

**TRAINING PROGRAM FOR THE
FAMILY OF MEDIUM TACTICAL
VEHICLES OPERATOR**

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HEADQUARTERS, DEPARTMENT OF THE ARMY

**TRAINING PROGRAM FOR THE FAMILY OF MEDIUM TACTICAL
VEHICLES OPERATOR**

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PREFACE

This TC provides a training program for the Family of Medium Tactical Vehicles (FMTV cargo variants) vehicle operator according to AR 600-55. It was designed for the Medium Tactical Vehicle 5-ton cargo truck, but also may be used for the Light Medium Tactical Vehicles 2 1/2-ton cargo variant. It provides standardized training and testing in the operation, maintenance, and safety of this vehicle. It stresses hands-on training with minimal classroom instruction and does not include any theater-unique requirements. Additionally, during the development of this TC, it was assumed that each driver candidate would have a state driver's license, have completed accident avoidance training according to TC 21-305, and possess an OF 346 Learners Permit.

The lesson content for this training program is arranged sequentially and separated into three chapters (Chapters 4, 5, and 7). Chapter 4 contains training for driving operations and Chapter 5 for trailer operations. Testing is contained in Chapter 7. For those operators trained on truck operations, testing is conducted after the training in Chapter 4. Operators that are trained in trailer operations are tested after receiving all training in Chapters 4 and 5. This allows the commander the flexibility to tailor 5-ton operator training based on the unit's equipment. Additionally, all training should be annotated on DA Form 348, Equipment Operator's Qualification Record (or ULLS generated DA Form 348-E) according to AR 600-55.

To provide effective training, each instructor should ensure his operators are trained and tested to the standards in this TC. Any deviation from the successful completion of these basic standards will only lessen the soldiers' overall driving effectiveness.

Graduates of this training program (licensed drivers) should be supervised until they have gained the experience to operate the MTV 5-ton cargo truck safely. They should not be placed in situations that may be above their skill level. Periodically, the supervisor should ride with each driver to observe safe operating procedures and to determine the need for additional training.

The proponent of this publication is the US Army Transportation School. Submit changes for improving this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to Commandant, US Army Transportation School, ATTN: ATSP-TDI-DX, Fort Eustis, Virginia 23604-5389.

The US Army's environmental strategy into the 21st century defines the Army's leadership commitment and philosophy for meeting present and future environmental challenges. It provides a framework to ensure that environmental stewardship ethic governs all Army activities. The Army's environmental vision is to be a national leader in environmental and natural resource stewardship for present and future generations, as an integral part of all Army missions. The Army's environmental vision statement communicates the Army's commitment to the environment.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

CHAPTER 1

RISK MANAGEMENT

1-1. GENERAL. This chapter explains risk management as it applies to wheeled vehicle driver training. For more detailed risk management guidance, refer to FM 101-5, Appendix J.

1-2. BACKGROUND. Ground vehicle accidents cost the Army millions of dollars each year and significantly reduce mission capabilities. Leaders must develop techniques that will save resources. Because the Army must be prepared to operate worldwide, the training mission has become increasingly demanding and so have the risks inherent in that mission. This increase in risk requires leaders to balance mission needs with hazards involved and make wise risk decisions.

1-3. DEFINITIONS.

a. **Risk Management.** Risk management is the process of identifying and controlling hazards to protect the force. It is a step-by-step process that provides a framework for analyzing any mission or task. The following are the five steps of risk management:

(1) **Step 1 – Identify Hazards.** Identify hazards to the force. Consider all aspects of current and future situation, environment, and known historical problem areas.

(2) **Step 2 – Assess Hazards.** Assess hazards to determine risks. Assess the impact of each hazard in terms of potential loss and cost based on probability and severity.

(3) **Step 3 – Develop Controls and Make Risk Decision.** Develop control measures that eliminate the hazards or reduce its risk. As control measures are developed, risks are reevaluated until all risks are reduced to a level where benefits outweigh potential cost.

(4) **Step 4 – Implement Controls.** Put controls in place that eliminates the hazards or reduce their risk.

(5) **Step 5 – Supervise and Evaluate.** Enforce standards and controls. Evaluate the effectiveness of control and adjust/update as necessary.

b. **Hazard.** Any real or potential condition that can cause injury, illness, or death of personnel; or damage to or loss of equipment or property.

c. **Risk.** Chance of hazard or bad consequences; exposure to chance of injury or loss. Risk level is expressed in terms of hazard probability and severity.

d. **Exposure.** The frequency and length of time subjected to a hazard.

e. **Probability.** The likelihood that an event will occur.

f. **Severity.** The expected consequence of an event in terms of degree of injury, property damage, or other mission impairing factors (loss of combat power, adverse publicity, and so forth) that could occur.

g. **Controls.** Actions taken to eliminate hazards or reduce their risk.

h. **Risk Assessment.** The identification and assessment of hazards (first two steps of risk management process).

i. **Residual Risk.** The level of risk remaining after controls have been identified and selected for hazards that may result in loss of combat power. Controls are identified and selected until residual risk is at an acceptable level or until it cannot be practically reduced further.

j. **Risk Decision.** The decision to accept or not accept the risk(s) associated with an action.

1-4. RISK MANAGEMENT PROCESS. The risk management process uses the following approach:

a. **Identify Hazards.** Look for hazards in each phase of the training or operation.

b. **Assess the Risk.** Ask these questions:

- What type of injury or equipment damage can be expected?
- What is the probability of an accident happening?

NOTE: A low probability of an accident and an expected minor injury equals low risk. A high probability of an accident and an expected fatality equals extremely high risk.

c. **Develop Risk Control Alternatives and Make Risk Decisions.** If you cannot eliminate the risk, then you must control it without sacrificing essential mission requirements. You can control some risks by modifying tasks, changing location, increasing supervision, wearing protective clothing, changing time of operation, and so on. Decisions take several forms:

- Selecting from available controls.
- Modifying the mission because risk is too great.
- Accepting risk because mission benefits outweigh potential loss.

d. **Implement Risk Control Measures.** You must integrate procedures to control risks into plans, orders, SOPs, and training. You must also ensure risk reduction measures are used during actual operations.

e. **Supervise the Operations.** Make sure leaders know what controls are in place, what standards are expected, and then hold those in charge accountable for implementation. This is the point when accident prevention actually happens.

1-5. RISK ASSESSMENT ELEMENTS. There are no hard and fast rules for assessing risk. Different training tasks involve different elements that can affect training safety. However, the following seven elements are central to safely completing most driver training tasks:

- Soldier qualification.
- Supervision.
- Vehicle type.
- Equipment.
- Weather.
- Time of day.
- Terrain.

Using matrices that assign a risk level to each of the elements is one way to quickly appreciate the overall risks. The following matrices (Tables 1-1 through 1-7) are examples of risk assessments for the seven elements common to driver training missions.

NOTE: The factors are arbitrarily weighted. Modify them based on your particular mission and unit.

- Measure soldier qualification risk (Table 1-1) by comparing the level of task difficulty to the soldier’s military driving experience.

Table 1-1. Soldier qualification risk value

SOLDIER QUALIFICATION RISK VALUE			
TASK	DRIVING EXPERIENCE		
	LICENSED OVER 1 YEAR	LICENSED UNDER 1 YEAR	UNLICENSED
COMPLEX	Moderate	High	High
ROUTINE	Low	Moderate	High
SIMPLE	Low	Low	Moderate

EXAMPLE: Unlicensed drivers learning braking techniques in an MTV cargo truck with air brakes would be a high risk situation requiring substantial controls (new drivers generally do not have experience with air brake vehicles).

- Measure vehicle type risk (Table 1-2) by comparing the vehicle configuration to the locations of the training tasks.

Table 1-2. Vehicle type risk value

VEHICLE TYPE RISK VALUE			
LOCATION OF TRAINING	VEHICLE CONFIGURATION		
	SMALL TRUCKS	STRAIGHT TRUCKS	COMBINATION UNITS
ROAD TRAINING AREA	Moderate	High	High
MOTOR POOL	Low	Moderate	High
	Low	Low	Moderate

EXAMPLE: Driving an MTV cargo truck over the road would have a high-risk value.

- Measure weather risk (Table 1-3) by comparing road conditions with visibility.

Table 1-3. Weather risk value

WEATHER RISK VALUE			
ROAD CONDITIONS	VISIBILITY		
	CLEAR	REDUCED	RESTRICTED
UNFAVORABLE	Moderate	High	High
ADEQUATE	Low	Moderate	High
FAVORABLE	Low	Moderate	High

EXAMPLE: Driving on icy roads in fog would have a high-risk value.

- Measure terrain risk (Table 1-4) by comparing the physical features of the land with the existing road network.

Table 1-4. Terrain risk value

TERRAIN RISK VALUE			
TYPE OF TERRAIN	ROAD NETWORK		
	IMPROVED ROADS	SECONDARY ROADS	UNIMPROVED
MOUNTAIN	Moderate	High	High
DESERT/JUNGLE	Low	Moderate	High
FLAT/ROLLING	Low	Low	Moderate

EXAMPLE: Driver training conducted at Fort Bragg, NC, over trails would have a moderate risk value.

- Measure supervision risk (Table 1-5) by comparing the level of supervision to the task location.

Table 1-5. Supervision risk value

SUPERVISION RISK VALUE			
LEVEL OF SUPERVISION	TASK LOCATION		
	MOTOR POOL	TRAINING AREA/ NONCONGESTED ROAD	OFF ROAD/ CONGESTED ROAD
NOT OBSERVING	High	High	High
OBSERVING	Low	Moderate	High
IN VEHICLE	Low	Low	Moderate

EXAMPLE: A student driving alone, but observed, in a training area would have a moderate risk value.

- Measure equipment risk (Table 1-6) by comparing the equipment’s age to the time (months) since the last semiannual service. Equipment age is defined as; old is 15 or more years old, average is 5 to 15 years old, and new is 5 or less years old.

Table 1-6. Equipment risk value

EQUIPMENT RISK VALUE			
EQUIPMENT AGE	LAST SEMIANNUAL SERVICE		
	0 TO 2 MONTHS	+ 2 TO 4 MONTHS	+ 4 MONTHS
OLD	Moderate	Moderate	High
AVERAGE	Low	Moderate	High
NEW	Low	Low	Moderate

EXAMPLE: An eight-year-old MTV cargo truck serviced 3 months ago would have a moderate risk value.

- Measure time of day risk (Table 1-7) by comparing the level of light to familiarity with the route.

Table 1-7. Time of day risk value

TIME OF DAY RISK VALUE			
ROUTE FAMILIARITY	LIGHT LEVEL		
	DAY	DAWN/DUSK	NIGHT
NEVER DRIVEN ROUTE	Moderate	High	High
DRIVEN ROUTE 1 TO 3 TIMES	Low	Moderate	High
FAMILIAR ROUTE	Low	Low	Moderate

EXAMPLE: A driving task over a familiar route that starts during the day but ends at dusk would have a moderate risk value.

After assessing all the risks, the overall risk value equals the highest risk identified for any one element. Now is the time to focus on high-risk elements and develop controls to reduce risks to an acceptable level. Control examples may include conducting training in a different location or at a different time of day, putting an instructor in the vehicle with the student, waiting for better weather, using a different vehicle, and so on.

1-6. DECISION AID. The level of the decision-maker should correspond to the level of the risk. The greater the risk, the more senior the final decision-maker should be. The matrix shown in Table 1-8, page 1-6 is a proposed decision aid to help determine the leadership decision-making level.

Table 1-8. Proposed decision aid

DECISION AID	
RISK	DECISION LEVEL
LOW MODERATE HIGH	SENIOR INSTRUCTOR COMPANY COMMANDER BATTALION COMMANDER

a. Moderate risk training warrants complete unit command involvement. For example, a moderate risk value in the weather element category indicates the soldiers are more susceptible to cold injuries and require closer supervision or a rescheduling of training. If you cannot reduce the risk level, the company commander should decide to train or defer the mission.

b. Operations with a high-risk value warrant battalion involvement. If you cannot reduce the risk level, the battalion commander should decide to train or defer the mission.

1-7. RISK CONTROL ALTERNATIVES. The following options can help control risk:

- Eliminate the hazard totally, if possible, or substitute a less hazardous alternative.
- Reduce the magnitude of the hazard by changing tasks, locations, times, and so forth.
- Modify operational procedures to reduce risk exposure consistent with mission needs.
- Train and motivate personnel to perform to standards to avoid hazards.

1-8. SUPERVISION. Leaders must monitor the training to ensure risk control measures are followed. Never underestimate subordinates ability to sidetrack a decision they do not understand or support. You must also monitor the impact of risk reduction procedures when they are implemented to see that they really work. This is especially true of new, untested procedures.

1-9. PAYOFFS. Risk management lets you use realistic training scenarios reducing personnel and equipment losses while training. Risk management is consistent with METT-T decision processes and can be used in battle to increase mission effectiveness.

SAMPLE RISK ASSESSMENT WORK SHEET FOR DRIVER TRAINING

TRAINING TASK: _____

RISK LEVEL: _____

_____ 1. SOLDIER QUALIFICATION

SOLDIER QUALIFICATION RISK VALUE			
TASK	DRIVING EXPERIENCE		
	LICENSED OVER 1 YEAR	LICENSED UNDER 1 YEAR	UNLICENSED
COMPLEX	Moderate	High	High
ROUTINE	Low	Moderate	High
SIMPLE	Low	Low	Moderate

_____ 2. VEHICLE TYPE

VEHICLE TYPE RISK VALUE			
LOCATION OF TRAINING	VEHICLE CONFIGURATION		
	SMALL TRUCKS	STRAIGHT TRUCKS	COMBINATION UNITS
ROAD TRAINING AREA	Moderate	High	High
MOTOR POOL	Low	Moderate	High
	Low	Low	Low

_____ 3. WEATHER

WEATHER RISK VALUE			
ROAD CONDITIONS	VISIBILITY		
	CLEAR	REDUCED	RESTRICTED
UNFAVORABLE	Moderate	High	High
ADEQUATE	Low	Moderate	High
FAVORABLE	Low	Moderate	High

_____ 4. TERRAIN

TERRAIN RISK VALUE			
TYPE OF TERRAIN	ROAD NETWORK		
	IMPROVED ROADS	SECONDARY ROADS	UNIMPROVED
MOUNTAIN	Moderate	High	High
DESERT/JUNGLE	Low	Moderate	High
FLAT/ROLLING	Low	Low	Moderate

_____ 5. SUPERVISION

SUPERVISION RISK VALUE			
LEVEL OF SUPERVISION	TASK LOCATION		
	MOTOR POOL	TRAINING AREA/ NONCONGESTED ROAD	OFF ROAD/ CONGESTED ROAD
NOT OBSERVING	High	High	High
OBSERVING	Low	Moderate	High
IN VEHICLE	Low	Low	Moderate

_____ 6. EQUIPMENT

EQUIPMENT RISK VALUE			
EQUIPMENT AGE	LAST SEMIANNUAL SERVICE		
	0 TO 2 MONTHS	+ 2 TO 4 MONTHS	+ 4 MONTHS
OLD	Moderate	Moderate	High
AVERAGE	Low	Moderate	High
NEW	Low	Low	Moderate

_____ 7. TIME OF DAY

TIME OF DAY RISK VALUE			
ROUTE FAMILIARITY	LIGHT LEVEL		
	DAY	DAWN/DUSK	NIGHT
NEVER DRIVEN ROUTE	Moderate	High	High
DRIVEN ROUTE 1 TO 3 TIMES	Low	Moderate	High
FAMILIAR ROUTE	Low	Low	Moderate

_____ OVERALL RISK LEVEL

DECISION AID	
RISK	DECISION LEVEL
LOW	SENIOR INSTRUCTOR
MODERATE	COMPANY COMMANDER
HIGH	BATTALION COMMANDER

APPROVED BY: _____ DATE: _____

CHAPTER 2

INSTRUCTIONAL AIDS

2-1. STUDENT REQUIREMENTS.

a. **Vehicles Per Student.** Vehicle to student ratio is contained in the instructional material and varies from 1:1 to 1:2.

b. **Forms Per Student.**

- DD Form 518. Accident Identification Card.
- DD Form 1970. Motor Equipment Utilization Record (or DA Form 5987-E, Motor Equipment Dispatch).
- DA Form 348. Equipment Operator's Qualification Record (Except Aircraft).
- DA Form 2404. Equipment Inspection and Maintenance Worksheet (or DA Form 5988-E, Equipment Inspection Maintenance Worksheet).
- DA Form 6125-R. Road Test Score Sheet.
- OF 346. US Government Motor Vehicle Operator's Identification Card.
- SF Form 91. Motor Vehicle Accident Report.

c. **Publications Per Student.** TM 9-2320-366-10-1 and 10-2. Operator's Instructions for M1083 Series, 5-Ton, 6X6, Medium Tactical Vehicles.

d. **Nonstandard Items.**

- Forty empty POL drums, traffic cones, or locally fabricated standards.
- Vehicle loads.

2-2. INSTRUCTOR REQUIREMENTS.

- One each of the above forms.
- One each of the above publications.
- AR 385-55. Prevention of Motor Vehicle Accidents.
- AR 600-55. The Army Driver and Operator Standardization Program (Selection, Training, Testing, and Licensing).
- DA Pamphlet 738-750. Functional Users Manual for the Army Maintenance Management System.
- FM 21-305. Manual for the Wheeled Vehicle Driver.
- All HN or local directives and regulations.

2-3. TRAINING FACILITIES.

- Classroom.
- Motor pool.
- Training area(s).
- Suitable road network for driver training (primary, secondary, and off road).

2-4. TRAINING AIDS AND DEVICES.

- Overhead projector.
- Projection screen.
- Transparencies (paper copies included with the instructional material).
- Television monitor.
- Videocassette player.
- TVT 55-54. Family of Medium Tactical Vehicles Driving Techniques, (PIN: 710939DA).
- TVT 55-55. Family of Medium Tactical Vehicles Preventive Maintenance Checks and Services, (PIN: 710940DA).

CHAPTER 3

SAMPLE TRAINING SCHEDULE

<u>WHEN</u>	<u>WHAT</u>	<u>WHERE</u>	<u>TASK NUMBER</u>
TRUCK OPERATIONS DAY 1			
0730-0830	Use TM and Make Entries on DA Form 2404	Classroom	551-721-1352
0830-0930	Prepare DD Form 1970	Classroom	551-721-1366
0930-1130	Report an Accident	Classroom	551-721-1388
1130-1230	Lunch		
1230-1300	Perform Operator PMCS	Classroom	551-721-1352
1300-1400	Identify Cab Controls, Instruments, and Indicators	Motor Pool	551-721-1352 551-721-1391
1400-1530	Raise and Lower Vehicle Cab	Motor Pool	551-721-1352
1430-1630	Perform Operator PMCS	Motor Pool	551-721-1352
TRUCK OPERATIONS DAY 2			
0730-0800	Drive an MTV Cargo Truck	Classroom	551-721-1366
0800-0830	Perform Before-Operation PMCS	Motor Pool	551-721-1352
0830-1130	Drive an MTV Cargo Truck	Training Area	551-721-1366
1130-1230	Lunch		
1230-1600	Drive an MTV Cargo Truck (continued)	Training Area	551-721-1366
1600-1630	Perform After-Operation PMCS	Motor Pool	551-721-1352
TRUCK OPERATIONS DAY 3			
0730-0830	Drive an MTV Cargo Truck on the Road	Motor Pool	551-721-1366
0830-0900	Perform Before-Operation PMCS	Motor Pool	551-721-1352
0900-1130	Drive an MTV Cargo Truck on the Road (continued)	Driver Training Route	551-721-1366
1130-1230	Lunch		
1230-1600	Change Tire on an MTV Cargo Truck	Motor Pool	551-721-1393
1600-1630	Perform After-Operation PMCS	Motor Pool	551-721-1352

TASK

<u>WHEN</u>	<u>WHAT</u>	<u>WHERE</u>	<u>NUMBER</u>
TRUCK OPERATIONS			
DAY 4			
0730-0800	Drive an MTV Cargo Truck Off Road	Motor Pool	551-721-1360
0800-0830	Perform Before-Operation PMCS	Motor Pool	551-721-1352
0830-1130	Drive an MTV Cargo Truck Off Road	Off Road Driver Training Area	551-721-1360
1130-1230	Lunch		
1230-1400	Drive an MTV Cargo Truck Off Road (continued)	Off Road Driver Training Area	551-721-1360
1400-1430	Perform After-Operation PMCS	Motor Pool	551-721-1352
1900-1930	Perform Before-Operation PMCS	Motor Pool	551-721-1352
1930-2330	Drive an MTV Cargo Truck at Night	Motor Pool/Driver Training Route	551-721-1366
2330-2400	Perform After-Operation PMCS	Motor Pool	551-721-1352

TRUCK OPERATIONS			
DAY 5			
1230-1300	Perform Before-Operation PMCS	Motor Pool	551-721-1352
1300-1600	Drive a MTV Cargo Truck on the Road (continued)	Driver Training Route	551-721-1366
1600-1630	Perform After-Operation PMCS	Motor Pool	551-721-1352

TRUCK OPERATIONS			
DAY 6			
NOTE: This day 6 is for straight truck drivers only. Drivers training for trailer operations will continue to trailer operations day 6 and testing on day 8.			
0730-0800	Perform Before-Operation PMCS	Motor Pool	551-721-1352
0800-1100	Drive an MTV Cargo Truck on the Road (continued)	Driver Training Route	551-721-1366
1100-1130	Perform After-Operation PMCS	Motor Pool	551-721-1352
1130-1230	Lunch		
1230-1630	End of Course Comprehensive Test and Perform PMCS	Classroom/Motor Pool/Road Test Route/Off Road Training Area Motor Pool	All Tasks 551-721-1352

TASK

<u>WHEN</u>	<u>WHAT</u>	<u>WHERE</u>	<u>NUMBER</u>
TRAILER OPERATIONS			
DAY 6			
0730-0830	Perform PMCS on Trailers	Motor Pool	551-721-1353
0830-0900	Perform Before-Operation PMCS	Motor Pool	551-721-1352 551-721-1353
0900-1130	Drive an MTV Cargo Truck with Trailer	Motor Pool/Training Area/Driver Training Route	551-721-1380 551-721-1385
1130-1230	Lunch		
1230-1600	Drive an MTV Cargo Truck with Trailer (continued)	Training Area/Driver Training Route	551-721-1380 551-721-1385
1600-1630	Perform After-Operation PMCS	Motor Pool	551-721-1352 551-721-1353
TRAILER OPERATIONS			
DAY 7			
0730-0800	Perform Before-Operation PMCS	Motor Pool	551-721-1352 551-721-1353
0800-1130	Drive an MTV Cargo Truck with Trailer (continued)	Training Area/Driver Training Route	551-721-1380 551-721-1385
1130-1230	Lunch		
1230-1600	Drive an MTV Cargo Truck with Trailer (continued)	Training Area/Driver Training Route	551-721-1380 551-721-1385
1600-1630	Perform After-Operation PMCS	Motor Pool	551-721-1352 551-721-1353
TRAILER OPERATIONS			
DAY 8			
0730-1130	End of Course Comprehensive Test and Perform PMCS	Classroom/Motor Pool/Road Test Route/Off Road Training Area Motor Pool	All Tasks 551-721-1352 551-721-1353

CHAPTER 4

LESSON OUTLINES FOR TRUCK OPERATIONS

LESSON TITLE: USE TECHNICAL MANUALS AND MAKE ENTRIES ON DA FORM 2404 (EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET)

TASK NUMBER: 551-721-1352 (Perform Vehicle Preventive Maintenance Checks and Services)

A. TRAINING OBJECTIVE.

- TASK:** Use the MTV TMs (operator's manual) and make operator entries on DA Form 2404.
- CONDITION:** Given instruction, TM 9-2320-366-10-1 and 10-2, DA Form 2404, and a practical exercise.
- STANDARD:** Locate information in the TMs (operator's manual) and make the required operator entries on DA Form 2404 in the correct sequence according to DA Pamphlet 738-750. Each student has 15 minutes to complete the practical exercise without error and will be graded on a GO/NO-GO basis.

B. INTERMEDIATE TRAINING.

Intermediate Training Objective 1

- TASK:** Use the MTV TMs (operator's manual).
- CONDITION:** Given instruction, TM 9-2320-366-10-1 and 10-2 and a practical exercise in a classroom environment.
- STANDARD:** Answer the questions correctly in the practical exercise by locating information in the TMs (operator's manual). Each student will be graded on a GO/NO-GO basis.

Intermediate Training Objective 2

- TASK:** Document a no-fault situation on DA Form 2404.
- CONDITION:** Given instruction, TM 9-2320-366-10-1 and 10-2, a practical exercise, and DA Form 2404 in a classroom environment.
- STANDARD:** You must fill out a no-fault situation on DA Form 2404 in the correct sequence according to DA Pamphlet 738-750. Each student will be graded on a GO/NO-GO basis.

Intermediate Training Objective 3

TC 21-305-11

- TASK:** Document a fault situation on DA Form 2404.
- CONDITION:** Given instruction, TM 9-2320-366-10-1 and 10-2 a practical exercise, and DA Form 2404 in a classroom environment.
- STANDARD:** You must fill out a fault situation on DA Form 2404 in the correct sequence according to DA Pamphlet 738-750. Each student will be graded on a GO/NO-GO basis.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Scheduled classroom.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every 20 students for the practical exercise.
6. Training aids and equipment: Overhead projector, screen, transparency (DA Form 2404), TM 9-2320-366-10-1 and 10-2 (1 per student), DA Form 2404 (4 per student), and a practical exercise situation sheet (1 per student).
7. References: DA Pamphlet 738-750 and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

NOTE: Before class arrival, ensure that each student desk or table has a TM 9-2320-366-10-1 and 10-2 and two DA Forms 2404. Sample completed DA Forms 2404 are at Figure 4-1, page 4-6 and Figure 4-2, page 4-7. These samples can be used to make transparencies for an overhead projection system or reproduced as student handouts.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

a. Proper technique for using the MTV -10 series TMs (TM 9-2320-366-10-1 and 10-2 which is also available on CD).

- (1) Front cover index – corresponding thumb tabs blackened pages and table of contents.
- (2) Warning summary and caution – warning statements.
- (3) PMCS tables (Chapter 2, TM 9-2320-366-10-1).
- (4) Troubleshooting instructions (Chapter 3, TM 9-2320-366-10-2).
- (5) Lubrication instructions (Appendix F, TM 9-2320-366-10-1).
 - Lubrication charts and local views.
 - Warnings and notes.
 - Lubricant abbreviations and intervals.
 - Lubricate after fording and high-pressure washing.
- (6) Alphabetical subject index.

b. DA Form 2404 no-fault situation:

NOTE: If the organization is using ULLS, ULLS generated DA Form 5988-E may be used instead of using DA Form 2404. The blocks of DA Form 5988-E are completed similar to those of DA Form 2404.

- (1) Organization.
- (2) Nomenclature and model.
- (3) Registration/serial number/NSN.
- (4) Type of inspection (PMCS).
- (5) TM number and TM date.
- (6) Date of inspection (column c).
- (7) Type of inspection (entered in column d when used for concurrent inspections).
- (8) Disposition of DA Form 2404.

d. DA Form 2404 fault situation.

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NOTE: If the organization is using ULLS, ULLS generated DA Form 5988-E may be used instead of using DA Form 2404. The blocks of DA Form 5988-E are completed similar to those of DA Form 2404.

- (1) Deferred maintenance. Check DA Form 2408-14 (Uncorrected Fault Record) for any deferred maintenance before listing faults on DA Form 2404. Do not list faults that are already listed on DA Form 2404 or DA Form 2408-14. (This form is not required when an automated system such as ULLS, provides a list or printout of deferred maintenance and uncorrected faults that includes all elements on the DA Form 2408-14.)

NOTE: Explain to the students that when a DA Form 2404 has previous no-fault daily annotations, a new form does not have to be initiated when a fault is found. Tell them to use the same form and some of the steps listed below would already be completed.

- (2) Organization.
- (3) Nomenclature and model.
- (4) Registration/serial number/NSN.
- (5) Miles. (If the reading is in kilometers, put the letter “K” before the number.)
- (6) Hours.
- (7) Date.
- (8) Type of inspection (PMCS).
- (9) TM number and TM date.
- (10) Signature and rank in block 8a.
- (11) TM item number entered in column a. Circle item number if the fault makes the equipment not mission capable.
- (12) Status symbol entered in column b.
- (13) Deficiencies or shortcomings entered in column c.
- (14) Disposition of DA Form 2404.

3. **Practical exercise.** Hand out one practical exercise and two DA Forms 2404 (or if using ULLS, ULLS generated DA Form 5988-E) to each student. Students will complete the practical exercise as outlined in paragraph 2 above within 15 minutes.

4. **Evaluate.** Check each student's practical exercise.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Retrain and retest NO-GOs after normal duty hours.

E. SAFETY RESTRICTIONS. None.

F. ENVIRONMENTAL CONSIDERATIONS. None.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1.0 hours (.5 conference and .5 practical exercise).

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET					
For use of this form, see DA PAM 738-750 and 738-751; the proponent agency is DCSLOG					
1. ORGANIZATION B Co 708th SPT BN			2. NOMENCLATURE AND MODEL Trk, Cgo, 5-ton, M1086		
3. REGISTRATION AJ 01 ABC	4a. MILES	b. HOURS	c. ROUNDS FIRED	d. HOT STARTS	5. DATE
					6. TYPE INSPECTION PMCS
7. APPLICABLE REFERENCE					
TM NUMBER TM 9-2320-366-10		TM DATE Oct 95		TM NUMBER	
TM DATE		TM NUMBER			
COLUMN a - Enter TM item number. COLUMN b - Enter the applicable condition status symbol. COLUMN c - Enter deficiencies and shortcomings.			COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c. COLUMN e - Individual ascertaining completed corrective action initial in this column.		
STATUS SYMBOLS					
"X" - Indicates a deficiency in the equipment that places it in an inoperable status. CIRCLED "X" - Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished. HORIZONTAL DASH "-" - Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished.			DIAGONAL "/" - Indicates a material defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable. LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL - Indicates that a completely satisfactory condition exists. FOR AIRCRAFT - Status symbols will be recorded in red.		
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.					
8a. SIGNATURE (Person(s) performing inspection)		8b. TIME	9a. SIGNATURE (Maintenance Supervisor)		9b. TIME
					10. MANHOURS REQUIRED
TM ITEM NO. <i>a</i>	STATUS <i>b</i>	DEFICIENCIES AND SHORTCOMINGS <i>c</i>		CORRECTIVE ACTION <i>d</i>	INITIAL WHEN CORRECTED <i>e</i>
		5 Jan 98			JCR
		6 Jan 98			JCR
		7 Jan 98			JCR
		8 Jan 98			JCR
		9 Jan 98		w	JCR

DA FORM 2404, APR 79

Replaces edition of 1 Jan 64, which will be used

USAPPC V1.10

Figure 4-1. DA Form 2404 (No-Fault Situation)

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET				
For use of this form, see DA PAM 738-750 and 738-751; the proponent agency is DCSLOG				
1. ORGANIZATION B Co, 708th SPT BN			2. NOMENCLATURE AND MODEL Trk, Cgo, 5-ton, M1086	
3. REGISTRATION/SERIAL NO. AJ 20 ABC	4a. MILES 1845	b. HOURS	c. ROUNDS FIRED	d. HOT STARTS
5. DATE 9 Jan 98			6. TYPE INSPECTION PMCS	
7. APPLICABLE REFERENCE				
TM NUMBER TM 9-2320-366-10		TM DATE Oct 95		
COLUMN a - Enter TM item number. COLUMN b - Enter the applicable condition status symbol. COLUMN c - Enter deficiencies and shortcomings.			COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c. COLUMN e - Individual ascertaining completed corrective action initial in this column.	
STATUS SYMBOLS				
"X" - Indicates a deficiency in the equipment that places it in an inoperable status. CIRCLED "X" - Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished. HORIZONTAL DASH "-" - Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished.			DIAGONAL "/" - Indicates a material defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable. LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL - Indicates that a completely satisfactory condition exists. FOR AIRCRAFT - Status symbols will be recorded in red.	
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.				
8a. SIGNATURE (Person(s) performing inspection) Janice Morris, PFC		8b. TIME	9a. SIGNATURE (Maintenance Supervisor)	
			9b. TIME	
				10. MANHOURS REQUIRED
TM ITEM NO. a	STATUS b	DEFICIENCIES AND SHORTCOMINGS c	CORRECTIVE ACTION d	INITIAL WHEN CORRECTED e
		5 Jan 98		JM
		6 Jan 98		JM
		7 Jan 98		JM
		8 Jan 98		JM
1	/	Passenger wiper blade torn		
8	X	Driver's seat belt will not fasten		
13	/	Tachometer inop.		

SAMPLE

Figure 4-2. DA Form 2404 (Fault Situation)

PRACTICAL EXERCISE

**LESSON TITLE: USE TECHNICAL MANUALS AND MAKE ENTRIES ON DA FORM
2404**

NAME _____ RANK _____ DATE _____

To complete this practical exercise, you will need appropriate vehicle operator's TM, two blank DA Forms 2404 (or ULLS generated DA Form 5988-E), and a pencil. You have 15 minutes to complete this practical exercise.

FIRST REQUIREMENT

Using the appropriate vehicle TM, answer the following questions by writing your answer in the space provided after each question.

1. At what interval does the operator check the ECU push-button shift selector for proper operation?

2. Where would you find the definition for the different classes of leaks?

3. In what section of the operator's TM would you find the BII authorized for the M1086 cargo truck?

4. In what paragraph of the operator's TM would you find instructions to raise and lower the cab?

5. In what section of the operator's TM would you find lubricating instructions?

6. What lubricant is required for the air/hydraulic power unit?

SECOND REQUIREMENT

NAME _____ RANK _____ DATE _____

From the following information, make the required operator entries on DA Form 2404 (or ULLS generated DA Form 5988-E):

You are assigned to the 54th Underwater Repair Company as the operator of an MTV, M1086 5-ton cargo truck, with registration number CG41127J.

- a. On 20 July 1998, you perform a daily PMCS and find no faults.
- b. On 21 July 1998, you perform a daily PMCS and again find no faults.
- c. On 22 July 1998, you perform a daily PMCS and your vehicle is pulling to the right side when the service brakes are applied and the right windshield is cracked. Your odometer reading is 7,502.
- d. On 23 July 1998, you perform a daily PMCS and find your brakes have been repaired. No other faults are discovered.
- e. On 24 July 1998, you perform a weekly PMCS and find a cracked battery. Your odometer reading is 7,641.

TC 21-305-11

LESSON TITLE: PREPARE DD FORM 1970 (MOTOR EQUIPMENT UTILIZATION RECORD)

TASK NUMBER: 551-721-1366 (Drive Vehicle with Automatic Transmission)

A. TRAINING OBJECTIVE.

- TASK:** Make correct vehicle operator entries on DD Form 1970.
- CONDITION:** Given instruction, DD Form 1970, pencil, and a practical exercise.
- STANDARD:** Make the required operator entries on DD Form 1970 in correct sequence according to DA Pamphlet 738-750. Each student has 15 minutes to complete the practical exercise with no errors. Students will be graded on a GO/NO-GO basis.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Classroom.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for each 20 students for the practical exercise.
6. Training aids and equipment: Overhead projector, screen, transparencies, practical exercise situation sheet (one per student), and DD Form 1970 (one per student).
7. References: DA Pamphlet 738-750.

D. SEQUENCE OF ACTIVITY.

1. **Introduction.**
 - a. Interest device.
 - b. Tie-in.
 - c. Lesson objective (paragraph A).
 - d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.

(3) Summary.

2. Explanation and demonstration.

NOTE: Sample completed DD Forms 1970 are at Figure 4-3, page 4-12 and Figure 4-4, page 4-13. These samples can be used to make transparencies for an overhead projection system or reproduced as student handouts.

a. Explain the purpose and use of DD Form 1970. Also, explain the dispatcher entries entered on the form.

b. Explain the operator entries that must be entered on DD Form 1970.

3. Practical exercise. Hand out one practical exercise and one DD Form 1970 to each student. Students will complete the practical exercise within 15 minutes.

4. Evaluate. Check each student's practical exercise.

5. Summary.

a. Recap main points.

b. Allow for questions.

c. Clarify questions.

d. Give closing statement.

6. Retraining. Retrain NO-GOs and slow learners. NO-GOs will be retrained after normal duty hours.

E. SAFETY RESTRICTIONS. None.

F. ENVIRONMENTAL CONSIDERATIONS. None.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1 hour (.5 conference and .5 practical exercise).

MOTOR EQUIPMENT UTILIZATION RECORD							
DATE (YYMMDD) *	TYPE OF EQUIPMENT *	REGISTRATION NO./SERIAL NO. *	ADMINISTRATION NO. *				
980204	Trk, Cgo, 5-Ton, M1086	AJ01ABC	B-202				
ORGANIZATION NAME *	ACTION	TIME	MILES	HOURS	FUEL	OIL	REPORT TO (Last Name, First, M.I.) *
B Co, 708th SPT Bn	IN						Richards, Henry, SFC
1ST OPERATOR (Last Name, First, M.I.) *	OUT	0730 *	3102 *	NA *			DISPATCHER'S SIGNATURE *
Jones, John J., SPC	TOTAL						<i>Michael Smith, SPC</i>
OPERATOR'S SIGNATURE							REPORT TO (Last Name, First, M.I.)
2D OPERATOR (Last Name, First, M.I.)	IN						DISPATCHER'S SIGNATURE
	OUT						
OPERATOR'S SIGNATURE	TOTAL						
3D OPERATOR (Last Name, First, M.I.)	IN						REPORT TO (Last Name, First, M.I.)
	OUT						DISPATCHER'S SIGNATURE
OPERATOR'S SIGNATURE	TOTAL						
4TH OPERATOR (Last Name, First, M.I.)	IN						REPORT TO (Last Name, First, M.I.)
	OUT						DISPATCHER'S SIGNATURE
OPERATOR'S SIGNATURE	TOTAL						
DESTINATION	TIME		RELEASE BY (Signature)	REMARKS			
	ARRIVE	DEPART					
FROM 1.							
TO 2.							
TO 3.							
TO 4.							
TO 5.							
TO 6.							
TO 7.							
TO 8.							
TO 9.							
TO 10.							
TO 11.							
TO 12.							
TO 13.							
TO 14.							
TO 15.							
TO 16.							

SAMPLE

DD FORM 1970, APR 81

EDITION OF FEB 76 MAY BE USED.

USAPFC V2.00

Note: An * denotes dispatcher entries.

Figure 4-3. DD Form 1970

MOTOR EQUIPMENT UTILIZATION RECORD							
DATE (YYMMDD) *	TYPE OF EQUIPMENT *	REGISTRATION NO./SERIAL NO. *	ADMINISTRATION NO. *				
980204	Trk, Cgo, 5-Ton, M1086	AJ01ABC	B-202				
ORGANIZATION NAME *	ACTION	TIME	MILES	HOURS	FUEL	Oil	
B Co, 708th SPT Bn					42gal	1qt	
1ST OPERATOR (Last Name, First, M.I.) *	IN	1625	3189				REPORT TO (Last Name, First, M.I.) *
Jones, John J., SPC	OUT	0730 *	3102 *	NA *			Richards, Henry, SFC
OPERATOR'S SIGNATURE	TOTAL	8:55	87				DISPATCHER'S SIGNATURE *
<i>John J. Jones</i>							<i>Michael Smith, SFC</i>
2D OPERATOR (Last Name, First, M.I.)	IN						REPORT TO (Last Name, First, M.I.)
	OUT						
OPERATOR'S SIGNATURE	TOTAL						DISPATCHER'S SIGNATURE
3D OPERATOR (Last Name, First, M.I.)	IN						REPORT TO (Last Name, First, M.I.)
	OUT						
OPERATOR'S SIGNATURE	TOTAL						DISPATCHER'S SIGNATURE
4TH OPERATOR (Last Name, First, M.I.)	IN						REPORT TO (Last Name, First, M.I.)
	OUT						
OPERATOR'S SIGNATURE	TOTAL						DISPATCHER'S SIGNATURE
DESTINATION	TIME		RELEASE BY (Signature)	REMARKS			
	ARRIVE	DEPART					
FROM 1. Motor Pool		0810					
TO 2. Marshall Kaserne	0905	1020					
TO 3. Rose Bks, Bldg 202	1035	1300					
TO 4. Kuhlberg Facility	1315	1345					
TO 5. Rose Bks, Bldg 205	1400	1430					
TO 6. Marshall Kaserne	1445	1530	Henry Richards				
TO 7. Motor Pool	1625						
TO 8.							
TO 9.							
TO 10.							
TO 11.							
TO 12.							
TO 13.							
TO 14.							
TO 15.							
TO 16.							

SAMPLE

DD FORM 1970, APR 81

EDITION OF FEB 76 MAY BE USED.

USAPPC V2.00

Note: An * denotes dispatcher entries.

Figure 4-4. DD Form 1970

PRACTICAL EXERCISE

LESSON TITLE: PREPARE DD FORM 1970 (MOTOR EQUIPMENT UTILIZATION RECORD)

NAME _____ RANK _____ DATE _____

To complete this practical exercise, you will need one DD Form 1970, with dispatcher entries made and a pen or pencil. You have 15 minutes to complete this practical exercise.

Use the information provided in the situation below to make all required operator entries on DD Form 1970 in the proper sequence and in the prescribed time limit.

1. SITUATION:

- a. You left the motor pool in an M1086, 5-ton cargo truck. Your run included stops at the following areas:

LOCATION	ARRIVED	DEPARTED
Motor Pool	NA	0750
Building 1028	0815	0850
Building 127A	0910	0945
Camp Swampy	1120	1530
Building 127A	1700	1705
Motor Pool	1725	

- b. The NCOIC was SSG Miller. He released you when you departed building 127A at 1705 hours.
- c. When you returned to the motor pool, your odometer reading was 3873. You also noted that you filled the vehicle with 23 gallons of diesel and no oil was added.

2. REQUIREMENT:

- a. Complete the attached DD Form 1970.
- b. Be sure your entries are legible (other people can read your handwriting) and accurate (the entries agree with the details of the information in the situation).

LESSON TITLE: **REPORT AN ACCIDENT (MAKE REQUIRED ENTRIES ON DD FORM 518 AND SF 91)**

TASK NUMBER: **551-721-1388 (Complete DD Form 518 and SF 91)**

A. TRAINING OBJECTIVE.

TASK: Make required entries on DD Form 518 (Accident Identification Card) and SF 91 (Operator's Report of Motor Vehicle Accident).

CONDITION: Given instruction, DD Form 518, SF 91, pencil, and a practical exercise.

STANDARD: Make the required entries on DD Form 518 and SF 91 accurately, legibly, and completely according to FM 21-305. Each student has one hour to complete the practical exercise with no errors. Students will be graded on a GO/NO-GO basis.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Classroom.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for each 20 students for the practical exercise.
6. Training aids and equipment: Overhead projector, screen, transparencies, practical exercise situation sheet (one per student), DD Form 518 (one per student), and SF 91 (one per student).
7. References: FM 21-305.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:

(1) Explanation.

(2) Practical exercise.

(3) Summary.

2. Explanation and demonstration.

NOTE: Sample completed DD Form 518 is at Figure 4-5, page 4-19, and SF 91 is at Figures 4-6 through 4-9, pages 4-20 through 4-23. These samples can be used to make transparencies for an overhead projection system or reproduced as student handouts.

a. Precautions and procedures. The following is not necessarily in the correct order. Each accident must be assessed to determine what should be done and in what order.

(1) Stop immediately.

(2) Take precautions to prevent further accidents or injuries by using road guards, highway warning devices, and flares.

(3) Render first aid to the injured.

(4) If fire breaks out, use an extinguisher or sand. Notify the fire department. Take precautions to prevent fire; for example, shut off engines and prohibit smoking.

(5) Notify authorities (civil or military depending on who has jurisdiction) for emergency services (police, ambulance, rescue, or fire fighting).

(6) Follow the rules or regulations of the state or area where accident took place when moving the vehicle from the scene of the accident.

b. Driver's responsibilities.

(1) When involved in an accident, always stop and investigate it.

(2) Secure hard-to-get facts first (names and addresses of people involved and witnesses, condition of the road, position of the vehicles, and an estimate of the amount of damage).

(3) Be exact. (Spell names correctly. Give street addresses by number. State visible damage. Show exactly where vehicles were before and after the accident and what obstacles blocked the driver's view.)

(4) Do not sign any paper or make any statement as to who was at fault (except to your supervisor or to a Federal Government investigator).

(5) Be polite. Try to get all the necessary information.

(6) Submit all reports and data to your supervisor ASAP but do not exceed one working day.

c. Instructions for filling out DD Form 518 (Accident Identification Card).

- (1) Explain the purpose and use of DD Form 518. This form is used to give any persons involved in an accident all of the information that they require from you.
- (2) Explain how to fill out this form block by block. Ensure zip codes are included and the students know that disclosure of the social security number is voluntary.
- (3) Explain the disposition of the form. Give it to the person directly involved in the accident. Or, if a parked vehicle, place it in or on the parked vehicle in a conspicuous and secure location, such as under the windshield wiper.

d. Instructions for filling out SF 91 (Motor Vehicle Accident Report).

- (1) Explain the purpose and use of SF 91. Even though an accident is minor or not your fault, you must report it so that the facts will be clearly presented and so that you can give the names of the witnesses.
- (2) Explain how to fill out this form block by block. The driver is responsible for filling out Sections I through IX. Section X, items 72 through 82c are filled out by the driver's supervisor. An accident investigator for bodily injury, fatality, and/or damage exceeds \$500 fills out Sections XI through XIII. No blocks should be left completely blank. If there is no information to put in a certain block, write None, Unknown, or NA.

3. **Practical exercise.** Hand out one practical exercise, SF 91, and DD Form 518 to each student. Students will complete the practical exercise within one hour.

4. **Evaluate.** Check each student's practical exercise.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining:** Retrain NO-GOs and slow learners. NO-GOs will be retrained after normal duty hours.

E. SAFETY RESTRICTIONS. None.

F. ENVIRONMENTAL CONSIDERATIONS. None.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 2 hours (1.0 conference and 1.0 practical exercise).

ACCIDENT-IDENTIFICATION CARD	
<i>(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974-SEE REVERSE)</i>	
Any correspondence regarding accident should be addressed to: Commanding General FTEustis, VA 23604.5000	
MAKE REFERENCE TO	
DATE OF ACCIDENT 7 Jan 98	
MAKE AND TYPE OF VEHICLE Trk, Cgo, 5-ton, M1083	
REGISTRATION NO. AJ30ABC	
DRIVER (Last name-first name-initial) Jones, John J	
SSN	GRADE PFC
ORGANIZATION 131 Trans Co FTEustis, VA 23604-5000	
DD FORM 518 1 OCT 78 PREVIOUS EDITION IS OBSOLETE.	

SAMPLE

PRIVACY ACT STATEMENT
<i>AUTHORITY: Sec 638a, Title 31, USC and EO 9397.</i>
<i>PRINCIPAL PURPOSE: To provide persons involved in an accident with a DoD owned/leased vehicle the identity of the person with the authority to act on the matter.</i>
<i>ROUTINE USES: Placed in each vehicle for purpose stated above. When a DoD vehicle is involved in an accident, the driver provides the other party(s) with a properly executed DD Form 518. The SSN is requested because of similarity of names, to further identify the driver of the DoD vehicle.</i>
<i>DISCLOSURE IS VOLUNTARY. No disciplinary action is taken in cases where the SSN is not provided.</i>

*U.S. Government Printing Office: 1991 — 281-485/40451

Figure 4-5. DD Form 518

MOTOR VEHICLE ACCIDENT REPORT		Please read the Privacy Act Statement on Page 3.	INSTRUCTIONS: Sections I thru IX are filled out by the vehicle operator. Section X, items 72 thru 82c are filled out by the operator's supervisor. Sections XI thru XIII are filled out by an accident investigator for bodily injury, fatality, and/or damage exceeding \$500.				
SECTION I - FEDERAL VEHICLE DATA							
1. DRIVER'S NAME (Last, first, middle) <u>Jones, John Jim</u>			2. DRIVER'S LICENSE NO./STATE/LIMITATIONS <u>J-0000/US Army/Glasses</u>		3. DATE OF ACCIDENT <u>7 Jan 98</u>		
4a. DEPARTMENT/FEDERAL AGENCY PERMANENT OFFICE ADDRESS <u>US Army/131 Transportation Company, Ft Eustis, VA 23604-5000</u>				4b. WORK TELEPHONE NUMBER <u>(757) 878-0001</u>			
5. TAG OR IDENTIFICATION NUMBER <u>AJ30 ABC (Trk-15)</u>		6. EST. REPAIR COST <u>\$2,000</u>	7. YEAR OF VEHICLE <u>1996</u>	8. MAKE <u>Trk, Gco, 5-Ton</u>	9. MODEL <u>M1083</u>	10. SEAT BELTS USED <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
11. DESCRIBE VEHICLE DAMAGE <u>Right headlight & signal light broke, front bumper bent & torn, right front cab crushed, right front tire cut.</u>							
SECTION II - OTHER VEHICLE DATA (Use Section VIII if additional space is needed.)							
12. DRIVER'S NAME (Last, first, middle) <u>Smith, Joseph James</u>			13. DRIVER'S LICENSE NUMBER/STATE/LIMITATIONS <u>111-11-1110/VA/Daylight only.</u>				
14a. DRIVER'S WORK ADDRESS <u>NA (retired)</u>			14b. WORK TELEPHONE NUMBER <u>() NA</u>				
15a. DRIVER'S HOME ADDRESS <u>100 Panther Paw Patch, Gloucester, VA 23061-1114</u>			15b. HOME TELEPHONE NUMBER <u>(804) 693-0000</u>				
16. DESCRIBE VEHICLE DAMAGE <u>Tailgate, bed, rear bumper & taillights smashed.</u>			17. ESTIMATED REPAIR COST <u>\$4,000</u>				
18. YEAR OF VEHICLE <u>1989</u>		19. MAKE OF VEHICLE <u>Nissan</u>		20. MODEL OF VEHICLE <u>Pickup</u>		21. TAG NUMBER AND STATE <u>123-ABC/VA</u>	
22a. DRIVER'S INSURANCE COMPANY NAME AND ADDRESS <u>Tidewater Pilecap Mutual Insurance 123 Hightide Road, Norfolk, VA 24671-1561</u>					22b. POLICY NUMBER <u>000-00-123</u>		
					22c. TELEPHONE NUMBER <u>(757) 321-0000</u>		
23. VEHICLE IS <input type="checkbox"/> CO-OWNED <input type="checkbox"/> LEASED		<input type="checkbox"/> RENTAL <input checked="" type="checkbox"/> PRIVATELY OWNED		24a. OWNER'S NAME(S) (Last, first, middle) <u>Same as item 12.</u>		24b. TELEPHONE NUMBER <u>Same as () item 15b.</u>	
25. OWNER'S ADDRESS(ES) <u>Same as item 15a.</u>							
SECTION III - KILLED OR INJURED (Use Section VIII if additional space is needed.)							
26. NAME (Last, first, middle) <u>Smith, Joseph James</u>					27. SEX <u>M</u>	28. DATE OF BIRTH <u>17 Jan 27</u>	
29. ADDRESS <u>Same as item 15a.</u>							
30. MARK "X" IN TWO APPROPRIATE BOXES <input type="checkbox"/> KILLED <input checked="" type="checkbox"/> DRIVER <input type="checkbox"/> PASSENGER <input type="checkbox"/> PEDESTRIAN <input checked="" type="checkbox"/> INJURED <input type="checkbox"/> HELPER			31. IN WHICH VEHICLE <input type="checkbox"/> FED <input checked="" type="checkbox"/> OTHER (2)		32. LOCATION IN VEHICLE <u>Behind Steering Wheel</u>		
33. FIRST AID GIVEN BY <u>Mobydick Volunteer Rescue Squad</u>							
34. TRANSPORTED BY <u>Mobydick Volunteer Rescue Squad</u>			35. TRANSPORTED TO <u>McDonald Army Community Hospital, FTEustis, VA 23604-5001</u>				
36. NAME (Last, first, middle) <u>None</u>					37. SEX	38. DATE OF BIRTH	
39. ADDRESS							
40. MARK "X" IN TWO APPROPRIATE BOXES <input type="checkbox"/> KILLED <input type="checkbox"/> DRIVER <input type="checkbox"/> PASSENGER <input type="checkbox"/> PEDESTRIAN <input type="checkbox"/> INJURED <input type="checkbox"/> HELPER			41. IN WHICH VEHICLE <input type="checkbox"/> FED <input type="checkbox"/> OTHER (2)		42. LOCATION IN VEHICLE		
43. FIRST AID GIVEN BY							
44. TRANSPORTED BY			45. TRANSPORTED TO				
46. Pedestrian			a. NAME OF STREET OR HIGHWAY <u>None</u>				
			b. DIRECTION OF PEDESTRIAN (SW corner to NE corner, etc.) FROM _____ TO _____				
c. DESCRIBE WHAT PEDESTRIAN WAS DOING AT TIME OF ACCIDENT (Crossing from road, against signal, against signal, diagonally, in roadway playing, walking, hitchhiking, etc.)							

SAMPLE

Figure 4-6. SF 91, page 1

SECTION IV - ACCIDENT TIME AND LOCATION (Use Section VIII if additional space is needed.)																													
47. DATE OF ACCIDENT 7 Jan 98	48. PLACE OF ACCIDENT (Street address, city, state, ZIP Code; Nearest landmark; Distance nearest intersection; Kind of locality (Industrial, business, residential, open country, etc.); Road description)																												
49. TIME OF ACCIDENT 0810 AM	200 Block, Highway 101, Newport News, VA, 75 yards southwest of Jones & Jones railway crossing. Locality - residential. Road description - Blacktop, wet from rain.																												
50. INDICATE ON THIS DIAGRAM HOW THE ACCIDENT HAPPENED <small>Use one of these outlines to sketch the scene. Write in street or highway names or numbers.</small>		51. POINT OF IMPACT (Check one for each vehicle)																											
<p>a. Number Federal vehicle as 1, other vehicle as 2, additional vehicle as 3 and show direction of travel with arrow. Example: </p> <p>b. Use solid line to show path before accident and broken line after the accident </p> <p>c. Show pedestrian by </p> <p>d. Show railroad by </p> <p>e. Place arrow in this circle to indicate NORTH </p>		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>FED</th> <th>2</th> <th>AREA</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>a. FRONT</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td></td> <td>b. R. FRONT</td> </tr> <tr> <td></td> <td></td> <td>c. L. FRONT</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/></td> <td>d. REAR</td> </tr> <tr> <td></td> <td></td> <td>e. R. REAR</td> </tr> <tr> <td></td> <td></td> <td>f. L. REAR</td> </tr> <tr> <td></td> <td></td> <td>g. R. SIDE</td> </tr> <tr> <td></td> <td></td> <td>h. L. SIDE</td> </tr> </tbody> </table>	FED	2	AREA			a. FRONT	<input checked="" type="checkbox"/>		b. R. FRONT			c. L. FRONT		<input checked="" type="checkbox"/>	d. REAR			e. R. REAR			f. L. REAR			g. R. SIDE			h. L. SIDE
FED	2		AREA																										
		a. FRONT																											
<input checked="" type="checkbox"/>		b. R. FRONT																											
		c. L. FRONT																											
	<input checked="" type="checkbox"/>	d. REAR																											
		e. R. REAR																											
		f. L. REAR																											
		g. R. SIDE																											
		h. L. SIDE																											
<p>52. DESCRIBE WHAT HAPPENED (Refer to vehicles as "Fed", "2", "3", etc. Please include information on posted speed limit, approximate speed of the vehicles, road conditions, weather conditions, driver visibility, condition of accident vehicles, traffic controls (warning light, stop signal, etc.) condition of light (daylight, dusk, night, dawn, artificial light, etc.), and driver actions (making U-turn, passing, stopped in traffic, etc.).</p> <p>I was traveling northeast on highway 101 at approximately 15 MPH, I looked down at an oil can rolling on the floor of my truck. When I looked back up at the roadway, there was a black pickup truck stopped in the roadway. The road was wet causing me to slide into the rear of the pickup.</p>																													
SECTION V - WITNESS/PASSENGER (Witness must fill out SF 94, Statement of Witness) (Continue in Section VIII.)																													
A	53. NAME (Last, first, middle) White Sarah Mary	54. WORK TELEPHONE NUMBER (757) 887-9999	55. HOME TELEPHONE NUMBER (757) 229-1888																										
	56. BUSINESS ADDRESS 1216 Oyster Point Rd, Newport News, VA 22164	57. HOME ADDRESS 8765 York Blvd, Yorktown, VA 2345-0010																											
B	58. NAME (Last, first, middle) None	59. WORK TELEPHONE NUMBER ()	60. HOME TELEPHONE NUMBER ()																										
	61. BUSINESS ADDRESS	62. HOME ADDRESS																											
SECTION VI - PROPERTY DAMAGE (Use Section VIII if additional space is needed.)																													
63a. NAME OF OWNER None.		63b. OFFICE TELEPHONE NUMBER ()	63c. HOME TELEPHONE NUMBER ()																										
63d. BUSINESS ADDRESS		63e. HOME ADDRESS																											
64a. NAME OF INSURANCE COMPANY		64b. TELEPHONE NUMBER ()	64c. POLICY NUMBER																										
65. ITEM DAMAGED	66. LOCATION OF DAMAGED ITEM	67. ESTIMATED COST \$																											
SECTION VII - POLICE INFORMATION																													
68a. NAME OF POLICE OFFICER CPL Betty White		68b. BADGE NUMBER 1234	68c. TELEPHONE NUMBER (757) 887-1212																										
69. PRECINCT OR HEADQUARTERS Newport News, VA		70a. PERSON CHARGED WITH ACCIDENT PFC John J. Jones	70b. VIOLATION(S) Inattentive Driving																										

Figure 4-7. SF 91, page 2

SECTION VIII - EXTRA DETAILS

SPACE FOR DETAILED ANSWERS. INDICATE SECTION AND ITEM NUMBER FOR EACH ANSWER. IF MORE SPACE IS NEEDED, CONTINUE ITEMS ON PLAIN BOND PAPER.

Note

SAMPLE

SECTION IX - FEDERAL DRIVER CERTIFICATION

In compliance with the Privacy Act of 1974, solicitation of the information requested on this form is authorized by Title 40 U.S.C. Section 491. Disclosure of the information by a Federal employee is mandatory as the first step in the Government's investigation of a motor vehicle accident. The principal purposes for using this information is to provide necessary data for legal counsel in legal actions resulting from the accident and to provide accident information/statistics in analyzing accident causes and developing methods of reducing accidents. Routine use of information may be by Federal, State or local governments, or agencies, when relevant to civil, criminal, or regulatory investigations or prosecutions. An employee of a Federal agency who fails to report accurately a motor vehicle accident involving a Federal vehicle or who refuses to cooperate in the investigation of an accident may be subject to administrative sanctions. I certify that the information on this form (Sections I thru VIII) is correct to the best of my knowledge and belief.

71a. NAME AND TITLE OF DRIVER <i>John J. Jones, PFC, Driver</i>	71b. DRIVER'S SIGNATURE AND DATE <i>John J. Jones, 7 Jan 98</i>
--	--

SECTION X - DETAILS OF TRIP DURING WHICH ACCIDENT OCCURRED

72. ORIGIN	73. DESTINATION
------------	-----------------

74. EXACT PURPOSE OF TRIP

75. TRIP BEGAN	DATE	TIME (Circle one) a.m. p.m.	76. ACCIDENT OCCURRED	DATE	TIME (Circle one) a.m. p.m.
----------------	------	-----------------------------------	-----------------------	------	-----------------------------------

77. AUTHORITY FOR THE TRIP WAS GIVEN TO THE OPERATOR <input type="checkbox"/> ORALLY <input type="checkbox"/> IN WRITING (Explain)	78. WAS THERE ANY DEVIATION FROM DIRECT ROUTE <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)
---	---

79. WAS THE TRIP MADE WITHIN ESTABLISHED WORKING HOURS <input type="checkbox"/> YES <input type="checkbox"/> NO (Explain)	80. DID THE OPERATOR, WHILE ENROUTE, ENGAGE IN ANY ACTIVITY OTHER THAN THAT FOR WHICH THE TRIP WAS AUTHORIZED. <input type="checkbox"/> NO <input type="checkbox"/> YES (Explain)
--	--

81. COMPLETED BY DRIVER'S SUPERVISOR	a. DID THIS ACCIDENT OCCUR WITHIN THE EMPLOYEE'S SCOPE OF DUTY <input type="checkbox"/> YES <input type="checkbox"/> NO b. COMMENTS
--------------------------------------	---

82a. NAME AND TITLE OF SUPERVISOR	82b. SUPERVISOR'S SIGNATURE AND DATE	82c. TELEPHONE NUMBER ()
-----------------------------------	--------------------------------------	------------------------------

STANDARD FORM 91 PAGE 3 (REV. 2-93)

Figure 4-8. SF 91, page 3

SECTION XI - ACCIDENT INVESTIGATION DATA			
83. DID THE INVESTIGATION DISCLOSE CONFLICTING INFORMATION. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If "Yes", explain below.)			
84. PERSONS INTERVIEWED			
	NAME	DATE	
a.			c.
b.			d.
85. ADDITIONAL COMMENTS (Indicate section and item number for each comment.)			
SECTION XII - ATTACHMENTS			
LIST ALL ATTACHMENTS TO THIS REPORT			
SAMPLE			
SECTION XIII - COMMENTS/APPROVALS			
86. REVIEWING OFFICIAL'S COMMENTS			
87. ACCIDENT INVESTIGATOR		88. ACCIDENT REVIEWING OFFICIAL	
a. SIGNATURE AND DATE		a. SIGNATURE AND DATE	
b. NAME (First, middle, last)		b. NAME (First, middle, last)	
c. TITLE		c. TITLE	
d. OFFICE		d. OFFICE	
e. OFFICE TELEPHONE NUMBER ()		e. OFFICE TELEPHONE NUMBER ()	
*U.S.GPO:1995-390-660/09125		STANDARD FORM 91 PAGE 4 (REV. 2-93)	

Figure 4-9. SF 91, page 4

PRACTICAL EXERCISE

LESSON TITLE: REPORT AN ACCIDENT (MAKE REQUIRED ENTRIES ON DD FORM 518 AND SF 91)

NAME _____ RANK _____ DATE _____

To complete this practical exercise, you will need one DD Form 518, one SF 91, and a pen or pencil. You have 45 minutes to complete this practical exercise.

1. SITUATION:

On Friday, 19 June 1998 at 0800, you left the motor pool in an M1083, 5-ton cargo truck (registration number 123XYZ) that had been dispatched to you. Your destination was the supply room, Company B, 396th Transportation Battalion, Fort Nowhere, AK 09111-5000. You were to report to your supply sergeant (SSG Anybody).

Approximately 15 minutes later, you were driving west on Washington Boulevard (a four-lane street) in the right lane at 25 mph. A civilian vehicle driving south on Olive Oil Lane made a left turn (east) onto Washington Boulevard. You swerved to miss him, but hit the civilian's car in the left front. The civilian was traveling 5 to 10 mph when you hit him. After the collision, his car turned 180 degrees and finally stopped about 75 feet, in the right lane of Washington Boulevard. Your vehicle also moved another 20 to 30 feet and ended up in the left lane. The weather was cloudy with light rain. The concrete roadway was wet.

You stopped your vehicle, jumped out, and ran to the civilian's vehicle. Luckily, he was not hurt. Since there were no other occupants in both vehicles and no threat of fire or explosion, there was no need to call the fire company or an ambulance. You and the civilian driver exchanged information. You wrote down the following information from his driver's license and registration:

Operator's name:	John J. Smith.
Operator's home address:	1211 Popeye Lane, Totem, Alaska 54321-1000.
Operator's state permit number and state:	000-00-0000, Alaska.
Make of vehicle:	Oldsmobile.
Type:	Cutlass Supreme SL, 4 door sedan.
Year:	1996.
Vehicle license number and state:	0123-ABC, Alaska.
Vehicle owned by:	John J. Smith.
Owner's address:	1211 Popeye Lane, Totem, Alaska 54321-1000.

If you have any reason to doubt the information you were given, you note it on your form. Record the estimates of damage to each vehicle. You looked at the civilian's car. His left front fender and door, grille, bumper, and hood were crushed. He estimated the amount of damage at \$5,000. Then you looked at your vehicle. Your left headlight was broken and the front bumper was scratched and bent; you approximate the amount of damage as \$500.

After estimating the damage, you went to a phone across the street and called the military police (MP). Within minutes MP officer SGT Joe Messkit, Badge Number 123, Company A, 302d MP Battalion,

TC 21-305-11

arrived. He recorded yours and the civilian's comments. There were no other witnesses to the accident. The officer did record that there is a stop sign at the south west corner of Olive Oil Lane, that your vehicle was equipped with seatbelts, and you were using the seatbelt at the time of the accident. Since you had recorded the information and given the other driver a copy of DD Form 518, you drove back to the motor pool.

2. REQUIREMENT:

- a. Complete the attached DD Form 518 and SF 91.
- b. Be sure your entries are legible (other people can read your handwriting) and accurate (the entries agree with the details of the information in the situation). Use your name, rank, social security number, and present age to complete these forms. Your military driver's license number is A-1234. You live in the B Company barracks. The barracks phone number is 123-1234.

LESSON TITLE: IDENTIFY CONTROLS, INSTRUMENTS, AND INDICATORS

TASK NUMBER: 551-721-1352 (Perform Vehicle Preventive Maintenance Checks and Services) and 551-721-1391 (Operate a Central Tire Inflation System)

A. TRAINING OBJECTIVE.

- TASK:** Identify controls, instruments, and indicators.
- CONDITION:** Given instruction on the MTV 5-ton cargo truck and a requirement to identify and explain the functions of controls, instruments, and indicators.
- STANDARD:** Correctly identify and explain the functions of controls, instruments, and indicators.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. When training will be given: As scheduled.
2. Training location: Scheduled motor pool.
3. Training type: Conference.
4. Who will be trained: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every three students.
6. Training aids and equipment: One MTV 5-ton cargo truck for each three students. If the class is large, a PA system may be needed for the primary instructor.
7. References: TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device. To become proficient operators of the MTV, you must first learn the location and function of all its indicators and controls. During certain driving and operating situations your knowledge of these items can prevent damage to your equipment or harm to yourself and others.
- b. Tie-in. This lesson is presented to enable the students to locate and identify the function of indicators and controls used for the operation of the MTV.
- c. Lesson objective (paragraph A).

d. Procedures:

- (1) Explanation.
- (2) Summary.

NOTE: The instructor will emphasize the importance of safety getting into and out of the cab (maintain three points of contact), observing all warnings, and using seatbelts.

NOTE: At this time, separate the class into groups of three and assign each group to a vehicle. Ensure each group has an assistant instructor. The assistant instructor will identify and demonstrate the use of each item to his group of students as the instructor explains each item.

2. **Explanation and demonstration.** Location, description, and use of the cab controls, instruments, and indicators.

a. Main instrument panel indicators and controls. The main instrument panel is located directly in front of the driver and contains the following indicators and controls:

- (1) The fording switch disables the radiator fan for deep water fording at a water depth of 20 inches and deeper. With the switch on, indicator light illuminates on indicator light panel when radiator fan is disabled. (Discuss low air effect on fan.)
- (2) Ether start switch - injects ether into engine intake system to assist with cold weather starting when switch is pressed. (Switch is used only when the vehicle is in the cranking cycle.)
- (3) Front brake air pressure gauge - indicates air pressure available to operate the front brakes normal range 65-120 psi. 100 psi or above is required for driving operations.
- (4) Indicator light panel - indicator lights illuminate to indicate operating characteristics of the vehicle.
 - Left turn indicator - flashes (green) when left turn signal is on.
 - Master stop indicator - lights (red) when a serious engine malfunction or loss of air pressure occurs.
 - High beam headlight indicator - lights (green) when high beam headlights are on.
 - Parking brake indicator - lights (amber) when parking brake is applied.
 - Emergency brake indicator - lights (amber) when parking brake is applied.
 - Right turn indicator - flashes (green) when right turn signal is on.

- Front brake air indicator - lights (red) and alarm sounds when air pressure for the air system drops below 65 psi.
- Oil pressure indicator - lights (red) when engine oil pressure drops below 15 psi.
- Coolant temperature indicator - lights (red) when engine coolant temperature is greater than 230° F.
- PTO on indicator (when equipped with MHE) - lights (green) when PTO is engaged.
- CTIS over speed indicator - lights amber when vehicle speed exceeds safe limit for selected tire inflation pressure.
- Fan off indicator - lights amber when radiator fan is disabled.
- Rear brake air indicator - lights red and alarm sounds when air pressure for the rear service brakes drops below 65 psi.
- Engine oil level indicator - lights red to indicate when engine oil level is low, master power switch is positioned to "on", and engine is not running.
- Transmission temperature indicator - lights red when oil temperature reaches 225° F.
- Chemical detect indicator - lights red when M43 chemical detector kit is installed and senses a chemical agent.

(5) Master power switch - controls electrical power for vehicle panel switch starting and/or electrical system operation.

(6) Rotary warning light switch - operates amber rotating beacon on top of cab when switch is turned on provided the rotating kit is installed on the vehicle.

(7) Hazard lights switch - operates hazard lights when switch is turned on. Left and right turn signals and indicator lights flash when switch is engaged.

(8) Hand throttle lever - used to adjust engine speed to assist with engine warm-up and when operating vehicle hydraulics. This control lever is not to be used when driving the vehicle. The hand throttle is not to be used as a "cruise control".

(9) Air filter gauge - indicates when air filter is restricted. Yellow diaphragm enters red zone when air filter is clogged and requires service. Yellow reset button on face of gauge is used to reset gauge after air filter is serviced.

(10) Dimmer (instrument panel) - controls brightness of main instrument panel lights. Counterclockwise to brighten and clockwise to dim.

Light selector switch:

- Main selector switch - controls service lights.
 - All blackout lights operate when main selector lever is positioned to blackout drive.
 - Blackout marker lights operate when main selector lever is positioned to blackout marker.
 - Stoplights operate when main selector switch is positioned to stop light and brake pedal is pressed.
 - All service drive lights operate when main selector lever is positioned to service drive.
 - No exterior lights operate when main selector lever is turned to off.
- Unlock lever - locks light selector switch. Unlock lever must be lifted and held in order to place main selector lever in any position except blackout marker.
- Auxiliary lever - controls operation of parking lights.
 - Operates parking lights when auxiliary lever is positioned to park and main selector lever is positioned to service drive.
 - Panel bright and dim positions have no function.

(11) Starter push button - used to start engine. Switch operates only when master power switch is in the on position. (Note: Red indicator will light when start button is pushed.)

(12) Water temperature gauge - indicates engine coolant temperature in degrees Fahrenheit. Normal temperature range is 160 - 230° F.

(13) Volts gauge - shows battery output voltage when engine is not running and alternator output voltage when engine is running.

(14) Speedometer/odometer - speedometer indicates vehicle speed in MPH and KM/H. Odometer indicates number of miles the vehicle has traveled.

(15) Audible alarm - sounds when air pressure is below approximately 65 psi or when STOP indicator illuminates on lighted indicator display.

(16) Fuel gauge - indicates fuel level in fuel tank.

(17) Rear brake air pressure gauge - indicates air pressure available to operate the rear brakes (normal range 65-120 psi). 100 psi or above is required for driving operations.

(18) Oil pressure indicator - indicates engine oil pressure (normal oil pressure 15-80 psi).

(19) ECU push button shift selector - used to select forward or reverse range, to set highest gear range, to switch from highway to off-road mode, and to monitor transmission operation.

- Shift selector display window - displays the following information:
 - Forward gear selected (shown in left side of window).
 - Current forward gear (shown in right side of window).
 - Operating mode (blank for highway mode, MODE ON displayed when off-road mode is selected).
 - Service message (codes will appear in display window if ECU detects an abnormal condition).
- Mode select button - switches transmission between highway mode and off-road mode.
- Up arrow button - switches transmission to the next higher forward gear or to select maximum forward gear.
- Down arrow button - switches transmission to the next lower forward gear or to downshift into first gear.
- D range button - switches transmission to drive. Automatically selects seventh gear as maximum forward gear. Second gear is the lowest gear available. First gear is available only as a manual selection.
- N range button - switches transmission to neutral.
- R range button - switches transmission to reverse.

b. Steering column controls:

- (1) Horn button - sounds horn when pressed.
- (2) Windshield washer switch - pushed in to activate windshield washer.
- (3) Windshield wiper switch - three-position switch (intermittent, low, or high speed) used to operate and control the speed of the windshield wipers.
- (4) Turn signal/headlight dimmer control - operates turn signals and controls headlight dimming.
 - Right turn signal will flash when control is pushed up.
 - Left turn signal will flash when control is pushed down.
 - Pulling the control back toward driver for bright and forward toward dash for dim controls headlight dimming.

(5) Steering wheel tilt/telescope control - used to raise/lower and adjust the angle of the steering wheel.

c. Under dash and floor mounted controls (driver side):

(1) STE/ICE-R receptacle - used to connect STE/ICE-R.

(2) STE/ICE-R zero offset switch - used to reset instrument connected to STE/ICE-R receptacle to zero.

(3) Brake pedal - applies service brakes when pressed. Also applies trailer service brakes when vehicle is coupled to a trailer and trailer air supply control is pushed in.

(4) Accelerator pedal - used to control engine speed.

d. Auxiliary panel. (Note: Switches are for special application and will not be on every model.)

(1) Tachometer (models with PTO only) - indicates speed of engine crankshaft in revolutions per minute (rpm x 100). Tachometer is used to monitor engine speed for PTO operation only.

(2) Winch switch (models with self-recovery winch only) - locks transmission in neutral for self-recovery operation.

(3) Winch in/out switch (models with self-recovery winch only) - controls reel in/pay out of self-recovery winch cable. PTO and winch switches must be positioned to on before winch in/out switch will operate.

(4) PTO switch (models with PTO only) - controls operation of PTO.

(5) Various other switches depending upon the configuration of the vehicle.

e. Heater controls (center passenger must keep feet away from these controls):

(1) Defroster control - used to control windshield defrosting. Air is routed to defrost windshield when control is pulled.

(2) Vent control - used to control outside airflow to cab. When control is pulled, fresh air is vented into cab.

(3) Heat control - used to control temperature of air that heats cab interior. Temperature of air increases when control is pulled.

(4) Heater fan switch - four-position switch used to control operation and speed of heater fan.

f. CTIS indicators and controls:

- (1) HWY (highway) mode control and indicator - pressed to set CTIS in highway mode. Indicator lights when tire pressure is 60 psi for MTV cargo truck (tire pressure varies for other models). Maximum vehicle speed is 55 mph in highway mode.
- (2) X-C (cross-country) mode control and indicator - pressed to set CTIS in cross-country mode. Indicator lights when tire pressure is 37 psi for MTV cargo truck (tire pressure varies for other models). Maximum vehicle speed is 40 MPH in X-C mode.
- (3) SAND (soft terrain) mode control and indicator - pressed to set CTIS in soft terrain mode. Indicator lights when tire pressure is 22 psi for MTV cargo truck (tire pressure varies for other models). Maximum vehicle speed is 12 mph in sand mode.
- (4) EMER (emergency) mode control and indicator - pressed to set CTIS in emergency mode. Indicator lights when tire pressure is 16 psi for MTV cargo truck (tire pressure varies for other models). Maximum vehicle speed is 5 mph for 10 minutes in emergency mode.
- (5) Run flat control and indicator is not a mode, but is used in conjunction with any mode - used to maintain tire air pressure in the event of a leak. Run flat is limited to a 10-minute operation cycle then it will shut off. For additional use, the operator will have to re-select run flat.

g. Seat controls - adjustment of the seat should be made before starting the engine. The seats are rigid mounted and only adjust to backward or forward positions and are equipped with adjustable seatbelts. The center seat is not adjustable.

h. Brake controls:

- (1) System park (yellow) - control knob is pulled out to apply the parking brakes on the truck and trailer (if coupled to a trailer). Brakes will remain engaged until the system park control knob is pushed in.
- (2) Trailer air (red) - the trailer air provides air supply to trailer brakes. Air is supplied to trailer when control is pushed in.

i. Door mounted controls:

- (1) Cab door latch - opens cab door from inside and outside when pulled.
- (2) Cab door lock - locks door so that it can not be opened from the inside or outside of the vehicle.
- (3) Cab door window glass regulator - raises and lowers window glass when handle is turned.

j. Power distribution panel (passenger's side) - location for the relays and circuit breakers utilized in the operation of all variants.

- All electrical circuits are protected from overload by circuit breakers. (If you have an electrical system that is not working, check the circuit breakers and troubleshoot using Chapter 3 of the operator's manual.)
- Mechanics switch (start inhibit switch) located behind the power distribution cover. Switch disables engine start while doing maintenance/repairs to engine or in engine compartment. Switch will automatically reset if master power switch is cycled to the off/on position.

k. Exterior indicators/controls:

(1) Pneumatic/hydraulic manifold - used to unlatch and raise/lower cab, raise/lower spare tire carrier, and kneel vehicle for air transport.

(2) Backup hydraulic pump - used as a backup for pneumatic/hydraulic manifold.

(3) Transmission oil dipstick - indicates transmission oil level.

(4) Hydraulic oil level gauge - indicates hydraulic oil level. Located on hydraulic tank for all models (except wrecker).

(5) Engine oil dipstick - indicates engine oil level.

(6) Fuel primer pump - supplies fuel to fuel lines. Pump is used after fuel system maintenance or when starting difficulty occurs.

3. **Practical exercise.** None.

4. **Evaluate.** Students are evaluated daily during driving tasks and are tested during the EOCCT.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Training is reinforced during daily driving tasks.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.

2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.

3. Ensure that drip pans remain under parked vehicles.

4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1 hour conference.

LESSON TITLE: RAISE AND LOWER MTV CAB

TASK NUMBER: 551-721-1352 (Perform Vehicle Preventive Maintenance Checks and Services)

A. TRAINING OBJECTIVE.

TASK: Raise and lower MTV cab.

CONDITION: Given instruction, TM 9-2320-366-10-1 and 10-2, an MTV cargo truck with BII, and a requirement to raise and lower the vehicle cab.

STANDARD: Perform task in the correct sequence according to TM 9-2320-366-10-1 and 10-2 and without damage to equipment or injury to personnel. Students will be graded on a GO/NO basis.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool as scheduled.
3. Training type: Demonstration and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every two students for the demonstration and practical exercise.
6. Training aids and equipment: Hearing protection and an MTV cargo truck with BII for every two students.
7. References: TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.

(3) Summary.

2. **Explanation and demonstration.** Demonstrate correct procedures for raising and lowering the cab.

a. Raise the cab.

(1) Make sure LVAD model cabs are reconfigured (fully assembled) before raising them. That prevents damage to the windshield and other equipment.

(2) The vehicle air tanks should be fully charged. If the air tanks are fully charged, the cab may be raised and lowered twice without starting the engine.

(3) Pull out system park control. (The cab will not rise unless the parking brake is applied. The vehicle has an interlock switch that prevents this.)

(4) Remove any loose objects from the cab before raising it. When the cab is tilted forward, loose objects can crack or break the windshield and damage other parts of the interior.

(5) Make sure both cab doors are securely closed. Unsecured doors swing open, damaging hinges and slamming against anyone standing nearby.

(6) Cab height when raised is higher than normal. Make sure there is plenty of room above and in front of the cab before raising it.

WARNING

1. Never raise the cab while occupied. Failure to comply may result in injury or death to personnel.
2. Ensure both doors are securely closed before the cab is raised. Do not allow personnel near cab while the cab is being raised. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.
3. Never raise the cab when the vehicle is parked uphill on a steep grade. Failure to comply may result in injury to personnel.

(7) Open the hydraulic manifold cover by removing the pin and lower the cover.

(8) Turn the cab tilt knob to the raise position and the function select knob to the cab tilt position.

(9) Press and hold the pump knob to raise the cab. Ease off the pump knob when the cab passes the halfway point. Let the cab's weight take it down as much as it will go. (Use the backup hydraulic pump if the temperature is below -25° F (-32° C) or if pressing the pump knob does not raise the cab.)

NOTE: If the automated system does not raise the cab, try each of the following, one at a time:

- a) Make sure the system park control is applied. (The cab will not rise unless the parking brake is applied.) If park brake is applied,
- b) Use the manual backup pump and automatic system at the same time. If that does not work,
- c) Have one person shake the cab while a second person operates the automated system and the backup pump. If the cab still will not raise,
- d) Contact organizational maintenance.

(10) Close and secure the hydraulic manifold cover.

WARNING

Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

WARNING

Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

b. Lower the cab.

WARNING

Do not allow personnel near cab while the cab is being lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

(1) Open the hydraulic manifold cover by removing the pin and lower the cover.

(2) Turn the cab tilt knob to the lower position and make sure the function select knob is at the cab tilt position.

(3) Press and hold the pump knob until the cab is fully lowered. (Use the backup hydraulic pump if the temperature is below -25° F (-32° C) or if pressing the pump knob does not lower the cab.)

WARNING

Cab hydraulic latch must be locked before driving vehicle. Failure to comply may result in serious injury or death to personnel or damage to equipment.

(4) Check the cab's hydraulic latch to ensure it is securely latched. The button on the right side end of the hydraulic latch shows the status of the latch. Button in shows the cab is latched; button out shows the cab is not latched. The button can be difficult to see, so climb up onto the cargo bed and look at the latch from over the center of the spare tire.

(5) Close and secure the hydraulic manifold cover.

NOTE: All MTVs have a back-up manually operated hydraulic pump. If the powered hydraulic system fails, this pump provides the hydraulic pressure needed to use the cab tilt, suspension compression, and spare tire lowering and raising mechanism. Make sure the pump is exercised every month. That also keeps pump seals lubricated.

3. Practical exercise.

- a. Assign two students to each vehicle.
- b. Students practice raising and lowering the cab.

4. Evaluate. Check each student's performance.

5. Summary.

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. Retraining. Retrain NO-GOs and slow learners.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

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5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.
6. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.
7. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.
8. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.
9. Pressure in radiator overflow tank must be released before removing cap. Do not remove radiator cap when engine is hot; steam and hot coolant can escape. Steam or hot coolant under pressure will cause injury such as serious burns.
10. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.
11. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.
12. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.
13. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.
14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.
15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.

3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1.5 hours (.5 demonstration and 1.0 practical exercise).

LESSON TITLE: PERFORM OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES

TASK NUMBER: 551-721-1352 (Perform Vehicle Preventive Maintenance Checks and Services)

A. TRAINING OBJECTIVE.

- TASK:** Perform operator PMCS on an MTV cargo truck.
- CONDITION:** Given instruction, DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, and an MTV cargo truck with BII.
- STANDARD:** Inspect the vehicle according to the PMCS tables listed in TM 9-2320-366-10-1 and 10-2, correct all faults within the operator's level of maintenance, and legibly record all others on DA Form 2404 (or ULLS generated DA Form 5988-E). If no faults are found, make necessary entries on DA Form 2404 (or ULLS generated DA Form 5988-E).

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Classroom and motor pool as scheduled.
3. Training type: Conference, demonstration, and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every two students for the demonstration and practical exercise.
6. Training aids and equipment: Television, VCR, TVT 55-55, hearing protection, rags, lubricants, and coolant. DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, and an MTV cargo truck with BII for every two students.
7. References: AR 385-55, DA Pamphlet 738-750, and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.**1. Introduction.**

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

- a. Show TVT 55-55.
- b. Demonstrate before, during, after, weekly, and monthly checks to students.

3. Practical exercise.

- a. Assign students to vehicles and issue TM 9-2320-366-10-1 and 10-2, pencils, DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.
- b. Students perform PMCS.

4. Evaluate. Check each student's PMCS performance.**5. Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. Retraining. Students perform PMCS daily and have it reinforced throughout the course. PMCS is tested on the EOCCT.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

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2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less.

8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

9. Inspect all seatbelts for damage and ensure all occupants wear seatbelts while the vehicle is in operation.

10. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

11. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

12. Pressure in radiator overflow tank must be released before removing cap. Do not remove radiator cap when engine is hot; steam and hot coolant can escape. Steam or hot coolant under pressure will cause injury such as serious burns.

13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Reemphasize the removal of all jewelry such as rings, dog tags, or bracelets before working around batteries. Be careful not to short out battery terminals. If jewelry or tools contact the battery terminal, a direct short may occur resulting in instant heating, damage to equipment, and injury to personnel. Do not smoke or use open flame near batteries. Batteries may explode from a spark. Battery acid is harmful to skin and eyes.

15. Wear safety goggles and acid-proof gloves when checking battery electrolyte level. Failure to comply may result in injury or death to personnel.

16. Avoid electrolyte contact with skin, eyes, or clothing. If battery electrolyte spills, take immediate action to stop burning effects:

a. External: Immediately flush with cold running water to remove all acid.

b. Eyes: Flush with cold water for at least 15 minutes. Seek immediate medical attention.

c. Internal: Drink large amounts of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Seek immediate medical attention.

d. Clothing or Vehicle: Wash at once with cold water. Neutralize with baking soda or household ammonia solution. Failure to comply may result in injury to personnel.

17. Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately. Failure to comply may result in injury or death to personnel.

18. Ground fuel funnel or nozzle against filler neck to prevent sparks and be sure to replace fuel tank cap. Failure to comply may result in injury or death to personnel.

19. Do not perform fuel/water separator checks, inspections, or draining while smoking, or when near fire or sparks. Fuel could ignite. Keep a fire extinguisher within easy reach when working with fuel. Failure to comply may result in injury or death to personnel.

20. Do not put the vehicle in motion until the air pressure warning lights go out, and the alarm (buzzer) stops sounding. Air pressure gauges should indicate at least 90 psi. If warnings continue beyond three minutes, and/or pressure gauges do not reach 90 psi, shut down the engine and notify unit maintenance. Failure to do this will result in injury or death.

21. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

22. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

23. Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury or death to personnel.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.

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2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1.5 hours (.5 conference, .5 demonstration and .5 practical exercise). The remaining PMCS is performed throughout the course in conjunction with driving tasks.

LESSON TITLE: DRIVE AN MTV CARGO TRUCK

TASK NUMBER: 551-721-1366 (Drive Vehicle with Automatic Transmission)

A. TRAINING OBJECTIVE.

TASK: Drive an MTV cargo truck.

CONDITION: Given instruction, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, a suitable driver training area, an MTV cargo truck with BII, and a requirement to drive the truck; start the vehicle, put the vehicle in motion, read gauges, upshift and downshift the transmission, manipulate the controls, use correct braking procedures, perform basic driving maneuvers to include backing using ground guides, and shut off the engine.

STANDARD: Operate the vehicle correctly and safely without accident or injury.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Classroom, motor pool, and training area as scheduled.
3. Training type: Conference, demonstration, and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference, one assistant instructor for the demonstration, and one assistant instructor for each two students for the practical exercise.
6. Training aids and equipment: Television, VCR, TVT 55-54, rags, lubricants, coolant, and 40 traffic cones or empty POL drums. DD Form 1970 (or ULLS generated DA: Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, and an MTV cargo truck with BII for every two students. Hearing protection is required for all personnel.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.

- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

NOTE: An instructor will be in the cab, sitting next to the driver (nothing between the student and instructor), whenever a student is driving the MTV cargo truck.

- a. Show TVT 55-54.
- b. Place vehicle in motion:
 - (1) Perform before-operation PMCS.

WARNING

The cab hydraulic latch must be locked before driving the vehicle. Failure to comply may result in serious injury or death to personnel or damage to equipment.

- (2) Check the cab's hydraulic latch button's position to confirm the cab is latched. (Button in shows cab is latched: button out shows cab is not latched.)
- (3) Remove and stow wheel chocks.
- (4) Check load, if present, for blocking and bracing and cargo tie downs for security.
- (5) Adjust seat as needed.
- (6) Adjust each rear view mirror so back of truck and view of road can be seen.
- (7) Adjust and fasten seatbelt.

WARNING

Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel

- (8) Start engine and allow it to warm up.
- (9) Check all gauges and instruments. Ensure that they are registering normal readings.

WARNING

Do not operate the vehicle until the front and rear brake air pressure reaches at least 100 psi. Do not press the brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until the air pressure builds up again. Failure to comply may result in injury or death to personnel.

- (10) Turn on lights as appropriate.
- (11) Apply the service brake, and move the transmission range selector to drive (D).

NOTE: When the transmission is operating normally, left side of display window will indicate selected gear and right side of display window will indicate current operating gear.

- (12) Release the parking brake by pushing in on the system park control.
- (13) Release the service brake pedal and slowly press the accelerator pedal until the vehicle reaches the desired speed.
- (14) Accelerate, brake, and steer as required.

WARNING

Do not use hand throttle while driving. When brakes are applied, the hand throttle does not automatically disengage. Using the hand throttle as a cruise control device will result in injury or death.

CAUTION

Do not hold the steering wheel at the full left or right position for longer than 10 seconds. Power steering oil overheating and pump damage can result.

WARNING

Exercise extreme care when making sharp turns with this vehicle. It may roll over which may result in personal injury or death.

(15) Press the down arrow button on the ECU push-button shift selector to shift transmission to a lower gear or the up arrow button to shift transmission to a higher gear as required by driving conditions.

c. Stop the truck.

(1) Release the accelerator pedal.

(2) Depress the brake pedal.

WARNING

Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

WARNING

Rapid operation repeatedly of service brakes will consume compressed air supply and cause automatic spring brake application. Failure to follow proper service brake operating procedures may cause serious injury or death to personnel.

(3) As the vehicle begins to reduce speed, decrease brake pedal pressure.

(4) Stop smoothly by releasing the brake pedal pressure gradually as the stopping rate increases.

(5) After stopping, apply the brake just enough to keep the truck stopped.

d. Backing the truck. Since the driver cannot see directly behind his vehicle, backing is always a dangerous maneuver. Common sense therefore dictates that backing be avoided whenever possible. For example, if the vehicle must be parked, the driver parks so that he will be able to pull forward when leaving. Even though planning ahead can reduce the need to back, almost everyone who drives will have to back on occasion. These four simple rules will help in backing safely:

(1) Inspect your intended path.

(2) Back and turn toward the driver's side.

(3) Use four-way flashers and horn.

WARNING

Do not back up without a ground guide. The operator has limited vision while backing vehicle. Failure to do this may result in damage to vehicle, injury, or death.

- (4) Use ground guide(s).

WARNING

When backing or going forward, ground guides should never stand directly in the vehicle's path. Keep 10 yards between the vehicle and ground guides at the front or rear and at the corners of the vehicle (never directly behind the vehicle). Ground guides must not position themselves between the vehicle being guided and another object where an inadvertent engine surge or momentary loss of vehicle control could cause injury. The vehicle driver will immediately stop the vehicle if he loses sight of ground guides or notes that the guide is dangerously positioned between the vehicle and another object. In such cases, the vehicle driver will secure his vehicle, dismount, and make an on-the-spot correction before commencing operations.

- e. Park the truck and shut down the engine.

- (1) Align the front tires in a straight-ahead position.
- (2) Pull out system park control.
- (3) Press N (neutral) button on the ECU push-button shift selector.

CAUTION

- Allow the engine to cool before engine shutdown. Failure to comply may result in damage to equipment.
- Engine temperature must be maintained at 165° F for the final 15 minutes prior to engine shutdown. Failure to comply may result in damage to equipment.

- (4) Chock wheels (for proper placement see Figure 4-10). (The rear suspension of the MTV cargo truck is designed to ride over obstacles and can easily roll or be pushed over the chock blocks placed at the intermediate or rear wheels. The front axle suspension on these vehicles is much firmer; therefore, the rolling resistance is greatly increased.)

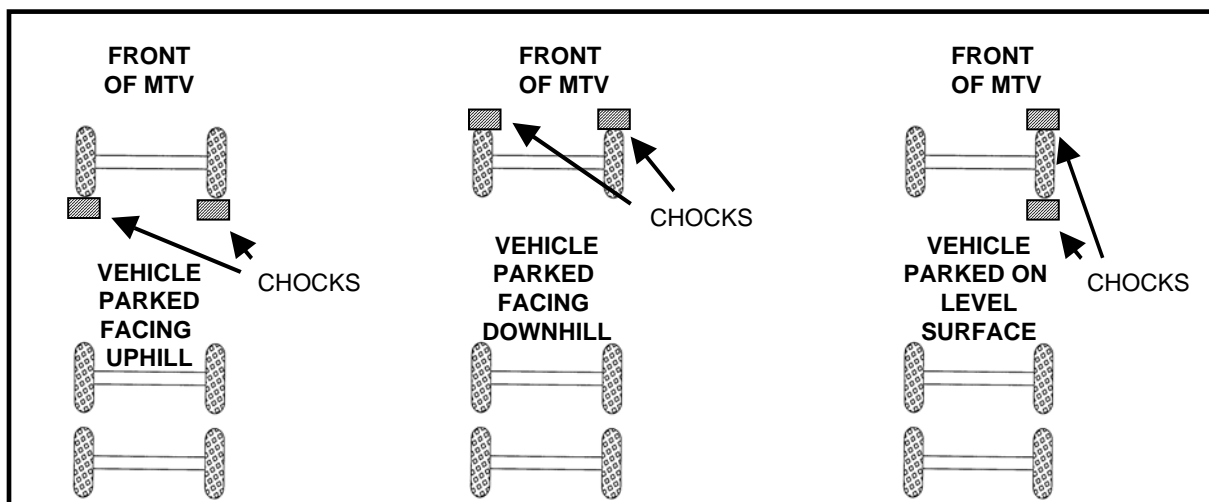


Figure 4-10. Correct chock block placement

- (5) Run the engine at approximately 750 RPM for three to five minutes to allow the turbocharger and engine to cool down.
- (6) Turn off lights, electrical accessories, and master power switch.
- (7) Perform after-operation PMCS.

- f. Give safety briefing to include safety restrictions and ground guide precautions for backing the truck.
- g. Demonstrate hand and arm signals required for this exercise.
- h. Demonstrate driving within the training area.

3. Practical exercise.

- a. Assign students to vehicles and issue TM 9-2320-366-10-1 and 10-2, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.
- b. Students perform before-operation PMCS.
- c. Students practice maneuvering the truck through the courses laid out in the training area(s). Sample training areas are in Chapter 6 (Figures 6-1 through 6-7). During-operation PMCS is also conducted at this time.

NOTE: As each student practices driving, an assistant instructor rides in the seat next to the driver. The assistant instructor explains driving techniques, ensures the driver is aware of driving situations, and conducts AARs with each driver. Now is the time to pass on valuable experience and correct any bad driving habits.

- d. Students perform after-operation PMCS. Ensure all operator entries required on DD Form 1970 (or ULLS generated DA Form 5987-E) and DA Form 2404 (or ULLS generated DA Form 5988-E) are accurate, complete, and legible.

4. Evaluate. Check each student's performance of PMCS and driving.

5. Summary.

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Retrain NO-GOs and slow learners. This can be accomplished using TVT 55-54. Students perform driving tasks daily and are tested on the EOCCT.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.

8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

9. Inspect all seatbelts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.

10. Do not pull seatbelt more than 1 inch (2.54 centimeters) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.

11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

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13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi, there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi. Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi. Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 8 hours (.5 conference, .5 demonstration, and 7.0 practical exercise, including 1.0 PMCS).

LESSON TITLE: DRIVE AN MTV CARGO TRUCK ON THE ROAD

TASK NUMBER: 551-721-1366 (Drive Vehicle with Automatic Transmission)

A. TRAINING OBJECTIVE.

TASK: Drive an MTV cargo truck (empty, partially loaded [2 to 3 tons], and fully loaded) on the road (primary and secondary).

CONDITION: Given instruction, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, designated driving route (improved surfaced and secondary roads), an MTV cargo truck with BII, vehicle loads, and a requirement to drive a designated route (to include making right and left turns, making gradual steering corrections, signal intentions in advance, pass oncoming vehicles, maintain vehicle interval, obey highway warning and regulatory signs, operate the lights as required, monitor gauges and indicator lights, upshift/downshift the transmission through all gear ranges, manipulate the controls, and perform basic driving maneuvers to include downhill braking and backing using ground guides).

STANDARD: Operate the vehicle correctly and safely without accident or injury.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool and driver training route (built up and rural areas) as scheduled.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for each two students for the practical exercise.
6. Training aids and equipment: Rags, lubricants, coolant, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, an MTV cargo truck with BII for every two students, and vehicle loads. Hearing protection is required for all personnel.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.**1. Introduction.**

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

NOTE: An instructor will be in the cab, sitting next to the driver (nothing between the student and instructor), whenever a student is driving the MTV cargo truck.

NOTE: The students will be required to drive the vehicle fully loaded, partially loaded, and empty. If three vehicles are used, the following arrangement will allow the students to rotate in a round robin fashion:

- One vehicle should be loaded (load should be as close to maximum weight as possible [-5 tons]).
- A second vehicle should be partially loaded (2 to 3 tons).
- The third vehicle should be empty.

NOTE: To prevent loss of cargo or shifting en route, check cargo for blocking/bracing and cargo tie downs for security before operation and repeatedly during operation.

a. Explain braking precautions—(Most likely, this is the first exposure to air brake equipped vehicles for these students. They really need to understand the difference between air brakes and hydraulic brakes.) MTVs have conventional air-brake systems, and air brakes can be sensitive. Air brakes are unique in that braking force is proportional to pedal travel, but the driver does not experience resistance from the brake pedal. Air brakes do not “feel” like hydraulic brakes. The untrained driver - or even the cross-trained one - may respond to this lack of resistance by applying too much force to the brake pedal. This causes the brakes to lock up and the vehicle to become uncontrollable. All drivers of these trucks must be thoroughly trained in operating tactical trucks with air brakes. Warnings are printed in the technical manual. These warnings can also be considered controls:

WARNING

Do not operate the vehicle until the front and rear brake air pressure reaches at least 100 psi. Do not press the brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until the air pressure builds up again. Failure to comply may result in injury or death to personnel

WARNING

Sudden stops may cause the vehicle wheels to lock. Apply even pressure on the brake pedal when stopping vehicle on ice and snow. Failure to apply brakes gradually can result in injury or death.

WARNING

Never use the parking brake for normal braking. The wheels will lock up causing a severe skid. Failure to comply may result in injury or death to personnel.

b. Explain procedures for hill climbing—

- (1) The engine works hardest when moving a loaded vehicle up a grade. Proper use of gear ranges will shorten the time on hills.
- (2) Unless the hill is extreme, begin in gear range D (drive), and depress the accelerator pedal all the way downward. (The selector display window should indicate the gear the transmission is in and the maximum forward gear available such as 7 and 2.) Keep it there as the vehicle moves up the grade. Remain in this gear range and allow the transmission to upshift and downshift automatically. If the transmission is constantly changing gears, push the down arrow one selection at a time, such as 6 then 5.
- (3) When you reach the top of the hill, manually (press the down arrow) downshift the transmission to the gear that the transmission is in. This is normally the gear the truck should be in to descend the other side of the hill.

c. Explain procedures for downhill driving—

- (1) Select a “safe” speed that is not too fast for the following:
 - Total weight of the vehicle and cargo.
 - Length of the grade.
 - Steepness of the grade.
 - Road conditions.
 - Weather.

- (2) Manually downshift the transmission (press the down arrow) into a lower gear before starting downgrade. (The general rule is to use the same gear to descend the grade that would be needed to climb the grade.)

WARNING

Do not allow the vehicle to coast in N (neutral). Failure to comply may result in injury or death to personnel or damage to equipment.

- (3) Check brakes before starting the downgrade.
- (4) Pay attention to signs indicating the location of escape ramps.

WARNING

Transmission incorporates a hold feature to prohibit upshifting above selected gear during normal driving. However, during downhill operation, transmission may upshift above selected gear. On downgrades, vehicle speed may need to be restricted by using service brakes. Failure to comply may result in injury or death to personnel or damage to equipment.

CAUTION

If illumination of last selected gear (in left side of display window) goes out, transmission ECU pushbutton shift selector has detected a problem that needs correcting. Do not attempt to shift transmission to N (Neutral) or any other gear. Operate vehicle at reduced speed to a safe parking location. Failure to comply may result in damage to equipment.

- (5) When vehicle speed reaches the maximum “safe” speed, apply the brakes just hard enough to feel a definite slowdown.
- (6) When the vehicle speed has been reduced to approximately 5 mph below the “safe” speed, release the brakes. (This brake application should last for about 3 seconds.)

NOTE: New drivers generally have two problems with air brake systems on down grades:

- They try to maintain a constant speed down hill by dragging the brakes. This glazes the brakes and they become completely ineffective.
- They drain the air system by continually pumping the brakes.

- (7) When vehicle speed has increased to the “safe” speed, repeat steps (5)

and (6).

(8) If braking power diminishes, pull off to the side of the road and allow the brakes to cool.

CAUTION

Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

WARNING

Rapid operation repeatedly of service brakes will consume compressed air supply and cause automatic spring brake application. Failure to follow proper service brake operating procedures may cause serious injury or death to personnel.

d. Explain following distances—

(1) Maintain one second for each ten feet of vehicle length (40 mph and less). (The M1083 22.75 feet long and the M1086 is 31.67 feet long [other models vary], so at speeds of up to 40 mph, allow three seconds following distance for the M1083 and four seconds following distance for the M1086.)

(2) Increase by one second for speeds over 40 mph. At 45 mph allow four seconds following distance for the M1083 and allow five seconds following distance for the M1086.

(3) Increase by several seconds for rain, fog, and winter conditions.

e. Explain driving in adverse weather conditions. Two major hazards associated in driving during adverse weather conditions are reduced visibility and reduced traction.

(1) Countermeasures for driving during periods of reduced visibility:

- Travel at reduced speeds and be prepared to meet sudden changes in road conditions.
- Do not use high beams. Switch to low beams if high beams are on.
- Look to the right if blinded by oncoming vehicles.
- Do not overrun the headlights and stay twice the normal distance from the vehicle ahead.

- Give turn signals sooner.
- Apply brakes sooner and press brake pedal lightly to give early warning that vehicle will slow or stop.
- Use defrosters and wipers to help keep the windshield clear.

- Keep windshield, windows, mirrors, headlights, brake lights, reflectors, and area around air cleaner intake free of snow and ice. Snow and ice may melt, refreeze, and cause restriction in the air intake system.
- Watch for pedestrians and vehicles pulled over to the side of the road.
- Use caution when weather reduces visibility to near zero. This is particularly true at night, in heavy snow, in a downpour of rain or dense fog. When this happens, it is unsafe to drive.
 - Exit the highway, stop, and wait until visibility improves before continuing.
 - Do not stop on the shoulder with flashers on. Stopping on shoulders may induce a rear end collision/chain reaction.

(2) Reduced traction countermeasures:

- Install tire chains, if needed, for snow or ice. When tire chains are used they must be used on all four-rear wheels. Tire chains must not be used when driving on hard surfaces where there is no wheel slippage. The maximum speed limit for vehicles with tire chains on highways is 10 mph and off highway is 15 mph.

WARNING

Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

WARNING

Rapid operation repeatedly of service brakes will consume compressed air supply and cause automatic spring brake application. Failure to follow proper service brake operating procedures may cause serious injury or death to personnel

- Pump the brakes gradually when stopping the vehicle on snow and ice (pumping air brake vehicles may be dangerous, do not pump the brakes more than three to four times and allow the air pressure to build back up before reapplying the brakes). Sudden braking will cause wheels to lock and vehicle to slide out of control.
- Place the transmission shift lever in the appropriate driving range to descend or climb steep hills.
- Place the vehicle in motion slowly to prevent wheels from spinning.
- Press the accelerator pedal slowly when changing speed.
- Keep the accelerator pedal steady after vehicle reaches the desired speed.
- Turn the vehicle slowly and make gradual steering adjustments when on slippery surfaces.
- Steer the vehicle away from ruts and large snow banks.
- Steer the vehicle straight up and down hills if possible.
- Check for black ice. Black ice is clear and cannot be seen because the road surface is visible through the ice. The ice becomes invisible to the driver. Black ice usually occurs on bridges, beneath underpasses, in dips in the road, in shaded areas, and on lower sides of banked curves.
 - When driving in rain or near freezing temperatures, feel for ice along the front of a mirror. If ice is there, it may be on the road surface as well.
 - When in doubt, test surface traction by first checking to see that nothing is following your vehicle, then slow down and apply the brakes gently to see if the vehicle skids.
- Sudden changes in speed or direction result from over acceleration, over braking and over steering. These changes result in skidding and jackknifing. Use the following procedures if the vehicle's rear skids:
 - Let up on the accelerator pedal.
 - Steer in the same direction in which the rear of the vehicle is skidding.
 - When vehicle is under control, press the brake pedal lightly.
 - Steer vehicle on a straight course and slowly press the accelerator pedal.

- Do the following if the vehicle starts to slide while climbing a hill:
 - Let up on the accelerator pedal.
 - Steer the vehicle in the direction of the slide until the vehicle stops sliding.
 - Slowly press the accelerator pedal and steer the vehicle on a straight course.
- The best advice in regard to a stuck vehicle is to avoid getting stuck. However, do the following if the vehicle does get stuck:
 - Shovel clear path ahead of each wheel. Put boards, brush, sand, gravel, or similar material in cleared paths to get better traction.
 - Lower the CTIS tire pressure to the emergency setting.
 - Press the mode button on the ECU control panel to select the off-road mode. Do not rock the vehicle or spin the wheels.
 - If vehicle remains stuck, use wrecker or another vehicle equipped with winch to tow or winch the stuck vehicle.
 - If vehicle is equipped with a self-recovery winch, it may be used to help free the vehicle.
- Drive slowly and test brakes after driving through slush or water. If brakes slip do the following:
 - Continue to drive slowly.
 - Apply moderate pressure on brake pedal to cause slight brake drag.
 - When brakes are dry and they no longer slip and uneven braking ceases, let up on the brake pedal.
 - Resume normal driving speed.
- When driving during hot weather, adjust your driving for bleeding tar conditions on the roadway. Do the following to drive under these conditions:
 - Frequently scan the roadway ahead.
 - Identify a black tar area ahead.

- Maintain steady speed.
- Make no sudden steering maneuvers.
- Make no sudden braking maneuvers.
- If braking is required, ensure all wheels are on a similar surface.

f. Explain driving on secondary roads—

(1) Select the cross-country (X-C) setting on the CTIS selector panel. Speed in this mode is limited to 40 mph. If this speed is exceeded for more than two minutes, CTIS will automatically inflate the tires to the highway setting. At the highway setting, this smaller footprint can cause traction problems and the driver may lose control of the vehicle.

(2) Do not drive in dust clouds created by other vehicles. Maintain a longer following distance when traveling on dusty roads. Establish procedures to warn approaching vehicles in dust and other restricted visibility conditions of vehicles that are stopped or broken down.

(3) Drive slowly on secondary roads. All models of the MTV have been known to lose traction on secondary roads, especially when the vehicles are empty or lightly loaded. This is because the rear wheels tend to bounce on the rough road.

(4) Travel on the solid part of the roadway and stay away from the edge of soft shouldered roads. Edges of trails and secondary roads have been known to give way, causing the vehicle to roll on its side.

g. Give safety briefing to include safety restrictions and ground guide precautions for backing the truck.

3. Practical exercise.

a. Assign students to vehicles and issue TM 9-2320-366-10-1 and 10-2, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.

b. Students perform before-operation PMCS.

c. Students practice driving the truck on the road (primary and secondary). During-operation PMCS is also conducted at this time.

NOTE: As each student practices driving, an assistant instructor rides in the seat next to the driver. The assistant instructor explains driving techniques, ensures the driver is aware of driving situations, and

conducts AARs with each driver. Now is the time to pass on valuable experience and correct any bad driving habits.

d. Students perform after-operation PMCS. Ensure all operator entries required on DD Form 1970 (or ULLS generated DA Form 5987-E) and DA Form 2404 (or ULLS generated DA Form 5988-E) are accurate, complete, and legible.

4. **Evaluate.** Check each student's performance of PMCS and driving.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Retrain NO-GOs and slow learners. Students perform driving tasks daily and are tested on the EOCCT.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.

8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

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9. Inspect all seatbelts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.

10. Do not pull seatbelt more than 1 inch (2.54 centimeters) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.

11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi, there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi. Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi. Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

31. Ensure a safe following distance and speed is maintained when driving on the designated route (as determined by the local command).

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all-hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 12.5 hours (1.0 conference and 11.5 practical exercise, including 3.0 PMCS).

LESSON TITLE: DRIVE AN MTV CARGO TRUCK OFF ROAD

TASK NUMBER: 551-721-1360 (Drive Cargo Vehicle on Side Roads and Unimproved Roads)

A. TRAINING OBJECTIVE.

TASK: Drive an MTV cargo truck (empty, partially loaded [2 to 3 tons], and fully loaded) off road.

CONDITION: Given instruction, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, a suitable off-road training area, an MTV cargo truck with BII, vehicle loads, and a requirement to operate the vehicle off road (to include streams, ravines, gullies, ditches, wooded areas, rocky terrain, swamps, mud, and sand).

STANDARD: Operate the vehicle safely at reduced speeds and over rough terrain without injury to personnel or damage to the vehicle.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool and off road driver training area as scheduled. A classroom is required if optional videotape is shown.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for each two students for the practical exercise.
6. Training aids and equipment: Rags, lubricants, coolant, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, an MTV cargo truck with BII for each two students, and vehicle loads. Television, VCR, and TVT 55-54 are required if the videotape is re-shown to the students. Hearing protection is required for all personnel.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.

- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

NOTE: An instructor will be in the cab, sitting next to the driver (nothing between the student and instructor), whenever a student is driving the MTV cargo truck.

NOTE: The students will be required to drive the vehicle fully loaded, partially loaded, and empty. If three vehicles are used, the following arrangement will allow the students to rotate in a round robin fashion:

- One vehicle should be loaded (load should be as close to maximum weight as possible [-5 tons]).
- A second vehicle should be partially loaded (2 to 3 tons).
- The third vehicle should be empty.

NOTE: To prevent loss of cargo or shifting en route, check cargo for blocking/bracing and cargo tie downs for security before operation and repeatedly during operation.

- a. As an option, show TVT 55-54, to reinforce driving tasks. This step may be deleted because the students should have viewed this TVT in earlier lessons.
- b. General off road driving procedures:
 - (1) Any time the vehicle is driven off-road, raise and hook the rear mud flaps to prevent them from being torn (remember to unhook them when going back to on road driving).
 - (2) If wheel slippage is apparent, pre-select the off-road mode on the transmission selector panel.
 - (3) When operating cross-country, pre-select the cross-country (X-C) mode on the CTIS selector panel. When the mission requires maximum traction in sand, snow, or mud, select sand on the selector panel. When the mission requires maximum traction in extremely adverse terrain, select emergency on the selector panel.
- c. Shallow ditches require the following maneuvers:

- (1) Stop the vehicle.
- (2) Check the terrain for obstacles.
- (3) Make sure mode on (off-road mode) shows in the transmission selector display window.
- (4) Press the transmission down arrow until 4 mode on 2 show in the transmission display window.
- (5) Steer the vehicle toward the ditch so that one wheel on the axle will leave the ditch as the other wheel on the same axle enters it.

d. Deep ditches require the following driving techniques:

- (1) Stop the vehicle.
- (2) Check the terrain for obstacles.
- (3) Cut away sides of the ditch, if necessary.
- (4) Make sure mode on (off-road mode) shows in the transmission selector display window.
- (5) Press the transmission down arrow to control vehicle speed. (If this is an extremely deep ditch, press down arrow until 1 mode on 1 show in the transmission display window.)
- (6) Approach the ditch at an angle.
- (7) Accelerate the vehicle enough to keep it rolling as it goes up the other side.

e. Gullies and ravines require the following maneuvers:

- (1) Stop the vehicle.
- (2) Check the terrain for obstacles.
- (3) Make sure mode on (off-road mode) shows in the transmission selector display window.
- (4) Press the transmission down arrow to control vehicle speed. (If gully or ravine is extremely deep or have a steep grade, press down arrow until 1 mode on 1 show in the transmission display window.)
- (5) Ease the front wheels over the edge into the ravine.
- (6) Steer a straight course so that both front wheels strike the bottom at the same time.
- (7) Accelerate enough so that the vehicle can climb up the opposite bank.

f. Forests or rocky terrain driving techniques include the following:

- (1) Stop the vehicle.
- (2) Check the terrain for obstacles. Ensure vehicle has enough clearance before driving over rough terrain. Rough terrain can damage components under vehicle. Avoid driving over rough terrain whenever possible.
- (3) Ensure vehicle can clear overhanging tree limbs. Avoid driving under low overhead areas whenever possible.
- (4) Fold the vehicle's side mirrors in as far as possible where area to the rear of vehicle is visible but mirrors will not be damaged.
- (5) Remove tarps and bows as necessary.
- (6) CTIS should be set to the cross-country (X-C) mode. Any lower tire pressure can cause breaks in the tires as large rocks force the tire to contact the rim.
- (7) Make sure mode on (off-road mode) shows in the transmission selector display window.
- (8) Press the transmission down arrow to control vehicle speed.
- (9) Maneuver around obstacles.
- (10) Steer vehicle straight up and down hills when possible. When necessary to drive across a hill, choose lowest angle possible. Keep vehicle moving. Avoid quick, sharp turns. Avoid driving diagonally on a hillside. You can lose control and roll the vehicle.
- (11) Rocks and fallen leaves can be very slippery, especially when wet. Check tire traction and braking.
- (12) Drive slowly choosing route while advancing. Drivers should achieve a "rolling" effect as they cross large rocks by braking as the vehicle's wheels ride over a rock so the axle settles relatively gently on the far side.

g. Fording shallow streams (30 inches or less) calls for these handling techniques:

- (1) Stop the vehicle.
- (2) Check the terrain for obstacles.
- (3) Check the stream for depth and firm support.
- (4) Tighten fuel tank cap.
- (5) Secure all loose objects on vehicle.

(6) Make sure battery caps are all installed and tight. Make sure transmission dipstick is secured.

(7) Start engine. Make sure engine is running properly.

(8) Make sure mode on (off-road mode) shows in the transmission selector display window.

(9) Press the transmission down arrow to control vehicle speed. (The best selection for fording is 2 mode on 2).

(10) Turn the deep water-fording switch to on, the fan off indicator should be lit. (Turning this switch on disables the radiator fan when water depth is 20 inches or more. This prevents the water from pushing the composite fan blade into the engine).

WARNING

Do not attempt to cross water deeper than 30 inches. Limit vehicle speed while fording to 3 or 4 mph. Failure to do this will result in damage to the vehicle or injury or death to personnel.

(11) Enter water slowly at a gentle sloping area.

(12) Maintain a constant vehicle speed while fording, and exit water in an area with a gentle slope. Unless absolutely necessary, do not stop while in water.

(13) If vehicle accidentally enters water deeper than 30 inches—

- Apply brake pedal and hold to stop vehicle.
- Shift transmission to N.
- Move the transmission shift lever to R.
- Let up on the brake pedal and slowly back vehicle out of the water.

WARNING

Do not rely on service brakes until they dry out. Keep applying brakes until uneven braking ceases. Failure to do this will result in injury or death.

(14) After leaving the water, turn the deep water-fording switch to off, the fan off indicator should not be lit. (If the fan switch is left on, the engine will over heat.) Apply the brake pedal lightly and hold while driving slowly to dry out brake linings.

(15) When clear of the fording area, stop the vehicle, apply and release the parking brakes several times to remove water from brake components.

(16) Wash all parts of vehicle with fresh water as soon as possible and have organizational maintenance service it.

h. Operation in mud and swamps or sand require the following driving techniques:

(1) Operating in mud causes brake linings to get wet and can impair vehicle braking. If braking is impaired while operating in mud, dry brakes by driving vehicle about 500 feet while applying service brakes often. This must be done with brake drums totally out of mud so that drying action can take place. If drying brakes does not restore adequate braking, notify Unit Maintenance.

(2) Cover exposed glass surfaces when not needed for operations. Take care when cleaning glass to prevent scratching the surfaces.

(3) Check the air filter restriction gauge often. Shut down the engine immediately when the yellow diaphragm on the gauge enters the red zone and service the air filter. Check other gauges and indicator lights on the instrument panel assembly to be sure the sand does not affect other equipment.

(4) If wheel slippage is apparent, pre-select the off-road mode on the transmission selector panel.

(5) Press CTIS mode to sand.

(6) Accelerate slowly so tires do not spin and dig in sand or mud.

(7) Press the lower gear range (down arrow) button on the ECU push-button shift selector for added tire traction and to restrict vehicle speed.

(8) Keep the accelerator pedal steady after the vehicle reaches the desired speed.

(9) Turn the vehicle slowly when in loose sand or mud.

(10) Steer the vehicle straight up and down hills when possible.

- Do not straddle or drive on the sides of sand mounds. Loose sand will not support the vehicle on steep slopes
- When necessary to drive across a hill, choose the lowest angle possible. Keep the vehicle moving and avoid quick, sharp turns.
- Avoid driving diagonally on a hillside. You can lose control and roll the vehicle.

(11) To move the vehicle forward and turn after the vehicle is stopped in loose sand or mud:

- Press R (reverse) select button on the ECU push-button shift selector.

- Press the accelerator pedal and move the vehicle straight back approximately 20 feet.
- Release the accelerator pedal and press the brake pedal.
- Press the D (drive) select button on the ECU push-button shift selector and press the down arrow to select a higher gear than gear selected when vehicle was stopped. (If 6 and 2 were selected last time, try 5 and 2 or 4 and 2.)
- Release the brake pedal and press the accelerator pedal to move vehicle forward.
- Gradually turn the vehicle.
- Press higher gear select button (up arrow) on the ECU push-button shift selector when the vehicle picks up speed and is moving forward smoothly.

(12) If vehicle starts to skid:

- Release the accelerator pedal.
- Steer in the direction of the skid until the vehicle stops skidding.
- Press the brake pedal lightly when the vehicle is under control.
- Press the accelerator pedal slowly and steer the vehicle on a straight course.

(13) Park vehicle so it does not face wind whenever possible.

- i. Clean mud off vehicle as soon as possible, giving special attention to wheels, brakes, axles, universal joints, steering mechanism, and radiator. Do not direct high-pressure water stream at glass surfaces, seals, air intake, exhaust outlet, or any other component of vehicle that could be easily damaged by high-pressure water stream.
- j. Give safety briefing, to include reinforcing ground guide safety procedures for backing the vehicle.

3. Practical exercise.

- a. Assign students to vehicles and issue TM 9-2320-366-10-1 and 10-2, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.
- b. Students perform before-operation PMCS.

- c. Students practice driving the truck off road. During-operation PMCS is also conducted at this time.

NOTE: As each student practices driving, an assistant instructor rides in the seat next to the driver. The assistant instructor explains driving techniques, ensures the driver is aware of driving situations, and conducts AARs with each driver. Now is the time to pass on valuable experience and correct any bad driving habits.

- d. Students perform after-operation PMCS. Ensure all operator entries required on DD Form 1970 (or ULLS generated DA Form 5987-E) and DA Form 2404 (or ULLS generated DA Form 5988-E) are accurate, complete, and legible.

- 4. **Evaluate.** Check each student's performance of PMCS and off road driving.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

- 6. **Retraining.** Retrain NO-GOs and slow learners. Students perform driving tasks daily and are tested on the EOCCT.

E. SAFETY RESTRICTIONS.

- 1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

- 2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

- 3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

- 4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

- 5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

- 6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

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7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.

8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

9. Inspect all seatbelts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.

10. Do not pull seatbelt more than 1 inch (2.54 centimeters) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.

11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi (448 kPa), there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi (448 kPa). Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi (448 kPa). Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi (448 kPa). Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

31. Do not rely on service brakes until they dry out. Keep applying brakes until uneven braking ceases. Failure to do this will result in injury or death.

32. Ensure a safe following distance and speed is maintained when driving on the designated route (as determined by the local command).

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all-hazardous materials and hazardous wastes are stored and labeled properly.

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2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.

3. Ensure that drip pans remain under parked vehicles.

4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 6 hours (.5 conference and 5.5 practical exercise, including 1.0 PMCS).

LESSON TITLE: DRIVE AN MTV CARGO TRUCK AT NIGHT

TASK NUMBER: 551-721-1366 (Drive Vehicle with Automatic Transmission)

A. TRAINING OBJECTIVE.

TASK: Drive an MTV cargo truck at night.

CONDITION: Given instruction, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, designated driving route (improved surfaced and secondary roads), an MTV cargo truck with BII and a requirement to drive a designated route at night with headlights using defensive driving (accident avoidance) methods; operate the lights, monitor gauges and indicator lights, manipulate the controls, and perform basic driving maneuvers to include downhill braking and backing using ground guides).

STANDARD: Operate the vehicle correctly and safely without accident or injury.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool and driver training route (built up and rural areas) as scheduled.
3. Training type: Conference and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for each two students for the practical exercise.
6. Training aids and equipment: Rags, lubricants, coolant, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, an MTV cargo truck with BII for every two students, and vehicle loads. Hearing protection is required for all personnel.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, and TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.

- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

NOTE: An instructor will be in the cab, sitting next to the driver (nothing between the student and instructor), whenever a student is driving the MTV cargo truck.

a. *Night driving factors.*

(1) *Driver factors:*

- Vision. The driver has limited vision at night because of the following:
 - Eyes need time to adjust to the change between light and darkness.
 - Drivers cannot see as sharply at night.
 - Drivers cannot see to the sides as well at night.
- Glare. Temporary blindness is caused by glare, normally from oncoming headlights but sometimes from other lights.
- Fatigue. Reduces the ability to see clearly. The driver becomes less alert, slower to see hazards, and does not react as promptly.
- Driver inexperience. Newness to driving, coupled with the problems of reduced vision, glare, and fatigue account for the fact new drivers have higher nighttime accident rates than more experienced drivers.

(2) *Roadway factors:*

- Low illumination. Illumination provided by streetlights is often only fair to poor. On most roads, the only illumination is from the driver's headlights. Headlights are useful for a relatively short and narrow path directly ahead of the vehicle. Headlights do not bend around corners.

- Variation in illumination. The driver must constantly adjust his eyes to different types and degrees of lighting. Flashing lights distract as much as they illuminate. Traffic signs are hard to see against the background of other lights especially in towns and cities.
- Familiarity with roads. The driver needs to be particularly alert on roads that he has never driven during the day. On familiar roads, drivers tend to be overconfident. This is dangerous because of the following:
 - The view of the roadway is not the same.
 - Situations on some stretches will change.
 - Other road users. The driver must adjust his driving to hazards such as pedestrians, joggers, bicyclists, and animals.
 - Drinking drivers. The likelihood of encountering drunken drivers increases after sundown. Be especially alert when driving near roadside taverns and similar attractions.

(3) *Vehicle factors:*

- Headlights. Sight distance is limited to the range of the headlights. Therefore, the driver must drive at a speed that allows him to stop within his sight distance.
- Auxiliary lights. Other drivers better see trucks at night when reflectors, marker lights, clearance lights, taillights, and brake lights are clean and working properly.
- Turn signals. The ability to communicate with other drivers depends on turn signals. Nonfunctional or dirty turn signal lights greatly increase the risk of an accident.
- Windshield and wipers. A clean windshield and properly working wipers are a must for safe driving.
- Mirrors. Mirrors help the driver see what is going on around him. Keep them clean and properly adjusted.

b. *Night driving procedures.*

(1) *Preparing to drive at night:*

- Getting yourself ready.
 - If you wear glasses, be sure they are clean.
 - Remove sunglasses.

- Be well rested.
- Plan your route.
 - Know the location of rest stops.
 - Plan for hazards such as unlighted areas, exit ramps, construction areas, and other changes in the highway environment.
- Getting the vehicle ready.
 - Ensure windshield, mirrors, lights, and reflectors are clean.
 - Ensure all lights are operational.

(2) *Driving at night:*

- Avoid blinding others.
 - Dim high beams when oncoming vehicles are less than 500 feet away.
 - Do not use high beams to retaliate against other drivers.
- Avoid glare.
 - Set interior panel lights at the lowest setting to reduce glare.
 - Look to the right when oncoming vehicles are using high beams.
- Maximize visibility.
 - Use low beams when desired visual range is about 250 feet.
 - Use high beams when there are no oncoming vehicles and desired visual range is 350 to 500 feet.
- Adjust basic driving techniques.
 - Exercise additional caution because of reduced vision.
 - Signal earlier than you would during daylight to give other drivers more time to react.

3. **Practical exercise.**

- a. Assign students to vehicles and issue TM 9-2320-366-10-1 and 10-2, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.
- b. Students perform before-operation PMCS to include the operation and cleanliness of all lights.
- c. Give safety briefing with emphasis on safety precautions for night operations.
- d. Students drive the designated route. During-operation PMCS is also conducted at this time.

NOTE: As each student practices driving, an assistant instructor rides in the seat next to the driver. The assistant instructor explains driving techniques, ensures the driver is aware of driving situations, and conducts AARs with each driver. Now is the time to pass on valuable experience and correct any bad driving habits.

- e. Students perform after-operation PMCS. Ensure all operator entries required on DD Form 1970 (or ULLS generated DA Form 5987-E) and DA Form 2404 (or ULLS generated DA Form 5988-E) are accurate, complete, and legible.

4. **Evaluate.** Check each student's performance of PMCS and night driving.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Retrain NO-GOs and slow learners.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.
2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.
3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

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4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.

8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

9. Inspect all seatbelts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.

10. Do not pull seatbelt more than 1 inch (2.54 centimeters) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.

11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi, there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi. Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi. Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

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31. Ensure a safe following distance and speed is maintained when driving on the designated route (as determined by the local command).

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all-hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 5 hours (.5 conference and 4.5 hours practical exercise, including 1.0 PMCS).

LESSON TITLE: CHANGE TIRE ON MTV CARGO TRUCK

TASK NUMBER: 551-721-1352 (Perform Vehicle Preventive Maintenance Checks and Services)

A. TRAINING OBJECTIVE.

TASK: Change a tire on the MTV cargo truck.

CONDITION: Given instruction, TM 9-2320-366-10-1 and 10-2, rags, heavy work gloves, hearing protection, an MTV cargo truck with BII, and a requirement to change a simulated flat tire on the truck.

STANDARD: Perform task in the correct sequence according to TM 9-2320-366-10-1 and 10-2 and without damage to equipment or injury to personnel. Students will be graded on a GO/NO-GO basis.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Training area or motor pool as scheduled.
3. Training type: Demonstration and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every six students for the demonstration, and one assistant instructor for every two students for the practical exercise.
6. Training aids and equipment: Rags, heavy work gloves, TM 9-2320-366-10-1 and 10-2, and an MTV cargo truck with BII for every two students. Hearing protection is required for all personnel.
7. References: TM 9-2320-366-10-1 and 10-2.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:

- (1) Explanation.
- (2) Practical exercise.
- (3) Summary.

2. Explanation and demonstration.

NOTE: Changing a tire on the MTV cargo truck is a two-soldier task. One soldier cannot safely do this task.

- a. Review safety warnings.
- b. Park the vehicle.

WARNING

Ensure the vehicle is parked on level ground before changing flat tire. The vehicle may roll. Failure to comply may result in injury or death to personnel.

- (1) Park the vehicle in a safe area, out of traffic, where there is no traffic danger to personnel changing the tire. Also, the vehicle must be parked on hard, level ground.
 - (2) Set the parking brake, shift the transmission range selector to N, and shut off the engine.
 - (3) Turn on emergency flashers as dictated by traffic hazards.
 - (4) Position emergency reflective triangles as dictated by traffic hazards.
 - (5) Chock the wheels. It is best to chock the front wheel on the opposite side of the vehicle from the flat tire. For example, if the right rear tire were flat, chock the left front tire, front and rear of the tire, to prevent movement in either direction.
- c. Tools. Remove all necessary tools from vehicle and vehicle stowage boxes (jack, jack handle, 12-inch adjustable wrench, wheel lugnut wrench, and wheel lugnut wrench handle).
 - d. Lower the spare tire.
 - (1) Raise the cab (see previous lesson outline: Raise and Lower MTV Cab).
 - (2) Disconnect safety chain from spare tire retainer.
 - (3) Remove safety chain from spare tire.
 - (4) Lift latch on ratchet of spare tire restraining strap.
 - (5) Loosen spare tire restraining strap on ratchet.

- (6) Remove spare tire restraining strap from ratchet.
- (7) Disconnect spare tire restraining strap from spare tire retainer.
- (8) Remove strap from spare tire.
- (9) Lower cab (see previous lesson outline: Raise and Lower MTV Cab).
- (10) At the hydraulic manifold, turn the spare tire knob to the lower position and the function select knob to the spare tire position.

WARNING

Tire weighs approximately 350 pounds. Do not stand in front of spare tire while lowering. Failure to comply may result in injury to personnel.

CAUTION

Use caution when lowering tire to prevent damage to CTIS wheel valve. Failure to comply may result in damage to equipment.

- (11) Press and hold the pump knob to lower spare tire to the ground. (Use the backup hydraulic pump if the temperature is below -25° F (-32° C) or if pressing the pump knob does not lower the spare tire.)

e. Position jack and remove the flat tire.

WARNING

Place the jack on a flat surface. Do not allow personnel under the vehicle when jacking. Failure to comply may result in serious injury or death to personnel.

- (1) Position jack for front tire removal.
 - Position jack under the saddle of the leaf spring.
 - Unscrew jack ram until it touches saddle.
- (2) Position jack for rear tire removal.
 - Position jack under the shock mount.
 - Unscrew the jack ram until it touches the shock mount.

NOTE: Both the front and rear tires are removed the same way. Air will not escape when the CTIS hose is removed from the hollow wheel stud.

- (3) Using the 12-inch adjustable wrench, loosen and remove the banjo bolt, washer, CTIS hose, and washer from the hollow wheel stud.

NOTE: Studs and lugnuts on the left side of the vehicle have left-hand threads. Turn lugnuts to the right to loosen, and to the left to tighten. Studs and lugnuts on the right side of the vehicle have right-hand threads. Turn lugnuts to the left to loosen, and to the right to tighten.

- (4) Using the wheel lugnut wrench and the wheel lugnut wrench handle, loosen ten lugnuts. Do not remove lugnuts.

- (5) Raise the jack until the flat tire is slightly off the ground.

NOTE: Steps (6) through (9) require the aid of an assistant. Both front and rear tires are removed the same way.

WARNING

Tire weighs approximately 350 pounds. One soldier should steady the tire during removal. A falling tire may cause injury or death.

- (6) Remove the 10 lugnuts from the studs. Set the lugnuts aside.
- (7) One soldier tilts the top of the flat tire forward, while the other soldier raises the jack slightly. The tire should move forward.
- (8) Repeat step (7) to walk the flat tire off the studs. The wheel lugnut wrench handle may be used under the tire to assist sliding or creeping wheel away from the hub.
- (9) Remove the flat tire and lean the flat tire against the vehicle out of the way.

f. Tire installation.

NOTE: Steps (1) through (5) require the aid of an assistant. Both front and rear tires are installed the same way.

- (0) Remove chain from the spare tire and with the aid of an assistant; roll the spare tire up to the hub where the flat tire was removed.

CAUTION

Use caution when installing wheel and lugnuts. Do not drag wheel across studs or cross-thread lugnuts. Failure to comply may result in damage to equipment.

- (2) Align the CTIS hose with the hollow wheel stud.

WARNING

The jack is under heavy pressure. Keep hand, arm, and head clear while slowly raising or lowering the jack to avoid injury to personnel. Do not lower the jack too quickly as the tire could fall causing serious injury or death.

- (3) Slide the spare tire onto the hub and studs. The jack may have to be raised slightly to accommodate the spare tire. The wheel lugnut wrench handle may be placed near the bottom of the tire to either side and raised up to move the tire forward on the hub and studs.
- (4) Continue with step (3) until the spare tire is seated on the axle and studs.
- (5) Install and tighten the 10 lugnuts using the wheel lugnut wrench to tighten in the sequence as shown.

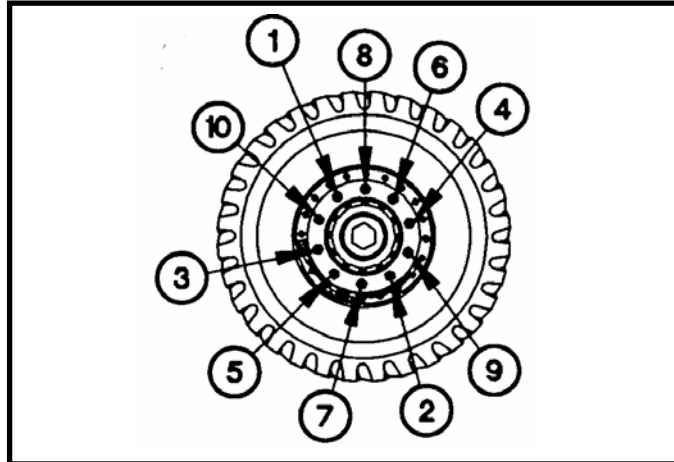


Figure 4-11. Lugnut tightening sequence.

- (6) Use the jack to carefully lower the vehicle to the ground.
- (7) Remove the jack and handle from under the vehicle.
- (8) Tighten the 10 lugnuts in order as shown until they no longer tighten.

WARNING

Notify unit maintenance that lugnuts must be tightened to 415-475 pounds-feet as soon as possible. Tire may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

- (9) Stow the jack and handle in the tool kit.

CAUTION

Do not over tighten screw when installing CTIS hose on hollow wheel stud. Failure to comply may result in damage to equipment. Spare tire has a solid bolt installed, which must be removed and installed with banjo bolt. Failure to comply may result in damage to equipment.

(10) Install CTIS hose on hollow wheel stud with two washers and banjo bolt.

f. Stow tire.

WARNING

Handle the flat tire with care. Tire may have exposed broken metal cords or sharp debris in it. Failure to comply may result in injury to hands.

WARNING

Tire weighs approximately 350 pounds. Do not stand in front of tire while raising. Failure to comply may result in injury to personnel.

CAUTION

CTIS valve of tire must be positioned toward cab. Failure to comply may result in damage to equipment.

- (1) Roll flat tire under center of spare tire lift arm.
- (2) Route chain through uppermost lughole in wheel.
- (3) Connect chain to spare tire lift arm.

CAUTION

Use caution when raising tire to prevent damage to CTIS wheel valve. Failure to comply may result in damage to equipment.

NOTE: Vehicle may have to be started to build up enough air pressure to raise the cab, stow the flat tire, and lower the cab.

- (4) Raise the cab (see previous lesson outline: Raise and Lower MTV Cab).
- (5) Turn the spare tire knob (6) to the raise position and the function select knob to the spare tire position.

CAUTION

Tire must be stowed against the back frame of the spare tire retainer. The tread engagers must be in the slots of the tire tread. Failure to comply may result in damage to equipment.

- (6) Press and hold the pump knob to raise the spare tire lift arm to the stowed position. (Use the backup hydraulic pump if the temperature is below -25° F (-32° C) or if pressing the pump knob does not raise the spare tire.)
- (7) Connect the strap to the spare tire retainer.

CAUTION

The spare tire-restraining strap must be tightened securely. A loose strap will allow the tire to move causing chafing of strap and possible loss of tire. Failure to comply may result in damage to equipment.

- (8) Position the strap on the tire.
- (9) Feed the other end of the strap through the ratchet.

CAUTION

Ensure that the strap is wrapped around the ratchet at least three complete wraps after tightening. Failure to comply may result in damage to equipment.

- (10) Tighten the strap around the tire with the ratchet and close the ratchet latch.

CAUTION

Ensure that the safety chain is loose. If the safety chain is tight then the strap is not tight enough or the spare tire is not correctly positioned. Failure to comply may result in damage to equipment.

- (11) Connect the safety chain to the spare tire retainer
 - (12) Route the other end of the safety chain through the tire and connect to the spare tire retainer.
 - (13) Lower the cab (see previous lesson outline: Raise and Lower MTV Cab).
- h. Prepare vehicle for driving.
- (1) Return all tools and wheel chocks to stowage boxes or locations.
 - (2) Stow vehicle access ladder (if used) and secure tailgate and/or side panels.

(3) Pick up and stow highway safety markers.

(4) At the earliest opportunity, have unit maintenance torque all nuts and bolts (lugnuts and banjo bolts) that were loosened during the tire changing procedure and repair or replace spare tire.

3. Practical exercise.

- a. Assign two students to each vehicle and issue TM 9-2320-366-10-1 and 10-2.
- b. Students practice changing simulated flat tires.

4. Evaluate. Check each student's performance.

5. Summary.

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. Retraining. Retrain NO-GOs and slow learners.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.

6. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

7. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle

access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.

8. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.

9. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

10. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

11. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

12. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

13. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

14. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

15. Ensure the vehicle is parked on level ground before changing flat tire. The vehicle may roll. Failure to comply may result in injury or death to personnel.

16. Tire weighs approximately 350 pounds. Do not stand in front of spare tire while lowering. Failure to comply may result in injury to personnel.

17. Place the jack on a flat surface. Do not allow personnel under the vehicle when jacking. Failure to comply may result in serious injury or death to personnel.

18. Tire weighs approximately 350 pounds. One soldier should steady the tire during removal. A falling tire may cause injury or death.

19. The jack is under heavy pressure. Keep hand, arm, and head clear while slowly raising or lowering the jack to avoid injury to personnel. Do not lower the jack too quickly as the tire could fall causing serious injury or death.

20. Notify unit maintenance that lugnuts must be tightened to 415-475 pounds-feet as soon as possible. Tire may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

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21. Handle the flat tire with care. Tire may have exposed broken metal cords or sharp debris in it. Failure to comply may result in injury to hands.

22. Tire weighs approximately 350 pounds. Do not stand in front of tire while raising. Failure to comply may result in injury to personnel.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all-hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 3.5 hours (1.0 demonstration and 2.5 practical exercise).

CHAPTER 5

LESSON OUTLINES FOR TRAILER OPERATIONS

LESSON TITLE: **PERFORM OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES ON TRAILERS**

TASK NUMBER: **551-721-1353 (Perform Preventive Maintenance Checks and Services on Trailers)**

A. TRAINING OBJECTIVE.

- TASK:** Perform operator PMCS on a trailer.
- CONDITION:** Given instruction, DA Form 2404 (or ULLS generated DA Form 5988-E), pencils, appropriate trailer operator's manual, equipment records folder, rags, lubricants, and a trailer coupled to an MTV cargo truck with BII.
- STANDARD:** Inspect the trailer according to the PMCS tables listed in the appropriate trailer operator's manual, correct all faults within the operator's level of maintenance, and legibly record all others on DA Form 2404 (or ULLS generated DA Form 5988-E). If no faults are found, make necessary entries on DA Form 2404 (or ULLS generated DA Form 5988-E).

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool as scheduled.
3. Training type: Demonstration and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class and one assistant instructor for every two students for the demonstration and practical exercise.
6. Training aids and equipment: Rags, lubricants, DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, appropriate trailer operator's manual, equipment records folder, and a trailer coupled to an MTV cargo truck with BII for each two students.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, TM 9-2320-366-10-1 and 10-2, and appropriate trailer operator's manual.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration. Demonstrate before, during, and after checks to students.

3. Practical exercise.

- a. Assign students to coupled trailers and issue TM 9-2320-366-10-1 and 10-2, trailer operator's manuals, pencils, DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags and lubricants are located.
- b. Students perform PMCS.

4. Evaluate. Check each student's PMCS performance.

5. Summary.

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. Retraining. Retrain NO-GOs and slow learners.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.

2. If trailer is not coupled to towing vehicle, ensure the trailer wheels are securely chocked. Failure to do so may cause the trailer to roll, resulting in injury to personnel or damage to equipment.

3. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.

4. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.

5. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle or trailer. Jewelry may catch on equipment.

6. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manuals.

7. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.

8. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.

9. Ensure personnel maintain at least three points of contact when mounting or dismounting the trailer (to include performing PMCS).

10. Ensure all personnel stand clear of towing vehicle and trailer during coupling and uncoupling operations. Failure to follow this warning may result in serious injury or death.

11. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.

2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.

3. Ensure that drip pans remain under parked vehicles.

4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 1.0 hours (.5 demonstration and .5 practical exercise). The remaining PMCS is performed in conjunction with driving tasks.

LESSON TITLE: DRIVE AN MTV CARGO TRUCK WITH TRAILER

TASK NUMBER: 551-721-1380 (Transport General Cargo in Trailer) and 551-721-1385 (Couple/Uncouple Pintle-Connected Trailer)

A. TRAINING OBJECTIVE.

TASK: Drive an MTV cargo truck with trailer.

CONDITION: Given instruction, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, appropriate trailer operator's manual, equipment records folder, rags, lubricants, coolant, suitable training area, designated driving route (improved surfaced and secondary roads), an MTV cargo truck with BII, trailer, and a requirement to drive a designated route.

STANDARD: Without accident or injury, drive the designated route. Couple and uncouple the trailer, back the trailer in a straight line, and perform basic driving maneuvers.

B. INTERMEDIATE TRAINING. None.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Motor pool, training area, and driver training route as scheduled.
3. Training type: Conference, demonstration, and practical exercise.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the conference and one assistant instructor for every two students for the demonstration and practical exercise.
6. Training aids and equipment: Rags, lubricants, coolant, 40 traffic cones or empty POL drums, suitable driver training area, and designated driving route (improved surfaced and secondary roads). DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, appropriate trailer operator's manual, equipment records folder, a trailer coupled to an MTV cargo truck with BII for each two students, and vehicle loads. Hearing protection is required for all personnel.
7. References: AR 385-55, DA Pamphlet 738-750, FM 21-305, TM 9-2320-366-10-1 and 10-2, and appropriate trailer operator's manual.

D. SEQUENCE OF ACTIVITY.

1. Introduction.

- a. Interest device.
- b. Tie-in.
- c. Lesson objective (paragraph A).
- d. Procedures:
 - (1) Explanation.
 - (2) Practical exercise.
 - (3) Summary.

2. Explanation and demonstration.

NOTE: The instructions contained in this lesson for pintle-connected trailers are in general terms because this lesson covers a variety of trailers. Although procedures for these type trailers are similar, the instructor should consult the specific trailer operator's manual for detailed instructions. Additionally, when towing other authorized equipment such as towed howitzers, consult the specific technical manual for the equipment being towed before conducting any towing operations.

- a. Connect the trailer to the vehicle.

WARNING

All personnel must stand clear of towing vehicle and trailer during coupling operation. Failure to comply with this warning may result in serious injury or death to personnel.

- (1) Sound the horn before backing. Using ground guides, back the vehicle to the trailer. Be sure no one stands between the vehicle and trailer.

WARNING

Do not back up without a ground guide. Failure to do this may result in damage to vehicle, injury, or death.

WARNING

When backing or going forward ground guides should never stand directly in the vehicle's path. Keep 10 yards between the vehicle and ground guides at the front or rear and at the corners of the vehicle (never directly behind the vehicle). Ground guides must not position themselves between the vehicle being guided and another object where an inadvertent engine surge or momentary loss of vehicle control could cause injury. The vehicle driver will immediately stop the vehicle if he loses sight of ground guides or notes that the guide is dangerously positioned between the vehicle and another object. In such cases, the vehicle driver will secure his vehicle, dismount, and make an on-the-spot correction before commencing operations.

(2) Stop the vehicle. Engage the parking brake. Shut off the engine. Get out of the vehicle to connect the trailer.

(3) Remove the pintle safety cotter pin and open the pintle. Release the trailer handbrake(s).

(4) Lift the trailer. (Some trailers are light and can be lifted by one person, while others will require several people, and still others have a mechanical lift.) Secure the trailer drawbar ring in the pintle of the towing vehicle. Close the pintle. Install the pintle safety cotter pin in the pintle.

(5) Hook the two safety chains from the trailer to the rear lifting shackles of the towing vehicle.

(6) Raise the retractable support (landing leg).

(7) Connect the intervehicular brake hoses to the towing vehicle. Turn on the air supply.

(8) Connect the intervehicular electrical cable to the towing vehicle.

(9) Operate the controls in the towing vehicle to check brake action and operation of all lights.

b. Disconnect the trailer from the vehicle.

(1) Position the trailer on level ground if possible.

WARNING

All personnel must stand clear of towing vehicle and trailer during uncoupling operation. Failure to comply with this warning may result in serious injury or death to personnel.

- (2) Close the vehicle's air coupling shut-off cock(s) and disconnect the intervehicular brake hose(s). Stow on the bracket provided on the trailer.
- (3) Lower the retractable support (landing leg). Ensure it is locked in position to prevent the trailer from falling.
- (4) Unhook the safety chains.
- (5) Remove the pintle safety cotter pin and open the pintle.
- (6) With assistance remove the drawbar ring from the towing vehicle and lower the trailer on its' support leg.
- (7) Apply the trailer hand brake or chock wheels to prevent trailer movement.
- (8) Close the pintle. Reinstall the pintle safety cotter pin in the pintle.
- (9) Level the trailer if required and perform the after-operation PMCS on the trailer.

c. Driving. When driving the towing vehicle and trailer, keep the overall length of the unit in mind when passing other vehicles and turning. Backing is also affected because the unit is hinged in the middle.

WARNING

Before moving trailer, ensure all loose equipment is properly stowed and that nothing will drag on the ground. If trailer is loaded, ensure that load is properly secured. Failure to follow this warning may result in injury to personnel or damage to equipment.

- (1) Safely towing a trailer requires increased concentration, alertness, and strict compliance with towing speeds.
- (2) Trailers have a tendency to fishtail or swerve very easily when the driver makes an erratic movement of any magnitude. This can be caused by—
 - Speed.
 - A slight swerve to miss a pothole.
 - A quick lane change.
 - A slip of the hand on the steering wheel.
 - Rough or uneven road.
- (3) To prevent trailer fishtail or swerve—
 - Never exceed the recommended speed for the trailer that you are towing.

- Never exceed the trailer's maximum recommended weight capacity.
- Always slow down for curves, wet or rough roads, or downgrades.
- Anticipate all stops to take longer as a result of the added weight. Brake early and gently. Do not slam on the brakes.
- On downgrades, slow down before starting downhill. Use a lower gear. Let the engine compression help slow the vehicle.

(4) To correct trailer fishtail or swerve—

- Steer straight ahead.
- Gradually decelerate.
- Do not brake until both the towing vehicle and trailer have stabilized.

(5) When turning corners, allow for the fact that the trailer wheels turn inside the turning radius of the towing vehicle.

- To make a right turn—
 - Check traffic ahead, to the rear, and to the right side.
 - If not in the right-hand lane, be sure that lane is clear, signal, and move into the lane well in advance of the turn.
 - Signal for the turn at least 150 feet in advance and reduce speed.
 - Check other traffic that is in, at, or approaching the intersection. (Be sure no bicycle or motorcycle is to the right. Be especially alert for pedestrians.)
 - Take a position farther from the curb or edge of the pavement (still within the right lane) than the driver would if driving a straight truck (no trailer).
 - Drive the truck approximately halfway into the intersection. Then cut sharply to the right. This will keep the trailer wheels off the curb.
 - Keep the vehicle close enough to the edge of the road to prevent following vehicles from trying to pass on the right.
 - During the turn, monitor the mirrors for off tracking and keep both hands on the steering wheel.

- If you can't make the turn without swinging into another lane, turn wide as you complete the turn.
 - If you must cross into an oncoming lane and a vehicle comes toward you, allow it to get by you. Stop if you have to, but don't back up.
 - After completing the turn, cancel the signal.
 - When it is safe to do so, steer the vehicle into the desired lane (four-lane roads).
- To make a left turn—
 - Check traffic ahead, to the rear, and to both sides.
 - Signal for the turn at least 150 feet in advance and reduce speed.
 - Check other traffic that is in, at, or approaching the intersection.
 - Ensure there is an adequate gap to make a turn in front of traffic.
 - Before turning, drive the truck into the center of the intersection to allow for the trailer.
 - Turn hard to the left. Watch for oncoming traffic, if applicable.
 - During the turn, monitor the mirrors for off tracking and keep both hands on the steering wheel.
 - If you're turning into a multi-lane street, enter the right lane.
 - If there are two left turning lanes, start your turn from the right-most lane.
 - After completing the turn, cancel the signal.

(6) Stopping requires more distance when pulling a trailer. Apply brakes gradually and smoothly. Stepping on the brake pedal will stop both the towing vehicle and trailer.

WARNING

Do not press the brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until the air pressure builds up again. Failure to comply may result in injury or death to personnel.

WARNING

Sudden stops may cause the vehicle wheels to lock. Apply even pressure on the brake pedal when stopping vehicle on ice and snow. Failure to apply brakes gradually can result in injury or death.

d. Backing the trailer in a straight line. Since the driver cannot see directly behind the vehicle, backing is always dangerous. Avoid backing whenever possible, even if you must go around the block to do so. When backing follow these rules.

- (1) Get out of the vehicle. Check the area to the sides, rear, and overhead for obstructions.
- (2) Use ground guides to direct while backing.

WARNING

When backing or going forward ground guides should never stand directly in the vehicle's path. Keep 10 yards between the vehicle and ground guides at the front or rear and at the corners of the vehicle (never directly behind the vehicle). Ground guides must not position themselves between the vehicle being guided and another object where an inadvertent engine surge or momentary loss of vehicle control could cause injury. The vehicle driver will immediately stop the vehicle if he loses sight of ground guides or notes that the guide is dangerously positioned between the vehicle and another object. In such cases, the vehicle driver will secure his vehicle, dismount, and make an on-the-spot correction before commencing operations.

- (3) Adjust the rearview mirrors before backing.
- (4) Sound the horn before backing, where it is legal to do so.
- (5) Remember, when backing, the trailer's rear will move in the opposite direction from which the front towing vehicle wheels are turned.
 - If the wheels are turned to the right, the trailer will go left.
 - If the wheels are turned to the left, the trailer will go right.
- (6) Make gradual steering corrections in relation to trailer alignment.
- (7) Pull up if necessary to improve the trailer's alignment.

(8) Stop the vehicle when the desired position is reached.

- e. Explain to the students that they must perform before-, during-, and after-operation PMCS on their assigned vehicle.
- f. Demonstrate hand and arm signals required for this exercise.
- g. Demonstrate driving through each maneuver.

3. **Practical exercise.**

- a. Assign students to vehicles/trailers and issue TM 9-2320-366-10-1 and 10-2, trailer operator's manuals, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), and equipment records folder. Tell students where rags, lubricants, and coolant are located.
- b. Students perform before-operation PMCS.
- c. Students practice maneuvering the truck and trailer through the courses laid out in the training area(s). Sample training areas are in Chapter 6 (Figures 6-2, 6-4, 6-5, and 6-6). During-operation PMCS is also conducted at this time.

NOTE: As each student practices driving, an assistant instructor rides in the seat next to the driver. The assistant instructor explains driving techniques, ensures the driver is aware of driving situations, and conducts AARs with each driver. Now is the time to pass on valuable experience and correct any bad driving habits.

- d. After the students have mastered driving the vehicle in the training area, they will practice driving on the road.
- e. Students perform after-operation PMCS. Ensure all operator entries required on DD Form 1970 (or ULLS generated DA Form 5987-E) and DA Form 2404 (or ULLS generated DA Form 5988-E) are accurate, complete, and legible.

4. **Evaluate.** Check each student's performance of PMCS and driving.

5. **Summary.**

- a. Recap main points.
- b. Allow for questions.
- c. Clarify questions.
- d. Give closing statement.

6. **Retraining.** Retrain NO-GOs and slow learners.

E. SAFETY RESTRICTIONS.

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1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.
2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.
3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.
4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.
5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.
6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.
7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.
8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.
9. Inspect all seat belts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.
10. Do not pull seatbelt more than 1 inch (2.54 centimeter) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.
11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.
12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.
13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.

14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.

15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.

16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.

17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi (448 kPa), there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi (448 kPa). Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi (448 kPa). Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi (448 kPa). Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

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27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

31. Ensure a safe following distance and speed is maintained when driving on the designated route (as determined by the local command).

32. All personnel must stand clear of towing vehicle and trailer during coupling and uncoupling operations. Failure to comply with this warning may result in serious injury or death to personnel.

33. Before moving trailer, ensure all loose equipment is properly stowed and that nothing will drag on the ground. If trailer is loaded, ensure that load is properly secured. Failure to follow this warning may result in injury to personnel or damage to equipment.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all-hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

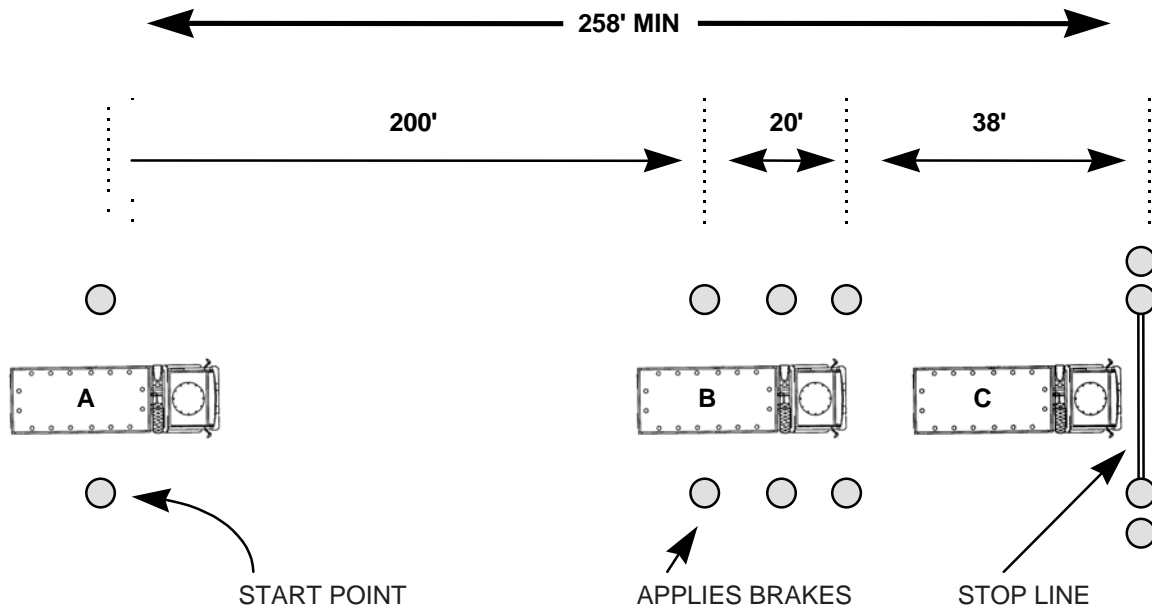
G. ADDITIONAL COMMENTS AND INFORMATION. Recommended instructional time is 15 hours (.5 conference, .5 demonstration, and 14.0 practical exercise, including 2.0 PMCS).

CHAPTER 6**SAMPLE TRAINING AREAS FOR THE MTV CARGO TRUCK**

This chapter shows the sample training areas for the MTV cargo truck. The figures in this chapter depict the MTV cargo as follows:

- Figure 6-1, page 6-2, stopping within the prescribed limits.
- Figure 6-2, page 6-3, diminishing clearance.
- Figure 6-3, page 6-4, offset alley.
- Figure 6-4, page 6-5, serpentine course.
- Figure 6-5, page 6-6, forward stop/straight line backing.
- Figure 6-6, page 6-7, left and right turns.
- Figure 6-7, page 6-8, alley dock.

MTV CARGO STOPPING WITHIN PRESCRIBED LIMITS



NOTES:

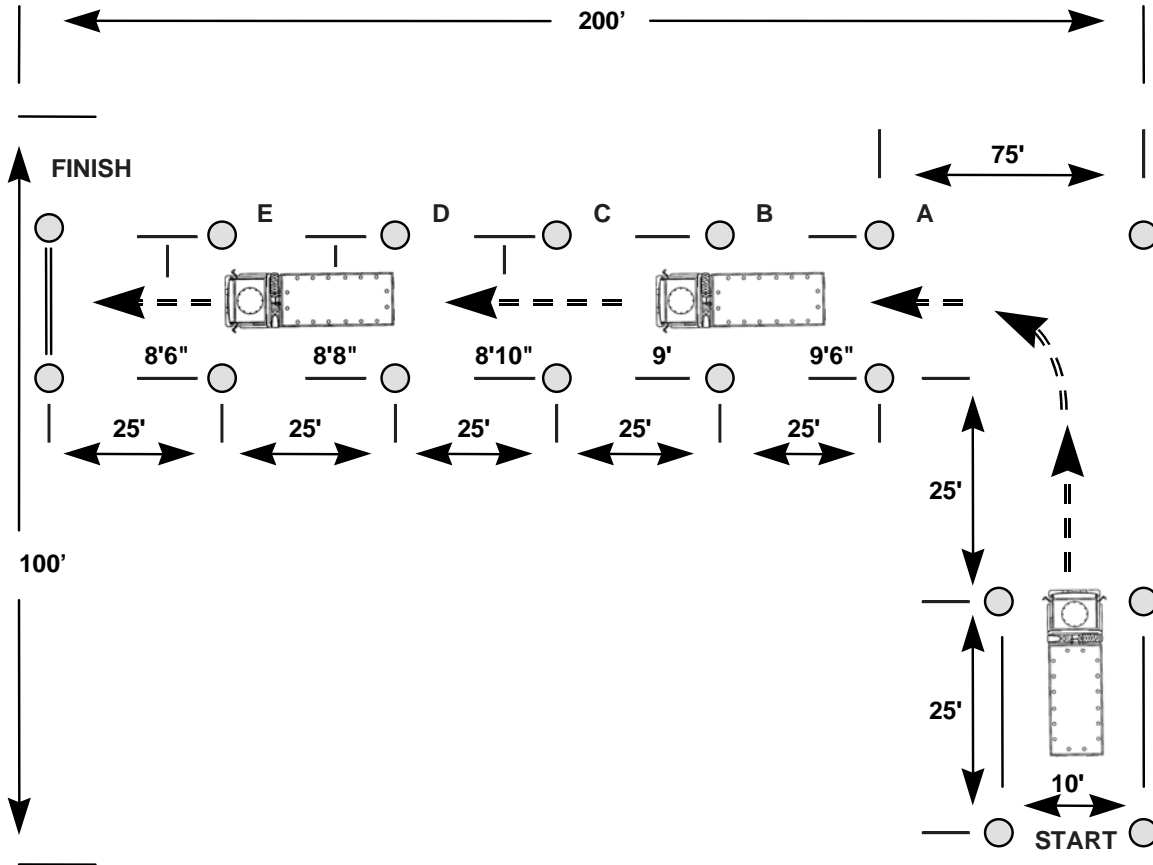
TRAFFIC CONES = ○ STOP LINE = ════════

THE DISTANCE (WIDTH) BETWEEN TRAFFIC CONES IS 12 FEET.

THE DRIVER PULLS OUT AT POINT A. HIS SPEED AT POINT B SHOULD BE 10 MPH WITH TRUCK LOADED AND 20 MPH WITH TRUCK EMPTY. HE APPLIES HIS BRAKES AT POINT B AND MUST STOP BEFORE REACHING POINT C.

Figure 6-1. MTV cargo stopping within prescribed limits

MTV CARGO DIMINISHING CLEARANCE



NOTES:

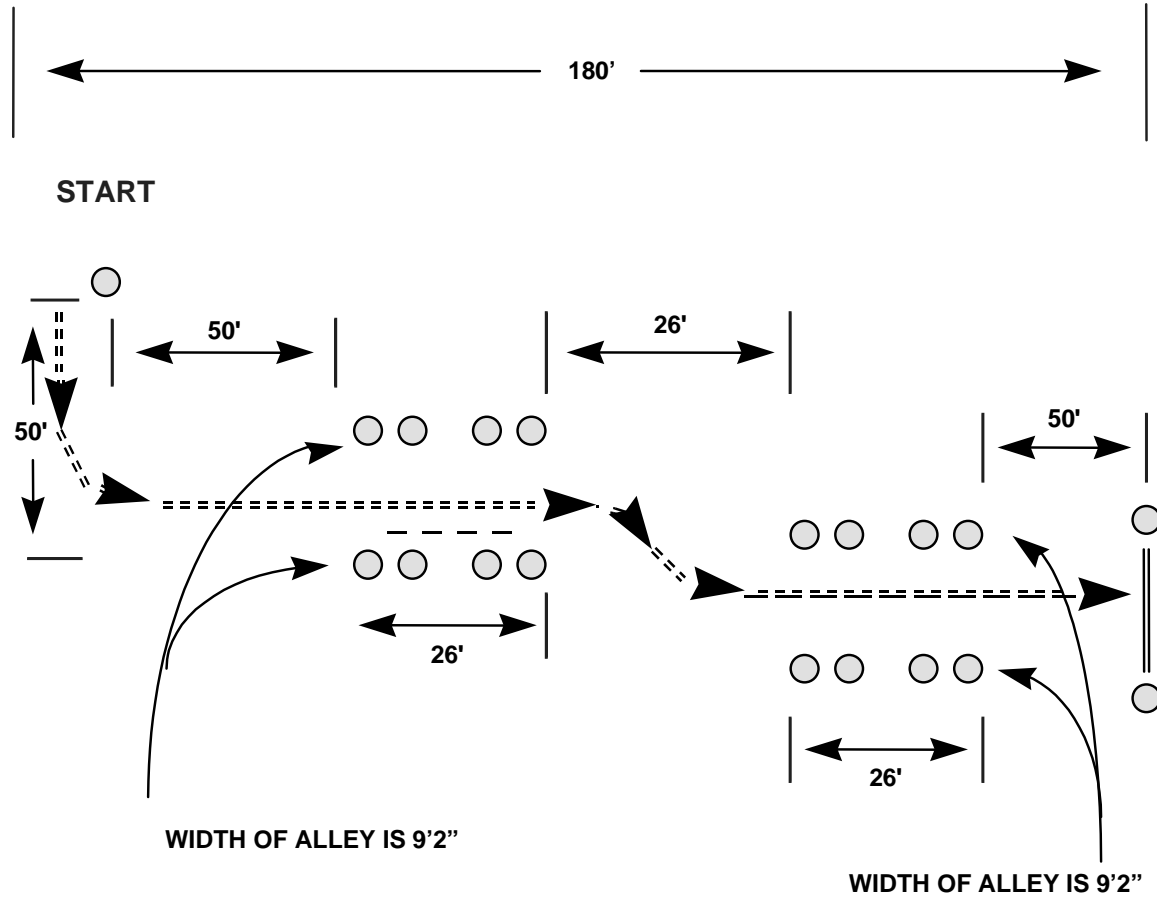
TRAFFIC CONES = ○

STOP LINE = ════

FORWARD = ←═══

Figure 6-2. MTV cargo diminishing clearance

MTV CARGO OFFSET ALLEY



NOTES:

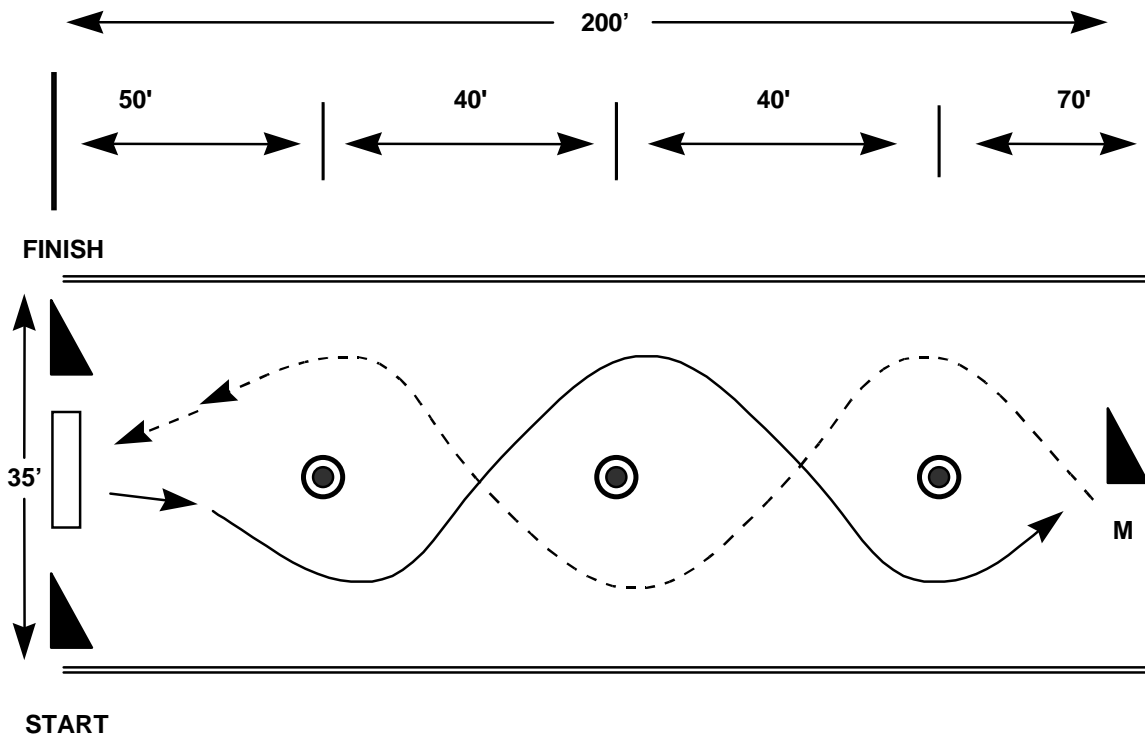
TRAFFIC CONES = ○

STOP LINE = ==

FORWARD = =====>

Figure 6-3. MTV cargo offset alley

MTV CARGO SERPENTINE COURSE



NOTES:

EMPTY POL DRUMS = FIXED BOUNDARIES =

STANDARD = (WIDTH BETWEEN STANDARDS IS 12')

FORWARD = BACKING =

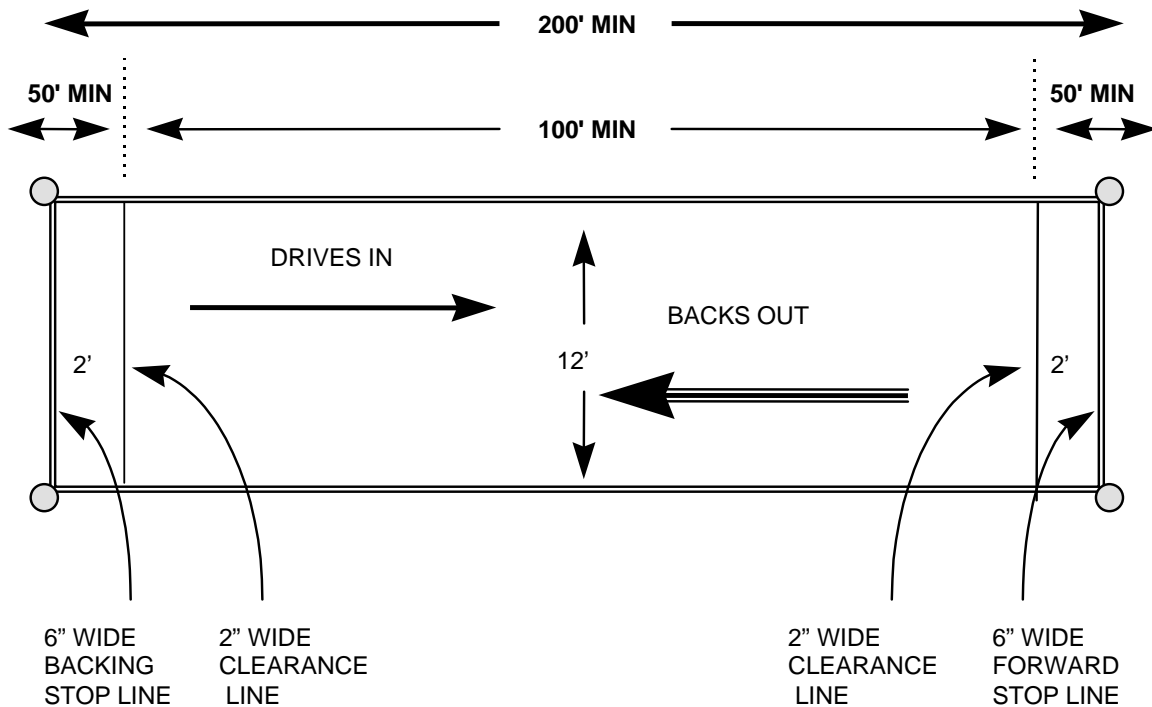
START AND FINISH = MIDPOINT = **M**

MINIMUM SIZE OF AREA IS 200' LONG AND 35' WIDE.

IF YOU HAVE A PERMANENT SITE, USE PAINT TO MARK THE FIXED BOUNDARIES. TO MINIMIZE CONFUSION, PAINT OUT EXISTING LINES WITH A COLOR THAT MATCHES THE PAVING. IF YOU CANNOT PAINT LINES, USE TRAFFIC CONES, ENGINEER TAPE OR YELLOW POLYPROPYLENE ROPE.

Figure 6-4. MTV cargo serpentine course

MTV CARGO FORWARD STOP/ STRAIGHT LINE BACKING



NOTES:

TRAFFIC CONES = ○ FIXED BOUNDARIES = ════════

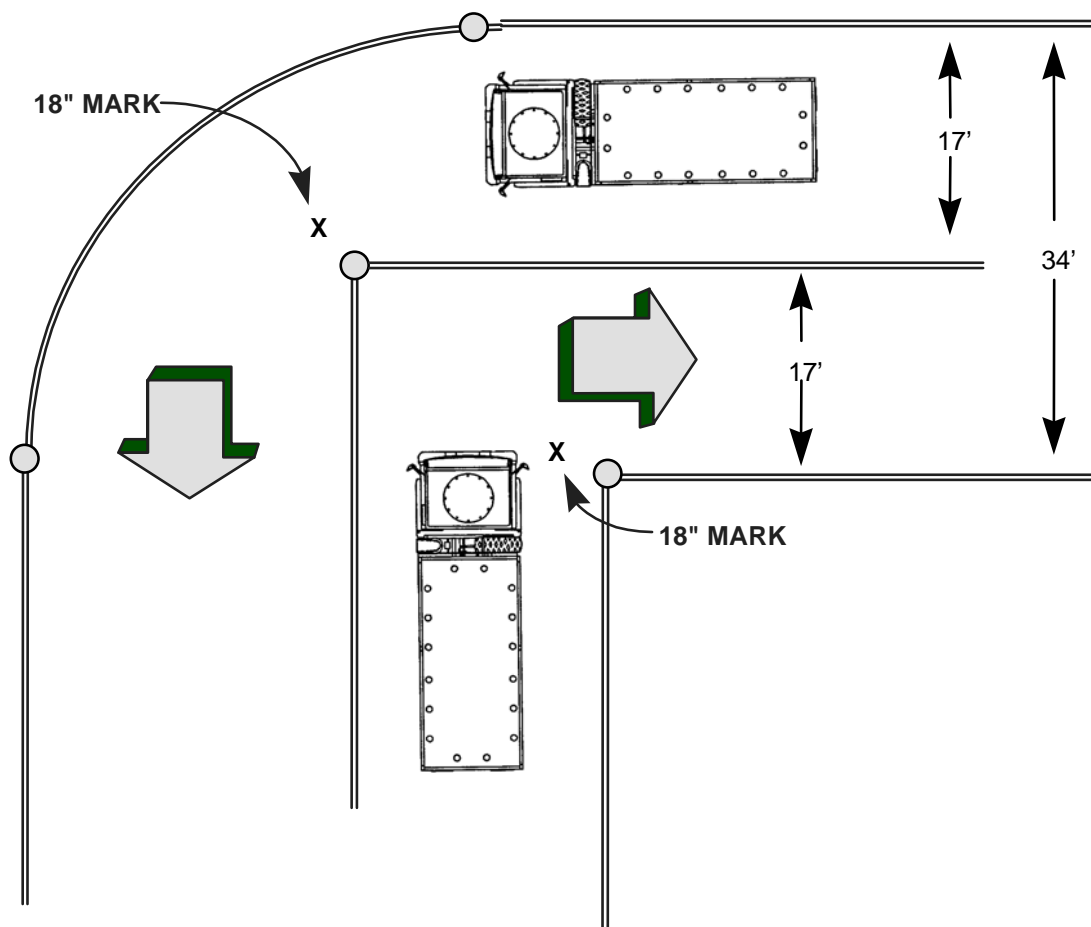
IF YOU HAVE A PERMANENT SITE, USE PAINT TO MARK THE FIXED BOUNDARIES. TO MINIMIZE CONFUSION, PAINT OUT EXISTING LINES WITH A COLOR THAT MATCHES THE PAVING. IF YOU CANNOT PAINT LINES, USE TRAFFIC CONES, ENGINEER TAPE OR YELLOW POLYPROPYLENE ROPE.

SCORING STANDARD FOR THE FORWARD STOP IS THE DRIVER DRIVES THROUGH THE ALLEY AND STOPS SO THAT THE FRONT OF THE TRUCK IS BETWEEN THE CLEARANCE LINE AND THE STOP LINE, WITHOUT HITTING ANY CONES OR TOUCHING THE BOUNDARIES.

SCORING STANDARD FOR THE STRAIGHT LINE BACKING IS THE DRIVER PULLS HIS VEHICLE COMPLETELY OUT OF THE ALLEY. HE THEN MUST BACK THROUGH THE ALLEY AND STOP WHEN THE FRONT OF THE TRUCK IS BETWEEN THE STOP LINE AND THE CLEARANCE LINE WITHOUT HITTING ANY CONES OR TOUCHING THE BOUNDARY.

Figure 6-5. MTV cargo forward stop/straight line backing

MTV CARGO LEFT AND RIGHT TURNS



NOTES:

TRAFFIC CONES = ○ FIXED BOUNDARIES = ════════

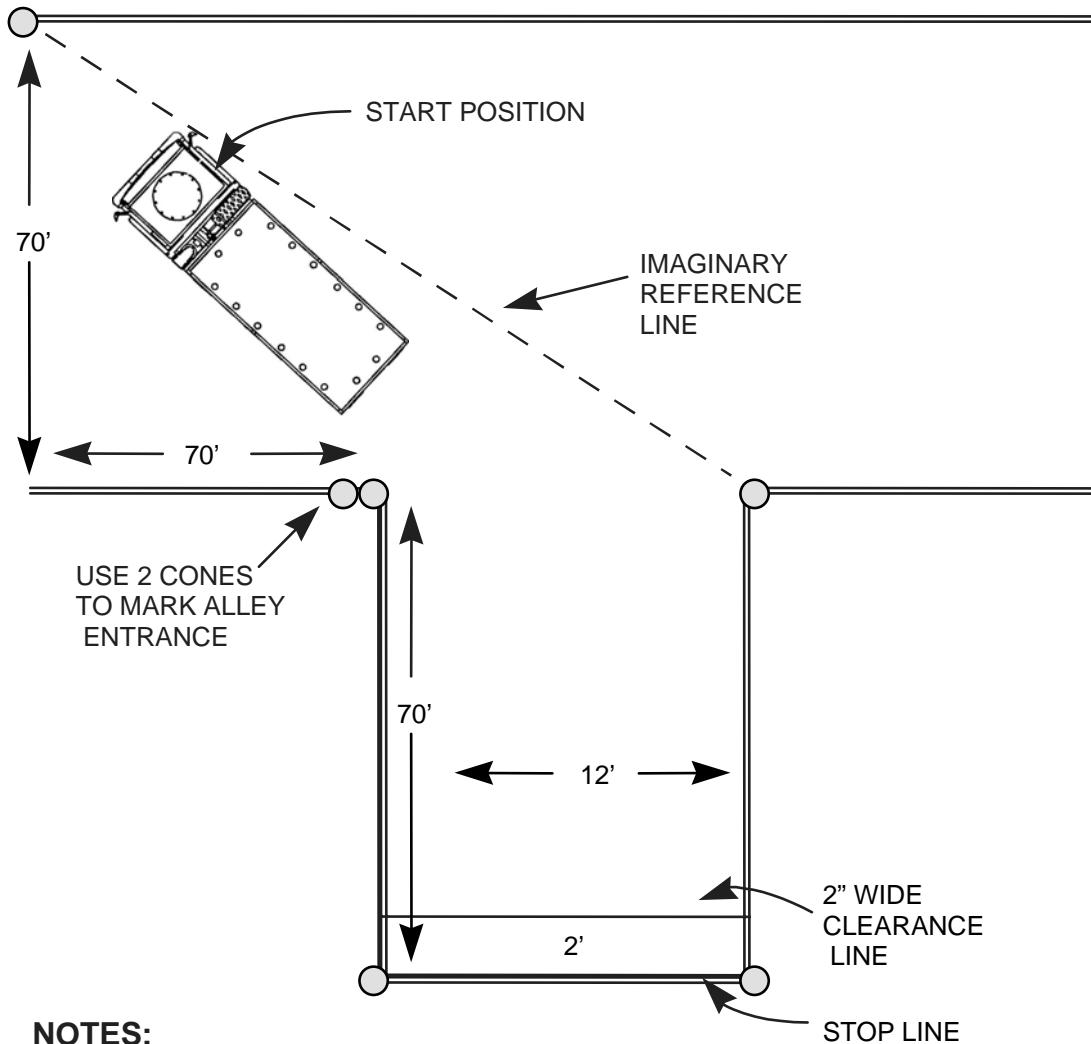
IF YOU HAVE A PERMANENT SITE, USE PAINT TO MARK THE FIXED BOUNDARIES. TO MINIMIZE CONFUSION, PAINT OUT EXISTING LINES WITH A COLOR THAT MATCHES THE PAVING. IF YOU CANNOT PAINT LINES, USE TRAFFIC CONES, ENGINEER TAPE OR YELLOW POLYPROPYLENE (POLY) ROPE.

ONE TRAINING AREA CAN BE USED FOR BOTH MANEUVERS, BUT THE MANEUVERS MUST BE DONE SEPARATELY, SUCH AS ALL STUDENTS DOING THE RIGHT TURN FIRST, THEN THE LEFT TURN.

THE ACCEPTABLE STANDARD IS, THE REAR WHEELS OF THE TRUCK (OR TRAILER) MUST BE WITHIN 18" OF THE CONE, WITHOUT HITTING THE CONE OR GOING OVER ANY BOUNDARIES.

Figure 6-6. MTV cargo left and right turns

MTV CARGO ALLEY DOCK



NOTES:

TRAFFIC CONES = ○ FIXED BOUNDARIES = ════════

IF YOU HAVE A PERMANENT SITE, USE PAINT TO MARK THE FIXED BOUNDARIES. TO MINIMIZE CONFUSION, PAINT OUT EXISTING LINES WITH A COLOR THAT MATCHES THE PAVING. IF YOU CANNOT PAINT LINES, USE TRAFFIC CONES, ENGINEER TAPE OR YELLOW POLYPROPYLENE ROPE.

THE DRIVER WILL DRIVE FORWARD TO THE LEFT SIDE OF THE REFERENCE LINE, WITHOUT GOING PAST THE OUTER BOUNDARIES, KEEPING THE ALLEY ENTRANCE ON HIS LEFT SIDE. HE WILL THEN BACK IN A CURVED PATH INTO THE ALLEY.

THE SCORING STANDARD IS TO BACK INTO THE ALLEY, WITHOUT HITTING ANY CONES OR TOUCHING ANY BOUNDARIES, AND STOP WITH THE REAR OF THE TRUCK BETWEEN THE STOP AND CLEARANCE LINES, WITH NO MORE THAN 2 PULL-UPS.

Figure 6-7. MTV cargo alley dock

CHAPTER 7

END OF COURSE COMPREHENSIVE TEST

LESSON TITLE: END OF COURSE COMPREHENSIVE TEST

TASK NUMBER: All previously taught tasks.

A. TRAINING OBJECTIVE.

TASK: Pass the EOCCT.

CONDITION: Given an examination booklet, pencil, DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, an MTV cargo truck with BII, road test route, and a suitable off road training area. When testing for trailer operations, additional requirements are appropriate trailer operator's manual and a trailer coupled to an MTV cargo truck.

STANDARD: Pass all written and performance tests.

B. INTERMEDIATE TRAINING. None.

Intermediate Training Objective 1

TASK: Pass a written examination.

CONDITION: Given an examination booklet and pencil.

STANDARD: Answer correctly 21 of 30 questions within 40 minutes. Use either the primary written test or the alternate written test.

Intermediate Training Objective 2

TASK: Pass the driver's road test.

CONDITION: Given DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), pencil, TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, road test route, an MTV cargo truck with BII, and road test route. When testing for trailer operations, additional requirements are appropriate trailer operator's manual and a trailer coupled to an MTV cargo truck.

STANDARD: Achieve a score of 75 or higher. Use the driver's performance test (road test) instructions and the driver's road test score sheet (DA Form 6125-R).

Intermediate Training Objective 3

- TASK:** Drive the MTV cargo truck off road.
- CONDITION:** Given DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), TM 9-2320-366-10-1 and 10-2, equipment records folder, rags, lubricants, coolant, a suitable off road training area, an MTV cargo truck with BII, and a requirement to operate the truck off road (to include ditches, marshes, gullies, ravines, steep grades, woods, mud, rocky terrain, and shallow streams [30 inches or less]) during daylight hours. When testing for trailer operations, additional requirements are appropriate trailer operator's manual and a trailer coupled to an MTV cargo truck.
- STANDARD:** Operate the vehicle safely at reduced speeds, taking precautions not to damage the truck while driving over rough terrain and receive all GOs on the performance test checklist.

C. ADMINISTRATIVE INSTRUCTIONS.

1. Training time: As scheduled.
2. Training location: Classroom, motor pool, road test route, and off road training area(s) as scheduled.
3. Training type: Performance evaluation.
4. Students: Scheduled personnel.
5. Principal and assistant instructors required: One primary instructor for the class for the written tests and one assistant instructor for every student for the performance tests.
6. Training aids and equipment: Hearing protection, rags, lubricants, coolant, examination booklet, pencil, and 40 traffic cones or empty POL drums. DD Form 1970 (or ULLS generated DA Form 5987-E), DA Form 2404 (or ULLS generated DA Form 5988-E), DA Form 6125-R, TM 9-2320-366-10-1 and 10-2, equipment records folder, and an MTV cargo truck with BII for every student. When testing for trailer operations, additional requirements are appropriate trailer operator's manual and a trailer coupled to an MTV cargo truck.
7. References: AR 385-55, AR 600-55, DA Pamphlet 738-750, FM 21-305, TM 9-2320-366-10-1 and 10-2, and appropriate trailer operator's manual.

D. SEQUENCE OF ACTIVITY.

1. **Introduction.**
 - a. Interest device.
 - b. Tie-in.

- c. Lesson objective (paragraph A).
- d. Procedures.
 - (1) Performance testing.
 - (2) Evaluation.
 - (3) Summary.

2. **Performance testing.**

NOTE: The driver will test in the order listed below and will not do the next test until he successfully passes the previous test.

- a. Intermediate training objective 1 (written test).
 - b. Intermediate training objective 2 (road test).
 - c. Intermediate training objective 3 (off road driving without trailer).
3. **Evaluate.** Check written test results, road test score sheets, and performance test checklists.
4. **Summary.**
- a. Recap main points.
 - b. Allow for questions.
 - c. Clarify questions.
 - d. Give closing statement.
5. **Retraining.** Retrain and retest NO-GOs.

E. SAFETY RESTRICTIONS.

1. Ensure that all chock blocks are in place when vehicles are parked or maintenance is to be performed.
2. Do not park vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel or damage to equipment.
3. Ensure the transmission is in N, the parking brake is set, and the engine is shut off before leaving the vehicle, when the vehicle is parked, or maintenance is being performed.
4. Ensure all personnel remove all wristwatches, rings, bracelets, identification tags, neck chains, and any other jewelry before working in or around the vehicle. Jewelry may catch on equipment or may short across an electrical circuit or battery terminal.

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5. Ensure all personnel pay particular attention to the cautions and warnings listed in the operator's manual.
6. Ensure the driver and ground guides know and understand the hand and arm signals, especially the signal to stop, as outlined in FM 21-305.
7. Ensure ground guide(s) are used when backing and all backing is conducted at a speed of 5 mph or less. Operator has limited vision while backing vehicle. Failure to comply may result in injury or death to personnel.
8. Hearing protection is required for all personnel working in and around this vehicle while the engine is running.
9. Inspect all seat belts for damage. Seatbelt must be fastened before operating vehicle. Avoid sudden stops and operate at a safe speed. Failure to comply may result in injury or death to personnel.
10. Do not pull seatbelt more than 1 inch (2.54 centimeters) away from shoulder and lock comfort latch. Seatbelt will not be effective if accident occurs. Failure to comply may result in injury or death to personnel.
11. Ensure personnel maintain at least three points of contact when mounting or dismounting the vehicle (to include performing PMCS). Keep steps and handholds clean and free of debris. The vehicle access ladder must be used to mount or dismount the cargo bed. Do not jump from the cab or bed of the vehicle. Use the available steps and handholds. This vehicle is built high from the ground and jumping from it may cause injury.
12. Ensure all personnel are clear of vehicle before engine start is attempted. Operator must visually check to see that all areas of the truck are clear of personnel before attempting to start the engine. Failure to do so could result in serious injury or death to personnel.
13. The exhaust system can become very hot during vehicle operation. Be careful not to touch exhaust parts with bare hands or allow the body to come in contact with them. Exhaust system parts can become hot enough to cause serious burns.
14. Engine compartment and accessories may be extremely hot when engine is running or has been running recently. Use caution around engine when cab is raised. Ensure oil is cool before performing any maintenance, checks, or services. Failure to comply may result in injury to personnel.
15. Engine compartment contains a partially exposed fan blade. Use extreme caution around front of engine. Failure to comply may result in injury to personnel.
16. Never raise the cab while occupied. Remove all loose objects from the cab before raising it. Both doors must be securely closed before raising the cab. Never raise the cab when the vehicle is uphill on a steep grade. Keep personnel clear of the cab while it is being raised. Failure to do so may damage the vehicle, or cause injury or death to personnel.
17. The cab hydraulic latch must be securely locked before driving vehicle. Failure to comply may result in injury or death to personnel or damage to equipment.

18. Do not allow personnel near cab while the cab is being raised or lowered. Cab doors could open or the hydraulic system could fail. Failure to comply may result in serious injury or death to personnel.

19. Do not use hand throttle control lever while driving vehicle. Vehicle control may be lost. Failure to comply may result in injury or death to personnel.

20. If warning alarm stops and air pressure reading is below 65 psi, there may not be braking action. Shut down engine and check to see what is wrong. Failure to comply may result in injury or death to personnel.

21. Sudden stops may cause vehicle wheels to lock. Apply even pressure on brake pedal when stopping vehicle on ice or snow. Failure to comply may result in injury or death to personnel.

22. Do not press brake pedal hard three or four times in a row. Air supply will be used up and service brakes will not work until air pressure builds up again. Failure to comply may result in injury or death to personnel.

23. Rear axle service brakes will not operate if rear brake air pressure gauge reads below 65 psi. Rear spring brakes will provide rear axle braking for a limited time. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

24. Front axle service brakes will not operate if front brake air pressure gauge reads below 65 psi. Allow greater stopping distance. Discontinue vehicle operation as soon as possible. Failure to comply may result in injury or death to personnel.

25. Service brakes will not operate if front brake air and rear brake air pressure gauge read below 65 psi. Spring brakes will apply. Discontinue vehicle operation. Failure to comply may result in injury to personnel.

26. Do not operate vehicle with spring brakes released. Vehicle can roll once spring brakes are released. Use wheel chocks to prevent vehicle from rolling out of control. Failure to comply may result in injury to personnel.

27. Vehicle must be secure. Chock tires when stopped on incline. Vehicle may roll. Failure to comply may result in injury to personnel.

28. Never use parking brake for normal braking or wheels will lock up and cause vehicle to skid. Failure to comply may result in injury or death to personnel.

29. Do not let vehicle coast down hill with transmission in neutral. Vehicle may increase speed and go out of control. Failure to comply may result in injury or death to personnel.

30. Excessive use of the service brake to control downhill speed will result in the loss of braking power because of heat buildup.

31. Do not rely on service brakes until they dry out. Keep applying brakes until uneven braking ceases. Failure to do this will result in injury or death.

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32. Ensure a safe following distance and speed is maintained when driving on the designated route (as determined by the local command).

33. All personnel must stand clear of towing vehicle and trailer during coupling and uncoupling operations. Failure to comply with this warning may result in serious injury or death to personnel.

34. Before moving trailer, ensure all loose equipment is properly stowed and that nothing will drag on the ground. If trailer is loaded, ensure that load is properly secured. Failure to follow this warning may result in injury to personnel or damage to equipment.

35. If trailer is not coupled to a towing vehicle, ensure the trailer wheels are securely chocked. Failure to do so may cause the trailer to roll, resulting in injury to personnel or damage to equipment.

F. ENVIRONMENTAL CONSIDERATIONS.

1. Ensure that all hazardous materials and hazardous wastes are stored and labeled properly.
2. Ensure that spill kits are within reach when changing or adding vehicle fluids or in the case of vehicle failures. Spill kits should enable the soldiers to contain a spill on land or in water.
3. Ensure that drip pans remain under parked vehicles.
4. Ensure that containers are the proper size and type for draining vehicle fluids.

G. ADDITIONAL COMMENTS AND INFORMATION. Recommended testing time is 4.0 hours.

INTERMEDIATE TRAINING OBJECTIVE 1

WRITTEN TEST (PRIMARY)

NAME	RANK	DATE
UNIT		

Instructions for Test

- A. This test consists of 30 multiple-choice questions.
- B. Read all questions and answers carefully; then write the answer that is MOST correct on the blank line to the left.
- C. Any unanswered questions will be scored as incorrect responses.

- _____ 1. The CTIS automatically adjusts tire pressure to suit existing terrain conditions. The system operates from a control panel from which any one of four operating modes can be selected, what are these modes of operation?
- a. Highway, cross-country, sand, emergency.
 - b. Highway, rough road, mud, run flat.
 - c. Hilly roads, emergency, highway, run flat.
 - d. Run flat, cross-country, snow, and mud.
- _____ 2. What does the vehicle main light switch control?
- a. Headlights (service drive).
 - b. Stoplights.
 - c. Black out drive lights.
 - d. All of the above.
- _____ 3. After operating the MTV, and before engine shutdown, how long should you run the engine at idle?
- a. 10 to 15 minutes.
 - b. 5 to 10 minutes.
 - c. 1 to 3 minutes.
 - d. 3 to 5 minutes.
- _____ 4. Fluid leaks are classified as class I, II, and III. What is a class III leak?
- a. Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.
 - b. Leakage of fluid great enough to cause drops to drip from item being checked.
 - c. Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being inspected.
 - d. Leakage of fluid, which causes drops to form at least a 12-inch diameter, puddle beneath the item being inspected.

- _____ 5. What do you do when the stop indicator light is visible on the driver instrument panel?
- a. Do not operate the vehicle until the condition that caused the light is cleared.
 - b. Disregard because the light is probably malfunctioning.
 - c. Do not operate for at least 5 minutes and then disregard.
 - d. Release the parking brake.
- _____ 6. The deep water-fording switch is used for what?
- a. Disables fan when fording water 20 inches or deeper.
 - b. Causes fan to run continuous.
 - c. Allows for limited fan operations.
 - d. Cuts air off to fan.
- _____ 7. Engine oil pressure indicator - lights (red) to indicate what?
- a. Low engine oil level.
 - b. Low engine oil pressure.
 - c. Low transmission oil pressure.
 - d. High engine oil pressure.
- _____ 8. When the "MODE" selector is pushed on the transmission selector, the transmission will not shift above what gear?
- a. 3rd gear.
 - b. 4th gear.
 - c. 5th gear.
 - d. 6th gear.
- _____ 9. What happens with the main light selector in the stoplight position?
- a. The stoplight and headlights operate.
 - b. The blackout stoplight and markers operate.
 - c. The brake lights and turn signals only operate.
 - d. The taillights and headlights operate.
- _____ 10. In the event of a punctured tire, with no spare available, which CTIS selector could be selected to enable you to return to a maintenance facility?
- a. Cross-country.
 - b. Run-flat.
 - c. Highway.
 - d. Emergency.
- _____ 11. What does the air filter gauge on the operator's instrument panel indicate?
- a. Front air tank pressure.
 - b. Air dryer restriction.
 - c. Quick release valve pressure.

- d. Air filter restriction.
- _____ 12. Where is the blackout drive light located?
- a. Right front of vehicle below the bumper.
 - b. Left front of vehicle bottom part of bumper.
 - c. Right front of vehicle just below the headlight.
 - d. Rear center of vehicle.
- _____ 13. Checking engine oil should be done according to what PMCS table?
- a. Before operation.
 - b. During operation.
 - c. After operation.
 - d. Weekly.
- _____ 14. The audible alarm sounds when—
- a. Air pressure is below approximately 90 psi or when the stop indicator is illuminated (red).
 - b. Air pressure is below 75 psi.
 - c. Air pressure is below 70 psi.
 - d. Air pressure is below approximately 65 psi or when the stop indicator is illuminated (red).
- _____ 15. The MTV can safely ford water up to _____ inches deep without using a fording kit.
- a. 60.
 - b. 45.
 - c. 30.
 - d. 20.
- _____ 16. When you ford the MTV, the vehicle speed should be—
- a. 20 mph or less.
 - b. 15 mph or less.
 - c. 10 mph or less.
 - d. 5 mph or less.
- _____ 17. Use the hand throttle to increase engine speed—
- a. When towing a trailer.
 - b. To drive through deep snow, sand, or mud.
 - c. As a “cruise control” device when driving.
 - d. To assist in engine warm-up.
- _____ 18. The recommended method of braking this truck is—
- a. Push the brake pedal down hard until the tires start to slide.
 - b. Continuously apply and release the brake pedal - pump the brakes.

- c. Apply brakes gradually when slowing or stopping.
 - d. Apply the trailer brakes.
- _____ 19. To raise the vehicle cab—
- a. Pull out system park control.
 - b. Close the hydraulic manifold cover.
 - c. At the hydraulic manifold, turn the cab tilt knob to the raise position and the function select knob to the spare tire position.
 - d. Make sure the cab's hydraulic latch is not latched.
- _____ 20. The MOST important item to check before driving this vehicle is—
- a. The engine oil level.
 - b. The spare tire.
 - c. Drip pan.
 - d. The cab hydraulic latch.
- _____ 21. The proper position for the seatbelt is to adjust it so the seatbelt is no more than—
- a. 1 in. away from the shoulder and lock the comfort latch.
 - b. 2 in. away from the shoulder and lock the comfort latch.
 - c. 1 in. away from the hips and lock the comfort latch.
 - d. 2 in. away from the hips and lock the comfort latch.
- _____ 22. Do not operate this vehicle until the front and rear brake air pressure reaches at least _____ psi.
- a. 60.
 - b. 75.
 - c. 90.
 - d. 100.
- _____ 23. The transmission ECU push-button shift selector has detected a problem that needs correcting when illumination of last selected gear (in left side of display window) goes out. What are your actions?
- a. Do not attempt to shift the transmission to any other gear and operate the vehicle at reduced speed to a safe parking location.
 - b. Downshift the transmission to a lower gear and continue to drive to allow the transmission to cool.
 - c. Shift the transmission to N (neutral) and then back to drive.
 - d. Do nothing, continue with your mission, and notify organizational maintenance.
- _____ 24. When driving downhill, your vehicle has just reached the maximum “safe” speed. What are your actions?
- a. Pump the brakes until the vehicle speed has been reduced to approximately 5 mph below the “safe” speed.
 - b. Maintain a constant speed down hill by dragging the brakes.

- c. Apply the engine brake.
 - d. Apply the brakes just hard enough to feel a definite slowdown and when the vehicle speed has been reduced to approximately 5 mph below the “safe” speed, release the brakes.
- _____ 25. Anytime this vehicle is driven off road—
- a. Pre-select the emergency mode on the CTIS selector panel.
 - b. Raise and hook the rear mud flaps.
 - c. Shift the transfer case to low range.
 - d. Pre-select front wheel drive.
- _____ 26. In normal driving conditions, the lowest forward gear available is—
- a. 1st gear.
 - b. 2nd gear.
 - c. 3rd gear.
 - d. 4th gear.
- _____ 27. When driving in reduced traction conditions, and the vehicle starts to slide while climbing a hill, your first action is to—
- a. Let up on the accelerator pedal.
 - b. Steer the vehicle in the direction of the slide until the vehicle stops.
 - c. Slowly press the accelerator pedal and steer the vehicle on a straight course.
 - d. Hit the brakes.
- _____ 28. The spare tire is correctly stowed when the—
- a. Safety chain is loose and the restraining strap is tight.
 - b. Safety chain is tight and the restraining strap is loose.
 - c. Both safety chain and restraining strap are tight.
 - d. Both safety chain and restraining strap are loose.
- _____ 29. To lower the spare tire to the ground—
- a. The cab must be lowered and the cab’s hydraulic latch not latched.
 - b. Close the hydraulic manifold cover.
 - c. At the hydraulic manifold, turn the spare tire knob to the lower position and the function select knob to the spare tire position.
 - d. The backup hydraulic pump must be used if the temperature is above 0° F.
- _____ 30. While driving an MTV cargo truck, you were involved in a motor vehicle accident. Your first action should be—
- a. Notify authorities for emergency services.
 - b. Complete DD Form 518 and give it to the person directly involved in the accident.
 - c. Secure hard-to-get facts (names and addresses of witnesses, and so forth).
 - d. Take precautions to prevent further accidents or injuries by using road guards, highway warning devices, and flares.

INTERMEDIATE TRAINING OBJECTIVE 1

WRITTEN TEST ANSWER SHEET (PRIMARY)

1.	A	11.	D	21.	A
2.	D	12.	B	22.	D
3.	D	13.	C	23.	A
4.	B	14.	D	24.	D
5.	A	15.	C	25.	B
6.	A	16.	D	26.	B
7.	B	17.	D	27.	A
8.	C	18.	C	28.	A
9.	C	19.	A	29.	C
10.	B	20.	D	30.	D

INTERMEDIATE TRAINING OBJECTIVE 1

WRITTEN TEST (ALTERNATE)

NAME	RANK	DATE
UNIT		

Instructions for Test

- A. This test consists of 30 multiple-choice questions.
- B. Read all questions and answers carefully; then write the answer that is MOST correct on the blank line to the left.
- C. Any unanswered questions will be scored as incorrect responses.

- _____ 1. While driving an MTV cargo truck, you were involved in a motor vehicle accident. Your first action should be—
- a. Notify authorities for emergency services.
 - b. Complete DD Form 518 and give it to the person directly involved in the accident.
 - c. Secure hard-to-get facts (names and addresses of witnesses, and so forth).
 - d. Take precautions to prevent further accidents or injuries by using road guards, highway warning devices, and flares.
- _____ 2. To lower the spare tire to the ground—
- a. The cab must be lowered and the cab’s hydraulic latch not latched.
 - b. Close the hydraulic manifold cover.
 - c. At the hydraulic manifold, turn the spare tire knob to the lower position and the function select knob to the spare tire position.
 - d. The backup hydraulic pump must be used if the temperature is above 0° F.
- _____ 3. The spare tire is correctly stowed when the—
- a. Safety chain is loose and the restraining strap is tight.
 - b. Safety chain is tight and the restraining strap is loose.
 - c. Both safety chain and restraining strap are tight.
 - d. Both safety chain and restraining strap are loose.
- _____ 4. When driving in reduced traction conditions, and the vehicle starts to slide while climbing a hill, your first action is to—
- a. Let up on the accelerator pedal.
 - b. Steer the vehicle in the direction of the slide until the vehicle stops.
 - c. Slowly press the accelerator pedal and steer the vehicle on a straight course.
 - d. Hit the brakes.
- _____ 5. In normal driving conditions, the lowest forward gear available is—

- a. 1st gear.
 - b. 2nd gear.
 - c. 3rd gear.
 - d. 4th gear.
- _____ 6. Anytime this vehicle is driven off road—
- a. Pre-select the emergency mode on the CTIS selector panel.
 - b. Raise and hook the rear mud flaps.
 - c. Shift the transfer case to low range.
 - d. Pre-select front wheel drive.
- _____ 7. When driving downhill, your vehicle has just reached the maximum “safe” speed. What are your actions?
- a. Pump the brakes until the vehicle speed has been reduced to approximately 5 mph below the “safe” speed.
 - b. Maintain a constant speed down hill by dragging the brakes.
 - c. Apply the engine brake.
 - d. Apply the brakes just hard enough to feel a definite slowdown and when the vehicle speed has been reduced to approximately 5 mph below the “safe” speed, release the brakes.
- _____ 8. The transmission ECU push-button shift selector has detected a problem that needs correcting when illumination of last selected gear (in left side of display window) goes out. What are your actions?
- a. Do not attempt to shift the transmission to any other gear and operate the vehicle at reduced speed to a safe parking location.
 - b. Downshift the transmission to a lower gear and continue to drive to allow the transmission to cool.
 - c. Shift the transmission to N (neutral) and then back to drive.
 - d. Do nothing, continue with your mission, and notify organizational maintenance.
- _____ 9. Do not operate this vehicle until the front and rear brake air pressure reaches at least _____ psi.
- a. 60.
 - b. 75.
 - c. 90.
 - d. 100.
- _____ 10. The proper position for the seatbelt is to adjust it so the seatbelt is no more than—
- a. 1 in. away from the shoulder and lock the comfort latch.
 - b. 2 in. away from the shoulder and lock the comfort latch.
 - c. 1 in. away from the hips and lock the comfort latch.
 - d. 2 in. away from the hips and lock the comfort latch.

- _____ 11. The MOST important item to check before driving this vehicle is—
- The engine oil level.
 - The spare tire.
 - Drip pan.
 - The cab hydraulic latch.
- _____ 12. To raise the vehicle cab—
- Pull out system park control.
 - Close the hydraulic manifold cover.
 - At the hydraulic manifold, turn the cab tilt knob to the raise position and the function select knob to the spare tire position.
 - Make sure the cab's hydraulic latch is not latched.
- _____ 13. The recommended method of braking this truck is—
- Push the brake pedal down hard until the tires start to slide.
 - Continuously apply and release the brake pedal - pump the brakes.
 - Apply brakes gradually when slowing or stopping.
 - Apply the trailer brakes.
- _____ 14. Use the hand throttle to increase engine speed—
- When towing a trailer.
 - To drive through deep snow, sand, or mud.
 - As a “cruise control” device when driving.
 - To assist in engine warm-up.
- _____ 15. When you ford the MTV, the vehicle speed should be—
- 20 mph or less.
 - 15 mph or less.
 - 10 mph or less.
 - 5 mph or less.
- _____ 16. The MTV can safely ford water up to _____ inches deep without using a fording kit.
- 60.
 - 45.
 - 30.
 - 20.
- _____ 17. The audible alarm sounds when—
- Air pressure is below approximately 90 psi or when the stop indicator is illuminated (red).
 - Air pressure is below 75 psi.
 - Air pressure is below 70 psi.
 - Air pressure is below approximately 65 psi or when the stop indicator is illuminated

(red).

- _____ 18. Checking engine oil should be done according to what PMCS table?
- a. Before operation.
 - b. During operation.
 - c. After operation.
 - d. Weekly.
- _____ 19. Where is the blackout drive light located?
- a. Right front of vehicle below the bumper.
 - b. Left front of vehicle bottom part of bumper.
 - c. Right front of vehicle just below the headlight.
 - d. Rear center of vehicle.
- _____ 20. What does the air filter gauge on the operator's instrument panel indicate?
- a. Front air tank pressure.
 - b. Air dryer restriction.
 - c. Quick release valve pressure.
 - d. Air filter restriction.
- _____ 21. In the event of a punctured tire, with no spare available, which CTIS selector could be selected to enable you to return to a maintenance facility?
- a. Cross-country.
 - b. Run flat.
 - c. Highway.
 - d. Emergency.
- _____ 22. What happens with the main light selector in the stoplight position?
- a. The stoplight and headlights operate.
 - b. The blackout stoplight and markers operate.
 - c. The brake lights and turn signals only operate.
 - d. The taillights and headlights operate.
- _____ 23. When the "MODE" selector is pushed on the transmission selector, the transmission will not shift above what gear?
- a. 3rd gear.
 - b. 4th gear.
 - c. 5th gear.
 - d. 6th gear.
- _____ 24. Engine oil pressure indicator - lights (red) to indicate what?
- a. Low engine oil level.
 - b. Low engine oil pressure.

- c. Low transmission oil pressure.
 - d. High engine oil pressure.
- _____ 25. The deep water-fording switch used is used for what?
- a. Disables fan when fording water 20 inches or deeper.
 - b. Causes fan to run continuous.
 - c. Allows for limited fan operations.
 - d. Cuts air off to fan.
- _____ 26. What do you do when the stop indicator light is visible on the driver instrument panel?
- a. Do not operate the vehicle until the condition that caused the light is cleared.
 - b. Disregard because the light is probably malfunctioning.
 - c. Do not operate for at least 5 minutes and then disregard.
 - d. Release the parking brake.
- _____ 27. Fluid leaks are classified as class I, II, and III. What is a class III leak?
- a. Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.
 - b. Leakage of fluid great enough to cause drops to drip from item being checked.
 - c. Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being inspected.
 - d. Leakage of fluid, which causes drops to form at least a 12-inch diameter, puddle beneath the item being inspected.
- _____ 28. After operating the MTV, and before engine shutdown, how long should you run the engine at idle?
- a. 10 to 15 minutes.
 - b. 5 to 10 minutes.
 - c. 1 to 3 minutes.
 - d. 3 to 5 minutes.
- _____ 29. What does the vehicle main light switch control?
- a. Headlights (service drive).
 - b. Stoplights.
 - c. Black out drive lights.
 - d. All of the above.
- _____ 30. The CTIS automatically adjusts tire pressure to suit existing terrain conditions. The system operates from a control panel from which any one of four operating modes can be selected, what are these modes of operation?
- a. Highway, cross-country, sand, emergency.
 - b. Highway, rough road, mud, run flat.
 - c. Hilly roads, emergency, highway, run flat.
 - d. Run flat, cross-country, snow, and mud.

INTERMEDIATE TRAINING OBJECTIVE 1

WRITTEN TEST ANSWER SHEET (ALTERNATE)

1.	D	11.	D	21.	B
2.	C	12.	A	22.	C
3.	A	13.	C	23.	C
4.	A	14.	D	24.	B
5.	B	15.	D	25.	A
6.	B	16.	C	26.	A
7.	D	17.	D	27.	B
8.	A	18.	C	28.	D
9.	D	19.	B	29.	D
10.	A	20.	D	30.	A

INTERMEDIATE TRAINING OBJECTIVE 2**DRIVER'S PERFORMANCE TEST (ROAD TEST) INSTRUCTIONS****1. GENERAL.**

a. This test is to be conducted according to the guidelines set forth in AR 600-55. Also, the specific directions for this test are to be followed without deviation. No omissions or changes in the wording of these directions are permitted.

b. The purpose of the road test is to evaluate the driver's ability to drive safely in most on-the-road situations. It serves as the basis for the issuance of an operator's permit and provides a means for instructional reinforcement and counseling. Driving weaknesses that surface as a result of the test should be called to the attention of the examinee so that specific steps can be taken to eliminate these weaknesses.

c. Final evaluations will be recorded on DA Form 348 (or ULLS generated DA Form 348-E). Once this transfer of information has been accomplished, the completed DA Form 6125-R will be destroyed.

d. The examiner will be a thoroughly qualified operator of the MTV cargo truck. Furthermore, he will be familiar with the road test route and the testing procedures as set forth in AR 600-55 and this TC. Before administering the test to any examinees, he must practice administering the test to a regular licensed driver qualified on the MTV cargo truck. This practice administration will help him become acquainted with the test route and testing procedures.

NOTE: Operators trained in trailer operations will perform these tests with the trailer connected to the vehicle.

e. The road test will consist of three scored phases: the PMCS test, the vehicle control test, and the on-the-road driving test. The driver will be tested on these phases in the order listed and will not move on to the next phase until successfully passing the previous phase. If the driver fails any phase of the test, the entire road test will be terminated at that point and the examiner will annotate the DA Form 6125-R and conduct an AAR with the driver. This procedure will help to ensure that only safe and proficient drivers get behind the wheel of the MTV cargo truck.

2. SETTING UP THE ROAD TEST. For the road test the driver drives a predetermined route. To set up the test, the examiner must plan the route to be used. Once a route is established (in a given locality) it should be used for all examinees that are to be tested in the MTV cargo truck. Should it prove necessary to vary the route, care should be taken that the different kinds of route requirements, as well as the number of requirements, remain the same. Every road test route will meet the following requirements (to the extent possible):

a. An area to conduct PMCS.

(1) The site should be a flat parking area suitable for heavy vehicles.

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(2) There should be at least 8 feet of open space around the vehicle. This will give the driver room to conduct the inspection and the examiner room to observe the driver's inspection performance.

(3) The site should be quiet enough that the examiner can hear the driver explain what he is doing during the inspection.

(4) Avoid using a parking space on a street or any place where traffic is passing close by.

b. A vehicle control test area with the following maneuvers:

(1) Forward stop (see Figure 6-5). Pull vehicle forward through a straight alley and then stop the vehicle so that the front-most part of the vehicle is within 2 feet of the forward stop line.

(2) Straight-line backing (see Figure 6-5). Back the vehicle through a straight alley and then stop the vehicle so that the front-most part of the vehicle is within 2 feet of the stop line.

(3) Right turn (see Figure 6-6). Drive the vehicle forward about 30 to 50 feet, and then turn the vehicle right around a cone or other point. Bring the rear tires of the vehicle within 18 inches from the cone without touching it.

(4) Alley dock (see Figure 6-7). Pull the vehicle forward past the alley, keeping the alley entrance on the left. Back in a curved path into the alley without touching the sides, and stop the rear of the vehicle within 2 feet of the stop line at the rear of the alley.

c. On-the-road driving test with the following maneuvers:

(1) Eight left turns and eight right turns. Include turns at traffic lights, stop signs, and uncontrolled intersections. The turns should range from easy to somewhat difficult for a heavy vehicle. Get a mixture of types of intersections so that they vary in complexity.

(2) A straight section of urban business streets. The section should be 1 to 2 miles long with moderate traffic density. It should contain through intersections and intersections with traffic lights. Try to get a section where the driver can make lane changes somewhere along the route. The section should be one that lets the examiner see how the driver copes with traffic in a typical business area.

(3) Two through intersections and two intersections where a stop has to be made. If possible, these intersections should be included in the urban section.

(4) Two railway crossings. Try to get at least one uncontrolled crossing. The crossing should have enough sight distance for the examiner to see if the driver makes head search movements when approaching each crossing. The driver's attempt to look left and right down the track will often be the only way to tell if the driver noticed the crossing. If the area does not have any railway crossings, simulate this exercise.

(5) Two curves, one to the left and one to the right. Try to get curves tight enough to produce noticeable off-tracking.

(6) A two-lane rural or semirural road. This section should be about 2 miles long. If there is no rural road near the motor pool, an industrial street with few entrances and a higher speed limit

is a good substitute. An undeveloped suburban road is another good substitute. In general, use any road that has characteristics similar to a rural road.

(7) A section of expressway. The section should start with a conventional ramp entrance and end with a conventional ramp exit. The section should be long enough for the MTV cargo truck to make two lane changes. A section of four-lane highway can be used if there is no expressway available.

(8) A downgrade. The grade should be steep enough and long enough to require gearing down and braking. A steep short hill is the next best choice if a long grade cannot be found. If the local area does not have any steep grades, simulate this exercise.

(9) An upgrade. The grade should be steep enough and long enough to require gear changing to maintain speed. A steep short hill is the next best choice if a long grade cannot be found. If it is hard to find steep grades in the local area, use the same grade for both the downgrade and the upgrade.

(10) A downgrade for stopping. This is a grade where a vehicle can safely stop (or pull off) and park for a minute or so. The grade needs only to be steep enough to cause a vehicle to roll if the driver does not park properly. If the local area does not have any steep grades, simulate this exercise.

(11) An upgrade for stopping. This is another grade where a vehicle can safely stop and park for a minute or so. If needed, use the same grade as was used for the downgrade stop.

(12) One underpass or low clearance and one bridge. The underpass should have a posted clearance height. The bridge should have a posted weight limit. If the local area does not have underpasses or bridges with posted limits, use ones that do not have posted limits. If needed, substitute a bridge for an underpass or an underpass for a bridge. If the local area does not have any low clearances or bridges, look for places that have signs an MTV driver should see. Examples of such signs are “No Commercial Vehicles after 11:00 PM” or “Bridge with 12 Ton Weight Limit in 2 Miles.”

d. Route design.

(1) When designing a route, try to include all of the specified maneuvers. If there is not an ideal example for a maneuver, find the closest substitute. Do not drop a maneuver because there is not an ideal example of it. The important thing is to have a route that tests the driver in as wide a variety of situations as possible.

(2) There is no minimum length for a route and no minimum amount of time that a route must take. A route is acceptable whenever it has all the specified maneuvers. It is a good idea to have at least two routes available so that there is an alternate route if construction or traffic prevents using the primary route.

3. ADMINISTERING THE ROAD TEST.

a. Preventing accidents.

(1) Road tests should normally NOT be given if road or weather conditions present a hazard such as ice, snow, rain, or blowing dust. The exception is when testing is specifically for driving under such conditions.

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(2) The examiner must always watch traffic conditions and warn the examinee of dangers that he may not see. If the driver becomes involved in a dangerous or unlawful moving traffic incident or an accident, terminate the test immediately. The examiner will drive the vehicle back to the start point once on-scene responsibilities are fulfilled.

b. Beginning the road test.

(1) Fill in the driver's name and your name (examiner's) on the front of the Road Test Score Sheet. (A sample of a completed DA Form 6125-R is at Figures 7-1 and 7-2.) A reproducible DA Form 6125-R is located at the back of AR 600-55. Read the following instructions to the driver at the beginning of the test:

DURING THE ROAD TEST, I WILL GIVE YOU DIRECTIONS AS WE GO ALONG.

I WILL ALWAYS GIVE DIRECTIONS FOR TURNS, AND SO ON, AS FAR IN ADVANCE AS POSSIBLE.

THERE WILL BE NO TRICK DIRECTIONS TO GET YOU TO DO SOMETHING ILLEGAL OR UNSAFE.

KEEP IN MIND THAT YOU ARE ALWAYS IN CHARGE OF THE VEHICLE. DO NOT FOLLOW A DIRECTION IF IT TURNS OUT AT THE LAST MINUTE TO LEAD TO AN UNSAFE ACT.

AS WE GO ALONG, I WILL BE MAKING VARIOUS MARKS ON THE SCORING FORM. WHEN YOU SEE THIS, IT DOES NOT NECESSARILY MEAN YOU HAVE DONE ANYTHING WRONG. IT IS BEST FOR YOU TO CONCENTRATE ON DRIVING AND NOT WORRY ABOUT WHAT I AM DOING.

YOUR SCORED TEST BEGINS WITH BEFORE-OPERATIONS PREVENTIVE MAINTENANCE CHECKS AND SERVICES. IF YOU ARE SUCCESSFUL IN THAT PORTION OF THE TEST, YOU WILL PROCEED TO THE VEHICLE CONTROL TEST, AND FINALLY TO THE ON-THE-ROAD DRIVING TEST.

ARE THERE ANY QUESTIONS?

(2) The road test actually begins when the driver starts his before-operations PMCS. If the driver performs the PMCS to appropriate standards, the examiner will annotate in the Notes section of the DA Form 6125-R "Before-operations PMCS satisfactory." If he does not perform PMCS to the examiner's satisfaction, the examiner will stop the road test at that point and fail the driver. In this situation, the examiner will annotate "Before-operations PMCS unsatisfactory" in the Notes section, list specific deficiencies if any, and refer the driver for further training. The examiner will follow the same procedures for grading during- and after-operations PMCS.

(3) If the driver successfully completes the before-operations PMCS, he will proceed to the vehicle control test. It is important to ensure that the driver is proficient in basic vehicle control skills before taking him on the road with other traffic.

- Upon arrival at the vehicle control test site, give the driver an overview of all four exercises (forward stop, straight-line backing, right turn, and alley dock). Use a diagram of the site to show the driver what to do, and explain he will get detailed instructions for each exercise as it comes up. When he is ready, the driver gets into the vehicle and proceeds to the first exercise for instructions.

- The examiner will evaluate the exercises from the ground and observe the driver's ability to control the vehicle during each maneuver. If the driver demonstrates satisfactory vehicle control skills, the examiner will indicate in the Notes section "Vehicle control test satisfactory." If the driver is unable to satisfactorily negotiate the course, the examiner will stop the road test and fail the driver at that point. The examiner will indicate in the Notes section "Vehicle control test unsatisfactory," indicate specific weaknesses if any, and refer the driver for further training.

(4) If the driver satisfactorily completes the vehicle control test, he will proceed to the driving portion of the road test. When the driver is ready, get into the vehicle with the driver and start giving directions for following the road test route. Give the directions in this form: At the (location), make (maneuver). For example, "At the next intersection, turn right," or "At the stop sign, turn left."

(5) If necessary, give combined directions. For example, "Immediately after you complete your right turn, you will have to turn left into that road over there."

(6) Avoid using commercial signs or buildings as landmarks for directions unless there is no alternative. Do not assume that the driver is familiar enough with the area that he knows such landmarks.

(7) Give directions well before the maneuver is to be performed. Always give a direction at a point where the driver can see where he will do the maneuver. However, give the directions close enough to the location so the driver can be sure of where to do the maneuver. For example, do not tell the driver to turn at the next intersection if there is another intersection before the one where you want the driver to turn.

(8) In addition to directions for getting the driver around the route, there are some directions to give for the expressway, urban straight, and rural sections.

- At the beginning of the expressway section say, "We will be driving along this expressway for about (2 or however many) miles. When it is safe to do so, make a lane change to the left. Then when it is safe to do so, make a lane change to the right."
- At the beginning of the urban straight section, say, "We will be driving along this street for about (2 or however many) miles. When it is safe to do so, make a lane change to the left. Then when it is safe to do so, make a lane change back to the right. When we get near the end of this section, I will tell you what to do next."
- At the beginning of the rural section, say, "We will be driving along this road for about (2 or however many) miles. When we get near the end, I will tell you what to do next."

(9) In general, give all directions in a way that avoids distracting the driver. Also, avoid unnecessary conversation.

4. SCORING THE ROAD TEST.

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a. The scoring form for the road test is DA Form 6125-R, a two-sided single sheet. (A sample of a completed DA Form 6125-R is at Figures 7-1 and 7-2.) A reproducible DA Form 6125-R is located at the back of AR 600-55. The main headings in the boxes give the names of the different maneuvers. Each maneuver has a list of driver behaviors to be scored. Beside each behavior is a letter "O" used for marking the driver for the behavior. In cases where a maneuver is done several times on the route, there is a column of O's for each time the maneuver appears on the route.

ROAD TEST SCORE SHEET			DATE	
For use of this form, see AR 600-55; the proponent agency is OCSA			29 Jan 98	
NAME OF DRIVER <i>Fly, Bill</i>		NAME OF EXAMINER <i>Cake, Rodney</i>		
SSAN <i>000-00-0000</i>	SCORE <i>-22</i>	ROUTE <i>Alternate</i>		
STOP/START ON GRADE		EXPRESSWAY		
<u>Approach</u>		<u>Merge On</u>		
	Up Down			
Traffic check	<input checked="" type="radio"/> <input type="radio"/>	Traffic check	<input type="radio"/>	
Signal On	<input type="radio"/> <input checked="" type="radio"/>	Signal On	<input type="radio"/>	
Moves to proper lane	<input type="radio"/> <input type="radio"/>	Maintains spacing	<input type="radio"/>	
Smooth deceleration	<input type="radio"/> <input type="radio"/>	Avoids stopping	<input type="radio"/>	
Does not coast to stop	<input type="radio"/> <input type="radio"/>	Smooth merge	<input type="radio"/>	
		Cancel signal	<input type="radio"/>	
<u>Stop</u>		<u>Lane Changes</u>		
			Left Right	
Vehicle parallel to curb	<input type="radio"/> <input type="radio"/>	Traffic check	<input type="radio"/>	<input type="radio"/>
Vehicle does not roll	<input type="radio"/> <input type="radio"/>	Signal on	<input type="radio"/>	<input checked="" type="radio"/>
Signal off/4-ways on	<input checked="" type="radio"/> <input type="radio"/>	Adequate spacing	<input type="radio"/>	<input checked="" type="radio"/>
Parking brake on	<input checked="" type="radio"/> <input type="radio"/>	Smooth lane change	<input type="radio"/>	<input type="radio"/>
		Cancel signal	<input type="radio"/>	<input type="radio"/>
<u>Resume</u>		<u>Exit</u>		
Traffic check	<input type="radio"/> <input type="radio"/>	Traffic check	<input type="radio"/>	
4-ways off/signal on	<input type="radio"/> <input type="radio"/>	Signal on	<input checked="" type="radio"/>	
Release parking brake	<input checked="" type="radio"/> <input type="radio"/>	Smooth merge to exit lane	<input checked="" type="radio"/>	
Did not stall engine	<input type="radio"/> <input type="radio"/>	Decelerate in exit lane	<input type="radio"/>	
Traffic check	<input type="radio"/> <input type="radio"/>	Adequate spacing	<input type="radio"/>	
Accelerate to traffic flow	<input type="radio"/> <input type="radio"/>	Correct ramp speed	<input type="radio"/>	
SEARCH	<input type="radio"/> <input type="radio"/>	Cancel signal	<input type="radio"/>	
DIRECTION	<input type="radio"/> <input type="radio"/>	SEARCH	<input type="radio"/>	
SPEED	<input type="radio"/> <input type="radio"/>	DIRECTION	<input type="radio"/>	
No errors	<input type="radio"/> <input type="radio"/>	SPEED	<input type="radio"/>	
		No errors	<input type="radio"/>	
DRIVING UP GRADE		GENERAL DRIVING BEHAVIOR		
In proper gear	<input type="radio"/>	Use clutch properly (<i>to shift, double clutched, didn't ride</i>)	<input checked="" type="radio"/>	
Stays in right lane	<input type="radio"/>	Used gears properly (<i>not over-rev/lug engine, clash gears, coast</i>) ..	<input type="radio"/>	
Uses 4-ways if slow	<input type="radio"/>	Used brakes properly (<i>no hard braking, no riding or pumping</i>	<input type="radio"/>	
Traffic check	<input type="radio"/>	<i>brake</i>)	<input type="radio"/>	
SEARCH	<input type="radio"/>	Proper steering (<i>both hands on wheel, not over/under steer</i>)	<input type="radio"/>	
DIRECTION	<input type="radio"/>	Obedied all traffic signs and signals	<input type="radio"/>	
SPEED	<input type="radio"/>	Drove without an accident	<input type="radio"/>	
No errors	<input checked="" type="radio"/>	Never put vehicle over sidewalks, lane markings, stop lines, etc.	<input checked="" type="radio"/>	
		Examiner was never thrown to left, right, or forward	<input type="radio"/>	
DRIVING DOWN GRADE		Driver was never forced to take evasive action	<input type="radio"/>	
Clear brakes	<input type="radio"/>	Wore seat belt	<input type="radio"/>	
In proper gear	<input type="radio"/>	Yielded right of way to pedestrians	<input type="radio"/>	
Steady braking on grade	<input type="radio"/>	Yielded right of way to other vehicles, as appropriate	<input type="radio"/>	
Does not ride clutch	<input checked="" type="radio"/>	No errors	<input type="radio"/>	
Maintain steady speed	<input type="radio"/>			
Traffic check	<input type="radio"/>	NOTES		
SEARCH	<input type="radio"/>	<i>Before-operations PMCS satisfactory.</i>		
DIRECTION	<input type="radio"/>			
SPEED	<input type="radio"/>			
No errors	<input checked="" type="radio"/>			

DA FORM 6125-R, AUG 93

EDITION OF MAR 65 IS OBSOLETE.

USAPPC V1.00

Figure 7-1. DA Form 6125-R, Road Test Score Sheet (Front)

<p>LEFT TURNS</p> <p style="text-align: center;"><u>Approach</u></p> <table style="width: 100%;"> <tr> <td style="width: 15%;">1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> <td>Traffic check</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> </tr> <tr> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td>Signal on</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input 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type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> </tr> <tr> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td>Stop was necessary</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> </tr> </table> <p style="text-align: center;"><u>Turning</u></p> <table style="width: 100%;"> <tr> <td style="width: 15%;">1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> <td>Traffic check</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> </tr> <tr> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td>Both hands on wheel</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> </tr> <tr> <td><input 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<td>Turn not too wide/short</td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> </tr> </table> <p style="text-align: center;"><u>Completes Turn</u></p> <table style="width: 100%;"> <tr> <td style="width: 15%;">1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> <td>Turned into correct lane..</td> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> </tr> <tr> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td> <td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input type="radio"/></td><td><input 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type="radio"/></p> <p>SPEED.....<input checked="" type="radio"/></p> <p>No errors.....<input checked="" type="radio"/></p>	1	2	3	4	5	6	7	8	Traffic check	1	2	3	4	5	6	7	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Signal on	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Smooth deceleration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Did not coast to start of turn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Correct lane to begin turn	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1	2	3	4	5	6	7	8	Gap to vehicle in front ...	1	2	3	4	5	6	7	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Not over stop line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input 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type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Both hands on wheel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	No gear change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input 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lane..	1	2	3	4	5	6	7	8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Traffic Check	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cancel signal	<input type="radio"/>	<input type="radio"/>	<input 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type="radio"/></td> <td><input checked="" type="radio"/></td> </tr> <tr> <td>Followed relevant laws</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>Did not change gears</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>Did not stop on tracks</td> <td><input type="radio"/></td> <td><input type="radio"/></td> <td><input type="radio"/></td> </tr> <tr> <td>No errors</td> <td><input checked="" type="radio"/></td> <td><input checked="" type="radio"/></td> <td><input checked="" type="radio"/></td> </tr> </table> <p style="text-align: center;">BRIDGE/UNDERPASS</p> <p>Know weight limit on bridge</p> <p>No error.....<input checked="" type="radio"/></p> <p>Know clearance of underpass</p> <p>No errors.....<input type="radio"/></p> <p style="text-align: center;">CURVES</p> <table style="width: 100%;"> <tr> <td style="width: 80%;">Reduce speed on entering</td> <td 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REVERSE OF DA FORM 6125-R, AUG 93

USAPPC V1.00

Figure 7-2. DA Form 6125-R, Road Test Score Sheet (Back)

b. To score a behavior, draw a stroke through the O whenever the driver's performance is unsatisfactory. Make no mark if the driver performs the behavior correctly. For each maneuver, there is a "No Errors" category at the bottom of the list of behaviors. There is a space beside "No Errors" where you can put a check mark if the driver is satisfactory on all behaviors. These check marks will show that you scored the driver even if the driver made no errors.

c. The only other marking that need to be done on the test is to indicate maneuvers that were not done. A maneuver might not be done because you missed it for some reason or because there was no opportunity for it on the route. To show that a maneuver was not performed, draw a vertical line down through the entire column of O's used for marking that maneuver.

d. To score the maneuver, follow these steps:

(1) Find the maneuver on the score sheet and be ready to mark it.

(2) Check the driver and the traffic. When the driver can pay attention, give the directions for the next maneuver.

(3) Watch the driver perform the maneuver.

(4) Mark the score sheet.

e. Mark the driver's score sheet immediately after each maneuver. Do not try to remember what the driver did and mark the sheet later on in the route or back at the office.

f. The following paragraphs describe how to mark the score sheet for each type of maneuver:

(1) Stop/start on a grade. There are two columns of O's to mark: one for the upgrade stop and one for the downgrade stop. The columns are labeled "Up" and "Down." The behaviors are organized in three groups: approach, stop, and resume. Score each group separately as the driver does them. Score the approach as soon as the driver comes to a stop. Then check the stop behaviors and score them before telling the driver to continue. After the driver pulls away, score the rest of the behaviors.

(2) Expressway. Score the expressway section in three phases: merge on, lane changes, and exit. Mark each phase as the driver completes it. There are two columns of O's for the lane changes. Mark the one labeled "Left" for the lane change to the left. Mark the one labeled "Right" for the lane change to the right.

(3) Driving upgrade and driving downgrade. Driving up a grade and driving down a grade are scored separately. Observe how the driver handles the grade and score the behaviors listed. It is especially important that the driver uses the proper gear and appropriate signals and speed on grades because these can affect other traffic.

(4) General driving behavior. General behaviors such as gear changing should be marked at the end of the test. Specific actions such as traffic violations can be marked when they happen. There is also space to write notes. Use this space to make notes of things that do not fit into any scoring categories or to record any unusual events during the test. Remember to draw a vertical line through behaviors that are not graded, such as use of clutch when grading on the MTV.

(5) Turns. There are eight columns of O's on the left of the box; eight columns of O's on the right (see Figure 7-2). The columns on the left are for left turns. The ones on the right are for right turns. The columns are numbered according to the order in which the turns occur on the route. Column 1 of the left turn columns is for the first left turn on the route, column 2 is for the second turn, and so on. The first few times an examiner uses a route, it is a good idea to write the names of the locations of the turns at the tops of the columns. This will help keep track of the turns until the route is completely memorized.

- Mark a turn in four steps: "Approach," "If Vehicle Stops," "Turning," and "Completes Turn." Mark the "If Vehicle Stops" section only if the driver has to make a legal stop before starting the turn, such as at a traffic light, a stop sign, or yield sign. Do not mark this section if the driver stops for some other reason, such as being blocked by other vehicles part way around the turn.
- It is important to observe whether the driver is aware of his vehicle position throughout the turn, because it can affect other traffic. If there is more than one left turn lane, the driver should start his turn from the rightmost turn lane.

(6) Railway crossing. This section has three columns for scoring. The ones labeled "1" and "2" are for actual railway crossings on the route. The one labeled "S" is for the simulated crossing. Vehicles transporting passengers or hauling hazardous cargo are required by law to stop between 15 and 50 feet from the nearest railroad crossing and take whatever actions are necessary (for example an open window) to look and listen for trains.

(7) Bridge/underpass. There is one space for marking a bridge and one for marking an underpass.

(8) Curves. There are two columns for scoring curves. The one labeled "Left" is for a curve that turns to the left. The column labeled "Right" is for a curve that turns to the right. Drivers should reduce to a safe speed before entering the curve, then maintain that speed during the curve.

(9) Urban/rural straight sections. This section has two columns. Use the one labeled "Urban" for the urban section. Use the one labeled "Rural" for the rural section. In most cases you will mark the driver when he gets to the end of the section. However, if you see the driver make an error while driving along the section, such as driving in the wrong lane, mark the error as soon as you see it. The driver should drive in the right lane if it is clear or in the center lane if the right lane is blocked or has a large volume of merging traffic.

(10) Lane changes. The column labeled "Left" is for a lane change to the left. The column labeled "Right" is for a lane change to the right. The lane changes are part of the urban section (in addition to the expressway section). Mark each lane change as soon as the driver makes it.

(11) Intersections. There are four columns for marking the driver on intersections. Columns 1 and 2 are for intersections where the driver has to make a legal stop, for example, at a traffic light or a stop sign. Columns 3 and 4 are for marking intersections that the driver goes straight through. There are two phases to marking a stop intersection, stopping and driving through. For a stop intersection, driving through items cover the time from when the driver starts off from the stop to when the driver resumes normal traffic speed. For a driving through intersection, you only mark columns 3 and

4. The urban straight section normally has more than enough intersections to score. Start scoring the intersections as soon as the examinee begins driving along the section. Score stop and through intersections in whatever order they come up in. It does not matter if an intersection with traffic lights is sometimes scored as a stop intersection and sometimes scored as a through intersection.

(12) Search, direction, and speed. Most of the grading blocks discussed above has areas for grading search, direction, and speed in addition to the other behaviors listed. These are general categories that the examiner should be monitoring through each exercise.

- Search. At all times during the road test the driver must be constantly checking the front, sides, and rear of his vehicle for traffic, pedestrians, obstructions, emergencies, and so forth. During each maneuver, the examiner must observe whether the driver is checking around him and yields right of way to other road users when appropriate.
- Direction. The driver must be aware of the position of his vehicle at all times. During each maneuver, the examiner must observe the vehicle position in the lane, whether the vehicle is in the correct lane, and whether the driver maintains the appropriate distance from traffic, stop lines, and so on.
- Speed. The driver must be aware not only of his speed in comparison with the speed limit, but how his speed affects other traffic. During each maneuver the examiner must watch to see that the driver maintains posted speed limits, accelerates and decelerates smoothly, uses the proper gear for his speed, and blends in with the traffic flow. The examiner must also observe that the driver does not lug or race the engine, coast the vehicle, change gears or brake on tracks or in the middle of intersections, stall the engine, and so forth.

(13) Driver errors at nonmarking locations. Since the examiner scores at predetermined locations, there will be occasions when the driver makes an error at some place other than one of these locations. Score the error in the General Driving Behavior section of the form if appropriate. Otherwise, ignore the error. If the route has a lot of places where the examiner cannot score the driver, the route is probably inefficient. If the driver makes errors in places where the examiner does not score, the driver will likely make errors in places where scoring can be done. Do not decide where to score a driver based on when the driver makes an error. Stick to scoring at the predetermined locations.

5. COMPUTING THE DRIVER'S SCORE.

a. Road test score sheet. At the end of the test, make sure all driver and examiner information is completed. Check that everything is marked clearly and correctly. Be sure to cross out maneuvers that were not done on the test. Review the scored maneuvers for repeated errors and score errors in the general driving behavior. Carefully add the number of marked letter O's and write the total in the "Score" space on the front of the form. A passing score is 25 errors or less. The driver fails the road test if he makes 26 or more errors (errors accumulated on the vehicle control test DO NOT count toward the score on the driving portion of the road test). If the score is close to a failing score, double-check that you have added correctly.

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b. Failures. Annotate reason for failure in the Notes section; for example, "Examinee exhibited undue nervousness." The following are some reasons for failures:

- (1) Any unsafe driving act.
- (2) Failure to properly perform PMCS.
- (3) Not knowing location and function of gauges and controls.
- (4) Unsatisfactory performance on vehicle control test.
- (5) Undue nervousness.
- (6) Failure to achieve minimum passing score.

NOTE: If the individual scores 25 errors or less, but the examiner feels that the individual needs additional training, the examiner has the right not to issue a license.

c. After-action review. Whether the driver passes or fails, the examiner will review the results of the road test with him and bring to his attention any weaknesses that require further practice or training. If the driver failed, tell him what caused him to fail. Advise him that an standard Army OF 346 cannot be issued and he will have to retake the entire performance test at a later date. Whether pass or fail, the results must be recorded on the DA Form 6125-R.

INTERMEDIATE TRAINING OBJECTIVE 3

PERFORMANCE TEST – OFF ROAD DRIVING

NAME	RANK	UNIT	
EVALUATOR		DATE	
<u>STEPS</u>		GO	NO-GO
1. RAISES AND HOOKS THE REAR MUD FLAPS TO PREVENT THEM FROM BEING TORN.			
2. PRESETS THE CTIS SELECTOR TO THE CROSS-COUNTRY (X-C) MODE.			
3. PRE-SELECTS THE OFF-ROAD MODE ON THE TRANSMISSION SELECTOR PANEL, WHEN WHEEL SLIPPAGE IS APPARENT.			
4. ALLOWS CTIS AMPLE TIME TO ADJUST BEFORE ENCOUNTERING ADVERSE TERRAIN			
5. PRESSES THE TRANSMISSION DOWN ARROW TO CONTROL VEHICLE SPEED.			
6. SETS THE TRANSMISSION TO 1 AND 1 AS NEEDED.			
7. ANTICIPATES TERRAIN AND, BEFORE NEGOTIATING, TAKES POSITIVE ACTION TO MATCH CTIS, TRANSMISSION AND MODE SELECTION TO TERRAIN FEATURES.			
8. DOES NOT SHIFT INTO ANY LOWER GEAR THAN IS NECESSARY TO MAINTAIN HEADWAY.			
9. CHECKS FOR OBSTRUCTIONS/CLEARANCES AND CHOOSES THE BEST ROUTE OF TRAVEL TO AVOID OBSTACLES.			
10. MAINTAINS CONTROL OF THE VEHICLE.			
11. MANEUVERS AROUND, NOT OVER OBSTACLES.			
12. DRIVES SLOWLY ENOUGH TO PREVENT TRUCK DAMAGE, LOOSE OR SHIFTING CARGO, AND INJURY TO VEHICLE OCCUPANTS.			
13. MANUALLY DOWNSHIFTS/UPSHIFTS THE TRANSMISSION PROPERLY WHEN NECESSARY, SUCH AS ON GRADES.			
14. ASCENDS/DESCENDS HILLS IN A STRAIGHT APPROACH.			
15. CROSSES RAVINES AND DITCHES PROPERLY.			
16. DOES NOT EXCEED THE FORDING DEPTH/SPEED.			
17. UNHOOKS AND LOWERS THE REAR MUD FLAPS BEFORE DRIVING ON ROAD.			

GLOSSARY

AAR		after-action review
AK		Alaska
AMP		amperes
AR		Army regulation
ASAP		as soon as possible
ATTN		attention
BII		basic issue items
BLDG		building
C		Celsius
CTIS		central tire inflation system
D		drive
DA		Department of the Army
DD		Department of Defense
E		electronic (as in electronic forms)
ECU		electronic control unit
EGA		electronically generated form
EMER		emergency
EOCCT		end of course comprehensive test
F		Fahrenheit
FM		field manual
FMTV		family of medium tactical vehicles
FT		foot
FY		fiscal year
HWY		highway
IN.		inch
K		kilometers
KPH		kilometers per hour
LB		pound
LB-FT		pound-foot
LB-IN		pound-inch
LH		left hand
LMTV		light medium tactical vehicle
LVAD		Low Velocity Air Drop
METT-T		mission, enemy, terrain, troops, and time available
MOS		military occupational specialty
MP		military police
MPH		miles per hour
MTV		medium tactical vehicle
N		neutral
NA		not applicable
NMC		not mission capable
NO.		number
NSN		national stock number
OF		optional form
PA		public address
PIN		production identification number

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PMCS		preventive maintenance checks and services
POL		petroleum, oils, and lubricants
PSI		pounds per square inch
PTO		power take-off
R		reverse
RH		right hand
RPM		revolutions per minute
S		simulated
SF		standard form
SOP		standing operating procedure
TA		training area
TACOM		US Army Tank-Automotive and Armaments Command
TC		training circular
TM		technical manual
TVT		training videotape
ULLS		unit level logistics system
US		United States (of America)
VCR		video cassette recorder
X-C		cross-country

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20 MAY 1999

By Order of the Secretary of the Army:

Official:



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