

SUPERVISE THE LAND TRANSPORT OF HAZARDOUS MATERIAL

Subcourse Number TR1030

EDITION 8

US Army Transportation School
Fort Eustis, Virginia 23604-5400

8 Credit Hours

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SUBCOURSE OVERVIEW

This subcourse is designed to teach you to supervise the preparation of materials for shipment and to ensure security and safety requirements are met when shipping hazardous materials.

There are no prerequisites for this subcourse.

This subcourse reflects the doctrine which was current at the time the subcourse was prepared. In your own work situation, always refer to the latest publications.

The words "he," "him," "his," and "men," when used in this publication, represent both the masculine and feminine genders unless otherwise stated.

TERMINAL LEARNING OBJECTIVE

TASK: You will identify procedures for supervising transport of hazardous cargo and ensuring adequate safety measures when transporting hazardous cargo.

CONDITIONS: You will be given information from CFR 49 and the Transportation Security Guide on documenting, labeling, and inspecting hazardous cargo; inspecting and marking transport vehicles; and inspecting loaded hazardous cargo.

STANDARDS: You will demonstrate competency of the task skills and knowledge by correctly responding to 70 percent of the multiple-choice test items which include documenting, labeling and inspecting hazardous cargo; inspecting and marking vehicles; and inspecting loaded hazardous cargo.

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LESSON ONE

SUPERVISE THE LOADING OF HAZARDOUS CARGO

MQS Manual Tasks: 01-7381.00-0010
01-7381.00-0020

OVERVIEW

TASK DESCRIPTION:

In this lesson you will learn to supervise the loading of hazardous cargo.

LEARNING OBJECTIVE:

ACTIONS: Supervise the loading of hazardous cargo.

CONDITIONS: You will be given access to information and extracts from AR 55-355, CFR 49, DOD Regulation 4500.32-R-1, FM 55-30, and TM 55-2200-001-12.

STANDARDS: Supervision of the loading of hazardous cargo will be in accordance with AR 55-355, CFR 49, and FM 55-30.

REFERENCES: The material contained in this lesson was derived from the following publications:

AR 55-355.

CFR 49.

DOD Regulation 4500.32-R, Volume I.

FM 55-30.

TM 55-2200-001-12.

INTRODUCTION

When your unit is tasked with loading hazardous cargo for overland transport, it is your responsibility as a transportation officer to ensure that the hazardous cargo is loaded correctly. The nature of hazardous cargo requires extra supervision on your part to ensure that the cargo is handled safely and loaded securely.

PART A - DOCUMENT, LABEL, AND INSPECT FOR DAMAGE

When dealing with hazardous cargo, you must use strict accountability and careful handling procedures. As a supervisor, you do not have to personally inspect, account for, and handle each piece of cargo; but you should make sure that your unit personnel know how to perform these tasks properly.

Cargo Documentation on Transportation Control and Movement Document or Government Bill of Lading

This part of the lesson describes the process of checking cargo and documentation to ensure the shipment matches the paperwork. As an officer, you must be able to instruct unit personnel on how to perform this task.

The task starts with cargo documentation. All cargo transported overland has some sort of documentation that describes the cargo and identifies the consignor and consignee. The general name for this documentation is "bill of lading" or "waybill." You will commonly encounter two types of waybills: the Transportation Control and Movement Document (TCMD) and the Government Bill of Lading (GBL). Use the TCMD (DD Form 1384) when transporting cargo by government units in government vehicles. Use the GBL (Standard Form 1103) when transporting cargo by a commercial carrier. For this subcourse, you must become familiar with specific blocks of information on these documents that identify cargo types, status, and configuration.

Transportation Control and Movement Document

The TCMD uses codes from DOD Regulation 4500.32-R, Volume I, Military Standard Transportation and Movement Procedures (commonly known as MILSTAMP) to describe cargo. Five blocks of information are used on the TCMD to identify hazardous cargo. Those blocks are keyed by circled numbers in Figure 1-1 and are discussed below.

Item 1: The "Doc ID," or Document Identifier block (block numbers 1 and 32). The Document Identifier code is a three-position alphanumeric field in which the first position is always "T." The letter "E" in the second position indicates a shipment of ammunition and explosives; the letter "J" in the second position indicates a shipment of hazardous materials other than ammunition and explosives. For example, if the Document Identifier shows "TJ," the shipment consists of hazardous material other than ammunition and explosives.

Item 2: The "Commodity Spec Hdlg," or Commodity/Special Handling block (block number 35). The Commodity/Special Handling Code is a five-position alphanumeric field that identifies a particular cargo and provides special information pertaining to a particular shipment. The format of this alphanumeric field is explained in Paragraph 12 of Appendix B of MILSTAMP. MILSTAMP contains a number of codes corresponding to the commodities shipped through the military transportation system. The first three positions of the Commodity/Special Handling Code indicate the general type of commodity being shipped and are shown at Figure 1-2. The fourth position of the code indicates the type of cargo and also shows if the commodity is a hazardous material.

- **Hazardous cargo.** Nearly all classes of hazardous material fall within certain ranges on the first three positions of the code. Ammunition, explosives, most oxidizers, most acids, and radioactive substances have codes ranging from 400 to 499. Petroleum products, other than bulk, have codes ranging from 600 to 609. Chemicals and compressed gases have codes ranging from 630 to 639. These ranges of codes include most types of hazardous material your unit is likely to transport. The commodity code categories are summarized in alphabetical order with a cross reference to specific commodity codes listed in numerical sequence.

<u>Commodity</u>	<u>Codes</u>
Aircraft parts	670-679
Aircraft, unboxed	900-999
Small Arms, Small Arms Ammunition and Inert Component Parts of Explosives	680-689
Hazardous items.	
Ammunition, explosives and other hazardous items, except small ammunition and radio- active waste	400-489
Antisubmarine equipment	790-799
Baggage	360-389
Boats and vehicles	640-649
Bulk cargo, unpackaged, dry or liquid, except POL	200-299
Chemicals	630-639
Construction Materiel	660-669
Drugs and sundries	530-549
Dunnage and lashing	-099
Empty containers	690-699
HHGs	390-399
Instruments and apparatus	650-65A
Lumber and logs	550-569
Machinery and parts	590-599
Mail	610-619
Metal products	570-579
Miscellaneous items	70X-789
Paints and varnishes	620-629
POL items, other than bulk	600-609
POVs	300-359
Radioactive waste	490-499
Reefer cargo, chill above 32.F	100-149
Reefer cargo, freeze, below 32.F	150-199
Special cargo	800-899
Subsistence	500-529
Vehicle parts	580-589

Figure 1-2. Commodity Codes.

The fourth position of the Commodity/Special Handling Code is keyed to Paragraph 14 of Appendix B of MILSTAMP and is shown at Figure 1-3. This figure lists general characteristics of cargoes, including the general types of hazardous cargoes. These characteristics are keyed to an alphanumeric character that is in the fourth position of the Commodity/Special Handling Code. In Figure 1-3, six codes--the characters H, M, Q, Z, 1 and 2--are associated with nonhazardous cargo. Any character other than these in the fourth position of the code indicates hazardous material.

<u>Code</u>	<u>Description</u>
A	Radioactive Substances, UN Class 7 (Radioactive label)
B	Mixed hazardous materials, consolidated only as authorized by USCG regulations, Title 49, CFR. Use with T_2 or T_3 documents only
C	Etiologic Agent, UN Class 6
D	Contaminated cargo (not including hazardous materiel)
E	Empty hazardous materiel containers or packages (empty label)
F	Explosives Class C, UN Class 1, (Explosives C label)
G	Non-flammable compressed gas UN Class 2 (Non-flammable gas label; EXCEPT: (1) oxygen requires an oxidizer label, and (2) fluorine requires poison and oxidizer labels)
H	Subject to damage from heat
I	Explosives Class A, UN Class 1 (Explosive A label)
J	Explosives Class B, UN Class 1 (Explosive B label)
K	Spontaneously combustible substances, UN Class 4 (Spontaneously combustible labels and flammable solid labels)
L	Water reactive substances, UN Class 4 (Flammable Solid labels and Dangerous When Wet labels)
M	Magnetic materiel
N	Dangerous materiel in limited quantities (No label required)
O	Flammable compressed gas, UN Class 2 (Flammable Gas label)
P	Poison Class B, UN Class 6 (Poison label)
Q	Subject to damage from freezing
R	Flammable liquids, UN Class 3 (Flammable liquids label)
S	Poison Class A, UN Class 2 (Poison Gas label) or UN Class 6 (Poison label)
T	Poison Class C, UN Class 6 (Irritant label)
U	Combustible liquids (no label)
V	Miscellaneous hazardous materials, UN Class 9, (no label)
W	Corrosive materials, UN Class 8 (Corrosive label)
X	Flammable solids, UN Class 4 (Flammable Solid label)
Y	Oxidizing materials, UN Class 5 (Oxidizer or Organic Peroxide label)
Z	No special type of cargo code applicable
1	Aircraft engine internal combustion engines and fuel, control devices.
2	Type cargo code not applicable (for Air Force internal use)

Figure 1-3. Type of Cargo.

Sensitive Cargo. Sensitive cargo is a special MILSTAMP cargo category. Sensitive cargo includes small arms, ammunition, and explosives which are a definite threat to public safety and can be used by militant, revolutionary, criminal or other elements for civil disturbances, domestic unrest, or criminal actions. Sensitive cargo is identified in the fifth position of the Commodity/Special Handling Code. If a commodity is sensitive, the fifth position of the Commodity Special Handling Code is either 4, D, M, or U.

Item 3: The "Type Pack" block (block number 39). The Type Pack Block is a two-position alphanumeric field that describes the way a commodity is packaged. Codes for this field are found in Paragraphs 87 through 90 of Appendix B of MILSTAMP and are shown in Figure 1-4. The Type Pack Code is useful for determining what a particular hazardous commodity looks like especially when the commodity may come in a variety of packages. The first position shows the type of container in which the shipment is loaded; the second position identifies who loaded the vans and to what capacity.

Item 4: The "Pieces" column (column a) of the "ADDITIONAL REMARKS OR" block (block 44). The Pieces Column is a numeric field indicating the number of pieces a particular shipment of cargo includes. This information is important in keeping track of a shipment that includes many pieces of hazardous cargo.

Item 5: The "REMARKS AND/OR" Column (block 43). Classified cargo is never identified as such on a TCMD. If cargo is classified, its nature may be inferred from the type of security services required. Any security requirement for a piece of cargo will normally be listed in this block.

Items 3 and 4 of Figure 1-1 can apply to classified and sensitive cargo as well as hazardous cargo.

B-88. MSCVAN, MILVAN AND SEAVAN SHIPMENTS

<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
A_	MSC leased/controlled SEAVAN or MILVAN (MSCVAN)	_N	Loaded to less than capacity by contract shipment consolidation facility, loading completed by military terminal
Y_	MILVAN		
Z_	SEAVAN (second position code for MSCVANS, MILVANS and SEAVANS shown below)		
_A	Loaded to capacity by ocean carrier	_P	Loaded to less than capacity with military cargo by ocean carrier, commingled with commercial cargo in accordance with the MSC Container Agreement and Rate Guide
_B	Loaded to capacity by military terminal		
_C	Loaded to capacity by military shipping activity		
_D	Loaded to capacity by vendor		
_E	Loaded to capacity by contract shipment consolidation facility	_T	Loaded to less than capacity by military shipping activity, loading completed by ocean carrier
_F	Loaded to less than capacity by military shipping activity with loading to capacity completed by contract shipment consolidation facility	_U	Loaded to less than capacity by vendor, loading completed by ocean carrier
_L	Loaded to less than capacity by military shipping activity loading completed by military terminal	_V	Loaded to less than capacity by contract shipment consolidation facility, loading completed by ocean carrier
_M	Loaded to less than capacity by vendor, loading completed by military terminal		
_W	Loaded to less than capacity by vendor, loading completed by contract shipment consolidation facility	_3	Loaded to less than capacity by military shipping activity
		_4	Loaded to less than capacity by vendor
		_5	Loaded to less than capacity by contract shipment consolidation facility
_Z	Empty MILVAN or SEAVAN		

Figure 1-4. Type Pack Codes.

B-89. CONTAINER EXPRESS (CONEX) SHIPMENTS

X_	CONEX (second position based on CONEX serial number below)
0	00001- 99999
1	100000-199999
2	200000-299999
3	300000-399999
4	400000-499999
5	500000-599999
6	600000-699999
7	700000-799999
8	800000-899999
9	900000-999999

B-90. BREAKBULK SHIPMENTS

BD	Bundle
BE	Bale
BG	Bag, burlap or cloth
BL	Barrel
BS	Basket
BX	Box
CA	Cabinet

Figure 1-4 (cont). Type Pack Codes.

<u>Code</u>	<u>Description</u>	<u>Code</u>	<u>Description</u>
CB	Carboy	PC	Piece
CC	HHG containers, wood (federal specification PPP-8-580)	PL	Pail
CL	Coil	PT	Palletized unit load, other than code MW
CM	Container, MAC ISO Lightweight 8 x 8 x 20 ft. air container	RL	Reel
CN	Can	RO	Roll
CO	Container, other than CC, CM, CU, CW, MW, or MX	RT	RORO
CR	Crate	SA	Sack, paper
CS	Case	SB	Skid, box
CT	Carton	SD	Skid
CU	Container, Navy cargo trans- porter	SH	Sheet
CW	Container, commercial highway lift	SL	Spool
CY	Cylinder	SW	Suitcase
DB	Duffelbag	TB	Tub
DR	Drum	TK	Trunk
EC	Engine container	TU	Tube
ED	Engine cradle or dolly	UX	Unitized (use code RT for unitized cargo on RORO)
FK	Footlocker	VC	Van chassis
HA	Hamper	VE	Vehicle
KE	Keg	VO	Vehicle in operating condition
LS	Loose, not packaged	VS	SEAVAN-TOTE
MW	Multi-wall container (formerly referred to as triple wall or tri-wall secured or attached to a warehouse pallet)	WR	Wrapped
MX	Mixed (more than one type of shipping container)		

Figure 1-4 (cont). Type Pack Codes.

US Government Bill of Lading

The US Government Bill of Lading (Standard Form 1103), unlike the TCMD, does not put information about hazardous or sensitive cargo in code. Instead, that information, with the exception of a detailed description of the cargo, appears in a group of blocks in the middle of the form. Figure 1-5 shows a sample GBL keyed with circled numbers.

This is an Accountable Form GPO: 1967-550-931

U.S. GOVERNMENT BILL OF LADING				ORIGINAL	B/L NO.	
TRANSPORTATION COMPANY TENDERED TO			SCAC	ROUTE ORDER/RELEASE NO.		
STOP THIS CAR OR TRUCK AT		IMPORTANT <small>Regulations require Original Shipping Order, and Freight Receipt Receipts and Carrier's Copy to be surrendered to carrier after signature of YES S. Transportation Coy. must be sent to consignee.</small>	CARTRIDGE CONTAINER		DATE B/L ISSUED	
FOR CAR, TRUCK OR CONTAINER INITIALS AND NO.			ORDERED	FURNISHED	ORDERED	FURNISHED
RECEIVED BY THE TRANSPORTATION COMPANY NAMED ABOVE, SUBJECT TO CONDITIONS NAMED ON REVERSE HEREOF, THE PROPERTY HEREINAFTER DESCRIBED, IN APPARENT GOOD ORDER AND CONDITION (CONTENTS AND VALUE UNKNOWN), TO BE FORWARDED TO DESTINATION BY THE SAID COMPANY AND CONNECTING LINES, THERE TO BE DELIVERED IN THE GOOD ORDER AND CONDITION TO SAID CONSIGNEE.			<small>If extra services are ordered see Administrative Directive No. 2 on reverse</small>			
CONSIGNEE (Name, address and ZIP code)			FROM		SPLC	
DESTINATION (Name, address and ZIP code of installation)			FULL NAME OF SHIPPER		GBLOC	
BILL CHARGES TO (Dept./Agency, Bureau/Office, mailing address and ZIP code)			APPROPRIATION CHARGEABLE			
SEALED NUMBERS			FOR CARRIER'S USE ONLY - WAYBILL NO. OR FREIGHT BILL NO.			
APPLIED BY:			Contractor will return unused or unneeded bills of lading to the Government of use from which prepared.			
PACKAGES		DESCRIPTION OF ARTICLES (Use carrier's classification or brief description if possible; otherwise use a clear nontechnical description.)	NUMBERS ON PACKAGES	WEIGHTS*	FOR USE OF DESTINATION CARRIER ONLY	
NO.	FIND				CLASS.	RATE
①		②	③	④	SAMPLE	
Reason			Type		TP	
TARIFF OR SPECIAL RATE AUTHORITIES (CL, TL or Vol. only)						
IF THIS SHIPMENT FULLY LOADS THE CAR OR TRUCK USED, CHECK <input type="checkbox"/> YES			FOR USE OF ISSUING OFFICE			
IF B/L FURNISHED SERVICE AT ORIGIN			CONTRACT OR PURCHASE ORDER NO. OR OTHER AUTHORITY		DATED	
NAME OF TRANSPORTATION COMPANY			F.O.B. POINT NAMED			
DATE OF RECEIPT OF SHIPMENT			ISSUING OFFICER (Name and title)		DATE	
SIGNATURE OF AGENT			ISSUING OFFICE (Name and complete address)			
PER			GBLOC			
CERTIFICATE OF CARRIER BILLING FOR CHARGES - Consignee must not pay any charges on this shipment						
BY (Date)			AT (Actual delivery point)		THE (Name of delivering carrier)	
SHIPPED THE COMMODITY COMPLETE AND IN APPARENT GOOD ORDER EXCEPT AS MAY BE INDICATED HEREAFTER			<input type="checkbox"/> SHORTAGE		<input type="checkbox"/> DAMAGE	
NAME OF DESTINATION CARRIER (Last initial carrier attached to bill shipment)			<input type="checkbox"/> CARRIER READ REPORT ATTACHED		<input type="checkbox"/> SERVICE FURNISHED BY CARRIER AT DESTINATION	
			<input type="checkbox"/> DELIVERY		<input type="checkbox"/> TRUCK-CAR	
			SIGNATURE OF CARRIER'S AUTHORIZED AGENT			

Figure 1-5. US Government Bill of Lading

Key 1, the "PACKAGES" block, lists the number and kinds of packages in the cargo. Key 2, the "DESCRIPTION OF ARTICLES" block, lists standard, in-the-clear descriptions of the cargo. Key 3, the "NUMBERS ON PACKAGES" block, lists the numbers appearing on each piece of cargo if there is more than one piece in a shipment. Key 4, the "WEIGHTS" block, lists the weight of each package and the cubic measurements of each package where required.

Hazardous cargo may be identified in the "DESCRIPTION OF ARTICLES" block (Key 2) by an in-the-clear description or by a United Nations North American hazardous materials identification number. The United Nations North American hazardous identification number is a universally accepted standard of identifying hazardous materials by the type of hazards they represent to property and personnel. The identification numbers are matched to descriptions of the hazards in Section 172.101 of CFR 49. Section 172.101 cross-references United Nations identification numbers with other parts of Section 172 that describe the different hazards. Pages from Section 172.101 appear in Appendix B. To find a description of an item you must--

- locate the Identification Number symbol in column 1.
- note the part of Section 172 that describes the hazardous material involved. This information appears in column 2.
- turn to the appropriate part of Section 172 for a description of the hazards involved with that material.

The hazards description usually appears on the GBL; however, if only the UN identification number appears, consult Section 172.102 in Appendix B.

PROPER LABELING OF HAZARDOUS MATERIALS

Hazardous materials should be readily identifiable. Each piece of hazardous material must display a standard hazardous materials label in accordance with CFR 49. Figure 1-6 shows standard hazardous materials labels. The TCMD often tells you in the REMARKS AND/OR block what type of hazardous materials label a commodity requires. The fourth position of the Commodity/Special Handling Code also indicates whether a hazardous material label is required. The description of the code in MILSTAMP Appendix B, Paragraph 14, includes the type of hazardous materials label that a commodity requires. See Figure 1-3.

The GBL usually indicates the type of hazardous materials label required in the "DESCRIPTION OF ARTICLES" block (Key 2 of Figure 1-5). If it does not, look up the referenced United Nations Identification Number and check the commodity description in CFR 49, Hazardous Materials Table 172-102. Column 2 identifies the item; Column 4 identifies the required labels. It is very important to ensure each piece of hazardous cargo carries the appropriate material label.

POISONOUS MATERIALS

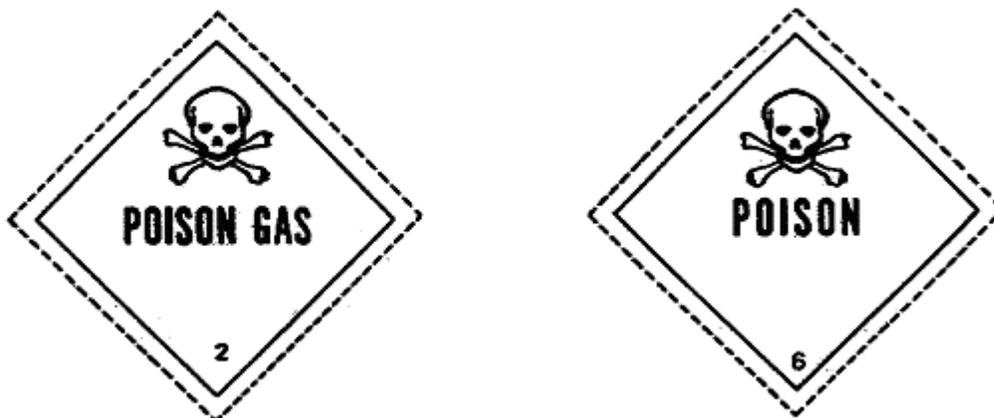


Figure 1-6. Standard Hazardous Materials Labels.

RADIOACTIVE MATERIALS



OXIDIZING MATERIALS



SPONTANEOUSLY COMBUSTIBLE MATERIAL



WATER-REACTIVE MATERIAL



Figure 1-6 (cont). Standard Hazardous Materials Labels.

IRRITATING MATERIAL



COMPRESSED GASES

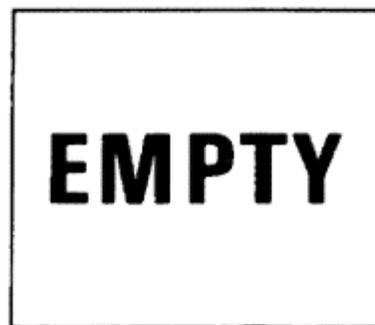


Figure 1-6 (cont). Standard Hazardous Materials Labels.

CORROSIVE MATERIAL



EMPTY



EXPLOSIVES



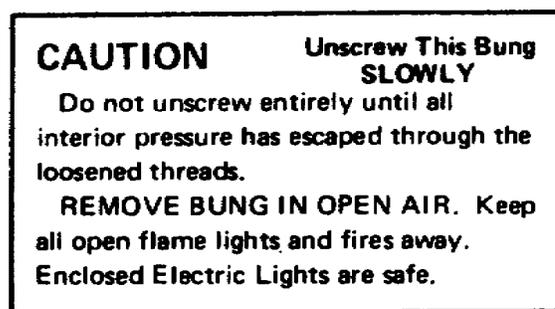
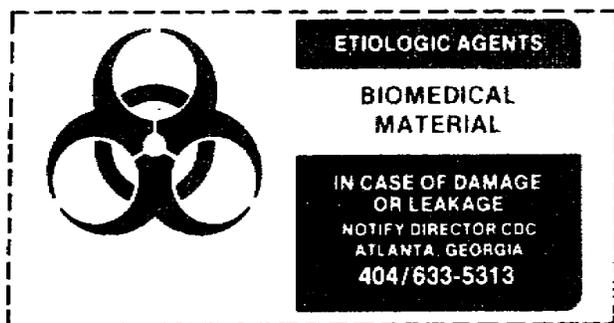
FLAMMABLE LIQUIDS AND SOLIDS



Figure 1-6 (cont). Standard Hazardous Materials Labels.

ETIOLOGIC AGENT*

BUNG*



*DISEASE CAUSING CHEMICALS OR ORGANISMS

*USED TO RELIEVE INTERIOR PRESSURE IN PRESSURIZED CONTAINERS

Figure 1-6 (cont). Standard Hazardous Materials Labels.

INSPECTING CARGO ITEMS FOR DAMAGE

When unit personnel are tallying cargo, instruct them to inspect each piece of cargo for evidence of damage. Evidence of damage includes the following:

- Stains.
- Leakage or spillage.
- Torn, cut, crushed, or mutilated packaging.
- Wetness.
- Loose or rattling contents.

If evidence of damage is found, personnel should immediately notify you or appropriate safety personnel so the damaged cargo can be inspected and repacked or removed from the loading area.

PART B - INSPECT AND PLACARD VEHICLES

Army Regulation 55-355, Military Traffic Management Regulation, requires that motor vehicles carrying hazardous cargo be inspected prior to loading and unloading, and that they display appropriate hazardous materials placards. The regulation also requires a preloading inspection and placarding of all railcars carrying hazardous cargo.

MOTOR VEHICLE AND TRAILER INSPECTION USING DD FORM 626

AR 55-355 requires that motor vehicles and trailers used to transport hazardous materials use DD Form 626 as the inspection document. Personnel will inspect the vehicle and correct any deficiencies noted on the DD Form 626 before the vehicle enters the loading/unloading area.

A sample DD Form 626, Motor Vehicle Inspection (Transportation Hazardous Materials) appears in Figure 1-7. Instructions for completing DD Form 626 appear on the back of the form.

RAILCAR INSPECTION USING CAR CERTIFICATES

If you are shipping hazardous material by railcar, you must conduct two preloading inspections before loading hazardous cargo. These preloading inspections are recorded on a Car Certificate (see Figure 1-8). The Car Certificate is a three-part form. The carrier files the original copy and attaches one copy to each outer side of the fixed placard board of the railcar.

The carrier representative makes the initial inspection, and approves the car for service by signing certification number one on the car certificate. You, as the shipper, or someone authorized by you, must conduct a second preloading inspection. After loading, the shipper must inspect the car again, and sign certification number two on the Car Certificate to indicate that the cargo is properly loaded and is ready for transport. In addition, if the shipment of hazardous cargo is in containers or on trailers, the carrier representative or you, as the shipper, must ensure that these containers are properly secured on the flatcar. The carrier representative or the shipper signs certification number three on the Car Certificate when the containers or trailers holding hazardous cargo are properly secured.

The carrier representative and shipper should consider the following criteria when making preloading or loaded car inspections.

- **Preloading Car Inspection Criteria.** This includes but is not limited to, the following:

- Air and hand brakes must be serviceable.
- Brake shoes must be at least 3/8-inch thick, and in safe and suitable condition for service.
- Journal boxes must be properly packed, oiled, and covered. Trucks and springs must be in good condition. Bearing wedges must not be bent, cracked, or broken. Boxcars must be equipped with journal roller bearings. Friction bearings are no longer allowed in interchange railroad service.

<http://www.amstedrail.com/aar/C7490.htm>

- Coupling and hoses must be in good condition.
- Spark shields must meet safety requirements which include no holes or decayed metal; and no accumulation of oil, grease, or other debris which could support combustion.
- Door runners and channels must be inspected for damage. If door gaps cannot be sealed by stripping, the car will be rejected.
- Placard holders and doorkeepers must be installed in the proper places.
- Cargo space in cars must be swept clean before loading,
- Roofs with holes or decay will be rejected.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIAL)						
GBL. NO.	ORIGIN	DESTINATION				
NAME OF CARRIER						
NAME OF DRIVER						
DATE AND HOUR						
INSTALLATION/ACTIVITY						
DRIVER'S STATE PERMIT NO.						
MEDICAL EXAMINER'S CERTIFICATE AND DATE						
VEHICLE						
TYPE OF VEHICLE <input type="checkbox"/> TRUCK <input type="checkbox"/> TRUCK AND FULL TRAILER <input type="checkbox"/> TRACTOR AND DOUBLE TRAILERS <input type="checkbox"/> TRACTOR AND CLOSED SEMI-TRAILER <input type="checkbox"/> TRACTOR AND FLAT-BED TRAILER		TRUCK NUMBER ORIGIN DESTINATION	TRAILER(S) NUMBER ORIGIN DESTINATION	SLEEPER CAB <input type="checkbox"/> YES <input type="checkbox"/> NO VALID LEASE <input type="checkbox"/> YES <input type="checkbox"/> NO I.C.C. NUMBER		
NOTE: All of the following items shall be checked on empty equipment prior to loading. Items with an asterisk(*) shall be checked on incoming loaded equipment.						
ITEM NO.	CHECK APPROPRIATE COLUMN (See reverse side for explanatory notes)	ORIGIN		DESTINATION		REMARKS (Explain unsatisfactory items; use reverse side if necessary)
		SAT	UNSAT	SAT	UNSAT	
1.	ENGINE, BODY, CAB AND CHASSIS CLEAN					
2.	STEERING MECHANISM					
3.	HORN OPERATIVE					
4.	WINDSHIELD AND WIPERS					
5.	SPARE ELECTRIC FUSES AVAILABLE					
6.	REAR VIEW MIRRORS INSTALLED					
7.	HIGHWAY WARNING EQUIPMENT					
* 8.	FULL FIRE EXTINGUISHER INSTALLED					
9.	LIGHTS AND REFLECTORS OPERATIVE					
10.	EXHAUST SYSTEM					
* 11.	LIQUID PETROLEUM GAS POWERED VEHICLES					
* 12.	FUEL TANK, LINE AND INLET					
13.	COUPLING DEVICES - KINGPIN LOCK					
* 14.	ALL BRAKES OPERATIVE					
* 15.	LANDING GEAR ASSEMBLY OPERATIVE					
16.	SPRINGS AND ASSOCIATED PARTS					
* 17.	TIRES					
18.	CARGO SPACE					
* 19.	ELECTRIC WIRING					
* 20.	TAIL GATE AND DOORS SECURED					
* 21.	FIRE AND WATER RESISTANT TARPULIN					
22.	ANY OTHER DEFECTS (Specify)					
<input type="checkbox"/> APPROVED (If rejected give reasons on reverse under "Remarks". Equipment shall be approved if deficiencies are corrected prior to loading.) <input type="checkbox"/> REJECTED		SIGNATURE (of Inspector) ORIGIN		SIGNATURE (of Inspector) DESTINATION		
ITEMS TO BE CHECKED PRIOR TO RELEASE OF LOADED VEHICLE				ORIGIN	DESTINATION	
23.	MIXTURES OF MATERIAL PROHIBITED BY DOT REGS. ARE NOT LOADED ONTO THIS VEHICLE					
* 24.	LOAD IS SECURED TO PREVENT MOVEMENT					
25.	WEIGHT IS PROPERLY DISTRIBUTED AND VEHICLE IS NOT OVERLOADED					
* 26.	SEALING APPLIED TO CLOSED VEHICLE, FIRE AND WATER RESISTANT TARPULIN APPLIED ON OPEN VEHICLE					
* 27.	SPECIAL INSTRUCTIONS (DD Form 836) FURNISHED DRIVER					
* 28.	COPY OF VEHICLE INSPECTION (DD Form 626) FURNISHED DRIVER					
* 29.	PROPER PLACARDS APPLIED					
* 30.	SHIPMENT MADE UNDER DOT EXCEPTION 688					
SIGNATURE (of Inspector) ORIGIN		SIGNATURE (of Driver) ORIGIN				
SIGNATURE (of Inspector) DESTINATION		SIGNATURE (of Driver) DESTINATION				

SAMPLE

DD FORM 626
1 APR 78

REPLACES EDITION OF 1 JUN 72, WHICH IS OBSOLETE.

Figure 1-7. DD Form 626, Motor Vehicle Inspection (Transporting Hazardous Material) (Front).

EXPLANATORY NOTES	
REFERENCES IN ITALICS BELOW ARE THE APPLICABLE PORTIONS OF THE DOT MOTOR CARRIER SAFETY REGULATIONS (M.C.S.R.) AND THE CODE OF FEDERAL REGULATIONS (C.F.R.) AND REQUIREMENTS ARE ESTABLISHED BY THE DEPARTMENT OF DEFENSE (DOD)	
THE INSPECTOR MUST BE FAMILIAR WITH THE CONTENTS OF THE SAFETY AND EXPLOSIVE REGULATIONS	
<p>MEDICAL EXAMINER'S CERTIFICATE - Certificate must not be over 24 months old. (M.C.S.R.)</p> <p>Item 1, ENGINE, BODY, CAB, AND CHASSIS CLEAN (i.e., no excessive oil or grease) - Inspect to see that engine and compartment are clean, check cab to see that no excessive grease is on cab and cab floor is free of debris, check under cab and chassis for excessive grease. (DOD Requirement)</p> <p>Item 2, STEERING MECHANISM - Inspect to see that steering mechanism is in good condition, in proper adjustment, correctly and securely mounted, and whether the steering gear case is leaking lubricant. Pay particular attention to the pitman arm and tie rod assembly to see that they are securely mounted and not bent out of normal shape. (DOD Requirement)</p> <p>Item 3, HORN OPERATIVE - Inspect to see that horn is securely mounted and of sufficient volume to serve its purpose. (M.C.S.R.)</p> <p>Item 4, WINDSHIELD AND WIPERS - Inspect to see that the windshields of the tractors are free from breaks, cracks or defects which would make operation of the vehicle unsafe, that the view of the driver is not obscured by stickers, that wipers operate properly, and that wiper blades are of proper kind and in good condition. Defroster operative when conditions require it. (M.C.S.R.)</p> <p>Item 5, SPARE ELECTRIC FUSES AVAILABLE - Check to see that at least one spare fuse for each kind and type of installed fuse is carried on vehicle as a spare, or it is equipped with an overload protective device (circuit breaker) (M.C.S.R.)</p> <p>Item 6, REAR VIEW MIRRORS INSTALLED - Every truck and truck tractor shall have installed two rear vision mirrors, one at each side, firmly attached and so located as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. Mirrors must not be cracked or dirty. (M.C.S.R.)</p> <p>Item 7, HIGHWAY WARNING EQUIPMENT - This equipment must include either three red electric lanterns in operating condition and two red flags or three red emergency reflectors and two red flags with standards adequate to maintain them in an upright position, or three red emergency reflective triangles or three bidirectional emergency reflective triangles. Flame producing equipment is prohibited. (M.C.S.R.)</p> <p>Item 8, FULL FIRE EXTINGUISHER INSTALLED - Inspect to see that one full fire extinguisher having an Underwriters' Laboratories rating of 30 B:C or more is securely mounted and readily accessible. (M.C.S.R.)</p> <p>Item 9, LIGHTS AND REFLECTORS OPERATIVE - (Head-Stop-Tail-Front and Rear Clearance) - Inspect all lights and switches, including clearance lights and turn signals; make sure they are not obscured by dirt or grease or have broken lens; high and low beam switch must be operative. EMERGENCY flashers operating on front and rear of vehicle. (M.C.S.R.)</p> <p>Item 10, EXHAUST SYSTEM - Inspect the exhaust system to see that no part is so located as would be likely to result in burning, charring, or damaging the electrical wiring, the fuel supply, or any combustible part of the vehicle. The exhaust system shall discharge to the atmosphere at a location to the rear of the cab or, if the exhaust projects above the cab, at a location near the rear of the cab. (M.C.S.R.)</p> <p>Item 11, LIQUID PETROLEUM GAS POWERED VEHICLES - Inspect LPG burning system to insure compliance with DOT standards prescribed in 49 CFR 393.69. (M.C.S.R.)</p> <p>Item 12, FUEL TANK, LINE, AND INLET - Inspect tanks and fuel lines to see that they are in completely serviceable condition, free from leaks or evidence of leakage and surely mounted. Examine caps for defective gaskets or plugged vents. Inspect the filler necks to see that they are in completely serviceable condition, securely supported and not leaking at joints. (M.C.S.R.)</p>	<p>Item 13, COUPLING DEVICES - KINGPIN LOCK - Inspect without uncoupling to see that the fifth wheel rocker plate and bed are in good condition, properly assembled and mounted, and adequately lubricated. Kingpin lock must operate freely and properly, lock securely, and not show excessive wear. (M.C.S.R.)</p> <p>Item 14, ALL BRAKES OPERATIVE - (Including hand brakes and air pressure warning devices) - Inspect for oil or grease leaks around drum flanges, pedal travel, air or vacuum line leaks, moisture in tanks, compressor build up and governor cut off. Test for proper and adequate brake application. (M.C.S.R.)</p> <p>Item 15, LANDING GEAR ASSEMBLY OPERATIVE - Landing gear assembly must be in good condition, correctly assembled, adequately lubricated, and properly mounted.</p> <p>Item 16, SPRINGS AND ASSOCIATED PARTS - Examine visually the springs, suspension hanger mechanisms, torsion bar assemblies, and auxiliary parts such as U-bolts, shackles, center bolts and hangers, for breakage, improper adjustment, and, as appropriate, lack of lubrication. Air suspensions should not be leaking. (DOD Requirement)</p> <p>Item 17, TIRES - Examine all tires for cuts, bruises, breaks, and blisters. All tires with cuts or injuries extending into the cord body and those worn smooth in the center of the tread are not acceptable. Insure that stones are removed from between duals. Tires must be properly matched on dual-equipped tractors and trailers. (M.C.S.R.)</p> <p>Item 18, CARGO SPACE - Inspect to see that cargo space is clean and in good condition to prevent damage to loading from exposed bolts, nuts, screws, nails, or other inwardly projecting parts. Check floor to make sure it is tight and free of holes. Floors shall not be permeated with oil or gasoline. (C.F.R.)</p> <p>Item 19, ELECTRIC WIRING - Electric wiring must be clean and properly secured, insulation must not be frayed or otherwise in poor condition. There must be no uninsulated wires or improper splices or connections. Wires and electric fixtures inside the body must be protected from the loading. (M.C.S.R.)</p> <p>Item 20, TAILGATE AND DOORS ON CLOSED EQUIPMENT SECURED - Inspect to see that all hinges are tight in body. Check for broken hinges and safety chains. Doors must close securely. (M.C.S.R.)</p> <p>Item 21, FIRE AND WATER RESISTANT TARPULIN - If shipment is made on open equipment, check to make sure the loading is properly covered with a fire and water resistant tarpaulin. Explosive material packed in fire and water resistant containers and transported on flat-bed vehicles are not required to be covered with fire and water resistant tarpaulins. (C.F.R.)</p> <p>Item 22, ANY OTHER DEFECTS (Specify) - Self Explanatory.</p> <p>Item 23, MIXTURES OF MATERIAL PROHIBITED BY DOT REGS. ARE NOT LOADED ONTO THIS VEHICLE - Check carefully to prevent loading of incompatible explosives. (C.F.R.)</p> <p>Item 24, LOAD IS SECURED TO PREVENT MOVEMENT - Self Explanatory.</p> <p>Item 25, WEIGHT IS PROPERLY DISTRIBUTED AND VEHICLE IS NOT OVERLOADED - Loading shall be distributed in accordance with the approved load plan, when available, or when not available, a plan agreed upon by the shipper and the carrier. The weight of the load shall not exceed the capacity of the vehicle established by the carrier. The gross axle weights and the gross vehicle weight shall not exceed the limits imposed by the states through which the vehicle is routed. The carrier shall inform the shipper of the state(s) law requirements. (DOD Requirement).</p> <p>Item 26, 27, and 28 - Self Explanatory.</p> <p>Item 29, PROPER PLACARDS APPLIED - Four standard placards applicable to the load will be furnished the carrier and insure they are conspicuously displayed, one in front, rear, and each side. (C.F.R.)</p> <p>Item 30, SHIPMENT MADE UNDER DOT EXCEPTION 688 - This item will be checked when a shipment is made under the provisions of DOT Exception 688. When checked, it signifies that the shipment was loaded in compliance with carrier's advice on maximum weight and that the driver is relieved from certifying to Items 23, 24, and 25. (DOD Requirement)</p>
REMARKS	

SAMPLE

Figure 1-7 (cont). DD Form 626, Motor Vehicle Inspection (Transporting Hazardous Material) (Back).

----- RAILROAD

CAR CERTIFICATE

No. 1 ----- Station, -----, 19 --

I hereby certify that I have this day personally examined Car No. ----- and that (as applicable to the type of car) there are no holes or other openings in the roof, sides, ends or car lining, through which sparks might enter; that the floor is clean and in good condition and it and the car lining are free of projecting uncovered pieces of metal or nails; that I have examined all the journal boxes and that they are properly covered, packed and oiled and that the air brakes and hand brakes are in condition for service.

Railway Employee Inspecting Car.

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, and that placards have been applied, according to the regulations prescribed by the Department of Transportation; that the doors of cars so equipped fit or have been stripped so that sparks cannot enter.

Shipper or his Authorized Agent.

Railway Employee Inspecting Bracing.

Note: A shipper must decline to use a car not in proper condition.

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.

Figure 1-8. Car Certificate Used For Railcar Inspection.

- Loaded Car Inspection Criteria. This includes, but is not limited to, the following:
 - Load must be properly blocked, braced, and shored in accordance with Military Standard Transportation and Movement Procedures (MILSTD) or other military service drawings.
 - Shipment must not contain any combination of explosives or dangerous articles prohibited by Department of Transportation (DOT) regulations from being loaded, transported, or stored together.
 - All items must be in good condition and marked in accordance with DOT and other applicable regulations.
 - Placards must be properly placed.

PLACARD VEHICLES/RAILCARS IN ACCORDANCE WITH CFR 49 AND AR 55-355

Department of Transportation hazardous materials transportation regulations in CFR 49 and Army Regulation 55-355 require that all vehicles/railcars transporting hazardous materials must have placards indicating the nature of their cargo. Every vehicle/railcar with any quantity of a hazardous material must be placarded on each end and on each side with the type of placards specified in the CFR 49 tables reproduced in Figure 1-9. The various hazardous materials placards look like larger versions of the hazardous materials labels.

A vehicle/railcar carrying two or more classes of hazardous materials requiring different placards specified in Figure 1-9, Table 2 may be placarded DANGEROUS in place of the different placards. However, when 5,000 pounds or more of one class of hazardous material is loaded in a vehicle/railcar, the vehicle/railcar must display the appropriate placard for that hazardous material in addition to the DANGEROUS placard. This regulation does not apply to a portable tank, cargo tank, or tank car. No placard is required on a vehicle if it contains less than 1,000 pounds total of any of the materials listed in Figure 1-9, Table 2.

If your unit is responsible for shipping hazardous materials, you must provide the carrier with the appropriate hazardous materials placards. If your unit is a motor or rail transportation unit, you must obtain appropriate hazardous materials placards from the shipper at the time the cargo is loaded. If hazardous material is shipped in freight containers having a capacity of 640 cubic feet or greater, each freight container must display the appropriate placard.

TABLE 1

If the motor vehicle, rail car, freight container contains a material classed (described) as--	The motor vehicle, rail or car or freight container must be placarded on each side and each end--
Class A explosives.....	EXPLOSIVES A.
Class B explosives.....	EXPLOSIVES B. ¹
Poison A.....	POISON GAS.
Flammable solid (DANGEROUS WHEN WET label only)	FLAMMABLE SOLID W. ²
Radioactive material.....	RADIOACTIVE. ²
Radioactive Material:	
Uranium hexafluoride, fissile (containing more than 1.0 pct U ²³⁵).....	RADIOACTIVE ³ AND CORROSIVE ⁴
Uranium hexafluoride, low specific activity, (containing 1.0 pct or less U ²³⁵)	RADIOACTIVE ³ AND CORROSIVE ⁴

¹ EXPLOSIVES B placard not required if the freight container, motor vehicle, or rail car contains class A explosives and is placarded EXPLOSIVES A as required.

² FLAMMABLE SOLID "W" placard is required only when the DANGEROUS WHEN WET label is specified for a material classed as a Flammable solid.

³ Applies only to a quantity of packages bearing the RADIOACTIVE YELLOW III label.

⁴ CORROSIVE placard not required for shipments of less than 1000 pounds gross weight.

Figure 1-9. Placards Required When Transporting Various Hazardous Materials (Source: CFR 49).

TABLE 2

If the motor vehicle, rail car or freight container contains a material classed (described) as--	The motor vehicle, rail car or freight container must be placarded on each side and each end--
Class C explosives.....	DANGEROUS. ^{1, 7}
Blasting agents.....	BLASTING AGENTS. ^{7, 8}
Nonflammable gas.....	NONFLAMMABLE GAS. ⁶
Nonflammable gas (Chlorine).....	CHLORINE. ⁵
Nonflammable gas (Fluorine).....	POISON.
Nonflammable gas (Oxygen, pressurized liquid, cryogenic liquid).....	OXYGEN.
Flammable gas.....	FLAMMABLE GAS.
Combustible liquid.....	COMBUSTIBLE. ^{2, 3}
Flammable liquid.....	FLAMMABLE.
Flammable solid.....	FLAMMABLE SOLID. ⁴
Oxidizer.....	OXIDIZER. ^{7, 8}
Organic Peroxide.....	ORGANIC PEROXIDE.
Poison B.....	POISON.
Corrosive material.....	CORROSIVE.
Irritating material.....	DANGEROUS.

¹Applies only to a Class C explosive required to be labeled with an EXPLOSIVE C label.

²COMBUSTIBLE placard required only when a material classed as a combustible liquid is transported in a packaging having a rated capacity of more than 110 gallons, a cargo tank, or a tank car.

Figure 1-9 (cont). Placards Required When Transporting Various Hazardous Materials (Source: CFR 49).

³ A FLAMMABLE placard may be used on a cargo tank or portable tank during transportation by highway, rail or water, and on a compartmented tank car containing materials classed as Flammable liquid and Combustible liquid. However, no EMPTY placard may be displayed on an "empty" Combustible liquid tank car.

⁴ FLAMMABLE placard may be displayed in place of a FLAMMABLE SOLID placard except when a DANGEROUS WHEN WET label is specified for the material.

⁵ CHLORINE placard required only for a packaging having a rated capacity of more than 110 gallons; the NONFLAMMABLE GAS placard for packagings having a rated capacity of 110 gallons or less.

⁶ A NONFLAMMABLE GAS placard is not required on a motor vehicle displaying a FLAMMABLE GAS placard.

⁷ BLASTING AGENTS, OXIDIZER, and DANGEROUS placards need not be displayed if a freight container, motor vehicle, or rail car also contains Class A or Class B explosives and is placarded EXPLOSIVES A or EXPLOSIVES B as required.

⁸ Except for shipments by water, OXIDIZER placards need not be displayed if a freight container, motor vehicle or rail car also contains blasting agents and is placarded BLASTING AGENT as required.

Figure 1-9 (cont). Placards Required When Transporting
Various Hazardous Materials (Source: CFR 49).

PART C - INSPECT LOADED CARGO

You should always ensure that cargo is properly loaded to prevent damage to cargo, damage to equipment, and injury to personnel. This part will discuss the procedures and regulations to follow when loading hazardous cargo.

CARGO COMPATIBILITY RULES OF CFR 49

Many types of hazardous materials are incompatible with one another. Transporting incompatible hazardous materials together is prohibited by CFR 49.

Section 174.81 of CFR 49 contains a Segregation and Separation Chart of Hazardous Materials in railcars. The table shows which hazardous materials (principally ammunition and explosives) must not be loaded or stored together and is located in Appendix B of this subcourse. The table is a matrix listing hazardous materials in horizontal row and vertical column. The articles listed here must not be loaded or stored together. For example, detonating fuzes Class A, with or without radioactive components (g in the column) must not be loaded or stored with high explosives or propellant explosives Class A (b in the row). If a dotted line appears at an intersection of a row and column, the articles listed may be loaded or stored together. Exceptions and limitations are indicated by footnotes.

Section 177.848 of CFR 49 contains the Segregation and Separation Chart of Hazardous Materials for determining compatibility when shipping by motor vehicle. The table, which is reproduced in the extract of CFR 49 (see Appendix B) is read in the same manner as the table in Section 174.81.

In general, hazardous materials that are not specified as incompatible in these tables may be shipped together. Hazardous materials may generally be transported with nonhazardous materials. There is one major exception to this rule: A carrier may not transport any package of material bearing a poison label with food stuffs, feed, or any edible material intended for consumption by humans or animals.

MOTOR VEHICLE TRANSPORT

The following measures are required in the loading and securing of hazardous materials when transport is by motor vehicle.

General Handling Requirements

- Secure and brace packages to prevent movement in the vehicle.

- Do not permit smoking or open flame while loading or unloading.
- Set vehicle handbrake while loading and unloading.
- Do not use tools which may damage packages for loading or unloading.
- Do not permit extremes of temperature during transport.
- Load flammable solids, oxidizing materials, or corrosive liquids with compatible cargo, so they are easily accessible.
- Severely restrict use of cargo heaters when hazardous material is being transported.

Explosives Handling Requirements

- Do not load or unload explosives from any motor vehicle with the engine running.
- Do not use bale hooks and other metal tools for loading, unloading, or handling.
- Do not roll packages except for barrels and kegs.
- Keep all packages away from hot vehicle tailpipes and sources of sparks.
- Equally distribute the weight of the cargo over the load bed as much as possible.
- Secure tarpaulins by means of rope, wire, or other tiedowns.
- Do not load or carry Class A explosives on any vehicle or combination of vehicles if--
 - more than two cargo-carrying vehicles are in the combination.
 - any full trailer in the combination has a wheel base of less than 184 inches.
 - any vehicle in the combination is a tank motor vehicle.

- the other vehicle in the combination contains any initiating explosive, packages of radioactive materials with "Yellow III" labels, Class A or B poisons, or hazardous materials in a portable tank.
- Ensure transport vehicles have tight floors with no projections that may damage packages.
- Do not transport detonating primer on the same motor vehicle with any Class A or Class B explosive.
- Contain explosives entirely within the body of the motor vehicle.
- Close the vehicle tailgate and secure it during transport.
- Transport explosives in a closed vehicle or in an open vehicle cargo bed covered with a tarpaulin.
- Secure and separate packages or containers which may damage explosives.
- Do not transfer explosives on any public highway, street, or road, except in an emergency.
- Do not load liquid nitroglycerin, desensitized liquid nitroglycerin, or diethylene glycol dinitrate directly above any other explosive, or in any quantity in excess of 900 quarts on one motor vehicle or 10 quarts in any one individual container. The net load should not exceed 7,500 pounds.
- No handling or transportation restrictions are necessary for practice ammunition containing no explosive or other dangerous articles. This includes cartridge cases, dummy or drill cartridges, sandloaded projectiles, sandloaded bombs, empty projectiles, empty mines, empty bombs, solid projectiles, or empty torpedoes. Rotating bands should be appropriately protected against deformation.

Flammable Liquids Handling Requirements

- Stop vehicle engine unless it is operating a pump.
- Bond and ground cargo containers prior to and during transfer of cargo. For containers which are not in metallic contact with each other, provide either metallic bonds or ground conductors for the neutralization of possible static charges prior to and during transfers of flammable liquids between such containers. Connect an electric conductor to the container to be filled and

subsequently connect the conductor to the container from which the liquid is to come, in that order. To provide against ignition of vapors by discharge of static electricity, make the latter connection at a point well removed from the opening from which the flammable liquid is to be discharged.

- Bond and ground cargo tanks before and during transfer of cargo. When a cargo tank is loaded through an open filling hole, one end of a bond wire should be connected to the stationary system piping and the other end to the shell of the cargo tank to provide a continuous electrical connector.

Handling Requirements for Flammable Solids and Oxidizers

- Close and secure vehicle tailgate during transport.
- Transport cargo in a closed vehicle, an open vehicle cargo bed covered with a tarpaulin, or in watertight containers.
- Keep cargo dry during handling and transport.
- Load material subject to spontaneous combustion or heating to afford adequate ventilation so the cargo does not overheat and catch fire. Unload vehicle as soon as practicable after reaching its destination.

Corrosive Liquids Handling Requirements

- Handle carboys and other containers individually when loaded or unloaded by hand.
- Load carboys only one tier high unless they are boxed or crated, or are in barrels or kegs.
- Cargo should be stacked, blocked, and braced to prevent damage during transport.
- Load storage batteries so they are insulated against short circuit.

Compressed Gases Handling Requirements

- Ensure the floors of the vehicle cargo bed are as flat as possible.
- Load cylinders onto any motor vehicle not having a floor or platform only if the vehicle is equipped with suitable racks.

Poisons Handling Requirements

- Use all practicable means to minimize the spread of poisons into the atmosphere during loading or unloading.
- Load and unload away from public places and allow only necessary personnel to be present.
- Do not permit the transportation of a Class A poison or an irritating material if there is any interconnection between packagings.

Radioactive Material Handling Requirements

- Limit the number of packages of radioactive materials in a vehicle so that the total transport index number, as determined by adding together the transport index numbers on the labels of the individual packages, does not exceed 50. The transport index of a package is the highest radiation dose rate, in millirem per hour, at three feet from any accessible external surface of the package.
- Packages of radioactive material bearing RADIOACTIVE YELLOW II or RADIOACTIVE YELLOW III labels must not be placed in a motor vehicle or in any other place closer than the distances shown in Figure 1-10, to any area which may be continuously occupied by passengers, employees, animals or undeveloped film. If more than one of these packages is present, compute the distance from Figure 1-11 based on the total transport index number (determined by adding together the transport index numbers on the labels of the individual packages). Where more than one group of packages is present in any single location, a single group may not have a total transport index greater than 50. Each group of packages must be handled and stowed not closer than 6 meters (20 feet), measured edge to edge, to any other group.
- Load shipments of low-specific activity materials to avoid spilling and scattering loose materials.
- Block and brace packages so that they cannot change position during transportation.
- Survey each vehicle used for transporting radioactive materials under exclusive-use conditions with radiation detection instruments after each use. Fixed and nonfixed radiation should not exceed the standards listed in Section 173.443 and 177.843 of CFR 49 (these standards are not provided).

RAIL TRANSPORT

The following measures are required in loading and securing hazardous materials when transport is by rail.

Explosives Forbidden for Transport

- Explosives which ignite spontaneously or undergo marked decomposition when subjected to high temperatures (167°F or greater) for 48 consecutive hours.
- Explosives containing an ammonium salt and a chlorate, or an acidic metal salt and a chlorate.
- Leaking or damaged packages of explosives.
- Nitroglycerin or diethylene glycol dinitrate.
- Loaded firearms.
- Fireworks that combine an explosive and a detonator or blasting cap.
- Fireworks that contain yellow or white phosphorous.
- Toy torpedoes with maximum outside dimension exceeding 7/8 inch, or toy torpedoes containing a mixture of potassium chlorate, black antimony, and sulfur with average torpedo weight exceeding four grains.

Total transport index	Minimum separation distances in feet to nearest undeveloped film for various times of transit					Minimum distance in feet to area of persons or minimum distance in feet from dividing partition of cargo compartments
	Up to 2 hours	2-4 hours	4-8 hours	8-12 hours	Over 12 hours	
None.....	0	0	0	0	0	0
0.1 to 1.0....	1	2	3	4	5	1
1.1 to 5.0	3	4	6	8	11	2
5.1 to 10.0	4	6	9	11	15	3
10.1 to 20.0	5	8	12	16	22	4
20.1 to 30.0	7	10	15	20	29	5
30.1 to 40.0	8	11	17	22	33	6
.1 to 50.0	9	12	19	24	36	7

NOTE: The distance in the table must be measured from the nearest point on the packages of radioactive materials.

Figure 1-10. Separation Distances for One Package of Radioactive II and III Cargo (Source: CFR 49).

Total transport index	Minimum separation distance in feet to nearest undeveloped film ¹	Minimum distance in feet to area of persons, or minimum distance in feet from dividing partition of a combination car ²
None.....	0	0
0.1 to 10.0.....	15	3
10.1 to 20.0.....	22	4
20.1 to 30.0.....	29	5
30.1 to 40.0.....	33	6
40.1 to 50.0.....	36	7

¹In feet to nearest undeveloped filmed.

²In feet to area of persons, or minimum distance in feet from dividing partition of a combination car.

NOTE: The distance in the table must be measured from the nearest point on the packages of radioactive materials.

Figure 1-11. Separation Distances For More than One Package of Radioactive II AND III Cargo.

Loading Requirements for Explosives

- Load and secure Class A explosives so that the ends of the wooden boxes do not bear against sides of fiberboard boxes and there are no pressure points on the boxes.
- Load large (500 lbs or more) explosive bombs, unfuzed projectiles, rocket ammunition, rocket motors, and other Class A and Class B explosives, which are not packed in boxes, in stock cars or in flat-bottom gondola cars only if they are adequately braced.

- Load Class A and Class B explosives, which cannot be loaded in closed cars due to their size, in open-top cars or on flatcars, provided they are protected from the weather and accidental ignition.
- Load boxes of high explosives; low explosives; or black powder packed in long cartridges, bags, or sift-proof liners and containing no liquid explosive ingredient, on their sides or ends.
- Do not load Class A explosives higher than the car lining unless additional lining is provided as high as the load.
- When the cargo of a car includes any explosives, distribute the weight of the cargo to equalize the weight on each side of the car and over the trucks.
- Load wooden kegs, fiber kegs, barrels, and drums on their sides or ends.
- Do not place packages of explosives in the space opposite the doors unless the doorways are boarded on the inside as high as the cargo. This does not apply to palletized packages if they are properly braced.
- Securely block packages and brace them to prevent the packages from changing position, falling to the floor, or sliding into Each other.
- Do not drop packages during handling.
- Ensure planks for rolling trucks from platforms to cars have beveled ends.
- Ensure loading platforms and the workmens's shoes are free from grit.
- Take all possible precautions against fire.
- The shipper is responsible for furnishing all materials needed to stow and secure explosives on or in a railcar.
- Do not load explosives into a railcar equipped with any type of lighted heater or open-flame device, or electric devices having exposed heating coils.
- Use properly loaded, blocked, and braced container cars; freight containers on flatcars; and gondola cars to transport Class A explosives, except black powder in metal containers.

- Ensure that all freight containers used for transporting Class A explosives are weatherproof, allow for secure blocking and bracing of cargo inside, and can maintain structural integrity of itself and cargo under an 8 mph impact.
- Do not use drop-bottom railcars to transport freight containers of Class A explosives.
- You may transport Class A and B explosives in trucks or trailers on flatcars if cargo is protected from the weather.
- Class A explosives and initiating or priming explosives may not be together in the same railcar.
- Car certificates are not required for Class C explosives.

Loading Requirements for Flammable Gases

- Do not transport flammable gases in a railcar equipped with any type of open-flame device, or an internal combustion engine.
- Secure cylinders containing compressed gases in an upright position to prevent their overturning, or load them in a horizontal position.
- Do not transport cylinders containing compressed gases in hopper-bottom cars.

Loading Requirements for Poisons

- Do not transport poison gas in the same car with any edible material intended for consumption by humans or animals.
- Transport Class A poisons in DOT approved containers or tanks, and securely block and brace them.
- Transport Class A Poisons in carload lots; however, gas-filled projectiles may be transported in less-than-carload lots.
- Ensure each shipment of Class A Poisons is accompanied at all times by a qualified escort supplied with equipment to handle leaks and other packaging failures which could result in escape of the gas.
- When transporting Class A Poisons in a tank, securely mount on a railcar especially provided for it or on a gondola car prepared with substantial wooden frames and blocks.

- Transport drums of Class A Poisons with the filling holes up, and securely block and brace them against any movement.
- When transporting Class A Poisons in drums in a boxcar, load drums from ends of the car toward the space between the car doors, and there brace them with center gates and wedges.

Loading Requirements For Flammable Liquids

- Do not load flammable liquids in a railcar equipped with any type of lighted heater open-flame device or internal combustion engine.
- You may transport metal barrels or drums containing flammable liquids in a steel gondola, flatcar, or stock car. However, do not transport them in a hopper bottom car.
- Do not transport flammable liquids bearing a POISON label in the same car with edible material intended for consumption by humans or animals.

Loading Requirements For Flammable Solids

- Do not transport poisonous, flammable solid material bearing a POISON label with foodstuffs, feed, or any other edible material intended for consumption by humans or animals.

Loading Requirements for Oxidizers

- Do not transport oxidizer material bearing a POISON label in the same car with foodstuffs, feed, or any other edible material intended for consumption by humans or animals.

Loading Requirements for Radioactive Materials

- Limit the number of packages of radioactive material transported in a railcar to a number making a total transport index of 50. The transport index and total transport index are determined in the same manner as for transport by motor vehicle. This provision does not apply to exclusive-use shipments.

- Do not place packages of radioactive material bearing RADIOACTIVE YELLOW-II or RADIOACTIVE YELLOW-III labels closer than three feet to an area which may be continuously occupied by any passenger, rail employee, or shipment of animals; nor closer than 15 feet to any package containing undeveloped film (if so marked). If more than one package of radioactive materials is present, the distance must be computed from Figure 1-11 on the basis of the total transport index number (determined by adding together the transport index numbers on the labels of the individual packages) of packages in the car.
- Ensure adequate transport controls to assure that no Class III shipment is transported in the same railcar with any other radioactive material shipment. In loading and storage areas, segregate each fissionable (fissile) Class III shipment by a distance of at least 20 feet from other packages required to bear a RADIOACTIVE label.
- Ensure personnel do not remain unnecessarily in a railcar containing radioactive materials.
- Securely block and brace all packages of radioactive material to prevent movement during transport.
- In the case of packages shipped under the exclusive-use provision, ensure the radiation level does not exceed 2 millirem per hour in any normally occupied position in the transport vehicle or adjacent railcar.
- Survey each exclusive-use railcar used for transporting radioactive materials with appropriate radiation detection instruments after each use. A vehicle may not be returned to service until the radiation dose rate at any accessible surface is 0.5 millirem per hour or less, and all significant removable radioactive surface contamination has been removed.
- Stencil any exclusive-use car with the words FOR RADIOACTIVE MATERIALS USE ONLY in letters at least 3 inches high in a conspicuous place on both sides of the exterior of the car. Keep the car closed at all times other than during loading and unloading.

Loading Requirements for Corrosive Materials

- Do not transport carboys of corrosive liquids by rail in a container car.
- Load, block, and brace packages of corrosive liquids being transported so that they cannot change position during transport.
- Place less-than-carload shipments of corrosive liquids in carboys near the doorway of the car and nail wooden strips to the car floor so that the liquid from a broken carboy will drain toward the doorway and outside the car.
- When carrying a less-than-carload shipment of corrosives in carboys, cover the floor around carboy boxes with clean, dry sand or earth.
- Handle carboys with the necks up.
- Protect electric storage batteries to prevent short circuits; do not load or store them with explosives.
- Do not use wet electric storage batteries in refrigerator or plug-door type cars unless the car: have vents which prevent an accumulation of gas within the car.
- When transporting nitric acid with other corrosive liquids in carboys, separate it from the other carboys. Nail a 2-x 6-inch plank, set on edge, across the car floor at least 12 inches from the nitric acid carboy.

PROPERLY SECURED CARGO

Secure all cargo to prevent damage. Secure hazardous cargo not only to prevent damage to the cargo, but also to prevent damage to equipment and injury to personnel. Secure by bracing, blocking, tying down, and covering. FM 55-30, Army Motor Transport Units and Operations, describes techniques used to secure cargo on motor vehicles. TM 55-2200-001-12, Application of Blocking, Bracing, and Tiedown Materials for Rail Transport, describes techniques used to secure cargo on railcars. CFR 49 includes securing requirements for hazardous cargo such as detonators, flammable cryogenic liquids, and flammable gases. Consult each of these sources to determine the proper measures for securing a particular hazardous cargo.

The following are general criteria for determining if cargo is properly secured.

- Block, brace, or lash cargo so that no movement can occur during transport.
- Load boxes and crates so that the stronger sides are parallel with the direction of vehicle movement.
- Load drums, kegs, carboys, and cylinders so that their openings (bungs, valves, necks) are face up.
- Adequately protect materials that are sensitive to shock, puncturing, denting, or crushing by using crates, crib blocking, or other appropriate methods.
- Secure materials that may emit poisonous or flammable gases while allowing ventilation for the gases.
- Protect materials against moisture with closed containers, closed vehicles, or tarpaulins as appropriate.
- Protect flammable, combustible, and explosive materials from all sources of heat, flame, and sparks.
- Never load cargo higher than the top edge of the sides of the transporting vehicle.
- Load cargo so that the weight is evenly distributed over the load bed.

PROPER DOCUMENTATION OF CARGO

Every shipment of hazardous materials must be appropriately documented by some form of waybill. The forms usually used are the TCMD (DD Form 1384) and the GBL (Standard Form 1103 and accompanying forms).

If you are a transportation officer in a shipping activity, you are responsible for making sure that the carrier receives cargo documentation before starting the haul. If your unit acts as a carrier of hazardous cargo, be sure that unit personnel are in possession of the appropriate waybill before they start a haul.

If a GBL is used, the carrier DOES NOT receive a copy of Standard Form 1103. The carrier receives a document called the Freight Waybill, Standard Form 1106. The carrier will also often carry the consignee's documentation for the shipment. The consignee's documentation is Standard Form 1103b, Memorandum-Property Received. Both Standard Form 1106 and Standard Form 1103b are part of a GBL set, of which Standard Form 1103 serves as the original.

LESSON ONE

Practice Exercise

The following items will test your grasp of the material covered in this lesson. There is only one correct answer for each item. When you have completed the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, study again that part of the lesson which contains the portion involved.

Situation for Items 1 through 3: You are assigned to the transportation office of an ammunition depot in the Northeast US. You are coordinating a shipment of ammunition and explosives from your depot to an Army installation in the Northeast US. A commercial carrier, the Al Irhabi Trucking Company, has been hired for the haul. Documentation for the shipment is a Government Bill of Lading.

1. Which of the following information is on the waybill?
 - A. The name of manufacturer.
 - B. The security classification.
 - C. The required shipping procedures.
 - D. The type of label required for the cargo.

2. Consult the extract of CFR 49 shown in Appendix B, page 81. What type of label must you ensure is on all pieces of a shipment of explosive hand grenades?
 - A. Explosive A.
 - B. Explosive B.
 - C. Explosive C.
 - D. Blasting agents.

3. You are briefing unit personnel who will be loading the carrier's vehicles. You instruct them that if they see an oily stain on a package of C-4 explosive, Class A high explosive they should
 - A. ignore the stain since it is a normal condition.
 - B. annotate the GBL and load the box.
 - C. open the box and check for damage.
 - D. notify you immediately.

Situation for Items 4 through 8: The Al Irhabi Trucking Company has arrived at the depot. You are supervising loading preparations.

4. You are inspecting one of the trucks and find that its horn does not work. The driver says, "It's just a blown fuse. I'll replace it." What action should you take?
 - A. Note the inoperative horn on DO Form 626 and allow the trucks to proceed to the loading area.
 - B. Note the inoperative horn on DD Form 626 and prohibit the truck from entering the loading area until the horn works.
 - C. Approve the truck on DD Form 626, and prohibit it from entering the loading areas.

5. One of the trucks will be carrying 4,500 pounds of C-4 explosive, Class A high explosive and 3,500 pounds of inert 81mm mortar projectiles. What single placard may that truck display?
 - A. Dangerous.
 - B. Explosive A.
 - C. Explosive B.
 - D. Blasting agents.

6. The truck onto which the kegs of black powder are being loaded has an open body. Which of the following measures should be included in securing the cargo?
 - A. The kegs should be covered with a tarpaulin.
 - B. The sides of the cargo bed should be built up with 4x4 lumber.
 - C. The kegs should be blocked on all sides by sandbags.
 - D. The kegs should be braced with steel rods.

LESSON ONE

PRACTICE EXERCISE

ANSWER KEY AND FEEDBACK

<u>Item</u>	<u>Correct Answer and Feedback</u>
1.	B. The security classification. The information is in block 43 of the TCMD and in the description of the cargo on the GBL. (Pages 3 and 11.)
2.	A. Explosive A. Refer to Appendix B. (Page 81.)
3.	D. Notify you immediately. Leaking or damaged packages of explosives are forbidden for shipment. (Page 32.)
4.	B. Note the inoperative horn on DD form 626 and prohibit the truck from entering the loading area until the horn works. The deficiency must be corrected before the vehicle enters the loading area. (Page 18.)
5.	A. Dangerous. You may use the dangerous placard unless the weight of one of the materials is 5,000 pounds or more. (Page 23.)
6.	A. The kegs should be covered with a tarpaulin. Explosives must be transported in a closed vehicle or have a tarpaulin. (Page 29.)

LESSON TWO

SUPERVISE OVERLAND TRANSPORT OF HAZARDOUS CARGO

MQS Manual Tasks: 01-7381.00-0010
01-7381.00-0020

OVERVIEW

TASK DESCRIPTION:

In this lesson you will learn to supervise the transport of cargo and ensure adequate safety and security measures.

LEARNING OBJECTIVE:

ACTIONS: Supervise the transport of hazardous cargo and ensure adequate safety and security measures during transport.

CONDITIONS: You will be given information and extracts from the Transportation Security Guide.

STANDARDS: Supervise transport and ensure adequate safety and security measures in accordance with AR 55-355 and the Transportation Security Guide.

REFERENCES: The material contained in this lesson was derived from the following publications:

AR 55-355
Transportation Security Guide

INTRODUCTION

This lesson discusses the special tasks involved in planning and monitoring the transport and unloading of hazardous cargo.

To properly supervise the transport and unloading of hazardous cargo, you must be able to--

- plan transport of cargo.
- inform carrier of security precautions.
- observe safety and security precautions during loading and unloading.

PART A - PLAN TRANSPORT OF CARGO

The safety of individuals and the environment are prime considerations in the shipment of hazardous materials. Some of these materials require special security precautions. Careful planning is imperative before undertaking shipment of hazardous materials.

SECURITY REQUIREMENTS

The security service requirements for arms, ammunition, and explosives (AA&E) are determined by a categorization defined by DOD Manual 5100.76. There are four major categories of AA&E. Examples of each category are described in extracts of the Transportation Security Guide in Appendix B. The minimum security service requirements for various shipments of the categories of arms, ammunition, and explosives appear below.

Category I

For truckload shipments of Category I AA&E the following requirements apply:

- Security Escort Vehicle Service (SEVS).
- Exclusive use of vehicle.
- Vehicle must be locked and sealed by the shipper.
- Trip lease may not be used.
- Single-line haul is required.
- When two or more vehicles are in convoy, drivers must be in sight of other vehicles at all times. Convoy will require only a single escort vehicle.
- Stop off in transit authorized.

For less-than-truckload shipments of Category I AA&E, the following requirements apply:

- Armed Guard Surveillance (AGS).
- SEVS.
- Exclusive use of vehicle.
- Vehicle must be locked and sealed by the shipper unless shipment requires open equipment.

- CONEX or similar container may be used.
- Trip lease may not be used.
- Single-line haul is required.

For rail shipments, the following requirements apply:

- AGS.
- Military Traffic Expediting (MTX) Service.
- Railcars must be locked and sealed by the shipper.
- Use Category I motor regulations for associated motor movement

Category II

The minimum security service requirements for truckload shipments of Category II arms, ammunition, and explosives appear below:

- AGS.
- Exclusive use of vehicle.
- Vehicle must be locked and sealed by the shipper.
- Trip lease not authorized.
- Single-line haul is required.
- Stop off intransit authorized.

For less than truckload shipments, these requirements apply:

- AGS.
- CONEX or similar container may be used.
- Cargo must be packaged to a weight of at least 200 pounds, banded and sealed (if practicable), or container must be locked and sealed by the shipper.
- Single-line haul is required.
- Trip-lease may not be used by carrier.

For rail shipments, these requirements apply:

- Rail surveillance service (RSS) with load divider doors used when available.
- MTX.
- Railcars must be locked and sealed by the shipper.
- Consignee must be notified of impending delivery immediately upon dispatch of shipment.
- Category II motor regulations apply to associated motor movement.

Categories III and IV

The minimum security service requirements for truckload shipments of Categories III and IV arms, ammunition, and explosives appear below.

- Dual Driver Protective Service (DDPS).
- Trip lease may not be used.
- Single-line haul is preferred.
- Locked and sealed by shipper unless open equipment is required.

For less than truckload shipments, these requirements apply:

- DDPS.
- CONEX or similar container may be used.
- Cargo must be packaged to a weight of at least 200 pounds, banded and sealed (if practicable), or container must be locked and sealed by the shipper.
- Trip lease may not be used.
- Single-line haul is preferred.
- Locked and sealed by shipper unless shipment requires open equipment.

For rail shipments, these requirements apply:

- Railcar must be locked and sealed by the shipper.
- RSS.
- MTX
- Consignee must be immediately notified of impending delivery upon dispatch of shipment.
- Category III motor minimum security standards apply to associated motor movement.

ROUTING FOR CARGO

Routing is defined as an order issued by a routing officer specifying the mode of transportation and the means within that mode by which shipment will move.

Responsibility for determining transport routing for cargo depends on the nature of the cargo and the transportation environment. You are responsible for routing shipments of Class C explosives that weigh less than 10,000 pounds. The MTMC Area Command routes Class A and B explosives and all shipments weighing more than 10,000 pounds.

In situations where MTMC is responsible for routing the shipment, you must call the MTMC Area Command and inform them you need a route order. To issue a route order, MTMC must know the preferred mode of transport and the level of security service required by the shipment. The MTMC Area Command will process your request and issue a route order. A route order contains the following information:

- Name(s) of the carrier(s) to be used and contact information for the carrier(s).
- Junction points required by the shipment.
- Miscellaneous instructions required for the proper forwarding of the shipment.
- The period for which the route order is valid.

If your unit routinely ships cargo requiring security services, the MTMC Area command may issue a standing route order that is valid for all shipments to a particular consignee for a specified period.

CARRIER PROVIDING REQUIRED SECURITY SERVICE

Whether you or MTMC determine routing for a shipment, you are responsible (assuming you are the shipper) for contacting the carrier(s) and arranging shipment. If MTMC determines the routing, the carrier it selects will have the capability of providing the required security service. If you are determining the routing, be sure to consult the MTMC Area Command for names of carriers who can provide the required security service. Before you select the carrier, check the carrier's tender/tariff to confirm the availability of the appropriate protective service.

PART B - INFORM CARRIER OF SECURITY PRECAUTIONS

ROUTE AND SCHEDULE FOR HIGHWAY TRANSPORT

If you are using a commercial carrier for the shipment, the route and schedule should have been established at the time you contracted with the carrier. You should confirm route and schedule with the driver(s).

If you are using Army Transportation elements for the shipment, you or someone authorized by you should brief each driver on the transport route and schedule.

ENSURE CARRIER UNDERSTANDS PROTECTIVE SERVICE REQUIREMENTS

Commercial carriers should normally be aware of and understand the safety and security measures required during transport. Army transportation elements may have to be briefed unless they routinely handle transport of hazardous cargo.

You should ensure that the carrier understands the sensitivity of the material being shipped under protective services and the responsibilities and requirements for the type of protective service specified. A commercial carrier should not be informed as to the shipment's classification. If transport is by commercial motor vehicle, ensure that the driver knows how to obtain information on Refuge or Safe Haven (see glossary), if required. Ensure every carrier is instructed on the procedures to follow in case of emergency. These instructions should include the appropriate toll free telephone number to call in case of emergency.

In all cases, emphasize to the carrier representative that, until the consignee accepts delivery, the carrier has custody of the shipment and is responsible for using all appropriate protective measures.

There are two specific responsibilities under this task.

- If transport is via highway, ensure driver receives DD Form 836, Special Instructions for Motor Vehicles Drivers, which is illustrated in Figure 2-1. DD Form 836 is used when hazardous materials are being transported by motor vehicle. The form instructs the driver in general precautions, breakdown procedures, accident procedures, fire procedures, and whatever other measures are necessary. Every driver of the vehicle must acknowledge receipt of the DD Form 836 by signing the appropriate block at the bottom. You or someone authorized by you must complete each driver's DD Form 836. Most of the information required for completing the form should be readily available from the waybill and CFR 49. Fire procedures should be available from your installation's Safety Officer.

- Ensure carrier uses DD Form 1907 where Appropriate. DD Form 1907, Signature and Tally Record is used whenever required as part of a security service for a shipment. The form is illustrated in Figure 2-2. Each carrier representative (commercial or Army) accepting custody of the shipment must acknowledge receipt of the cargo by completing a row of Section B on the form. Section A of the form must be completed by the shipper. If your unit is the shipper, make sure a DD Form 1907 is initiated if the security service requires use of a signature and tally record. Information for Section A should be available from the shipment waybill and route order. If your unit is the carrier, make sure Section B of each DD Form 1907 is completed where and when appropriate (refer to Figure 2-2).

DELAYED OR OVERDUE SHIPMENT OF HAZARDOUS CARGO

If your unit is the shipper, you must notify the consignee and the local security office if a shipment of arms, ammunition, or explosives will be delayed in its arrival. If your unit is the consignee, you must notify the shipping unit Transportation Officer and the local security office if a shipment of arms, ammunition, or explosives is not received within 48 hours of its estimated time of arrival. The MTMC Area Command should also be notified if a shipment of hazardous cargo will be delayed or becomes overdue.

PART C - OBSERVE SAFETY AND SECURITY PRECAUTIONS

EQUIPMENT AND PROCEDURES

Correct equipment and procedures for unloading hazardous cargo are the same as for loading. You learned these procedures in Part C of Lesson 1.

INSPECT CARGO FOR DAMAGE

Inspect cargo for damage during transfer and unloading. Note any evidence of damage on the waybill. If there is evidence of damage to hazardous cargo, especially ammunition and explosives, personnel should immediately inform you of the damage so you can contact appropriate safety personnel. Do not move or disturb the damaged cargo except at the direction of safety personnel.

TALLYING AND REPORTING CARGO DISCREPANCIES

Tally cargo on the TCMD or GBL during every loading, unloading, or transfer operation to prevent shortages. It is especially important to tally arms, ammunition, and explosives. Make sure you can account for every piece of cargo. If cargo discrepancies (lost, damaged, or incomplete) are found follow the appropriate discrepancy reporting procedures. The Transportation Officer at the destination should initiate a Transportation Discrepancy Report (TDR). The initial message should be on the form illustrated in Figure 2-3. Backup documentation, the Standard Form 361, TDR, should be prepared at the same time the Discrepancy Message is prepared. An example of Standard Form 361 is shown in Figure 2-4. Detailed instructions for completing these forms appear in AR 55-38.

JOINT MESSAGEFORM				SECURITY CLASSIFICATION			
PAGE	ORIGINATOR'S UNIT	PRECEDENCE	CLASS	DATE	TIME	EXT	SECURITY GROUP
02 of 02	02	RR	RR	UUUU			0911800Z
<p>FROM: CDR FORT HOOD TEXAS //ITG//</p> <p>TO: CDR TOBYHANNA ARMY DEPOT TOBYHANNA PA</p> <p>TO: ABC TRUCKING CO, DALLAS TX 76233</p> <p>INFO: CDR MTRCEA BAYONNE NJ // MTE-IT//MTE-SS</p> <p>UNCLAS</p> <p>SUBJECT: TDR, CLASSIFIED OR PROTECTED SHIPMENT</p> <ol style="list-style-type: none"> 6191 W45QRE-0031 TRANS OFF, FT HOOD, TX 76544 (W45QRE) TRANS OFF, TOBYHANNA ARMY DEPOT, TOBYHANNA PA 18466 (J25G1W) SAME AS LINE 4 SAME AS LINE 5 ABC TRUCKING TRAILER NO. 01234 . SEAL NO. 446888 INTACT 064-657122 GBL K2 345 678 6191 6191 							
<p>20. TCH W45QRE40140001XX</p> <p>21. RADIOACTIVE DEVICE HSN 5849 #P 123 9876 UNCLAS</p> <p>22. BX</p> <p>23. 1 PC</p> <p>24. OK</p> <p>28. 465 LBS</p> <p>30. REQ A STATEMENT BE FURNISHED THIS CMD INDICATING WHO LOADED SHIPMENT, WHAT WEBE LOADING CONDITIONS AND IF CARRIER INSPECTED</p> <p>31. DOM SCAFFIDO, TMS COM 202-756-1680, AUTOVON 289-1680,</p>							
<p>DD FORM 1731Z (OCN) 1 FEB 73</p>							

SAMPLE

JOINT MESSAGEFORM				SECURITY CLASSIFICATION			
PAGE	ORIGINATOR'S UNIT	PRECEDENCE	CLASS	DATE	TIME	EXT	SECURITY GROUP
01 of 02	JUI	RR	RR	UUUU		AT	ZYUW 0911800Z
<p>FROM: CDR FORT HOOD TEXAS //ITG//</p> <p>TO: CDR TOBYHANNA ARMY DEPOT TOBYHANNA PA</p> <p>TO: ABC TRUCKING CO, DALLAS TX 76233</p> <p>INFO: CDR MTRCEA BAYONNE NJ // MTE-IT//MTE-SS</p> <p>UNCLAS</p> <p>SUBJECT: TDR, CLASSIFIED OR PROTECTED SHIPMENT</p> <ol style="list-style-type: none"> 6191 W45QRE-0031 TRANS OFF, FT HOOD, TX 76544 (W45QRE) TRANS OFF, TOBYHANNA ARMY DEPOT, TOBYHANNA PA 18466 (J25G1W) SAME AS LINE 4 SAME AS LINE 5 ABC TRUCKING TRAILER NO. 01234 . SEAL NO. 446888 INTACT 064-657122 GBL K2 345 678 6191 6191 							
<p>DD FORM 1731Z (OCN) 1 FEB 73</p>							

Figure 2-3. Example of a Transportation Discrepancy Message/Report.

TRANSPORTATION DISCREPANCY REPORT		1. DATE 6301	2. REPORT NUMBER FB4427-0101		FORM APPROVAL CLASS NO 3090-0093				
PART I									
<input checked="" type="checkbox"/> REQUEST FOR INFORMATION (RFI) <input type="checkbox"/> INITIAL NOTIFICATION <input type="checkbox"/> MISCELLANEOUS PROBLEMS									
3. TO (Address 1 copy to carrier and 1 copy to consignee)			4. REPORTING ACTIVITY Transportation Officer Travis AFB. CA 94535						
5. CONSIGNOR DCAS Philadelphia P.O. Box 7478 Philadelphia, PA 19101			6. CONSIGNEE Same as 4.						
7. SHIPPER ABC Manufacturing Co. 1110 W. 47th Street Philadelphia, PA 19105			8. CARRIER ROUTING AND IDENTIFICATION						
9. POINT OF ORIGIN			10. CARRIER'S PRO/FREIGHT BILL NO. M20018						
11. DESTINATION			12. BILL OF LADING NO./TYPE GBL M2-023,954						
13. MODE CODE R	14. DATE CARRIER SIGNED FOR SHIPMENT 6286	15. DATE CONSIGNEE RECEIVED SHIPMENT 6299	16. DATE DISCREPANCY DISCOVERED 6299	17. DATE CARRIER NOTIFIED 6299	18. NAME OF PERSON CONTACTED Mr. Bourne				
19. SEAL NUMBERS AND CONDITION <input type="checkbox"/> INTACT <input type="checkbox"/> BROKEN/MISSING (Include details) N/A									
ACQUISITION DOCUMENT AND/OR TRANSPORTATION CONTROL NO. 20	COMMODITY DESCRIPTION AND/OR NATIONAL STOCK NO. (NSN) 21	TYPE OF PACK 22	QUANTITY DISCREPANT (PIECES) 23	TYPE AND CAUSE CODE 24	ISSUE DATA				VALUE OR COST OF REPAIRS 29
					UNIT OF ISSUE 25	UNITS BILLED/SHIPPED 26	DISCREPANT		
EB4427-3210-0004	Records, Sound 7450-00-581-5740	CT	10	DK	ea	200	100	50	
			10	SS	ea		100	50	
SAMPLE									
30. REMARKS (See preparation instructions of covering regulation for suggested information) Carrier: Confirming telephone conversation 26 Oct 86, 10 cartons damaged to be inspected 31 Oct 86. Also tracing for 10 cartons short. Consignor: Furnish priced copy of shipping document.									
31A. NAME OF PREPARER (Type or print) Agatha Christie					31B. TITLE OS&D Clerk				
31C. TELEPHONE NO. AVN 289-1610 Com 1 202-756-1610			31D. SIGNATURE <i>Agatha Christie</i>						
32. REPLY Priced copy of DD250 attached.									
33A. NAME OF RESPONDENT (Type or print) Stephen King						33B. TELEPHONE NO. 215-546-1172			
33C. ADDRESS DCSA Philadelphia P.O. Box 7478 Philadelphia, PA 19105				33D. SIGNATURE <i>Stephen King</i>			33E. DATE 6332		

NSN 7540-00-965-2403

361 107

STANDARD FORM 361 (11-7-84)

Figure 2-4. Standard Form 361, Transportation Discrepancy Report (TDR).

PART II - (FOR CLAIMS PURPOSES)		34. THIS IS A SURVEY DOCUMENT. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	35. DATE 6343
36. TO: Commander US Army Finance and Accounting Center ATTN: FINCH-GBA Indianapolis, IN 46249			
37. RESPONSIBILITY <input checked="" type="checkbox"/> CARRIER <input type="checkbox"/> SHIPPER/CONTRACTOR <input type="checkbox"/> TRANS. SHIPPING ACTIVITY <input type="checkbox"/> RECEIVER <input type="checkbox"/> OTHER (Specify)			
38. EXCEPTION NOTED ON CARRIERS DELIVERY RECEIPT (If "NO," explain in Remarks) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		39. DOCUMENTS ATTACHED? (If "YES," list in Remarks) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
40. PHOTOGRAPHS ATTACHED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		41. INSPECTION DATA <input checked="" type="checkbox"/> CARRIER INSPECTED (Report attached) <input type="checkbox"/> INSPECTION WAIVED (Waiver attached) <input type="checkbox"/> ORAL WAIVER (Provide name, title, and date in Remarks) <input type="checkbox"/> GOVERNMENT INSPECTED (Report attached)	
42. DISPOSITION DATA <input checked="" type="checkbox"/> REJECTED (Receipt attached) <input type="checkbox"/> REPAIRED AT GOVERNMENT EXPENSE (Bill attached) <input type="checkbox"/> OTHER (Explain in Remarks)		43. REMARKS (See preparation instructions of covering regulation for suggested information)	
Negative results of tracer action on shortage. Heavy castings loaded on top of fragile records which were clearly marked caused damage. No salvage value.		Documents attached: 1. Cy GBL 2. Cy carriers delivery rec. 3. DD Form 250 4. Photographs 5. Carriers inspec. report 6. Msg from A16HHG, non-receipt of property.	
44. DISTRIBUTION OF COPIES MTMCWA-MTW-ITT-D Stock Control A16HHG file		45A. NAME OF PREPARER (Type or print) Perry Mason 45B. TITLE Transportation Officer 45C. TELEPHONE NO. AVN 289-1610 Com 1 202-756-1610 45D. SIGNATURE <i>Perry Mason</i>	
46. ACTION BY REVIEWING OFFICIALS			
A. ABOVE ITEMS HAVE BEEN <input type="checkbox"/> EXPENDED <input type="checkbox"/> RECEIVED	B. INVENTORY ACCOUNT	C. CHARGE/TRANSFER TO:	
D. ACCOUNTING CLASSIFICATION			
E. APPROVED TO HOLD _____ RESPONSIBLE IN THE AMOUNT OF \$ _____ <small>(Name)</small>			
F. APPROVING OFFICIAL	NAME (Type or print) SIGNATURE	TITLE	DATE
47. ACTION BY CLAIMS OFFICE			

SAMPLE

STANDARD FORM 361 BACK (REV. 3-64)

Figure 2-4 (cont). Standard Form 361, Transportation Discrepancy Report (TDR).

COMPATIBILITY RULES OF CFR 49

A compatibility chart for ammunition and explosives appears in Sections 174.81 and 177.848 of CFR 49. A number of these compatibility rules are required and summarized in Lesson 1. Make sure unit personnel understand the compatibility rules and follow them.

LESSON TWO

PRACTICE EXERCISE

The following items will test your grasp of the material covered in this lesson. There is only one correct answer for each item. When you have completed the exercise, check your answers with the answer key that follows. If you answer an item incorrectly, study again that part of the lesson which contains the portion involved.

Situation 1 for Items 1 and 2: You are assigned to the Transportation Office of an arms and ammunition depot in Northwest CONUS. You are coordinating a shipment from the depot to Fort Lewis. In accordance with regulations, you are arranging to have a commercial carrier transport the shipment. Review the extracts from the Transportation Security Guide, Appendix B.

1. The shipment includes light automatic weapons, hand grenades, antipersonnel mines, and C-4 high explosive. What category of security does this shipment require?
 - A. Category I.
 - B. Category II.
 - C. Category III.
 - D. Category IV.

2. You receive a route order for a shipment from the MTMC Area Command. Which of the following information will the route order include?
 - A. The day the shipment must occur.
 - B. Name(s) of the carrier(s).
 - C. Required delivery date.
 - D. Security category required.

Situation 2 for Item 3: A consignee at Fort Lewis requests expedited service on a less-than-truckload shipment of 5,000 pounds of M16 rifles and ammunition. You are making arrangements for this shipment. Review the extracts from the Transportation Security Guide, Appendix B.

3. You contact the Wanker Trucking Company to confirm their ability to provide appropriate protective service for the shipment. Which of the following services must the Wanker Trucking Company be able to provide?
 - A. Armed surveillance.
 - B. Greater security.
 - C. Dual driver protective service.
 - D. Exclusive use of vehicle.

Situation 3 for Items 4 and 5: You are coordinating the loading of a shipment of arms, ammunition, and explosives with representatives of a motor carrier.

4. You are checking to ensure the truck drivers have been issued instructions to use in case of emergency. What form includes this information?
 - A. DD Form 626.
 - B. DD Form 836.
 - C. DD Form 1384.
 - D. DD Form 1907.

5. Who has responsibility for the cargo while it is en route to Fort Lewis?
 - A. Your depot.
 - B. The consignee.
 - C. The MTMC Area Command.
 - D. The carrier.

Situation 4 for Item 6: You are assigned to the Transportation Office at Fort Lewis. You are supervising the receipt of the shipment of arms and ammunition from an ammunition depot.

6. Unit personnel find one crate of hand grenades in excess of the number listed on the waybill. What action should you take?
 - A. Annotate your copy of the waybill.
 - B. Initiate a TDR.
 - C. Telephone the depot.
 - D. Refuse delivery of the extra crate.

LESSON TWO

PRACTICE EXERCISE

ANSWER KEY AND FEEDBACK

<u>Item</u>	<u>Correct Answer and Feedback</u>
1.	B. Category II. Refer to Appendix B. (Page 85.)
2.	B. Name(s) of the carrier(s). The route order contains the name of the carrier and contact information (Page 49.)
3.	D. Exclusive use of vehicle. This is one of the security requirements. (Page 86.)
4.	B. DD Form 836. This form instructs the driver in general precautions, breakdown procedures, etc. (Page 51.)
5.	D. The carrier. He has responsibility while en route. (Page 50.)
6.	B. Initiate a TDR. This form is used to report discrepancies in shipments. (Page 55.)