

1.0. General.

As a military ammunition specialist in a surveillance position, you may be responsible for performing an inspection on rail cars before and after they are loaded. You will be required to verify the Car Certificate and to correctly fill out a locally produced Rail Car Inspection Form (RIF). You will be required to determine if a particular rail car may be loaded with Division 1.1 or 1.2 munitions. You will also be required to perform an inspection on the rail car to determine if the car can be released for shipment after it has been loaded.

2.0. Inspect Rail Cars.

There are three steps in inspecting rail cars:

- Preloading Inspection/Certification
- Loaded Rail Cars
- Inspection at Destination (before unloading).

2.1. Preloading Inspection/Certification.

Preloading inspection/certification is the first step in the verification of the Car Certificate after the car is received from the carrier.

2.1.1. Car Certificate (Figure 1).

A Car Certificate is required by the Code of Federal Regulations (CFR) 49 for the shipment of hazardous materials. It is prepared by the carrier in three copies. Before Division 1.1 or 1.2 explosive materials may be loaded into a rail car, the car must have been inspected and certified. A qualified person from the carrier must sign Section No. 1 on the certificate. One copy is filed by the carrier, and the other two copies are attached to the car, one to each outer side on a fixed placard board or as otherwise provided. If the Car Certificate is not present or is not signed, you must reject the car for shipment of Class A explosives.

2.1.1.1. Placards (Figure 2).

Placards are NOT posted on empty rail cars, but when the car is being loaded, the correct placard for the munitions being shipped should be posted on both sides and both ends of each car in the space provided. For example, if the car is to be loaded with Class A munitions, this placard would be displayed.

.....RAILROAD

Car Certificate

No. 1..... Station.....
19.....

I hereby certify that I have this day personally examined Car Number..... and that the car is in condition for service and complies with the FRA Freight Car Safety Standards (49 CFR Part 215) and with the requirements for freight cars used to transport explosives prescribed by the DOT Hazardous Materials Regulations (49 CFR Part 174).

.....
Qualified Person Designated Under 49 CFR 215.11

No. 2..... Station.....
19.....

I have this day personally examined the above car and hereby certify that the explosives in or on this car, or in or on vehicles or in containers have been loaded and braced; that placards have been applied, according to the regulations prescribed by the Department of Transportation; and that the doors of cars so equipped fit or have been stripped so that sparks can not enter.

.....
Shipper or his authorized agent

Qualified Person Designated Under 49 CFR 215.11

No. 3..... Station.....
19.....

I hereby certify that I have this day personally supervised the loading of the vehicles or containers on and their securement to the above car.

.....
Shipper or railway employee inspecting loading and securement

Note 1: A shipper must decline to use a car not in proper condition.
Note 2: All certificates, where applicable, must be signed.

Figure 1. Car Certificate

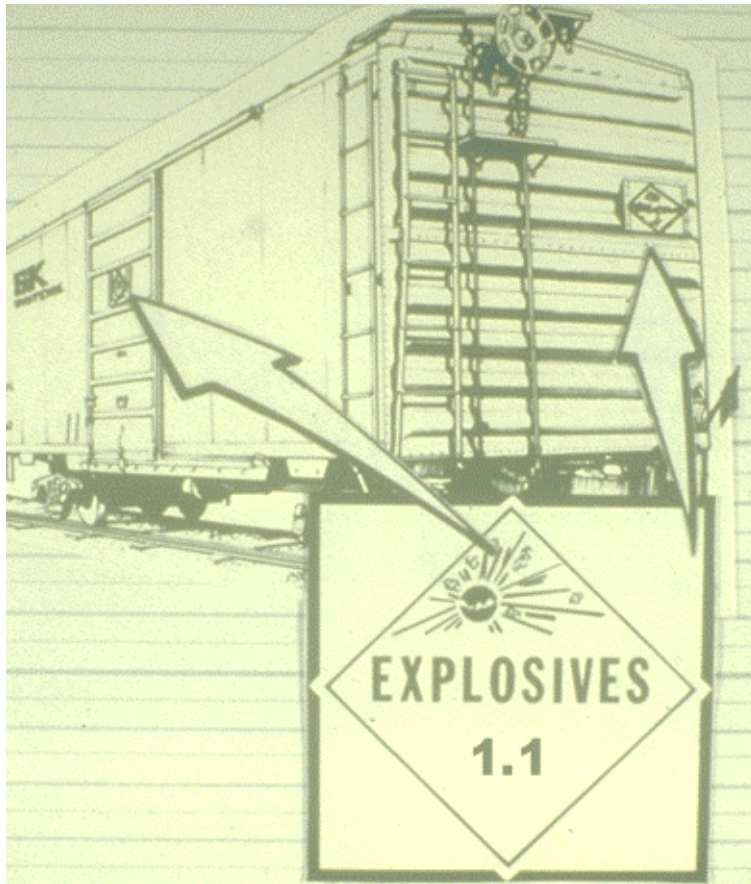


Figure 2. Rail Car Placard

2.1.1.2. Rail Car Inspection Report.

Record the results on your RIF (see Figure 3). The "Rail Car Inspection Report" is a locally produced form that may differ from one location to another. But the format for a particular location should be in a local standing operating procedure (SOP).

STUDENT CHECK 1

1. What are the three steps in inspecting rail cars?
2. What document is required for each rail car containing Division 1.1 or 1.2 munitions materials?
3. What form do you use to record deficiencies when inspecting a rail car?

RAILCAR INSPECTION REPORT (LOCAL FORMAT AUTHORIZED)							
INSTALLATION				DATE:			
NAME OF RAILROAD:			TYPE OF CAR: <input type="checkbox"/> BOX <input type="checkbox"/> FLAT <input type="checkbox"/> GONDOLA				
CAR NO:			CERTIFIED CAR: <input type="checkbox"/> YES <input type="checkbox"/> NO				
<p>NOTE: All of the following items must be checked on empty cars prior to loading. Items with an asterick (*) must be checked on incoming loaded cars.</p>							
ITEM NO.	ITEM	CHECK APPROPRIATE COLUMN				REMARKS <small>(Explain all unsatisfactory items)</small>	
		ORIGIN		DESTINATION			
		SAT	UNSAT	SAT	UNSAT		
*1.	Air and hand brakes						
2.	Brake shoes serviceable						
3.	Roller bearings and trucks						
4.	Journal boxes						
5.	Springs						
*6.	Couplings and hoses						
7.	Metal subfloor, spark shields						
*8.	Walks,sides, floors,roof						
*9.	Doors						
10.	Door keepers installed						
11.	Placard holders installed						
*12.	Cargo space clear						
*13.	Cargo space free of exposed metal						
14.	Fire and water resistant tarpaulin						
15.	Car certificate, No 1 and 2 signed						
16.	Any other defect(s) (specify)						
<input type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		Car will be approved if deficiencies are corrected prior to loading. (if rejected, give reasons on reverse under "REMARKS")			SIGNATURE ORIGIN:	SIGNATURE DESTINATION:	
ITEMS TO BE CHECKED PRIOR TO RELEASE OF LOADED CAR				CHECK APPROPRIATE BOX			
				ORIGIN		DESTINATION	
		SAT	UNSAT	SAT	UNSAT		
*17.	Loaded on this car						
18.	Load properly blocked and braced						
19.	Marking of items IAW DOT regulations						
*20.	Weight is properly distributed/not overweight						
*21.	Proper placards applied						
*22.	Tarpaulin applied to open car/seal applied to door of boxcar						
*23.	Car certificate affixed as required						
SIGNATURE (of inspector) ORIGIN:				SIGNATURE (of inspector) DESTINATION;			

Figure 3. Rail Car Inspection Form

2.1.2. Physical Inspection.

Once you have verified that the Car Certificate is complete and present, you will begin the physical inspection of the car. Each rail car used for transporting Division 1.1 or 1.2 explosive materials must meet the requirements outlined in the following paragraphs.

2.1.2.1. General.

The car may not have any holes or cracks in the roof, sides, ends, or doors through which sparks may enter or unprotected decayed spots that may hold sparks and start a fire.

2.1.2.2. Hand Brake System.

The car must be equipped with air brakes and hand brakes that are in condition for service. The car must be equipped with high-friction composition brake shoes and brake rigging designed for that type of brake shoe. Each brake shoe on the car must be at least 1 cm (0.4 inch) thick, and in safe and suitable condition for service. You must inspect the hand brake system for proper operation and for excessive oil and grease. Apply the brakes and release them. Reapply the brakes. You must determine that the brakes lock the wheels in place. If excessive oil or grease is present, it must be removed before the car can be used. Record defects on your RIF (see Figures 3 through 5).

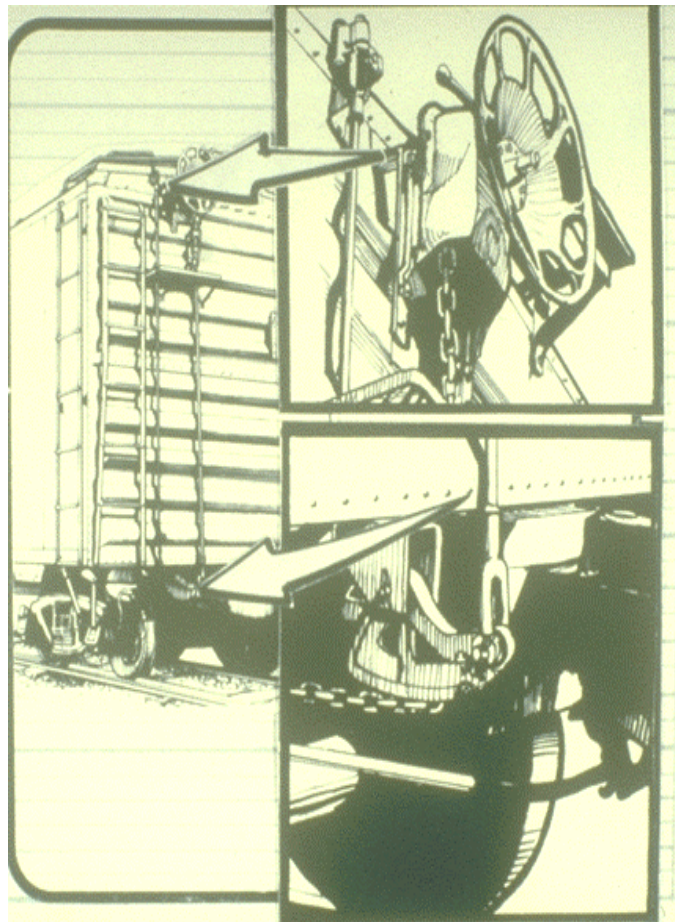


Figure 4. Hand Brake System

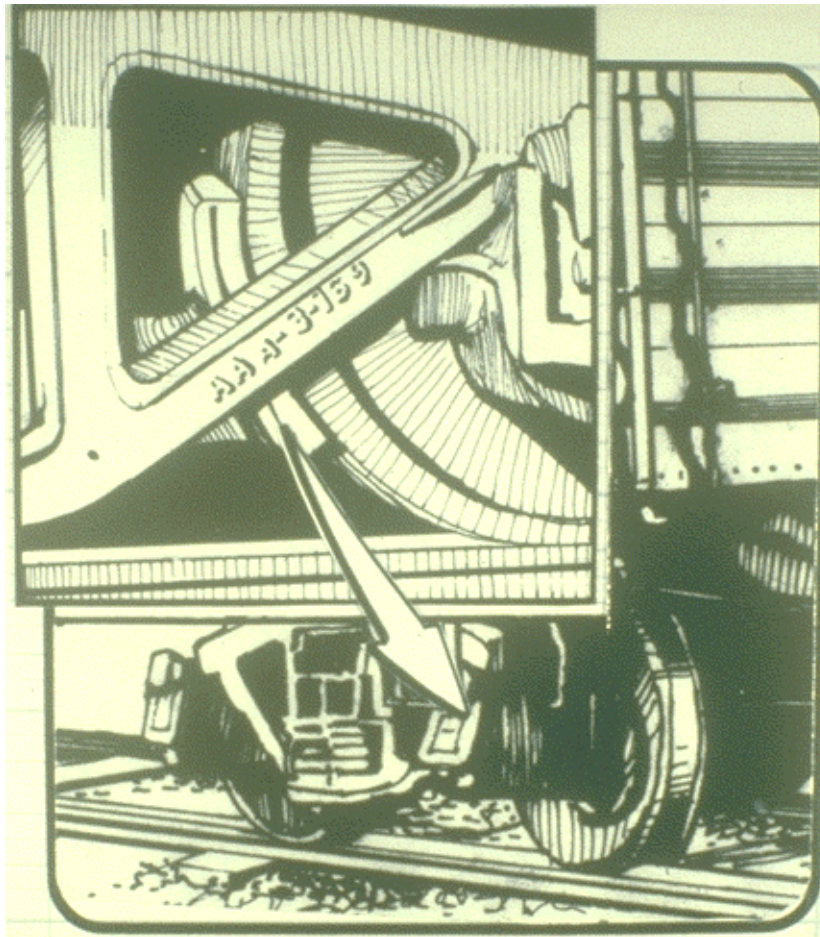


Figure 5. Contact Between Pad and Wheel

2.1.2.3. Interior.

The car must be carefully swept out before it is loaded. For less-than-carload shipments, the space in which the packages are to be loaded must be carefully swept. If evidence of potential hazardous residue is apparent after the floor has been swept, the carrier must either decontaminate the car or provide a suitable substitute car. If the car is equipped with automobile loading devices, it may not be used unless the loading device is securely attached to the roof of the car with fastenings supplementing those already provided. Record the conditions as either SAT or UNSAT on your RIF (see Figure 3 and Figure 6).

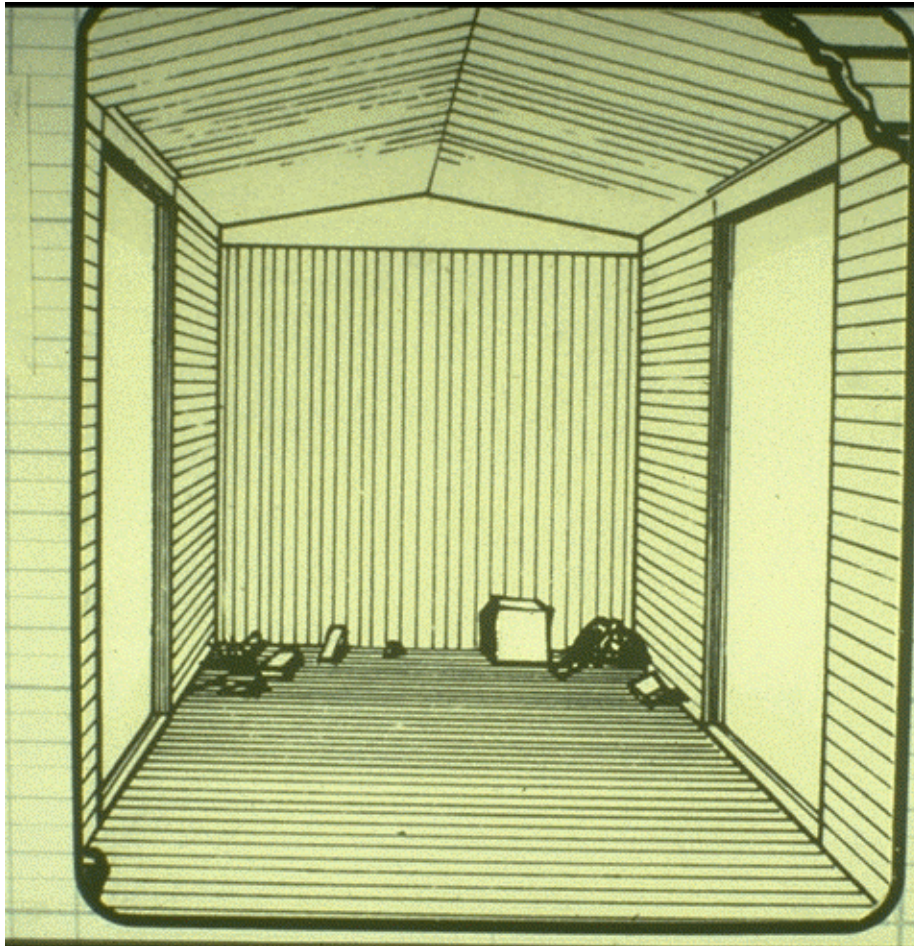


Figure 6. Rail Car Interior

2.1.2.4. Floors.

Rail Car floor requirements are outlined below:

- The car must have a metal subfloor with no combustible material exposed beneath the car or metal spark shields extending from center sill to side sills and from end sills to at least 12 inches beyond the extreme treads of the inside wheels of each truck, which are tightly fitted against the subfloor so that there is no vacant space or combustible material exposed. The metal subfloor or spark shields may not have an accumulation of oil, grease, or other debris that could support combustion.

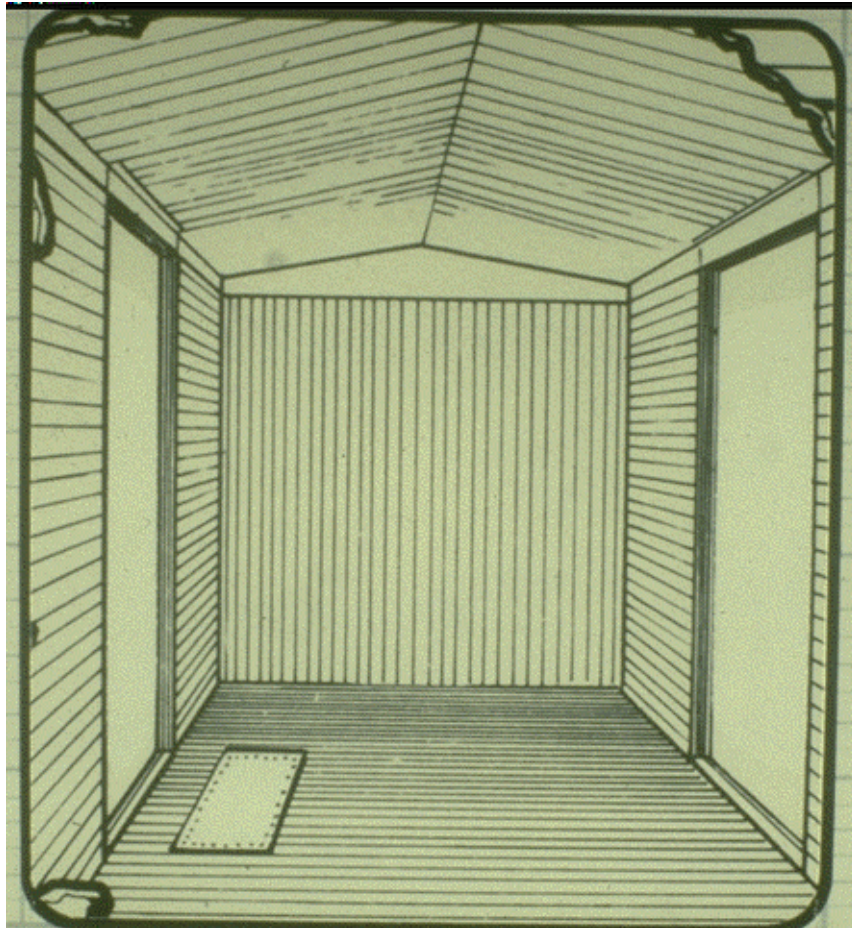


Figure 7. Metal Floor Plates

- Metal floor plates must be completely covered with wood, plywood, or fiber or composition sheets of adequate thickness and strength to prevent contact of the floor plates with the packages of Class 1 explosive materials under conditions incident to transportation. Covering of metal floor plates is not necessary for carload shipments loaded by the Department of Defense, provided the Class 1 explosive materials are of such nature that they are not likely to leak dust, powder, or vapor that might become the cause of an explosion. Record the conditions as either SAT or UNSAT on your RIF (see Figure 3 and Figure 7).

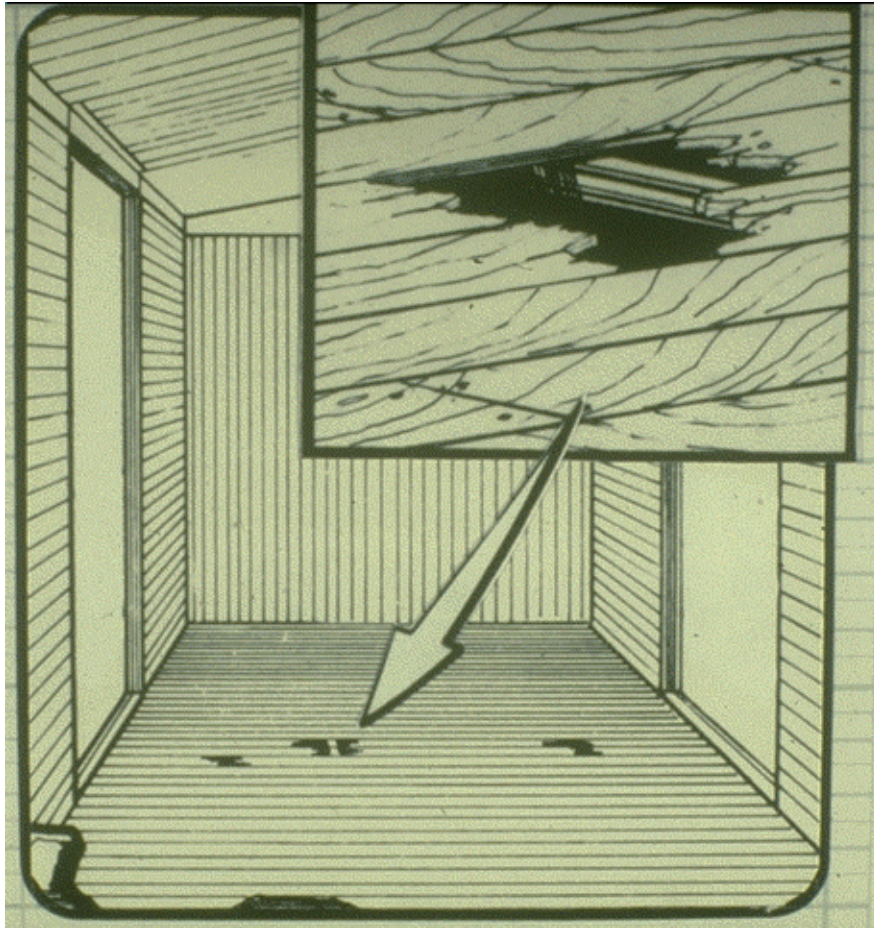


Figure 8. Rail Car Floor

- Any holes in the floor or lining must be repaired, and special care must be taken to ensure that there are no projecting nails or bolts or exposed pieces of metal that may work loose or produce holes in packages of Class 1 (explosive) materials during transit. Protruding nails in the floor or lining that have worked loose must be drawn; if necessary for the purpose of fastening the floor or lining, new nails must be driven through other parts thereof. Record the conditions as either SAT or UNSAT on your RIF (see Figure 3, Figure 8, and Figure 9).

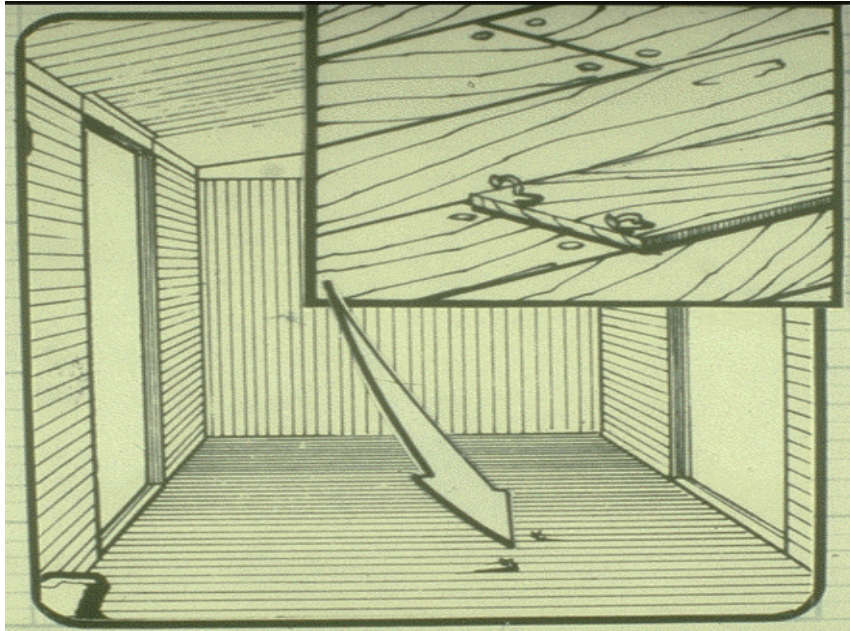


Figure 9. Protruding Objects

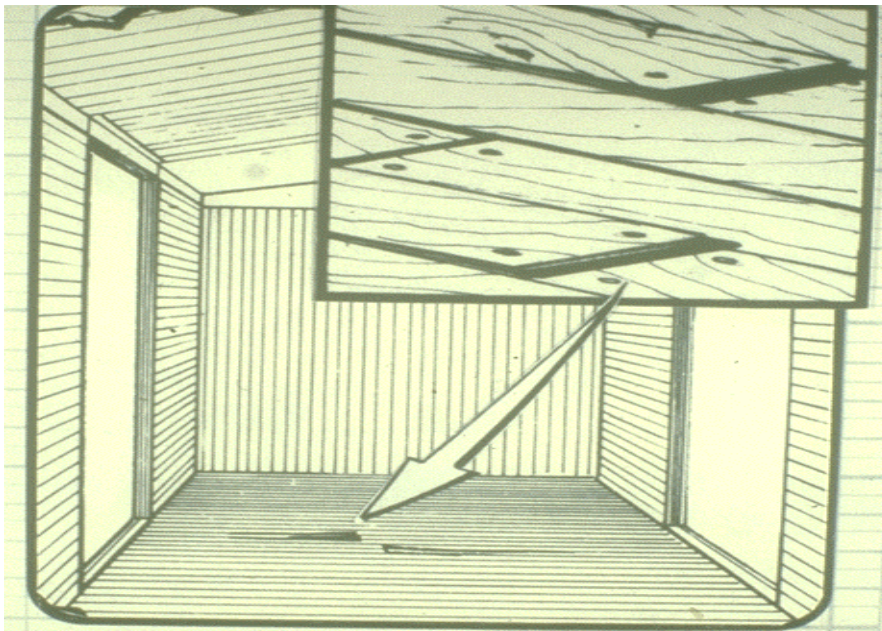


Figure 10. Loose Boards

- Inspect the rail car interior for loose boards or decay. Loose boards must be repaired before they may be used. Decayed wood will hold sparks that can result in a fire. Decay is recorded as an unsatisfactory condition on your RIF (see Figure 3 and Figure 10).

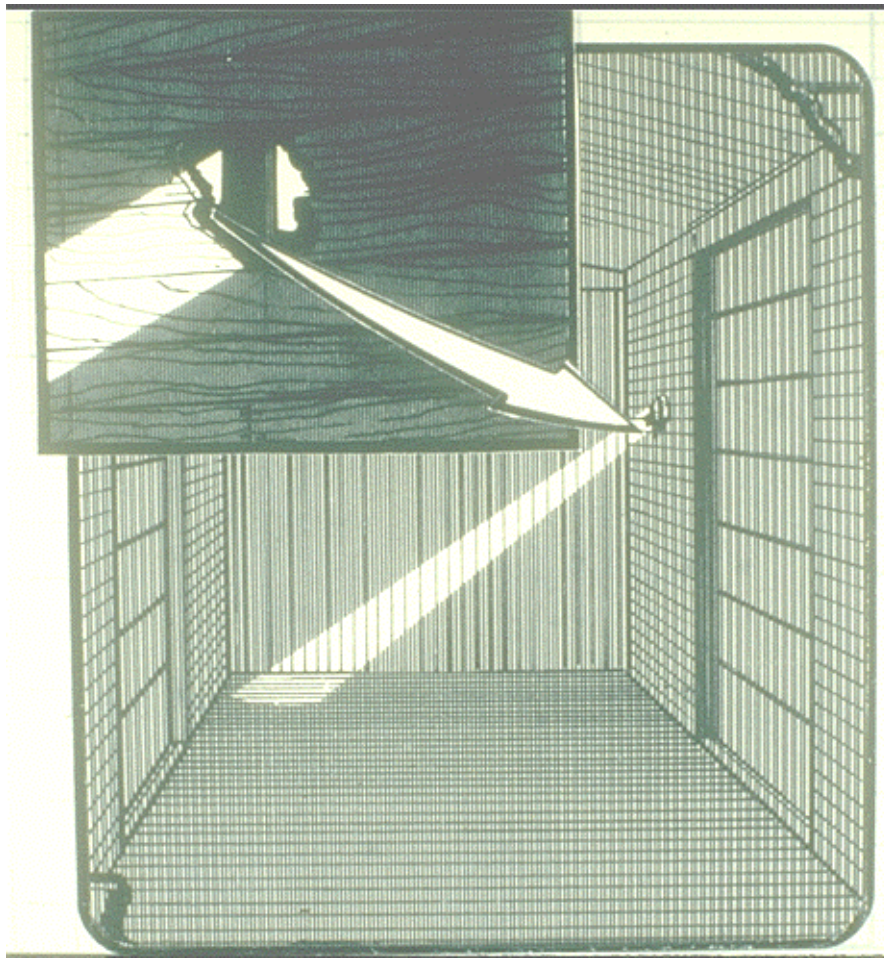


Figure 11. Walls and Interior

- Inspect the rail car interior for cracks or holes in the roof, sides or ends. If these conditions exist, record them as an unsatisfactory condition on your RIF (see Figure 3 and Figure 11).

2.1.2.5. Roof.

The roof of the car must be carefully inspected from the outside for decayed spots, especially under or near the running board. Such spots must be covered or repaired to prevent their holding fire from sparks. A car with a roof generally decayed, even if tight, may not be used. Record the conditions as either SAT or UNSAT on your RIF (see Figure 3, Figure 12, and Figure 13).

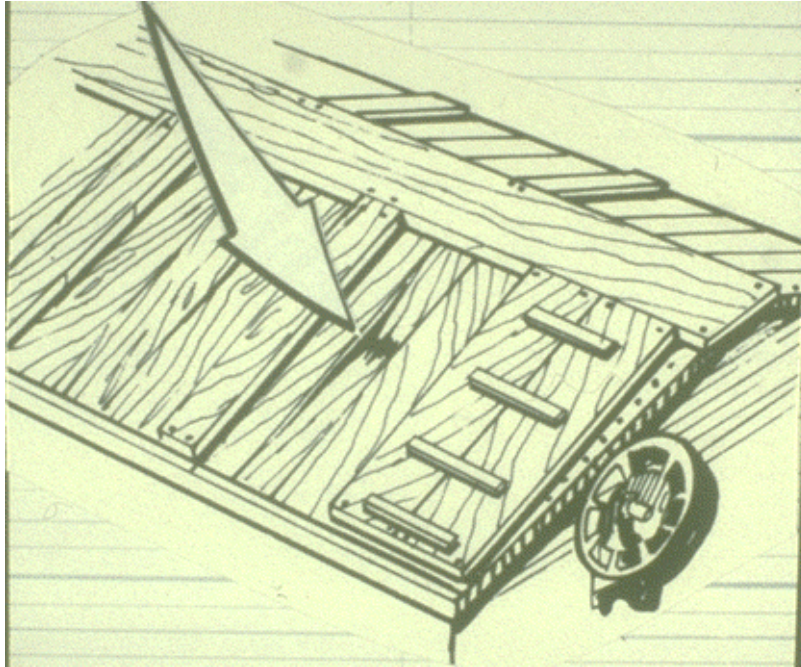


Figure 12. Rail Car Roof

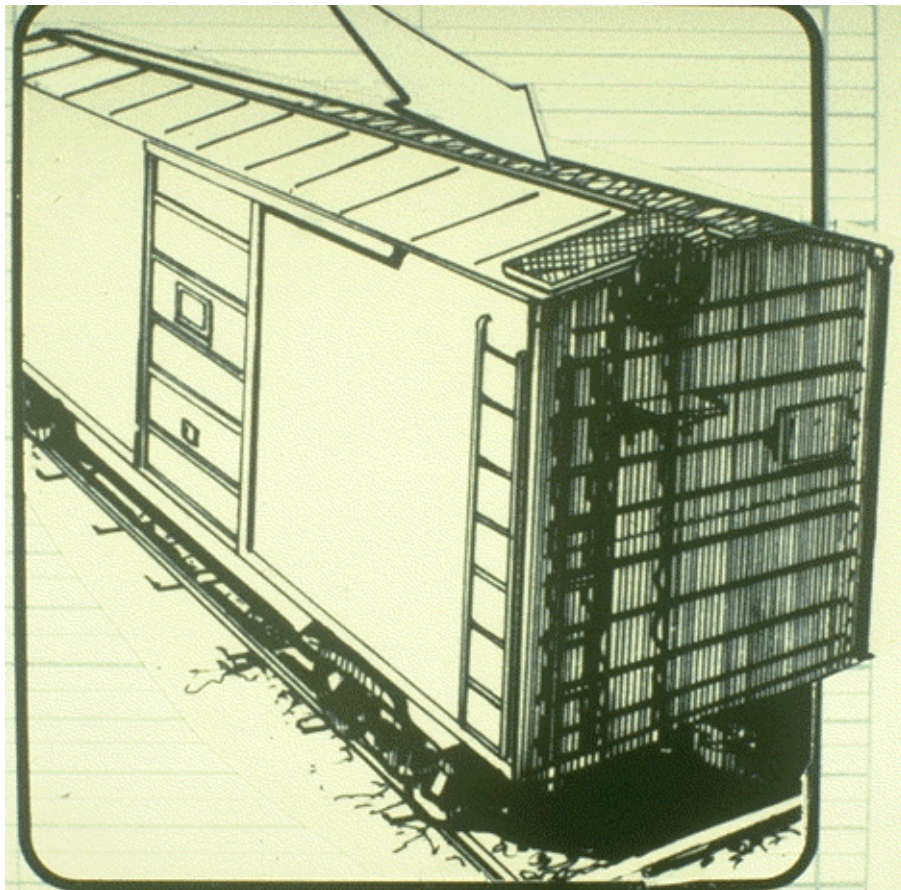


Figure 13. Roof and Running Boards

2.1.2.6. Doors.

The doors must close tightly so that sparks cannot get in at the joints. If necessary to achieve this degree of tightness, the doors must be stripped. Place the stripping on the inside and fasten it to the door frames, where it will form a shoulder against which the closed doors can be pressed by means of wedges or cleats in door shoes or keepers. The openings under the doors should be similarly closed. The hasp fastenings must be examined with the doors closed and fastened, and the doors must be cleated when necessary to prevent them from shifting. When the car is opened for any reason, the wedges or cleats must be replaced before the car containing Class 1 (explosive) materials is permitted to proceed. Record the conditions as either SAT or UNSAT on your RIF (see Figure 3, Figure 14, and Figure 15).

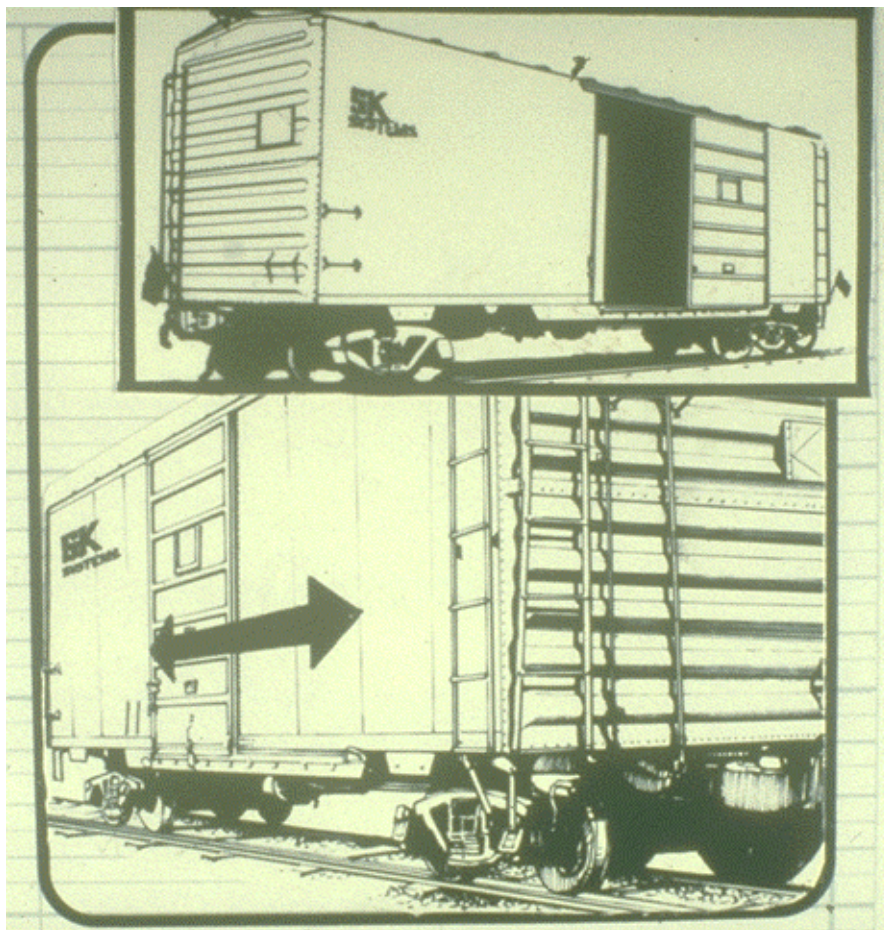


Figure 14. Rail Car Doors

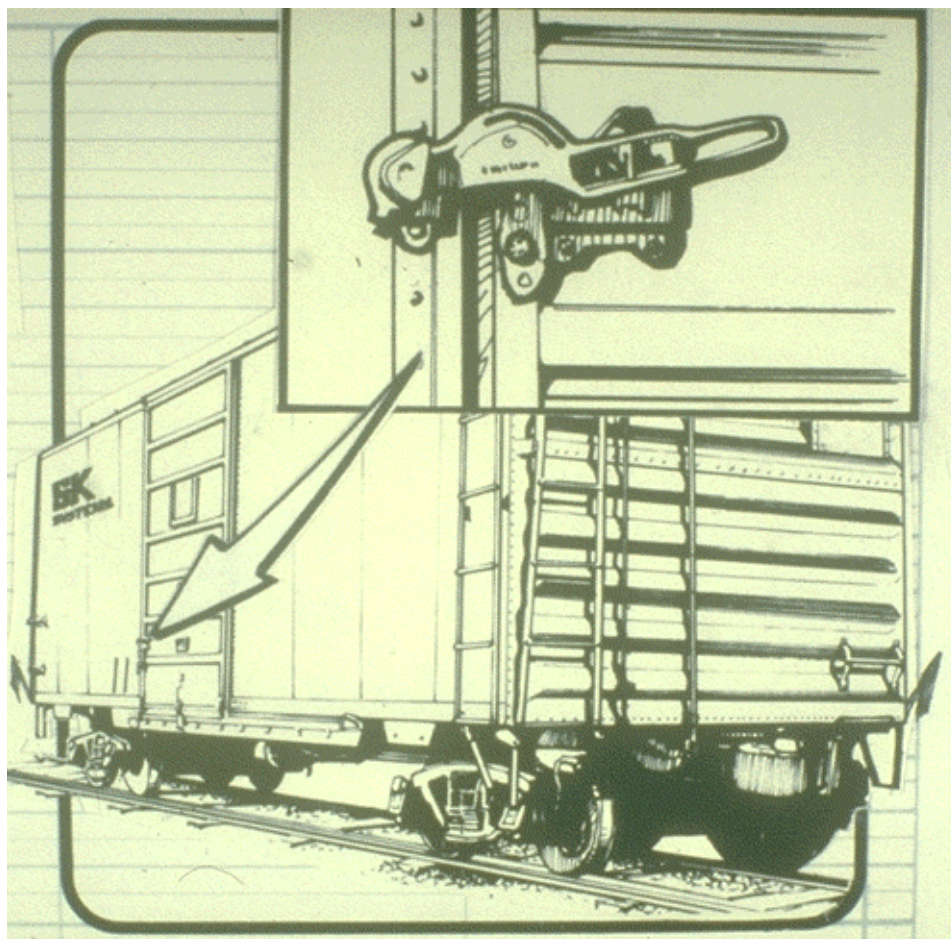


Figure 15. Door Hasp Fastener



Figure 16. Journal Boxes

2.1.2.7. Journal Boxes.

The carrier representative certified the journal boxes were properly packed, oiled, and covered. Ensure that they are tightly closed. If the springs do not hold the cover in the closed position, this is considered an UNSAT condition. Record the condition as either SAT or UNSAT on your RIF (see Figure 3 and Figure 16).

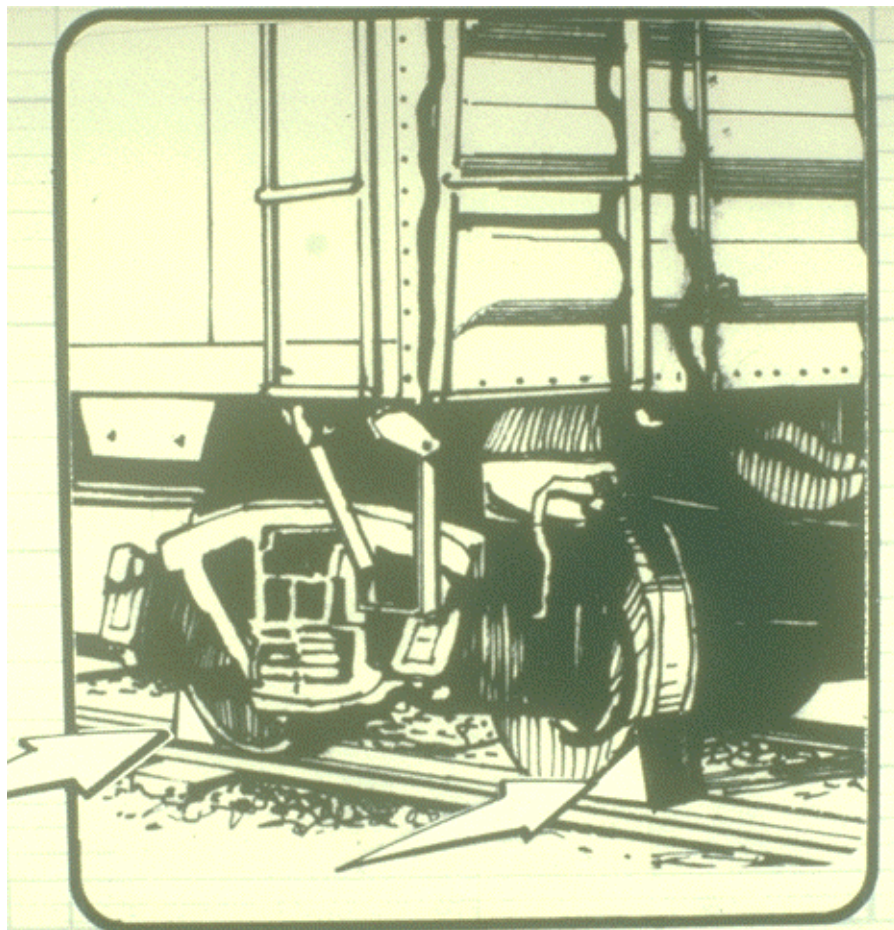


Figure 17. Chocked Wheels

2.1.2.8. Chocked Wheels.

Verify that the wheels are chocked. This further ensures that the car will not accidentally move. Record the condition as either SAT or UNSAT on your RIF (see Figure 3 and Figure 17).

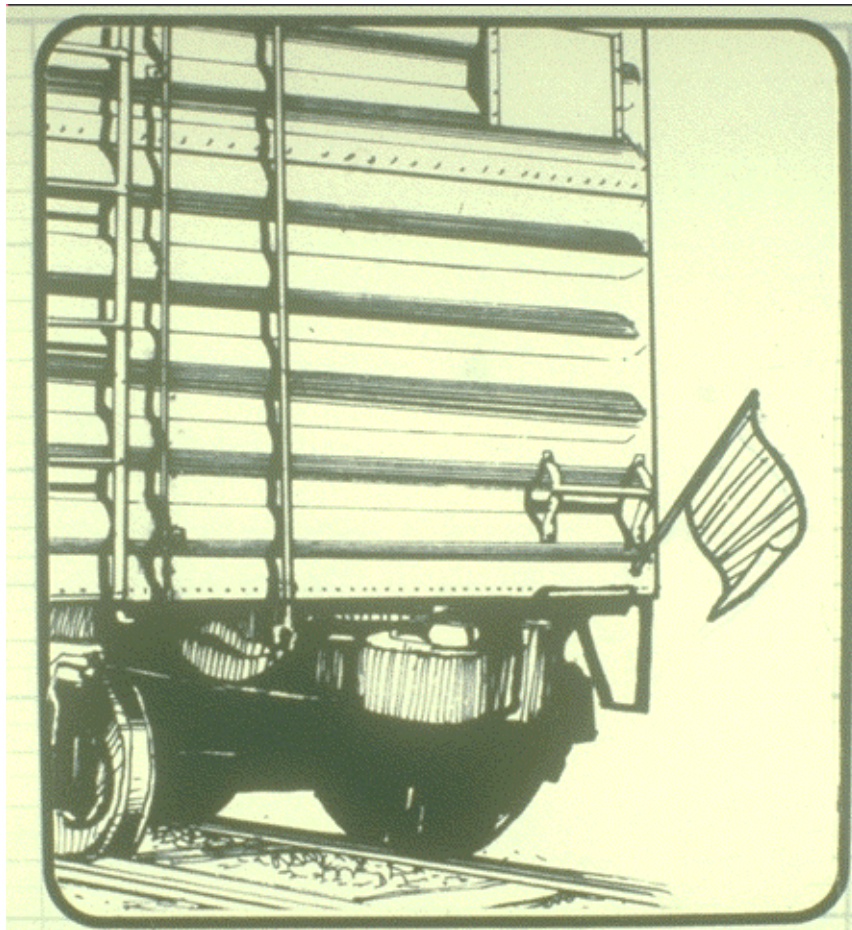


Figure 18. Blue Flags

2.1.2.9. Signals/Blue Flags.

Blue flags or signals must be placed at both ends of a car or “cut” of cars. The blue flags or signals visually alert personnel that work is being performed in, on, under, or around the car or cars. Record the condition as either SAT or UNSAT on your RIF (see Figure 3 and Figure 18).

2.1.2.10. Roller Bearings and the Trucks.

The roller bearings and the trucks must be carefully examined to minimize the danger of hotboxes or other failure that would require the car to be set out before reaching its destination. The carrier representative will certify the roller bearing condition. Record the condition as either SAT or UNSAT on your RIF.

2.1.2.11. Other Conditions.

The “Other” category on your RIF is used to record any unsafe existing conditions not otherwise found on the RIF. For example, you see scrap lumber and used strapping in the area around the car. This condition would be entered as UNSAT in the “Other” category on your RIF. If the condition is corrected on the spot, note in the "REMARKS" section that the unsatisfactory condition has been corrected.

2.1.3. Evaluate the Inspection.

Decide from the entries you made on the RIF, including remarks and comments, whether or not the car meets the standards for loading munitions. If all unsatisfactory conditions have been corrected, the car may be released from loading. Your signature as munitions inspector on the form will allow the car to be used or rejected.

STUDENT CHECK 2

1. You are inspecting a rail car and determine the brakes have excessive oil or grease. What actions do you take?
2. The floor of a rail car contains potential hazardous residue after cleaning. What are your actions?
3. Why are metal floor plates completely covered with plywood or other materials?
4. Why is decayed wood flooring considered an unsatisfactory condition?
5. Why must doors be able to be tightly closed?
6. What do blue signal flags represent?
7. What is the significance of your signature on the rail car inspection form?

2.2. Loaded Rail Car Inspections.

Loaded rail cars must meet the following criteria before they are sealed and certified:

- The brakes must be set and the wheels must be chocked.

- The first thing you inspect for is even distribution of the load.
- Boxes containing Division 1.1 or 1.2 explosive materials must be loaded so that the ends of wooden boxes will not bear against the sides of any fiberboard boxes and so that the ends of any box will not cause a pressure point on a small area of another box.
- Explosive bombs, unfuzed projectiles, rocket munitions, and rocket motors that are not packed in wooden boxes, or large metal packages of incendiary bombs, each weighing 500 pounds or more, may be loaded in stock cars or in flat-bottom gondola cars only if they are adequately braced. Boxed bombs, rocket munitions, and rocket motors that cannot be loaded in closed cars because of their size may be loaded in open-top cars or on flatcars, provided they are protected from the weather and accidental ignition.
- Boxes of Division 1.1 or 1.2 explosive materials that are packed in long cartridges, bags, or sift-proof liners, and contain no liquid explosive ingredient and may be loaded on their sides or ends.
- Class A explosive materials may not be loaded higher than any permanent car lining unless additional lining is provided as high as the load.
- Class A explosives must be distributed insofar as possible to equalize the weight on each side of the car and over the trucks.
- Except when boxed, metal keys containing explosive materials must be loaded on their sides with their ends toward the ends of the car. Packages of explosive materials may not be placed in the space opposite the doors unless the doorways are boarded on the inside as high as the load. This does not apply to palletized packages if they are braced so they cannot fall or slide into the doorways during transportation.
- Explosives, detonators, or detonating primers must be securely blocked and braced to prevent the packages from changing position, falling to the floor, or sliding into each other under conditions normally incident to transportation. Explosives must be loaded to avoid transfer at stations.
- Refer to the AMC drawing for outloads for proper blocking and bracing. Using DARCOM Drawing 4115 5PA 1002 as a reference, inspect for proper blocking and bracing of the load. DARCOM Drawing 4115 5PA 1002 is used as a guide for blocking and bracing in box cars of boxed munitions and munitions on pallets unitized with strapping. (see Figure 19 and Figure 20).

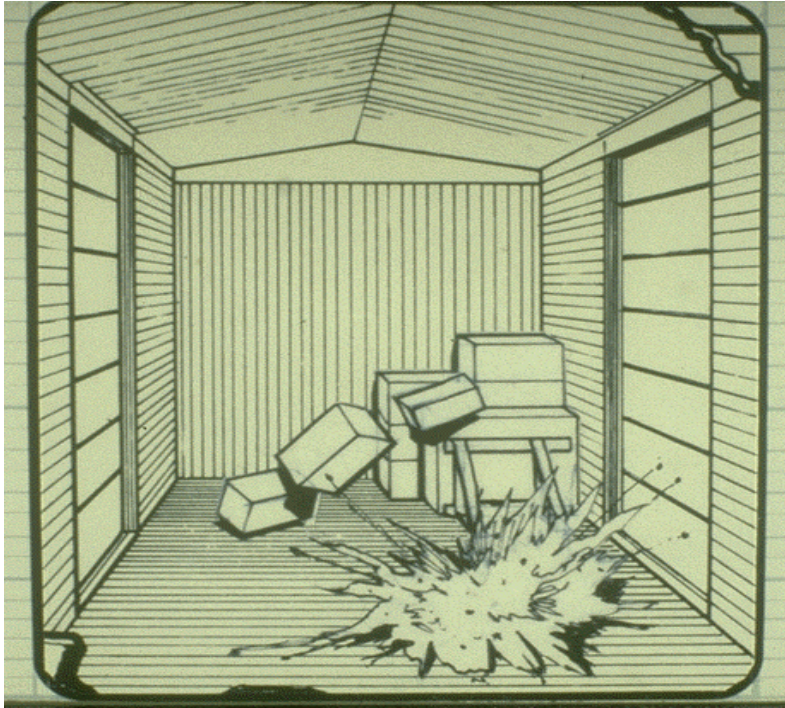


Figure 19. Improper Blocking and Bracing

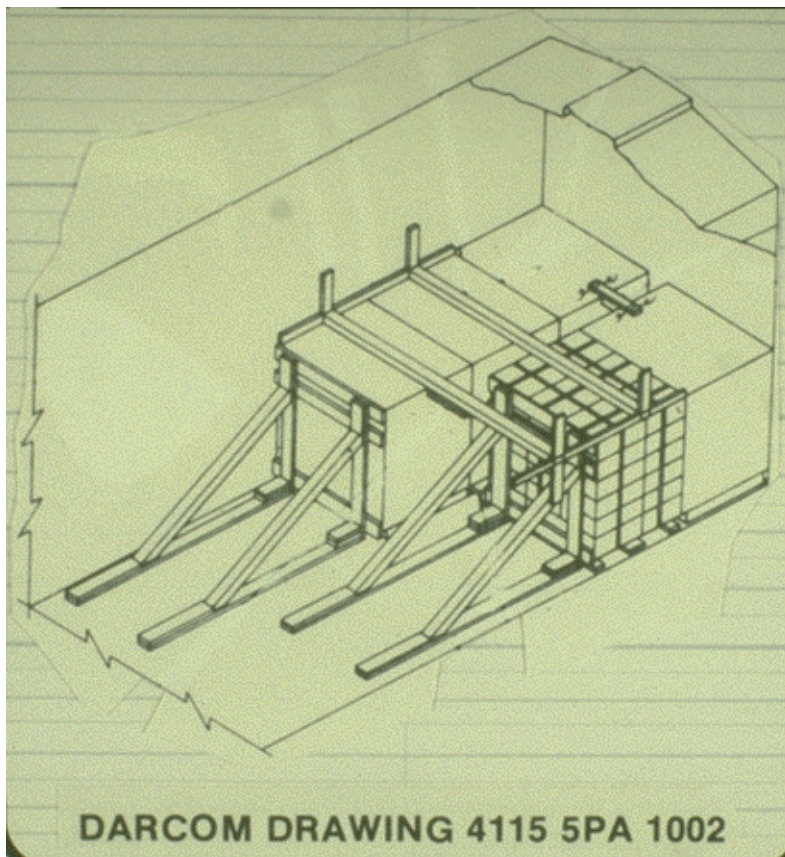


Figure 20. Proper Blocking and Bracing

Class/Division	Placard notation	Placard endorsement
Division 1.1	Placarded EXPLOSIVES 1.1 ¹	Explosives.
Division 1.2	Placarded EXPLOSIVES 1.2 ¹	Explosives.
Division 1.1 or 1.2, and Div. 2.3 ² (chemical ammunition).	Placarded EXPLOSIVES 1.1 or EXPLOSIVES 1.2, and POISON GAS ¹ .	Explosives and poison gas.
Division 1.3	Placarded EXPLOSIVES 1.3	Dangerous.
Division 1.4	Placarded EXPLOSIVES 1.4	Dangerous.
Division 1.5	Placarded EXPLOSIVES 1.5	Dangerous.
Division 1.6	Placarded EXPLOSIVES 1.6	(None).
Division 2.1	Placarded FLAMMABLE GAS	Dangerous.
Division 2.2	Placarded NONFLAMMABLE GAS	Dangerous.
Division 2.3 Zone A ²	Placarded POISON GAS ¹	Poison gas Zone A.
Division 2.3 (other than Zone A)	Placarded POISON GAS	Dangerous.
Class 3	Placarded FLAMMABLE	Dangerous.
Combustible Liquid	Placarded COMBUSTIBLE	(None).
Division 4.1	Placarded FLAMMABLE SOLID	Dangerous.
Division 4.2	Placarded SPONTANEOUSLY COMBUSTIBLE	Dangerous.
Division 4.3	Placarded DANGEROUS WHEN WET	Dangerous.
Division 5.1	Placarded OXIDIZER	Dangerous.
Division 5.2	Placarded ORGANIC PEROXIDE	Dangerous.
Division 6.1 PG I Zone A ²	Placarded POISON ¹	Poison PG I Zone A.
Division 6.1 PG I and II (other than PG I Zone A)	Placarded POISON	Dangerous.
Division 6.1 PG III	Placarded KEEP AWAY FROM FOOD	(None).
Class 7	Placarded RADIOACTIVE	Radioactive material.
Class 8	Placarded CORROSIVE	Dangerous.
Class 9	Placarded CLASS 9	(None).
ORM-D	(None)	(None).
Mixed loads of hazardous materials placarded DANGEROUS.	Placarded DANGEROUS	Dangerous.
Tank cars which contain a residue of a hazardous material other than a combustible liquid.	See § 174.25(c)	Dangerous.
Tank cars which contain a residue of a combustible liquid, a residue of a Division 6.1 PG III material, or a residue of a Class 9 material.	See § 174.25(c)	(None).

¹ Use of square background required (See § 172.510(a)).
² Identified as required in § 172.203(m)(3).

Figure 21

- Use the information on the chart (Figure 21) from CFR 49, Part 149 to determine which document/placard, if any, should be on the railcar used to transport Class A munitions.

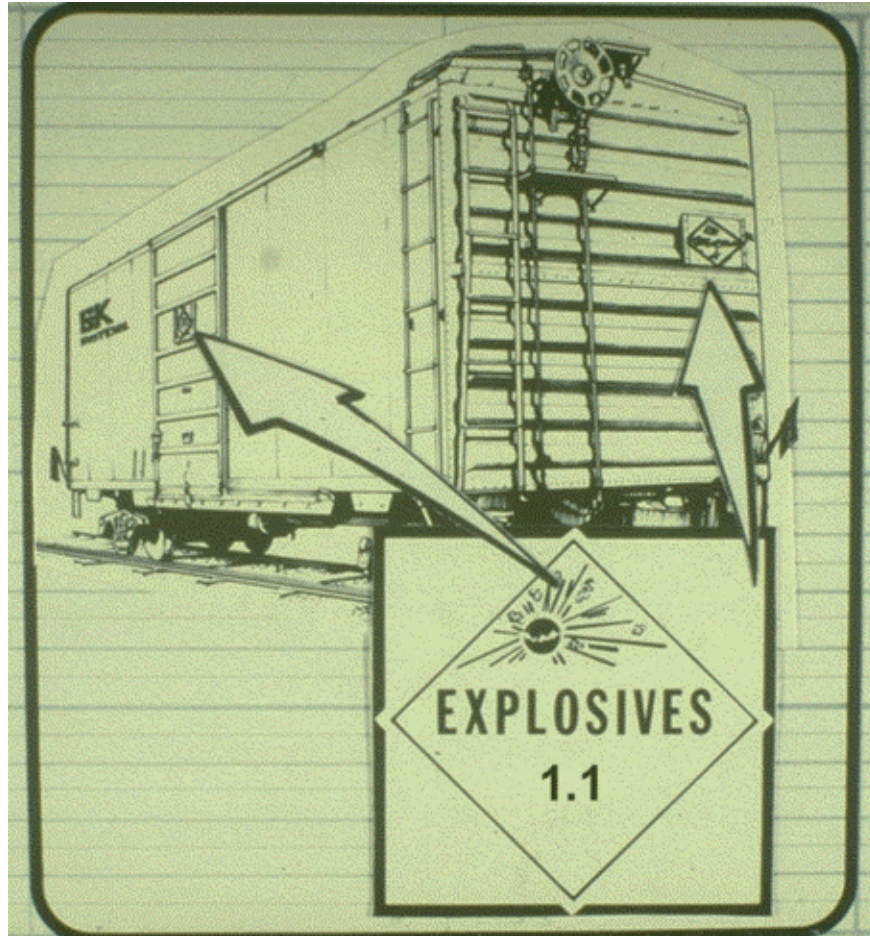


Figure 22. Explosive placards

- “EXPLOSIVES” placards must be attached to the rail car on both ends and on both sides of the car (see Figure 22).
- The compatibility of different munitions that are being shipped must be verified. Refer to Figure 23 to verify compatibility. If the items being shipped are NOT compatible, DO NOT SIGN the Car Certificate, Section No. 2.

COMPATIBILITY TABLE FOR CLASS 1 (EXPLOSIVE) MATERIALS.

Compatibility group	A	B	C	D	E	F	G	H	J	K	L	N	S
A	X	X	X	X	X	X	X	X	X	X	X	X	X
B	X	X	X	4	X	X	X	X	X	X	X	X	4/5
C	X	4	2	2	2	X	X	X	X	X	X	3	4/5
D	X	X	2	2	X	X	X	X	X	X	X	3	4/5
E	X	X	X	X	X	X	X	X	X	X	X	X	4/5
F	X	X	X	X	X	X	X	X	X	X	X	X	4/5
G	X	X	X	X	X	X	X	X	X	X	X	X	4/5
H	X	X	X	X	X	X	X	X	X	X	X	X	4/5
J	X	X	X	X	X	X	X	X	X	X	X	X	4/5
K	X	X	X	X	X	X	X	X	X	X	X	X	4/5
L	X	X	X	X	X	X	X	X	X	X	1	X	4/5
N	X	X	3	3	3	X	X	X	X	X	X	X	4/5
S	X	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	4/5	X	4/5	4/5

Figure 23. Compatibility Table for Class 1 Explosive Materials

Instructions for using the compatibility table are as follows:

- A blank space in the table indicates that no restrictions apply.
- The letter “X” in the table indicates that explosives of different compatibility groups may not be carried on the same rail car, unless packed in separate freight containers.
- The numbers in the table mean the following:
 1. Explosives from compatibility group L may only be carried in the same rail car with an identical explosive.
 2. Any combination of explosives from compatibility group C, D, or E is assigned to compatibility group E.
 3. Any combination of explosives from compatibility group C, D, or E with those in compatibility group N is assigned to compatibility group D.
 4. Detonators and detonating primers may not be loaded in the same car with Class A explosive materials.
 5. Fireworks may not be loaded in the same car with Class A explosive materials.

Explosives of the same compatibility group but of different divisions may be transported together, provided that the whole shipment is transported as though its entire contents were of the lower numerical division. For example, a mixed shipment of Division 1.2 (Class A explosive) materials and Division 1.4 (Class C explosive) materials, compatibility group D, must be transported as Division 1.2 (Class A explosive) materials.

- Your inspection is now complete. However, before the rail car can be closed, a railway employee must inspect the lead blocking and bracing, ensure that required placards have been applied, and ensure that the doors close tightly. The railway employee will then sign Section No. 2 on the Car Certificate for the carrier, and you will sign for the shipper.
- Before sealing the car, record the serial numbers of the E/Seals on the government bill of lading (Reference AR 55-535, Defense Traffic Management Regulation). Place all documents pertaining to the munitions shipment inside a manila envelope, and attach the envelope inside the rail car.
- Now, seal the rail car and notify the chief inspector that the rail car can be released to the carrier for shipment.

2.3. Before Unloading (Destination) Inspection.

All railway cars transporting explosives must be thoroughly inspected on entering a military establishment, before unloading is commenced. This inspection will be made at a designated inspection point by technically qualified personnel. If sabotage or any unsafe condition is suspected, the car should be immediately moved to the suspect car track for further inspection by authorized personnel.

All railway cars must be inspected on both the outside and inside. The exterior inspection includes examining car seals for tampering and comparing the numbers on the seals with those on the shipping documents to ensure that the cars have not been opened in transit. The interior inspection includes identifying the cargo; noting the condition of the munitions, the blocking, and the staying; and checking for the presence of any foreign objects. If car seals have been tampered with or their numbers do not correspond to those listed on the shipping documents, the car should be immediately move to the suspect car track for further inspection.

In open-top railway cars (gondola cars), the lading must be inspected for—

- Condition of the munitions
- Presence of foreign objects
- Condition of blocking and bracing
- Identity of the lading.

2.4. Damaged Shipments.

Improper bracing and staying causes damage to shipments and may expose munitions to hazardous conditions. Damaged shipments due to rough handling and/or improper blocking and bracing are reported using an SF 361 (Transportation Discrepancy Report) in accordance with AR 55-38 (Reporting of Transportation Discrepancies in Shipments). If damage was due to improper preservation and packaging, form SF 364 will be prepared in accordance with AR 735-11-2.

2.5. Spotting of Loaded Cars.

Loaded railway cars may not be left in the open area between magazines, where they could act as an intermediate step in propagation of an explosion, except when applicable quantity-distance can be maintained. Railroad loading and unloading facilities for munitions must be separated from inhabited buildings, public routes, and other explosive facilities in accordance with quantity-distance requirements. Before cars containing explosives and munitions are moved by a locomotive, the air brake couplings must be coupled and tested to ensure that the air brakes are in proper working condition. When cars are spotted and engines are detached, the hand brakes must be set. During the moving of a car by pinchbar, a man must be stationed at the hand brake at all times.

2.6. Position of Placarded Cars in Train.

The position of placarded cars in a train is determined by the following table from CFR 49, Sec 174.85:

Research and Special Programs Administration, DOT **§ 174.101**

POSITION IN TRAIN OF PLACARDED CARS TRANSPORTING HAZARDOUS MATERIALS

RESTRICTIONS	Placard Group 1	Placard Group 2		Placard Group 3		Placard Group 4
	Rail Car	Tank Car	Rail Car	Tank Car	Rail Car	Rail Car
1. When train length permits, placarded car may not be nearer than the sixth car from the engine or occupied caboose.	X	X		X		
2. When train length does not permit, placarded car must be placed near the middle of the train, but not nearer than the second car from an engine or occupied caboose.	X	X		X		
3. An open-top car when any of the lading protrudes beyond the car ends or if shifted would protrude beyond the car ends.	X	X		X		
4. Loaded flat car except closed TOFC/COFC equipment, auto carriers, and other specially-equipped cars with tie-down devices for handling vehicles. Permanent bulk head flat cars are considered the same as open-top cars.	X	X		X		
5. Any rail car, transport vehicle, or freight container with temperature control equipment or internal combustion engine in operation.	X	X		X		
6. Placarded cars may not be placed next to each other based on the following:						
Placard Group 1		X	X	X	X	X
Placard Group 2	X			X	X	X
Placard Group 3	X	X	X			X
Placard Group 4	X	X	X	X	X	

PLACARD GROUP:
 Group 1—Divisions 1.1 and 1.2 (Class A explosive) materials.
 Group 2—Divisions 1.3, 1.4, 1.5 (Class B and C explosive), Class 2 (compressed gas; other than Div 2.3, PG I, Zone A), Class 3 (flammable liquid), Class 4 (flammable solid), Class 5 (oxidizing), Class 6 (poisonous liquid; other than Div 6.1, PG I, Zone A), and Class 8 (corrosive) materials.
 Group 3—Divisions 2.3 (PG I, Zone A; poisonous gas) and 6.1 (PG I, Zone A; poisonous liquid) materials.
 Group 4—Class 7 (radioactive) materials.

(1) Where an "X" appears at the intersection of a Placard Group column and a Restriction row, the corresponding restriction applies.

(2) "Rail Car" means a car other than a tank car.

(3) For purposes of this subpart, each unit of an articulated intermodal rail car shall be considered as one car.

[Amdt. 174-68, 55 FR 52680, Dec. 21, 1990, as amended at 57 FR 45464, Oct. 1, 1992]

STUDENT CHECK 3

1. What must be attached to either end of a loaded rail car?
2. What are the minimum blocking and bracing requirements for explosives?
3. What is the Compatibility Table for Class 1 Explosive Materials used for?
4. After your inspection is complete, what actions must occur before the rail car can be closed and sealed?
5. You received a loaded rail car and the seals appear to have been tampered with. What action do you take?
6. How are damaged shipments reported?
7. Why are loaded rail cars not left in the open area between magazines?

STUDENT CHECK SOLUTIONS

STUDENT CHECK 1

1. Answer: Preloading Inspection/Certification.
Load Rail Car Inspection.
Inspection at Destination (before unloading).
Reference: Paragraph 2.0.
2. Answer: Car Certificate.
Reference: Paragraph 2.1.1.
3. Answer: Rail Car Inspection Form.
Reference: Paragraph 1.0.

STUDENT CHECK 2

1. Answer: It must be removed before the car can be used. You must record the defect on your Rail Car Inspection Form.
Reference: Paragraph 2.1.2.2.
2. Answer: The carrier must decontaminate the car or provide a substitute car.
Reference: Paragraph 2.1.2.3.
3. Answer: To prevent contact of the floor plates with the packages of Class 1 (explosive) materials.
Reference: Paragraph 2.1.2.4.
4. Answer: Decayed wood could hold sparks that can result in a fire.
Reference: Paragraph 2.1.2.4.
5. Answer: Doors must close tightly to prevent sparks from getting in at the joints.
Reference: Paragraph 2.1.2.6.
6. Answer: The flags visually alert personnel that work is being performed in, on, under, or around the car or cars.
Reference: Paragraph 2.1.2.9.
7. Answer: Your signature on the form allows the car to be used or rejected.
Reference: Paragraph 2.1.3.

STUDENT CHECK 3

1. Answer: EXPLOSIVES placards.
Reference: Paragraph 2.2.

1. Answer: Explosives, detonators, or detonating primers must be securely blocked and braced to prevent the packages from changing position, falling to the floor, or sliding into each other under conditions normally incident to transportation.
Reference: Paragraph 2.2.

3. Answer: It is used to verify the compatibility of explosive items being shipped.
Reference: Paragraph 2.2.

4. Answer: A railway employee must inspect the load blocking and bracing, ensure that required placards have been applied, and ensure that the doors close tightly.
Reference: Paragraph 2.2.

5. Answer: The car should be immediately moved to the suspect car track for further inspection.
Reference: Paragraph 2.3.

6. Answer: They are reported using an SF 361 (Transportation Discrepancy Report) in accordance with AR 55-38 (Reporting of Transportation Discrepancies in Shipments).
Reference: Paragraph 2.4.

7. Answer: Because they could act as an intermediate step in propagation of an explosion.
Reference: Paragraph 2.5.