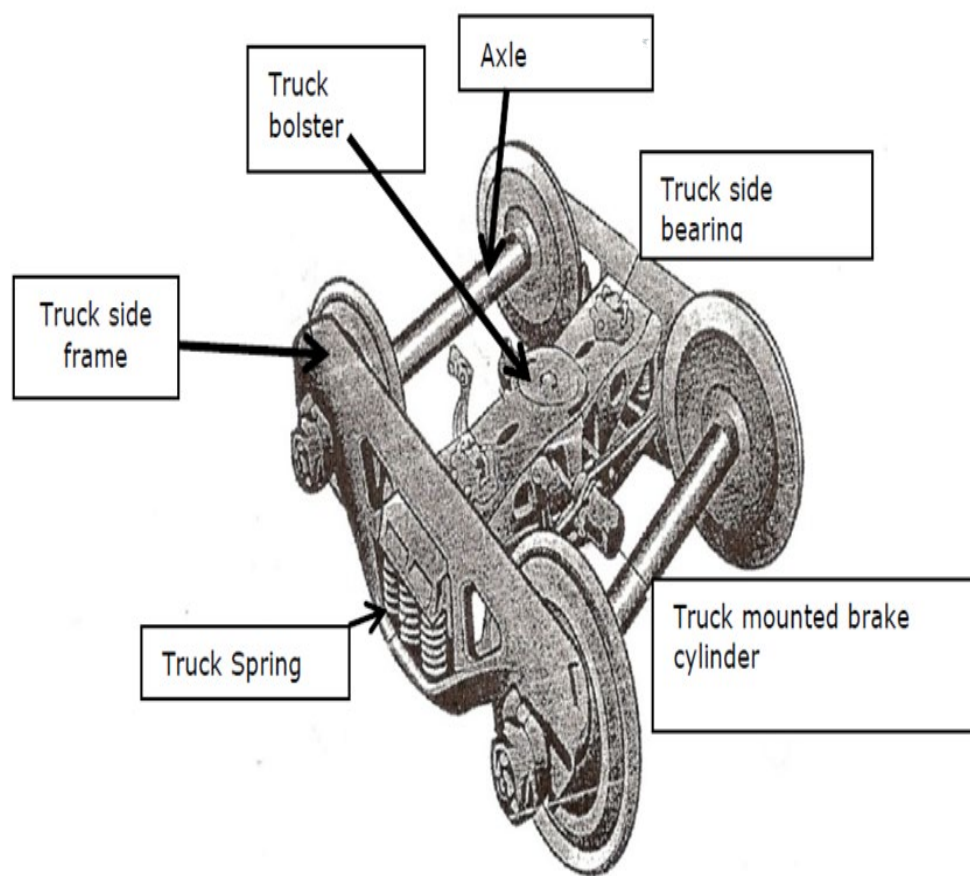
Wheel numbers on a Freight Car

- Identify the left and right hand sides of the car
- The wheels on the Right hand side number **R1 R2 R3 and R4** from the "B" end
- The wheels on the Left hand side number **L1 L2 L3 and L4** from the "B" end





Car Truck





Wheel Defects

Skidded and Shelled Wheels

a) Detection/Description:

- Detected by observing or being advised of pounding wheels.
- Skidded wheel - a wheel that has flat spots.



- Shelled wheel - a wheel tread defect where portions of the tread surface are missing.



Safety Defects:

- A skid measuring more than 2 ½ inches in length.
- Two adjoining skids each measuring more than 2 inches in length.
- A shell spot that is more than 1 ¼ inches in width and 1 ½ inches in length.



Wheel Defects





Wheel defect out comes





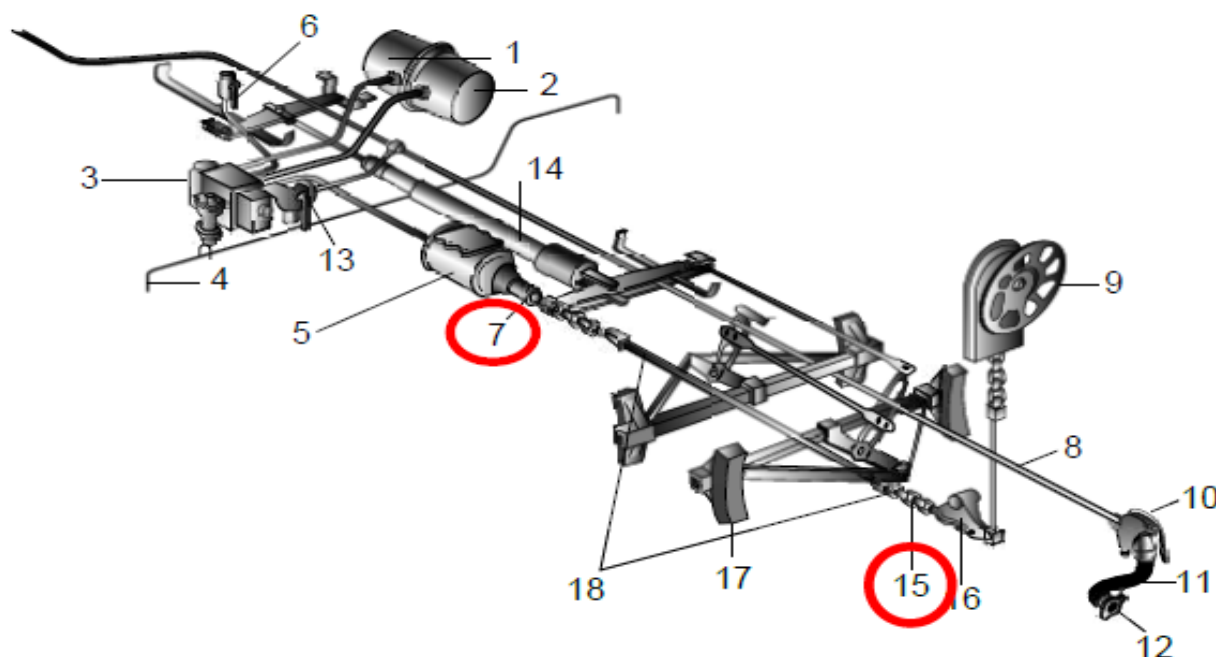
Railroads used to have a Handbrake Securement Policy...and then one day it failed. It used to be 10% plus an additional 2. It is now **Sufficient Amount** of handbrakes must be applied to the cars to left unattended followed by a car securement test. (GCOR 7.6 & ABTH 3.6)



Air and Hand Brake System

The Car Air and Hand Brake Systems Are Connected

- The systems operate independently of each other, however both are connected where the Horizontal Chain **(15)** and the Brake Piston **(7)** attach









QUESTIONS / COMMENTS

