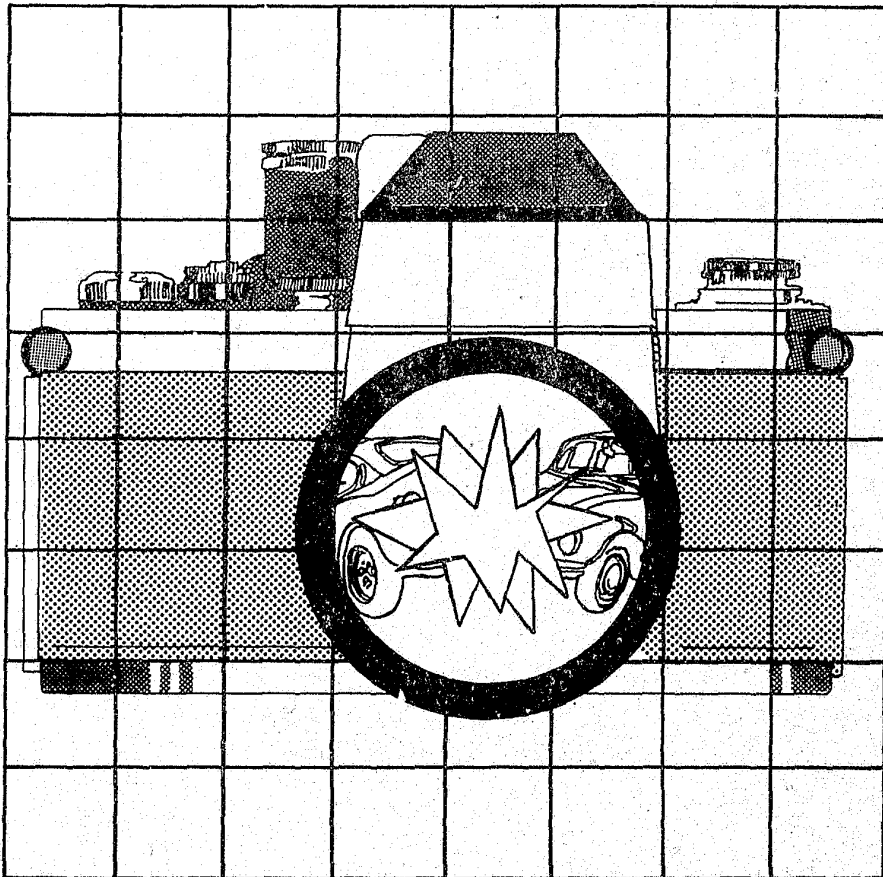


INTERPRETING & PHOTOGRAPHING VEHICULAR DAMAGE & THE CRASH SCENE

Field Training



52074



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Aberdeen Police Department
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Bowie State College
Brunswick Police Department
Cecil County Sheriff's Office
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Salisbury, Maryland - 10/6/75-12/2/75

Cambridge Police Department
Centreville Police Department
Chestertown Police Department
Crisfield Police Department
Denton Police Department
Easton Police Department
Federalsburg Police Department
Fruitland Police Department
Hurlock Police Department
Kent County Sheriff's Office
Ocean City Police Department
Pocomoke City Police Department
Queen Anne's County Sheriff's Office
Queenstown Police Department
Rock Hall Police Department
Salisbury Police Department
Salisbury State College
Talbot County Sheriff's Office
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Prince Georges County - 10/14/75-12/15/75

Armed Forces Police
Bladensburg Police Department
Brentwood Police Department
Calvert County Sheriff's Office
Charles County Sheriff's Office
Cheverly Police Department
GSA-Office of Buildings and Grounds
Hyattsville Police Department
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INTERPRETING AND PHOTOGRAPHING VEHICULAR DAMAGE AND THE CRASH SCENE - FIELD TRAINING

ABSTRACT

This unit is designed to provide experience in photographing vehicular damage and in estimating speed from physical evidence. The unit is designed primarily for field training exercises and provides Performance Checklists summarizing all the steps necessary to satisfactorily perform the job.

BEHAVIORAL OBJECTIVES

- Practice classifying vehicular damage and in reconstructing an accident from inspection of vehicular damage.
- Practice photographing vehicular damage.

XIII

INTERPRETING AND PHOTOGRAPHING

VEHICULAR DAMAGE

(FIELD TRAINING)

Training Aids

The following training aids are recommended for use with this unit:

- Wrecked vehicles associated with four accident situations
- Police accident records for wrecked vehicles to be examined
- Portable chalkboard/chalk or large drawing pad and marking pen
- Inexpensive Polaroid camera or press-type camera with Polaroid Land Film Holder (4" x 5" format), if used by the department
- Sufficient Polaroid black and white film for 40+ pictures
- Sufficient vehicles to transport students and equipment to the site(s) of wrecked vehicles.

Preparation

Recent police accident records will be obtained for several accident situations involving wrecked vehicles which were disposed of in the jurisdiction.

Permission will be obtained from the appropriate auto wrecker(s) to visit the premises and inspect the wrecked vehicles associated with four recent accidents for which police accident records are available.

- Visits to more than one auto wrecking establishment may be required to access sufficient wrecked vehicles.

Arrangements will be made to transport students and the previously specified training equipment to the site(s) of the wrecked vehicles to be examined.

Practice

Reconstruction of the Accident from Inspection of Vehicular Damage

The following steps should be accomplished to carry out this phase of the training session:

- For each accident situation and wrecked vehicle involved, a briefing will be provided on the following items:
 - The key event - type and number of vehicles involved in what kind of accident
 - Location of the accident - type of road (highway, street, intersection, etc.)
 - Condition of road surface
 - Identify any missing parts of the wrecked vehicle that were present after the accident and how the vehicle was transported to its present location, if this is known.
- Inspect the wrecked vehicle and independently accomplish the following tasks in regard to reconstructing the accident:
 - Make a rough sketch of how the accident happened, to include the approximate positions and directions of the vehicles and objects prior to, during, and after the collision.
 - Determine the following:
 - Classify the damage incurred, e.g., contact; induced; thrust; overlap; imprints; what damage was likely pre-collision, during collision, and post collision

- Speeds involved (low, 10-30 mph; medium, 30-35 mph; high, 55 mph or greater)
 - Severity of any injuries sustained
 - Kinds of roadmarks that may have been left at the scene
 - Collisions with any objects other than vehicles.
- Interpret the accident, using the chalkboard or large drawing pad to diagram what occurred.
 - Reconstruct the accident, using the relevant Motor Vehicle Accident Report Form to recreate the official diagram of the accident on the chalkboard/drawing pad and completely describe the circumstances of the accident.
 - Critique the accounts of the accident presented by the students and take care to show how the observable vehicular damage correlates with the major accident events.
 - Repeat the above procedure for each of the different wrecked vehicles to be observed.

Photographing Vehicular Damage

The following steps should be accomplished to carry out this phase of the training session:

- Take pictures of a wrecked vehicle using the "two shot" technique and use these as examples to support a brief discussion of the objectives to be satisfied by photographs of vehicular damage.
- As the time and the situation permits, photograph a wrecked vehicle using the "two shot" technique. If possible, have no more than three students photograph the same wreck.

- Critique the photos taken by the trainees
 - If a simple Polaroid camera is used, only the composition of the photographs should be critiqued
 - If a press-type camera is used, such technical aspects of the photographs as exposure, depth of field, can be critiqued in addition to composition.

Performance Checklist

General Directions

The Performance Checklist evaluates the officer's ability to interpret and photograph vehicular damage in a field training or simulated training environment.

Administration

Needed materials are:

- Training Aids as specified above.

Procedure (Performance Checklist)

For each Performance Checklist included in the field training unit, it will be the responsibility of the test examiner to create and present a well planned, realistic, and varied role play test situation. Through the use of available facilities, special equipment, and personnel to role play essential parts, a realistic drama can be presented requiring the officer to demonstrate his collision management skills.

The Performance Checklists have been designed to provide an objective and complete evaluation of a student's performance across numerous instances

of traffic accidents. To provide for test security it is recommended that specific role play situations be changed frequently.

Scoring

Evaluate the student's responses on the Performance Checklist by placing a check mark under the column labeled (✓) PASS for each correct response. Use the Performance Checklist to guide evaluation of the student's performance.

PERFORMANCE CHECKLIST

(✓) PASS

Obtain information from the vehicle to determine WHY the accident happened.

Examine tires.

Determine evidence tire was run flat.

Determine blowouts.

Examine road for flat tire marks back of key point.

Examine brakes.

Look for loss of brake fluid.

Determine if truck heavily loaded.

Determine if truck had added springs, wheels, or tires.

Try test skid.

Examine brake drums and brake bands.

Examine gears, wheels, and springs.

Look for broken parts.

Look for rust marks.

Look for worn and loose ball and socket connectors.

Check for play in wheel where front wheels are undamaged.

Determine if steering is worn stiff or loose.

Examine wipers.

Inspect for presence of blades.

Inspect position of switch or control knob.

Inspect for evidence of recent operation.

Examine trailer couplings or hitches.

Examine for wear or broken parts.

Examine guard chains if necessary.

Look for noticeable play in mount.

PERFORMANCE CHECKLIST

(✓) PASS

Obtain information from the vehicle. (Continued)

Examine windshield and windows

Look for pre-accident cracks.

Look for broken or missing glass.

Examine door locks.

Look for broken latches or pawls on door and door jamb.

Examine side of vehicle.

PERFORMANCE CHECKLIST

(✓) PASS

Obtain information from the vehicle to determine HOW the accident happened.

Examine the body of the vehicle.

Study the distortion and collapse of parts.

Examine for paint from other objects.

Examine for rubber rubbed from tires of other vehicles.

Examine for imprints from bumpers, head lights, door handles, etc.

Examine surfaces for cloth imprints, buttons, scratches, hair, or skin.

Examine glass fractures for direction of force.

Examine doors for severity of collision.

Examine the interior of the vehicle.

Examine shatter patterns of glass.

Examine breakdown of seat backs.

Examine outward bulges of doors.

Examine dents in dash.

Examine breakdown of steering wheel.

Examine tires.

Examine position of cuts.

Examine abrasions on sidewalls.

Count tread grooves to match with skidmarks or print patterns.

Measure shoulder rib spacing.

Examine gear position.

Determine what gear vehicle is in.

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PERFORMANCE CHECKLIST

(✓) PASS

Obtain information from the vehicle to determine HOW the accident happened. (Continued)

Examine couplings or hitches.

Identify sheared bolts and bent parts.

Determine direction of force between trailer and towing vehicle.

Examine speedometer.

Determine if dial is rotated in its mounting.

Determine if broken from front or rear.

Note reading.

Examine springs, A-frames, etc.

Determine direction of bending or breakage.

Identify ground or scratched underparts.

Examine engine and transmission.

Determine if engine is off its mount.

Determine if oil pan or casing is broken.

Look for signs of scraping on the ground.

Examine wheels.

Determine if rims are dented.

Determine if wheels are broken from hub.

Identify scratches or rub-off.

Determine collapse of wheels.

Measure wheelbase as damaged.

Determine side thrust.

Measure off-set of wheels.

Examine light bulbs.

Remove remains of bulb carefully.

Tape cracks to prevent breakage during removal.

PERFORMANCE CHECKLIST

(✓) PASS

Determine when and what to photograph.

Determine urgency of higher priority tasks.

Photograph information that may be quickly lost such as:

Debris which shows the point of impact.

Tire imprints or skidmarks in soft material.

Photograph more permanent evidence later.

Photograph changes or damage resulting from moving the vehicle or rescue operations.

Determine situations where photographs are of special value, such as accidents involving:

Fatalities.

Hit and run.

Railroad crossings.

Pedestrians.

PERFORMANCE CHECKLIST

(✓) PASS

Plan the pictures.

Plan the picture before setting up camera.

Include objects of interest.

Include relationship to other accident scene objects.

Make the photograph show as much as possible.

Exclude extraneous objects.

Keep bystanders from field of view.

PERFORMANCE CHECKLIST

(✓) PASS

Photograph vehicular damage.

Take at least two oblique pictures.

Show all four sides of vehicle.

Take only when time is a factor.

Take four pictures for best results.

Align each picture with axis of the vehicle.

Photograph damage before vehicle is removed.

Include detached parts where found in roadway.

Include recognizable landmarks.

Photograph roadmarks and/or tire marks.

Aim camera no closer than 3 feet above ground.

Show a large road area to prove that other marks are not omitted.

Use several synchronized flash sources at night.

Use additional flash beyond 25 feet.

Photograph final positions of objects.

Photograph trafficway environment to include:

View obstructions.

Sign distances.

Roadway irregularities, etc.

PERFORMANCE CHECKLIST

(✓) PASS

Record important facts after taking pictures, such as:

Location of scene or objects photographed.

Compass direction of each photograph.

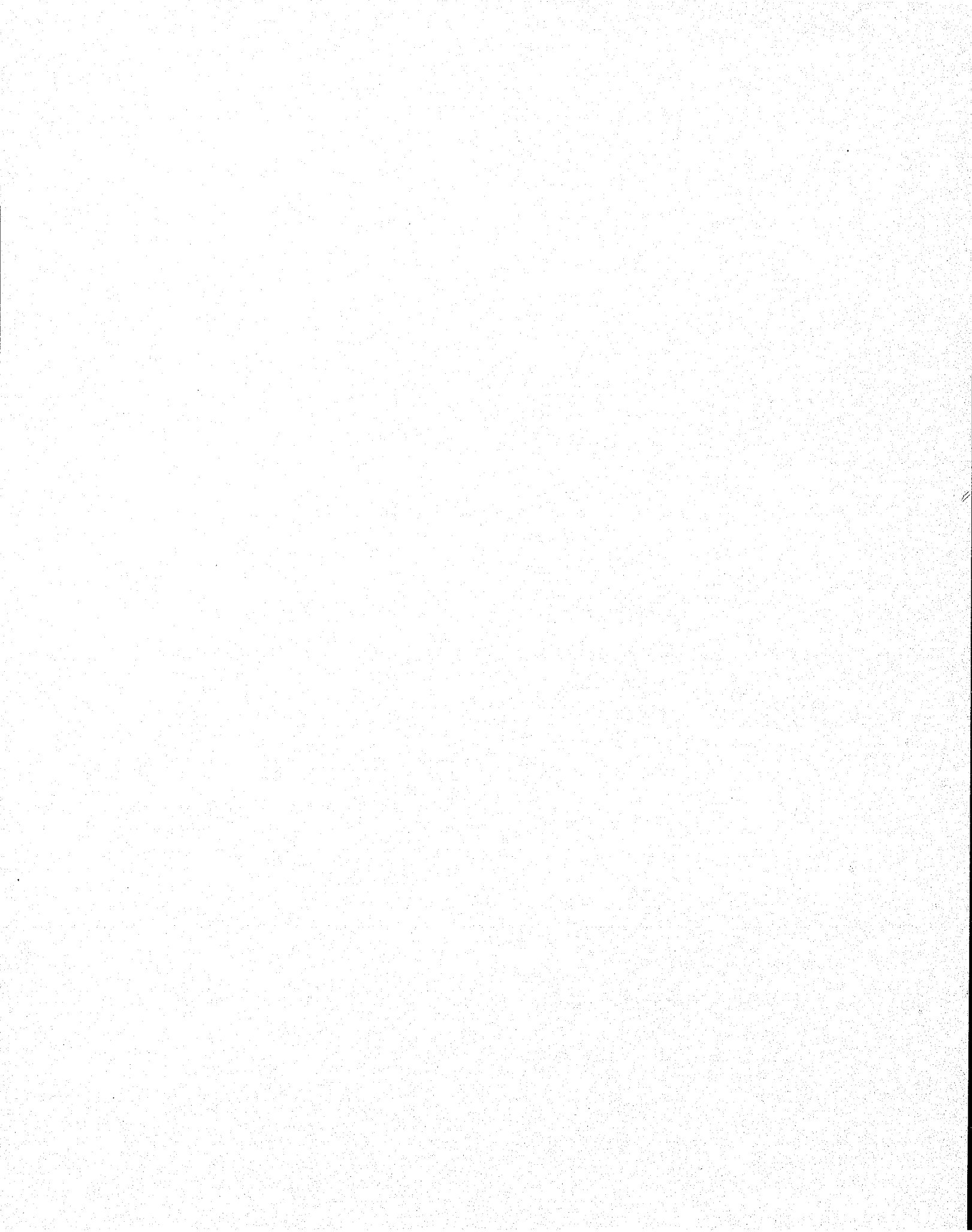
Identification number of camera.

Type of film used.

Type of lens used.

Type filter used.

Settings employed.



END