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Utility-Terrain Vehicle Operator Training Course: Instructor's Guide





Utility-Terrain Vehicle Operator Training Course: Instructor's Guide



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Course Instructions

This course is needed to train employees to safely operate utility-terrain vehicles (UTVs), which are motorized off-highway vehicles (figure 1). The course instructions provide information essential to the instructor. Read the course instructions and become familiar with the training materials before teaching the course. Each chapter begins with Instructor's Notes to provide additional information for teaching the chapter material. To locate local experts, technical specialists, and professional consultants who could assist you during training, consult your regional safety and health manager and fleet manager.

Instructor Prerequisites

Conduct the course safely, ensuring that all agency and U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations are followed. Before teaching the course, complete the ATV Safety Institute's (ASI) Rider Course Instructor Certification or another "train the trainer" course for other agencies or certifying organizations that meets the minimum training requirement (FSH 6709.11, chapter 10).

Student Target Group

This course is for Forest Service employees who will be operating UTVs for the Forest Service and require initial certification. This course is not intended to be used as a refresher class.

Student Prerequisites

All students should be familiar with the Forest Service's "Driver-Operator Guide" and the "Driver Orientation



Figure 1—UTV crossing water.

Self-Study Course" (U.S. Department of Agriculture, Forest Service, current editions) and the owner's manual for the UTV they will drive. Students also may want to take the Recreational Off-Highway Vehicle Association's "Interactive E-Course for ROV Safety" at <http://www.rohva.org>.

Course Materials

The course materials on the "Utility-Terrain Vehicle Operator Training Course" DVD include:

- This instructor's guide (including forms)
- A video-enhanced PowerPoint presentation

The PowerPoint presentation includes questions in blue text to encourage student participation and discussion.

Presentation Time

The course will require at least 2 hours (with breaks) for the classroom session and a minimum of 2 to 4 hours for the field training session. You will need more time if extra material is added, if the class is large, or if the students are inexperienced. To keep on schedule, prepare your lessons in advance and plan the field session. Draw from your experience to add realism and credibility to the class material.



Classroom Requirements

The course is designed to be taught in the classroom and in the field. A class size of 6 to 12 participants is recommended. A classroom with audiovisual equipment will be needed to display training materials.

The classroom should provide:

- Adequate space, desks, tables, and equipment for the students.
- Controlled lighting. Turn lights off and shade windows when showing audiovisual aids.
- Good acoustics.
- Good ventilation.
- A quiet place that is not subject to interruptions.
- Facilities nearby such as break areas and rest rooms.

Field Training Requirements

During the field training (figure 2) and certification sessions, the number one concern is the safety of the participants and the public. Before field training, do a thorough job hazard analysis specific to the location and the types of training and evaluations that are scheduled. Chapter 7 has instructions for conducting the field portion of the course.



Figure 2—UTV field training session. Courtesy of Dave Goodin.

Course Completion

To complete this course, each student will:

- Attend the classroom session.
- Complete and pass the classroom exam.
- Operate a UTV through a predetermined field course and receive a satisfactory evaluation.

At the beginning of the course, have each student sign the “Training Course Attendance” roster (appendix A). After completing the classroom session, students will be required to complete the “UTV Operator Written Test” (appendix B). Written tests may be administered open book, allowing the candidate to learn more about Forest Service policies by studying the “Driver-Operator Guide” and the “Driver-Oriented Self-Study Course” and the “Health and Safety Code Handbook” (U.S. Department of Agriculture, Forest Service, current edition). Use the “Answers for the UTV Operator Written Test” (appendix C) to grade the exam.

After passing the “Written Test,” students must complete the field portion of the course. In this session, students will drive a sample course modeled after the “Field Evaluation Driving Course” (appendix D). During the session, students will demonstrate their UTV skills in three areas: safety, loading and unloading, and UTV operation. The “UTV Operator Field Evaluation” (appendix E) will be used to evaluate each student’s skills.

When students have successfully completed the classroom session and the field training session, document their training on form FS-6700-41 (appendix F). Award each student a “UTV Operator Training Certificate” (appendix G). Include any restrictions or endorsements on the “UTV Operator Field Evaluation” and form FS-6700-41.

After the course, give the students the “Training Course Assessment” (appendix H). Retain the “Training Course Attendance” roster for your records.

All safety training needs to be entered into the AgLearn database by each student’s supervisor or training coordinator. For more information on how to enter this training into AgLearn, go to <http://fsweb.asc.fs.fed.us/HRM/training/job_aids/jobaid_supv_recordtrain_external.doc>.



Introduction

Instructor's Notes

- Identify the locations of emergency exits, rest rooms, and telephones.
- Establish the course schedule.
- Have each student sign the "Training Course Attendance" roster.
- Use the "Introduction" section of the video-enhanced PowerPoint presentation.

Using UTVs

UTVs are motorized off-highway vehicles (figure 3) intended for recreational use and work. In the Forest Service, they are becoming popular for project work, such as trail maintenance, pesticide application, and prescribed burning operations.



Figure 3—An employee operating a UTV in the field.

Before employees use these vehicles, it is critical they understand how to operate them safely. Between January 2003 and August 2009, the Consumer Product Safety Commission reviewed 181 recreational off-highway incidents involving UTVs. Of these incidents, 161 fatalities and 152

injuries were reported. In the Forest Service, some of the more serious UTV accidents (figure 4) have included roll-overs due to overloading of the UTV cargo bed, altering the cargo bed configuration thereby changing the vehicle's center of gravity, mounting nonbaffled tanks to the UTV cargo bed, attempting to climb grades exceeding the capability of the loaded UTV, and operating UTVs on sideslopes beyond the vehicle's design specifications. In some cases occupants were not wearing their seatbelts and were thrown from the vehicle. Those who were belted in were protected by the rollover protection system (ROPS).

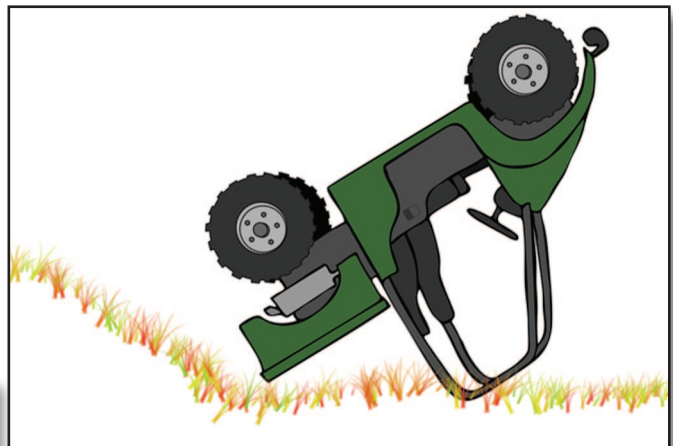


Figure 4—UTV rollover. Courtesy of Steve Slocomb.

UTV Operator Qualifications

Forest Service employees must be qualified before operating a UTV. Qualifications include:

- Being familiar with the Forest Service "Driver-Operator Guide" and the "Driver-Orientation Self-Study Course," and the owner's manual for the UTV they will drive
- Following all local and State operating requirements
- Completing this course or another course meeting the minimum training requirements (FSH 6709.11, chapter 10)
- Documenting training on form FS-6700-41 and keeping it in the employee's personnel folder
- Holding a valid Operator's Identification Card, OF-346

When students complete this course, they will meet all these qualifications.



All operators shall be reevaluated every 3 years by a certified trainer. Operators must demonstrate their skills and abilities in controls, service, handling, loading, unloading, and operation over local terrain. This reevaluation may take place during a check-ride. The reevaluation is documented on form FS-6700-41. Operators who ride less than 16 hours a year require a check-ride with a certified trainer before a UTV is used for project work.

Operators are responsible for the following:

- Tracking ride time
- Informing the appropriate supervisor of the need for a check-ride
- Contacting a certified trainer

Course Overview

At the beginning of each chapter, objectives are presented that define what students will know or be able to accomplish after completing the unit.

Chapter 1—Differences Between UTVs, ATVs, and Highway Vehicles

- Students will understand the different features of UTVs.
- Students will learn how UTVs differ from ATVs and highway vehicles.

Chapter 2—Safety Requirements

- Students will be able to identify the elements in a job hazard analysis (JHA):
 - » The task and procedures to be accomplished
 - » The hazards associated with the task or procedure
 - » Abatement actions to eliminate or reduce the hazards
 - » First aid and emergency evacuation procedures
- Students will learn why personal protective equipment and clothing (PPE) is used, how it is used, and how it is maintained.
- Students will learn about Federal and State regulations, rules, and laws they must obey while operating a UTV.

Chapter 3—Preride Inspection

- Students will be able to perform a preride inspection using the T-CLOC check.

Chapter 4—Transportation

- Students will be able to load, transport, and unload a UTV.

Chapter 5—Pework Safety Questions

- Students will consider and answer the prework safety questions.

Chapter 6—Safe Operating Practices

- Students will be able to load cargo properly.
- Students will understand how to operate a UTV safely and efficiently.

Chapter 7—Field Proficiency

Students will demonstrate their skills under the guidance of a qualified instructor/certifier and will be evaluated.





Chapter 1—Differences Between UTVs, ATVs, and Highway Vehicles

Instructor's Notes

- Use the “Differences Between UTVs, ATVs, and Highway Vehicles” section of the video-enhanced PowerPoint presentation.

Objectives

- Students will understand the different features of UTVs.
- Students will learn how UTVs differ from ATVs and highway vehicles.

Features of Utility-Terrain Vehicles

A utility-terrain vehicle (UTV) is a motorized off-highway vehicle designed to travel on four or more tires and carry one or more persons. Several different companies manufacture UTVs with these features:

- Maximum speed capability greater than 35 miles per hour
- Width less than 80 inches
- Key-operated ignition switch or engine stop device (figure 5)
- Steering wheel
- Two-wheel or all-wheel drive
- Accelerator pedal (figure 6)
- Brake pedal
- Side-by-side seats (figure 7)
- Seatbelts
- Parking brake
- Headlights
- Low pressure tires (figure 8)
- Handholds for passengers
- Tail lights
- Rollover protection system



Figure 5—UTV control panel.

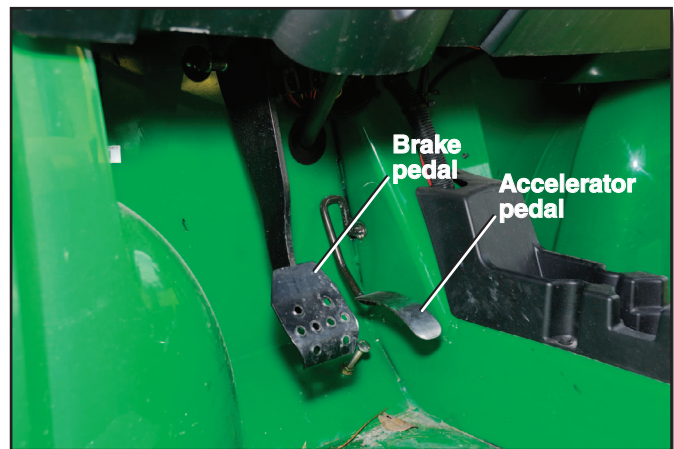


Figure 6—UTV foot controls.



Figure 7—Features of a UTV (front view).



Figure 8—Features of a UTV (rear view).

A rollover protection system (ROPS) is a frame of steel pipe above and around the cab. This system is designed to protect occupants from being crushed during a rollover. A cab enclosure is not a ROPS system unless it is specified in the owner's manual or on the ROPS itself that it meets SAE J2194 or ASA ES 519 standards. All UTVs purchased by the Forest Service or operated by employees must be equipped with a ROPS. Studies from the Consumer Protection Commission state that ROPS, when combined with properly fastened seatbelts, are 99 percent effective in preventing fatalities and serious injuries in rollovers.

UTVs Compared to ATVs

UTVs and all-terrain vehicles (ATVs) have several common features (figure 9). They both have four or more low-pressure tires, can be two-wheel or all-wheel drive, and have headlights and tail lights.

Despite these similarities, there are critical differences between the two vehicles. A UTV has a steering wheel with a sedentary operator while an ATV has handlebars and an active rider, who balances the machine and shifts weight as necessary. A UTV has side-by-side seats, while an ATV has a straddled seat. A UTV can carry one to four passengers, while an ATV is only approved for single riders in the Forest Service. A UTV has seatbelts for the operator and all passengers, while an ATV has none. A UTV has handholds for passengers, while an ATV does not. A UTV has an accelerator and brake pedal, while an ATV has a handlebar throttle and a handlebar and footbrake. A UTV has a ROPS, while an ATV does not.



Figure 9—UTV (left) and ATV (right).



UTVs Compared to Highway Vehicles

UTVs and highway vehicles (figure 10) have several similarities that help the operator learn how to use the vehicle. Similar features include:

- A steering wheel
- Two or all-wheel drive systems
- Side-by-side seats
- Ability to carry passengers
- Handholds for passengers
- Seatbelts
- Accelerator pedal and brake pedal
- Cargo racks and boxes (on some models)

Despite these similarities, operators of UTVs should not drive a UTV like they would a highway vehicle (table 1). UTVs are not street legal in all states and they handle differently than highway vehicles. A UTV has low pressure off-highway tires, a high center of gravity, and a smaller



Figure 10—Highway vehicle and UTV.

wheelbase that makes it less stable than highway vehicles. A UTV is more prone to roll or flip over if driven too fast or steered abruptly.

Table 1—Comparison of features for UTV, ATV, and highway vehicles approved for Forest Service use.

UTV, ATV, and Highway Vehicle Features			
Component	UTV	ATV	Highway Vehicle
Maximum width	Less than 80 inches	50 inches or less	102 inches or less
Steering control	Wheel	Handlebars	Wheel
Tires	Four or more low pressure	Four or more low pressure	Four or more regular pressure
Drives	Two, four, or six	Two, four, or six	Two to more than four
Seats	Side-by-side	One straddled	Side-by-side
Passenger capacity	One to four	None	One to more than six
Seatbelts	Yes	No	Yes
Handholds for passengers	Yes	No	Yes
Accelerator	Pedal	Handlebar throttle	Pedal
Brakes	Pedal and parking brake	Handlebar and footbrakes	Pedal and parking brake
Cargo box	Yes	Yes	Some models
Cargo racks	Yes	Yes	Some models
Rollover protection system	Yes	No	Yes (some models)



Notes



Chapter 2—Safety Requirements

Instructor's Notes

- Use the “Safety Requirements” section of the video-enhanced PowerPoint presentation.
- Provide a scenario and discuss with the students how a medical emergency and evacuation could be handled and what is the role of each person.
- Refer to the “Health and Safety Code Handbook” chapter 20 for information on handling a medical emergency.

Objectives

- Students will be able to identify the elements in a job hazard analysis (JHA):
 - » The task and procedures to be accomplished
 - » The hazards associated with the task or procedure
 - » Abatement actions to eliminate or reduce the hazards
 - » First aid and emergency evacuation procedures
- Students will learn why personal protective equipment and clothing (PPE) is used, how it is used, and how it is maintained.
- Students will learn about Federal and State regulations, rules, and laws they must obey while operating a UTV.

Job Hazard Analysis

A JHA (figure 11) must be prepared (preferably with the assistance of the employees involved) before beginning any work project or activity: The JHA must:

- Identify the tasks or procedures to be accomplished.
- Identify the hazards associated with the tasks or procedures. These hazards may include physical, biological, environmental, chemical, or other hazards.

Examples of hazards include:

- » Physical hazards—Rocky terrain and slippery slopes
 - » Biological hazards—Insect bites and hantavirus
 - » Environmental hazards—Weather-related hazards, such as hypothermia, wind, and lightning
 - » Chemical hazards—Hazardous materials, such as gasoline for UTVs
 - » Other hazards—Personal security issues, public traffic, and hunting seasons
- Identify abatement actions that can eliminate or reduce hazards. Abatement actions (in order of preference) include:
 - » Engineering controls—The most desirable method of abatement (such as ergonomic tools and equipment)
 - » Substitutions—Such as switching to nontoxic solvents

U.S. Department of Agriculture Forest Service		1. WORK PROJECT/ACTIVITY	2. LOCATION	3. UNIT
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)		4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED
7. TASKS/PROCEDURES		8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
10. LINE OFFICER SIGNATURE		11. TITLE		12. DATE

Previous edition is obsolete (over)

Figure 11—Job hazard analysis form.



- » Administrative controls—Such as limiting exposure by reducing work schedules or establishing appropriate work practices and procedures
- » PPE—The last method of abatement to be considered (such as using a helmet when operating a UTV)
- Identify first aid supplies and emergency evacuation procedures. The onsite first aid kit must have supplies that meet the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) specifications and requirements.

An emergency evacuation plan is essential for any field project. All employees need to be proficient in using a radio. They need to know emergency contacts and the proper radio frequencies. The latitude and longitude and/or the legal location for an emergency medical helispot shall be determined and included in the JHA before starting any work. The entire crew shall know where the helispot is located. The emergency evacuation plan needs to be updated when the work location changes. Be prepared to provide the following information for an emergency evacuation:

- » Nature of accident or injury (avoid using the victim's name)
- » Type of assistance needed (ground, air, or water evacuation)
- » Location of the accident and best access to the site (road name or number)
- » Radio frequencies
- » Contact person
- » Local hazards to ground vehicles or aviation
- » Weather conditions (wind speed and direction, visibility, temperature)
- » Topography
- » Number of individuals to be transported
- » Estimated weight of individuals for air or water evacuation

The JHA shall be signed by employees, signifying that they have read and understood the contents, have received the required training, are qualified to perform the task or procedure, and will comply with all safety procedures.

A copy of the JHA, including the emergency evacuation plan must be kept onsite during the project. The JHA can be reviewed and updated during tailgate safety sessions. These sessions take place before a new project or activity is begun, when changes are made, or whenever employees believe a session is needed. Topics often focus on the hazards associated with the job and methods to eliminate or abate them.

Selection and Use of Personal Protective Equipment

PPE is used with engineering controls, substitutions, administrative controls, or a combination of approaches. Relying on PPE alone is not adequate. Employees need to know how to select and use PPE properly.

Selection Requirements—

- Select PPE based on hazards identified in the JHA.
 - » PPE must fit properly.
 - » Defective, damaged, or unsanitary PPE shall not be used.
- Head protection: Employees shall wear appropriate head protection when working where there is a potential for head injuries. Ensure that helmet protection meets standards specified in the American National Standards Institute (ANSI) Z89.1-2009 or National Fire Protection Association (NFPA) 1977 and are made of material having a melting point of 350 degrees Fahrenheit or higher. Inspect shells daily for signs of dents, cracks, penetration, or any other damage that might compromise protection. Suspension systems, headbands, sweatbands, and any accessories also should be inspected daily (29 CFR 1910.132 and 29 CFR 1910.135).
- Hand protection: Base the type of protection on the specific hazards identified. Gloves often are relied



on to prevent cuts, abrasions, burns, and skin contact with chemicals that can cause local or systemic problems (29 CFR 1910.138).

- Foot protection: Employees shall wear footwear designed to prevent injury from falling or rolling objects, objects that could pierce the soles, and electrical hazards.
- Eye and face protection: Appropriate protection (including side protection) is needed when employees are exposed to eye or face hazards such as flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation (29 CFR 1910.133).

Use Requirements—

- Each employee shall be trained to wear the PPE required by the JHA. Training shall include:
 - » Why PPE is necessary, what PPE is required, and when and where the PPE should be worn
 - » How to properly don, adjust, wear, and remove PPE
 - » Proper care, maintenance, useful life, limitations, and disposal of PPE
- Before performing any work project or activity requiring PPE, employees need to demonstrate an understanding of its purpose and use. Employees are accountable for accidents and injuries that result from failing to use required PPE or from misusing it.
- Additional training may be necessary. Circumstances in which supervisors should provide additional training include:
 - » Workplace changes that make earlier training obsolete
 - » Changes in the PPE being used
 - » Evidence that an employee's knowledge or use of PPE is not adequate

Required PPE for UTV use—

Refer to the current edition of the “Health and Safety Code Handbook” (U.S. Department of Agriculture, Forest Service)

chapter 10 for UTV Operator PPE and chapter 30 for fire extinguisher training.

- First aid kit—In addition to the required standard first aid kit (figure 12), the following items are recommended: rubber gloves, eye protection, and cardiopulmonary resuscitation (CPR) clear-mouth barrier. It is also recommended to enclose the first aid kit in a zip-seal bag or other dustproof container.
- Personal communication device—A two-way radio (figure 13), cellular phone, or satellite phone. Select the device based on the area, terrain, and reception reliability.



Figure 12—First aid kit.



Figure 13—Hand-held radios.



- **Helmet**—UTV operators and passengers shall wear a helmet that meets the requirements of the Department of Transportation, ANSI Z90.1, or Snell Memorial Foundation. The helmet must be a full- or three-quarter face motorcycle helmet (figures 14 and 15) and worn with chinstrap properly secured. Helmets must be replaced as recommended by their manufacturer or sooner if a helmet is involved in an impact-related accident or shows significant wear or damage.



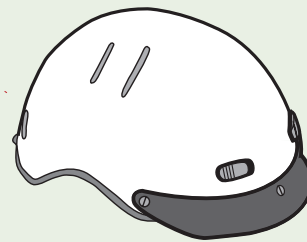
Figure 14—Full-face motorcycle helmet.



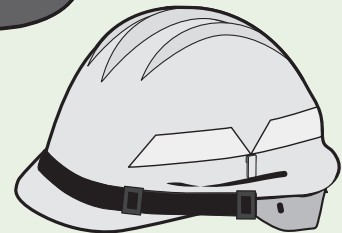
Figure 15—Three-quarter motorcycle helmet.

Hardhat or Shorty Helmet?

Hardhats are not acceptable for operating a UTV even though they may be needed at the worksite. Hardhats and motorcycle helmets are designed and tested differently based on different safety requirements. Motorcycle helmets have a rigid outer shell with an interior foam liner. The hard outer shell prevents objects from penetrating the helmet. The foam liner absorbs energy when it crushes on impact. The chinstrap on a motorcycle helmet is strong enough to keep the helmet on, even during an impact. Hardhats have an adjustable headband that suspends the shell over the wearer's head. The suspension system spreads the impact energy to the attachment points on the headband. The gap between the shell and the wearer's head helps provide protection. The chinstrap on the hardhat will keep the hardhat on during high winds, but not during an impact. Motorcycle helmets are tested for impact resistance by dropping them (attached to a headform) onto a fixed metal anvil; hardhats are tested by dropping an object onto a stationary hardhat (attached to a headform) while the hardhat is stationary. Shorty helmets are not acceptable for operating a UTV because they do not offer protection for your face, the upper part of your neck, or the lower portion of your head.



Shorty helmet



Hardhat



- Gloves—Determined by the JHA based on the work environment (figure 16).
- Long pants.
- Long-sleeved shirt, jersey, or jacket.
- Footwear—Must comply with agency field footwear requirements (dependent on where the employee will be working).
- Eye protection—Helmet face shield, safety glasses, goggles, or sunglasses that meet the ANSI 87.1 standard. The specific type of eye protection is determined by the JHA, based on the work



Figure 16—An employee dons gloves before operating a UTV. She also is wearing long pants, a long-sleeved shirt, appropriate footwear, and eye protection.

environment. Eye protection is not required for UTVs with original equipment manufacturer (OEM) windshields that protect the face from branches, flying debris, and so forth—unless they are required by an associated industrial use activity.

- Fire extinguisher—Employees shall be familiar with different types of fire extinguishers (figure 17) and trained to use them based on the emergency evacuation plan.
- Owner's manual and manufacturer's toolkit (figure 18)—Include a tire pressure gauge for the appropriate pressure range.
- Additional PPE—Identified in the JHA.



Figure 17—Fire extinguisher.

P.A.S.S. Technique

Most fire extinguishers can be operated using the P.A.S.S. technique.

P—Pull the pin and break the tamper-resistant seal.

A—Aim low, pointing the extinguisher nozzle or hose at the base of the fire.

S—Squeeze the handle.

S—Sweep the spray from side to side at the base of the fire until it appears to be out. Watch the area. If the fire reignites, repeat steps two through four.



Figure 18—Manufacturer's toolkit.



Recommended equipment for UTV use—

- Hearing protection—Employees shall wear hearing protection when noise exposure is more than 85 dB averaged over 8 hours. For more information on hearing conservation programs, consult your unit's safety and health officer or manager.
- GPS receiver (figure 19).
- Multipurpose tool.



Figure 19—A GPS receiver and multipurpose tool.

Back-country travel (figure 20) is defined as a 2 hour or longer walk or hike from transportation, the vehicle, or loading site. Follow these requirements and consider the recommendations for back-country PPE.



Figure 20—Two employees use a UTV to spray weeds in a rangeland area. Courtesy of Dave Goodin.

Required PPE for Back-country UTV use—

- Map and compass
- Matches or fire starter in a weatherproof container
- Water for 1 to 3 days or a 1-micron water filter with disinfection
- Food for 1 to 3 days
- Flashlight with extra batteries
- Eye protection and sunscreen
- Lightweight shelter and appropriate clothing for the climatic conditions
- Whistle and signal mirror
- Survival gear and other equipment identified in the JHA

Recommended PPE for Back-country UTV use—

- GPS receiver
- Multipurpose tool



Federal and State Regulations, Rules, and Laws

Check for the following State regulations, rules, and laws before operating a UTV:

- Training
- Public road, street, or highway use
- Speed
- Operating a UTV under the influence of alcohol and/or drugs
- Age requirements or parental supervision
- Noise restrictions
- Passenger requirements
- Spark arresters
- Dust abatement

Employees should refer to the travel management plans and published motor vehicle use maps on their unit for designated roads, trails, and areas open to motor vehicle use (figures

21 and 22). The Forest Service requires that a UTV operator be familiar with and follow the Forest Service “Driver-Operator Guide” and the “Driver-Orientation Self-Study Course” and the “Health and Safety Code Handbook” chapter 10. Some of the most important Forest Service regulations include:

- Operating a UTV alone in isolated areas is prohibited unless authorized by a supervisor and addressed in the JHA. The JHA must include emergency evacuation procedures and a communication plan.
- Operators and all passengers must have and wear a seatbelt and keep their arms, legs, and head inside when the vehicle is in motion.
- All passengers must be in a seat in the UTV.
- No passengers may ride in the cargo bed.
- Passengers must be tall enough to reach and hang onto handholds, even when they are wearing their seatbelts.



Figures 21 and 22—Motorized vehicle sign trail symbols.



Notes



Chapter 3—Preride Inspection

Instructor's Notes

- Use the “Preride Inspection” section of the video-enhanced PowerPoint presentation.

Objectives

- Students will be able to perform a preride inspection using the T-CLOC check.

T-CLOC Check

A preride inspection must be performed before an operator uses a UTV. This inspection ensures the UTV is in proper operating condition. Use the T-CLOC check:

T—Tires and wheels: Check the air pressure and condition of the tires (figure 23). Check the rim bolts, axle nuts, and wheel bearings.

C—Controls and cables: Locate and check the operation of the controls. Check the brake pedal adjustment (figure 24) and fluid level. Inspect the shifter.

L—Lights and electronics: Check the lights (figure 25). Check the ignition switch and engine stop switch. Ensure all the gauges are functional.

O—Oil, fuel, fluids, and air filter: Check the oil, fuel (figure 26), and coolant levels. Inspect the machine for leaks. Ensure that the air filter is clean, not torn or blocked.

C—Chassis, suspension, driveshaft, and external equipment: Check the underside (figure 27) of the UTV for damage. Shake the chassis and suspension system to be sure nothing is loose and that the shocks are operating properly. Check the cargo boxes and racks for cracks and ensure that the fasteners are tight and secure. Check the drive shaft for oil leaks or missing nuts and bolts. If the UTV has a winch, inspect it for damaged cables, fairleads, hooks, and controls. If the UTV has a trailer hitch, make sure it is secure and the proper size and capacity. Finally, ensure that toolboxes and other equipment are in good condition, properly loaded, and secure. If the UTV has a mounted piece of industrial equipment, ensure that the regional engineer or designee has approved the addition.



Figure 23—A properly inflated UTV tire.



Figure 24—An employee checks the UTV brake pedal.



Figure 25—Operational lights on a UTV.



Figure 26—UTV full fuel gage.



Figure 27—UTV underside, free of damage.



Notes



Chapter 4—Transportation

Instructor's Notes.

- Use the “Transportation” section of the video-enhanced PowerPoint presentation.

Objectives

- Students will be able to load, transport, and unload a UTV.



Figure 28—An employee drives a UTV onto a trailer.

Towing Vehicles

The weight of the towing vehicle and loaded trailer must not exceed 75 percent of the Gross Combined Weight Rating (GCWR). The GCWR is the maximum allowable weight of the vehicle and loaded trailer, including all cargo and passengers. The GCWR is determined by the manufacturer and is usually shown in the owner's manual. To determine the maximum loaded trailer weight your vehicle can tow, refer to the owner's manual.

Trailers

UTVs must be transported on a trailer (figure 28). They cannot be transported in the bed of pickup trucks. A tilt-bed trailer, especially designed for hauling off-highway vehicles, is the best unit for hauling these machines but others may be used. Forest Service Operator's Identification Cards (OF-346) must indicate trailer certification before employees can tow trailers for work.

All trailers must be in good condition and have the proper gross vehicle weight rating (GVWR), the trailer's maximum allowable weight when loaded. The weight of your trailer and your load must never exceed the trailer's GVWR. To determine the weight of your trailer and load, add the following:

- Trailer curb weight (empty)
- UTV gross vehicle weight
- Equipment or cargo weight
- The operator's weight

To hook a trailer to a truck or other towing vehicle (figure 29):

- Align the trailer to the hitch.
- Crank the tongue of the trailer down onto the hitch.
- Lock the hitch into place and insert the safety pin.
- Connect the safety chains in a crisscross fashion.
- Attach the breakaway cable, while keeping it separate from the safety chain.
- Raise the jack all the way up and secure its handle.
- Connect the electrical cord from the vehicle to the trailer.
- Inspect all trailers before use. Inspect the electrical system, brakes, tires, axles, frame, and safety security chain.



Figure 29—A trailer correctly hooked to the towing vehicle.



Ramps

Ramps must be rated to support the combined weight of the UTV, operator, equipment, and cargo (figure 30). Ramps must be fabricated of aluminum or welded steel and have a high traction surface comprised of closely spaced crossed members or mesh. Wooden ramps are not permitted.

The ramp can be one piece, two pieces, rigid, or folding so long as the hinges were installed by the manufacturer. One piece and bifold or trifold ramps must be at least 46 inches wide. Wider UTVs require a wider ramp. For two-piece ramps, each ramp must be at least 10 inches wide. Ramps are recommended to be 7 feet long. The minimum length is 6 feet.

When attaching a one-piece ramp, center it on the trailer. For two-piece ramps, place each ramp parallel with the tires (figure 31) of the UTV centered on the ramps. In either case, ensure that the ramp is level and the angle is as low as possible to reduce the risk of injury. To lower the angle of the ramp, use a loading platform or place the back tires of the trailer into a depression.

Once the ramp is in place, secure the ramp to the trailer with two tiedown straps, chains, steel cables, or mechanical fasteners that are taut with no slack. These devices must be able to support the weight of the ramp, machine, cargo, and rider.



Figure 30—Load capacity rating for a ramp.



Figure 31—Two-piece aluminum ramps.





Loading and Unloading UTVs

Wear appropriate PPE and ask someone to be a spotter when loading a UTV.

Ask all passengers to get out. Remove any portable cargo or equipment and empty any liquid tanks to remove weight from the back of the UTV. If heavy cargo or tanks cannot be emptied or removed safely, secure sandbags or other heavy objects to the front of the UTV to equalize the load. If the load cannot be balanced, the UTV can be winched onto the trailer without an operator on board.

A winch can also be used to load a disabled UTV. Before winching, operators should be trained and fully aware of serious hazards associated with winching operations. Appropriate PPE must be worn during winching operations.

To load a UTV, fasten your seatbelt and remain seated (figure 32). Injuries are more likely to be serious if you are thrown from the machine. Apply the accelerator pedal smoothly. Listen and follow the spotter's directions. Climb the ramp at a low speed (figure 33). Too much speed or sudden acceleration may cause the UTV to overturn, slam into the front of the trailer, or overshoot the front of the trailer.

When a UTV has been loaded, turn off the ignition, remove the key, put the transmission in the recommended gear (in the owner's manual), and set the parking brake. Secure the UTV to the trailer with four tiedowns: two in front and two in back (figure 34). Secure the tiedowns to the trailer's cargo anchors and the UTV frame tubing (not the cargo racks) unless the owner's manual indicates otherwise. The tiedowns will prevent the machine from moving while it is being transported. If a commercially manufactured restraining device is available, only two tiedowns may be used if the use is documented in the JHA. All tiedowns must be ratchet type, in good condition, free of frays and splices, and have a minimum weight capacity of 2,500 pounds. Do not use knotted straps or ropes to secure a UTV.



Figure 32—An operator prepares to load a UTV.



Figure 33—An operator slowly climbs a two-piece ramp.



Figure 34—Ratchet-type tiedowns are used to secure UTVs to a trailer.



To unload a UTV, apply the accelerator pedal just enough to start the UTV down the ramp. Allow the UTV to roll down the ramp using light brake pressure to control the speed (figure 35). Hard braking when descending a ramp could cause the UTV to flip over.



Figure 35—An operator slowly unloads a UTV while ensuring the wheels remain centered on the ramps.

Hazardous Materials

When transporting or using hazardous materials, follow all local, State, and Federal guidelines and meet the specifications in the guides (figure 36): “Interagency Transportation Guide for Gasoline, Mixed Gas, Drip-Torch Fuel and Diesel” (National Wildfire Coordinating Group current edition) or the “Everyday Hazmat User’s Training Guide” (Erickson and others current edition).



Figure 36—Two guides with information on hazardous materials..



Chapter 5—Pework Safety Concerns

Instructor's Notes

- Use the “Pework Safety Questions” section of the video-enhanced PowerPoint presentation.

Objectives

- Students will consider and answer the prework safety questions.

Pework Safety Questions

Before operating a UTV, consider these safety questions:

- Is a UTV the appropriate vehicle for the work project or activity?
- Do you have the experience and training needed to operate the UTV?
- Do you understand the capabilities and limitations of the UTV?
- Has the UTV had its annual maintenance inspection by the manufacturer, a qualified mechanic, or a fleet manager?
- Has the UTV been modified in any way? If so, are the modifications commercially available add-ons?
- Do you know how to load, unload, and transport the UTV?
- With the cargo, does the UTV exceed its gross vehicle weight rating (maximum allowable weight when loaded)?
- Have you reviewed the JHA and emergency evacuation procedures?
- Have you planned for the expected weather conditions?
- Do you and all passengers have appropriate PPE?
- Do you have a communications device?
- Have you completed the prerie inspection?
- Have you followed the check-out procedure at your home unit?





Notes



Chapter 6—Safe Operating Practices

Instructor's Notes

- Use the “Safe Operating Practices” section of the video-enhanced PowerPoint presentation.
- Administer the “UTV Operator Written Test” at the conclusion of this section.

Objectives

- Students will be able to load cargo properly.
- Students will understand how to operate a UTV safely and efficiently.

UTVs and Industrial Uses

Forest Service policy now stipulates that only UTVs will be used for industrial uses, after June 13, 2013. In the Forest Service, industrial use includes pesticide application (figure 37), fuel firing (torches), and transportation of more than 15 gallons of liquid cargo.

Industrial use does not include:

- Transporting the operator plus solid cargo that does not exceed the weight limitations of either the vehicle or cargo racks
- Transporting the operator plus liquid cargo up to 15 gallons if contained in one tank
- Transporting the operator with liquid cargo up to 15 gallons if the cargo is in separate 5-gallon tanks. Do not exceed the rated capacity of the cargo rack(s)
- Using a trailer to transport cargo



Figure 37—A UTV being used for pesticide application.

Loading Cargo

Cargo and trailers affect how a UTV handles. Before hauling cargo or towing a trailer, consult the UTV owner's manual to determine weight limits. Do not exceed the gross vehicle weight rating, the trailer's gross vehicle weight rating, or the weight rating of the trailer hitch.

When loading cargo, keep the cargo centered and as far forward as possible. Place heavier objects on the bottom and lighter objects on the top to keep the UTV or trailer from being topheavy, increasing the risk of rollover. Consider making two trips when you are transporting a lot of cargo or heavy cargo, especially in rough terrain. Secure the cargo with a net, bungee cords, straps, or ropes (figure 38) to prevent it from shifting. You could lose control of the UTV if cargo shifts while you are traveling.



Figure 38—An employee secures cargo with a tiedown strap.



Take extra precautions when carrying liquid (figure 39). When a liquid sloshes back and forth, weight shifts on the UTV which could affect its center of gravity. Ensure that tanks carrying liquid do not exceed the load carrying capacity for the UTV. Tanks with baffling devices are highly recommended to reduce sloshing and shifting of weight.



Figure 39—UTV equipped with a water tank. Courtesy of Chris Hobson.

Before Starting

Consult with the owner's manual before operating a UTV. Make sure that the manufacturer's recommended maintenance and service have been performed.

If a UTV has an adjustable suspension system, a qualified mechanic or certified dealer can adjust the suspension for the work conditions. A softer suspension setting is needed for rougher terrain. The right and left shocks must be set the same to avoid poor handling.

If a UTV has the option for two-, four-, or six-wheel drive, determine which setting is best suited for the trail conditions and terrain. Steering is easiest in two-wheel drive, but a UTV generally handles rough terrain and obstacles better in four- or six-wheel drive. Inexperienced operators may need to practice their driving skills in two-, four-, or six-wheel drive before knowing which setting is right for the conditions.

Before starting a UTV, make sure your seatbelt is securely fastened (figure 40). If the seatbelt is adjustable, move it until it's comfortable and then follow the manufacturer's instructions for securing it.

Become familiar with your UTV gauges and controls (figure 41), because each make and model may be different. UTV gauges may include a speedometer, fuel or hour gauge, and a low-oil light. UTV controls may include an accelerator pedal, brake pedal, shifter, parking brake, and light switch.



Figure 40—An operator and passenger make sure their seatbelts are fastened securely. Courtesy of Michael Donch.



Figure 41—An operator and passenger become familiar with the machine's controls. Courtesy of Michael Donch.



Startup

Before starting a UTV, make sure the parking brake is engaged and the transmission is in “neutral” for manual transmissions or “park” for automatic transmissions. Turn the lights on to increase visibility of the UTV.

To start some gas-powered UTVs, a key is inserted and turned to the “on,” “run,” or “start” position (figure 42). On other models, a “start” button may have to be pushed after the key is turned “on.” For machines with a carburetor, the choke will have to be closed for starting and then opened to run. For many electronic UTVs, the machine is started simply by turning the engine stop switch to “run” or “on.”



Figure 42—An operator starts a UTV.

Getting Going

To get going with an automatic transmission, press the brake pedal, shift into gear, and release the parking brake. Press the accelerator pedal slowly. For manual transmissions, press the brake pedal and clutch, shift into the lowest gear, and release the parking brake. Release the clutch slowly while pressing the accelerator pedal slowly.

While operating a UTV:

- Always remain seated.
- Be aware that passengers affect how the vehicle handles.
- Keep your eyes on the trail and hands on the wheel (figure 43).
- Avoid distractions such as eating, drinking, using a cell phone or radio, or reading a map.
- Operate the UTV at safe speeds within the limits of the machine and the operator’s skills.
 - » Speeds exceeding 8 miles per hour are considered dangerous (Driver-Operator Guide).
- Assess terrain before crossing it.
- Reduce speeds when hauling heavy cargo.
- Keep alert for signs of vehicle defects, such as unusual noises or vibrations, and take immediate action (during operation check).
- Follow the work/rest guidelines (refer to chapter 10 of the “Health and Safety Code Handbook”) and avoid driving at night.



Figure 43—An operator checks out the trail while driving slowly.



SIPDE Process

The SIPDE process (figures 44a, 44b, and 44c) is a system taught in driver education classes. SIPDE stands for:

S—Sweep, Search, and Scan: The operator must continually glance from side to side and scan the surrounding area for hazards that may affect the operator, the passengers, or the operation of the machine.

I—Identify: The operator must be able to identify whether an object, animal, or situation poses a hazard to the operator, the passengers, or the operation of the UTV.

P—Predict: The operator must be able to predict whether the identified hazard will affect the operation of the machine, operator, or passengers. Specifically, the operator must predict the worst-case scenario and determine possible courses of action.

D—Decide: The operator must choose a safe course of action that will mitigate the hazard.

E—Execute: The operator must execute the mitigation.



Figures 44a, b, and c—SIPDE process.



Trail Etiquette

When operating a UTV, observe proper trail etiquette. When in a group, travel in single file (figure 45) and use hand signals (figure 46).

Left Turn—Left arm is raised to shoulder height and pointed straight out in the direction of the turn.

Right Turn—Left arm is raised to shoulder height and bent at a right angle.

Slow—Left arm is lowered to waist height and pointed at the ground.

Stop—Left arm is raised above the operator's head and pointed at the sky.

When you encounter other UTV or ATV users, stay to the right and pass slowly. Slow down and yield the right of way when you encounter hikers and bicyclists. When you encounter horses, slow down, pull over, and stop the engine to avoid spooking the animals.



Figure 45—Two UTV operators observe proper trail etiquette. Courtesy of Dave Goodin.

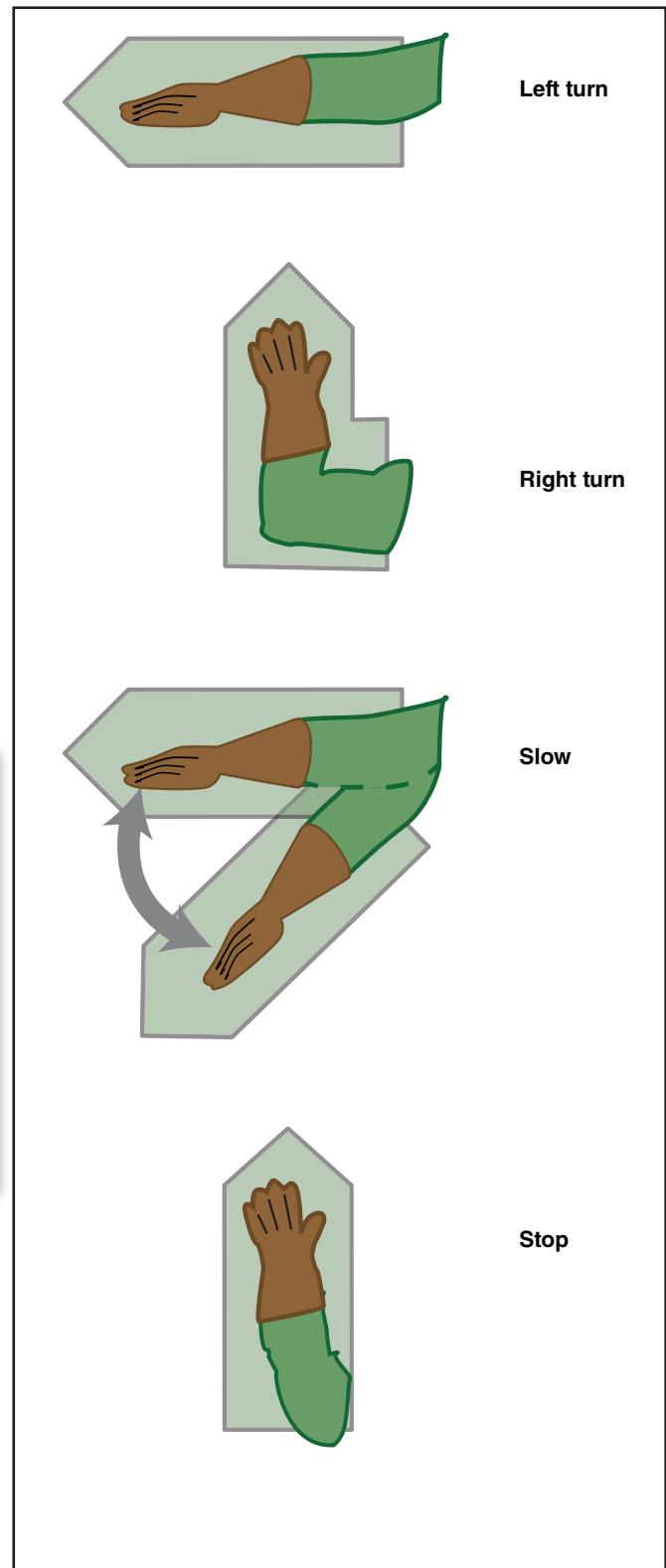


Figure 46—Hand signals.



Normal Braking

When beginning to operate a UTV, practice braking before proceeding with normal use. Ensure that the pressure applied to the brake pedal stops the machine smoothly without sudden jarring.

Emergency Stops

The best way to avoid emergency stops is to travel at a safe speed. The faster the UTV is going, the longer it takes to stop. During an emergency stop, press the brake pedal firmly while continuing in a straight line. Turning or swerving during an emergency stop may flip the UTV.

Turning

When approaching a turn, apply the brake pedal to slow down. Turn the steering wheel just enough to make the turn. Do not turn at high speeds or turn abruptly (figure 47), because you may flip the UTV. If you need to swerve to miss an object in the trail, slow down and move the UTV smoothly to the side. Do not turn sharply or swerve so far that the UTV leaves the trail. If the UTV goes onto the shoulder of the trail, do not sharply overcorrect. Gently turn the steering wheel until the machine is back on the trail.



Figure 47—An operator slowly navigates a turn on a UTV trail.

Handling Slopes

Check the UTV owner's manual for each machine's slope capability because each vehicle may be different. Even though UTVs are far more stable than ATVs, they can still flip or roll over when you exceed the maximum slope capability of the machine. Since operator experiences, cargo loads, terrain, and trail conditions all affect the capabilities of a UTV on slopes, use good judgment when deciding whether and how to travel on slopes.

Whenever possible, avoid traveling across a slope. The best way to handle a slope is to climb straight up, descend straight down (figure 48). Never attempt to turn around in the middle of the slope. Back straight down if you can't keep going straight up.



Figure 48—An operator climbs straight up a slope.

If you have to travel across a slope, assess the terrain and choose a path with the least grade. Slow down (figure 49), especially if the terrain is uneven or has lots of dips and bumps. Be extra careful when encountering rough terrain, such as ruts, rocks, or small logs. A rock on the uphill side of a slope or a dip on the downhill side can tip the UTV enough to flip it over. Never operate a UTV loaded to its carrying capacity on more than a slight slope or on a slope with very rough terrain.



Figure 49—An operator takes it slow while traveling across a slope. Courtesy of Dave Goodin.

Be alert for shifting cargo. Liquids are heavy and can shift quickly to the downhill side of a UTV or slosh back and forth, instantly moving the center of gravity of a UTV closer to its tipover point.

If you encounter slopes while operating a UTV and you are unsure whether or not they are within your machines capabilities, get off and walk the route. Slopes may be steeper than they appear, especially in rough terrain. If the slope is too steep to traverse, back up and find another route.

Encountering Obstacles

Obstacles, such as bumps, dips, rocks, or logs, may have to be crossed when you're operating a UTV. Whenever possible, remove the obstacle or go around it (figure 50).

If you have to cross an obstacle, maintain a firm grip on the outside of the steering wheel. Do not place your fingers in the steering wheel because the wheel may twist suddenly. Slowly approach the obstacle straight on. When the front tires contact the obstacle, slightly increase the throttle to maintain momentum until the obstacle has been climbed or crossed.



Figure 50—An operator removes branches from a trail before proceeding.

Crossing Water and Streams

When crossing water, (figure 51) assess the situation before proceeding. Do not cross streams that are deep or swift. Make sure that you can see the bottom of the stream and that the water doesn't become deeper part way across. Check the stream's bottom for mud, boulders, or submerged obstacles. Check the forcefulness of the current. If the current has to be counteracted to maintain balance and direction of travel, the stream is too strong to cross. If a stream is not safe to cross, back up and find another route.



Figure 51—An operator assesses a creek before crossing.



Crossing Roads

When you cross a road, come to a complete stop at the intersection and look both ways (figure 52). Do not cross roads where visibility is restricted. Once the intersection is free of traffic, drive across the road at a safe speed.



Figure 52—An operator looks both ways before crossing a road.

Parking

To park a UTV, press the brake pedal until the machine comes to a stop, shift the transmission into the recommended gear by the owner's manual, engage the parking brake, turn off the engine, and block the tires if you are on a slope. Follow the manufacturer's instructions for shutting off the fuel, if you are parking for longer than 1 or 2 days.

Inspection After Operation

After using a UTV, perform an inspection.

- Examine the vehicle for damage or leaks.
- Check and clean the air filter.
- Check the oil level and coolant levels for changes (figure 53).
- Check the tires for damage.

If damage is found, report it to a supervisor or fleet manager and arrange for a qualified mechanic to make the repairs.



Figure 53—An operator checks the fluid levels after a day in the field.

Accidents

After an accident:

- Seek medical attention, if needed.
- Notify your supervisor.
- Complete a CA-1 in the Safety and Health Information Portal System (SHIPS) and submit it the Albuquerque Service Center.
- If the UTV was damaged during the accident but you were not injured, the incident must still be entered into SHIPS.

Rollovers

During a rollover, keep your arms, legs, and head inside the vehicle. Do not try to stop the rollover or bail out of the vehicle. Severe injury to arms and legs or even death may be the result. The UTV rollover protection system and a properly fastened seatbelt give you a good chance of surviving a rollover.

Classroom Summary

Provide the students with a summary of the classroom training session and time to ask questions. Administer the "UTV Operator Written Test" (appendix B) and grade the exam using the "Answers for the UTV Operator Written Test" (appendix C).



Chapter 7—Field Proficiency

Instructor's Notes

- Use the “Field Proficiency” section of the video enhanced PowerPoint presentation.
- Discuss travel arrangements for the field portion of the course.
- Review the driving demonstration area.
- Make sure that the required equipment and PPE are available.
- Use the “UTV Operator Field Evaluation” to document the student's skills.

Chapter Objectives

- Students will demonstrate their skills under the guidance of a qualified instructor/certifier and will be evaluated.

Instructor's Responsibilities

As the instructor, take an active role in training and certifying the students. Demonstrate the proper skills and work with the students to ensure that they gain the skills needed to operate a UTV safely. Make honest and constructive assessments when evaluating each student. Make sure the students understand that further training may be required before they operate a UTV in different regions with different weather and terrain.

Safety should be the number one concern during the field training session. Follow these guidelines to help maintain safety:

- Assign no more than 12 students per instructor for the field training.
- Prepare a JHA in advance that includes first aid procedures and emergency evacuation plans. Use the “Health and Safety Code Handbook” and safety information in this chapter to help develop the procedures and plans.
- Conduct a tailgate safety briefing that includes all aspects of the field proficiency exercises as well as first aid procedures and emergency evaluation plans.
- Ensure that all students have the appropriate PPE (figure 54).



Figure 54—Two students receive final instructions and put on the last of their PPE before beginning the driving course. Courtesy of Michael Donch.

- Be aware of the activities taking place in all driving demonstration areas and make sure that students follow the correct safety procedures at all times.
- Monitor each student's operating procedures during the driving demonstration. Ensure the students do not drive too fast or recklessly. If problems arise, take corrective action or discontinue the demonstration.

Setting Up a Driving Demonstration Area

When selecting and developing a driving demonstration area, determine the needs of the students. Work with district or forest staff to locate a site that is suitable, has good access, and is open for UTV use. A parking lot or field site can be used as long as the field site does not have hidden hazards that could tip over a vehicle.

A suggested driving demonstration area “Field Evaluation Driving Course” (appendix D) has been provided. The area needed for this field exercise is a rectangle measuring 150 by 200 feet. The students will drive in a rectangular course measuring 90 by 140 feet. Place orange safety cones every 20 feet along the 140-foot sides of the driving course. Place one orange safety cone along each of the other two sides of the driving course. Finally, place two sets of four cones inside the driving course. Arrange each set of four cones into a circle with a radius of 15 feet. Place these circles 25 feet from the sides of the driving course.



To help create a more realistic field experience, try to tailor your field course to the local conditions or the work your students will experience. For example, if most of your students will operate UTVs on dozer lines or fire lines, try and simulate that environment. You may also want to include or add some maneuvers to your course, such as traversing slopes and crossing obstacles. Keep the maneuvers small and tailor them to your students' skills and abilities.

Securing the Area

Many safety issues can be addressed by establishing a secure driving demonstration area, which is identified and managed. No one shall be allowed in the secured driving demonstration area without authorization. A safety zone will be established outside the secure area where students can observe the driving demonstration area. Only the instructor and UTV operator demonstrating his or her skills may be in the driving demonstration area. All other students must remain in the safety zone.

A road or trail guard will be set up on all roads and trails entering and leaving the secured driving demonstration area to prevent members of the public or other employees from entering. Effective communications must exist between the guards and the instructor. One person shall be responsible for maintaining reliable communications with the instructor and students in the safety zone to ensure no one enters the secured driving demonstration area without authorization.

Required Equipment and PPE

For each field training session, provide the following equipment:

- UTV with a rollover protection system
- Owner's manual and manufacturer's toolkit
- Type IV first aid kit
- Fire extinguisher
- Approved safety container for fuel

If the students (at their workplace) will be operating UTVs loaded with cargo or equipped with industrial equipment, ideally the field training UTV would be loaded or equipped similarly (figure 55). Students need to practice how to properly load cargo. Handling of a UTV changes when it is



Figure 55—UTV being equipped with a pesticide sprayer. Courtesy of Jim Goodwin.

loaded with cargo or equipped with a particular type of industrial equipment.

Each student shall have the following personal protective equipment and clothing (PPE):

- A U.S. Department of Transportation, ANSI Z90.1, or Snell Memorial Foundation-approved full- or three-quarter face motorcycle helmet with chinstrap.
- Gloves.
- Long pants.
- Long-sleeved shirt, jersey, or jacket.
- Appropriate footwear.
- Eye protection (safety glasses, goggles, or sunglasses). Eye protection is not required for UTVs with original equipment manufacturer windshields.

Student Training and Practice

While in the field, demonstrate how to properly perform a pre-ride inspection. A student may perform the demonstration as an interactive exercise. Any of the student's errors or omissions must be corrected.

Review and demonstrate each of the skills the students need to learn.

- Identify appropriate PPE and how to wear it properly.
- Show them how to load and unload a UTV onto a trailer.
- Demonstrate the proper techniques for transporting hazardous materials.



Then use the driving course to review safe operating practices, such as loading cargo, starting up, braking, turning, and parking. If you add maneuvers to the course, such as traversing slopes, go over the proper techniques for completing these tasks. A suggested route through the course is:

- Start at point A.
- Turn right at point B.
- Turn right at point C.
- Turn right at point D.
- Complete a figure eight around the circles.
- Turn right at point E.

When the beginning of the course is reached, turn around and go through the course in the opposite direction. It will be beneficial for the students if they drive one half of the course by themselves and the other half with a passenger to see how the UTV handles differently.

Now, let the students practice (figures 56a and b) but keep a careful eye on them and take immediate action when mistakes are observed.

Evaluating Student Skills

Use the “UTV Operator Field Evaluation” (appendix E) to evaluate each student’s skills once they have had sufficient practice. For each skill, have the student perform the task and give the student a rating of complete or incomplete. If the student performs poorly, document the additional training needed on the “UTV Operator Field Evaluation” and restrict the student’s operational activities to specific locations, regions, or terrain.

A Final Note

Once the students have completed the course, remind them they are novice operators. They need to take it slow until they build their experience and skill level on the machines.



Figure 56a and b—Students practice on the driving course. Courtesy of Michael Donch.



Notes



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Notes



Appendix A—Training Course Attendance





Training Details		
Topic:	Location:	Date:
Presenter(s):		
Start Time:	End Time:	
Agenda/Topics Covered:		
Fulfills a mandatory safety and health training requirement? ☐ Yes ☐ No		

[illegible]



Appendix B—UTV Operator Written Test





UTV Operator Written Test

Questions contained in this test are based on one or more of the following: UTV Training Course, UTV Owner's Manual, Driver-Operator Guide (EM-7130-2), or Health and Safety Code Handbook (6709.11).

General Information			
Name:	Date:	Phone:	
Address:			
District/Agency:		Forest:	
Previously Certified? ☐ Yes ☐ No	Where:		Year:
Score:			

Questions
- The preride inspection shall include: - Tires and wheels - Controls and cables - Lights and electrics - Oil, fuel, fluids, and air filter - Chassis, suspension, driveshaft, and external equipment - All of the above - True or false. Helmets must be replaced as recommended by their manufacturer or sooner if a helmet is involved in an impact-related accident or shows significant sign of wear. - Forest Service "industrial use" of a UTV does NOT include which of the following: - Pesticide application - Fuel firing device application - Transporting the operator plus liquid cargo (up to 15 gallons) - Transporting liquid cargo (more than 15 gallons) - True or false. UTVs are street legal in all states. - Which of the following is required when operating a UTV? - Helmet (approved by DOT, ANSI Z90.1, or Snell) - Eye protection - Long pants and long-sleeved shirt or jacket - First aid kit - Personal communication device - All the above - Backcountry PPE that is required includes all of the following, except: - Map and compass - Food and water for 1 to 3 days - A GPS receiver - Whistle and signal mirror

7. True or false. Back-country travel is defined as a 2 (or more) hour hike away from transportation, the vehicle, or unloading site.
8. Which of the following helmet guidelines is **false**:
 - A. Must be three quarter or full face
 - B. Must fit properly
 - C. Must be approved by DOT, ANSI Z90.1, or Snell
 - D. Must have a flip-down helmet visor for eye protection
 - E. Must have a properly buckled chin strap
9. Eye protection options for UTVs include all of the following **except**:
 - A. The face shield that came with your DOT/Snell helmet
 - B. No eye protection is needed if the JHA has documented it
 - C. Glasses/sunglasses that meet ANSI Z87.1 safety eyewear standards
 - D. Motorcycle goggles
10. True or false. Passengers must be tall enough to reach and hang on to handholds even if they are wearing their seatbelts.
11. Passengers in a UTV must:
 - A. Ride in the back where the cargo goes if all the seats are taken.
 - B. Wear a hardhat.
 - C. Ride in a designated seat in the UTV but don't have to wear a seatbelt.
 - D. Remain buckled at all times and keep all body parts inside the vehicle when in motion.
12. True or false. All UTV cab enclosures are considered ROPS.
13. Studies show that UTVs with a ROPS, combined with correctly worn seatbelts, reduce fatalities and serious injuries from rollover accidents by:
 - A. 79 percent
 - B. 89 percent
 - C. 99 percent
14. Steering a UTV is easiest in:
 - A. Two-wheel drive
 - B. Four-wheel drive
 - C. Six-wheel drive
15. When loaded on a trailer, a UTV can be secured by which of the following:
 - A. Chains
 - B. Ropes
 - C. ROPS
 - D. Four ratchet tiedown straps rated at a minimum of 2,500 lbs
16. True or false. Employees are allowed to operate a UTV if it does not have ROPS.
17. A UTV is especially unstable and dangerous on which of the following:
 - A. A sideslope
 - B. Going up a hill
 - C. Going down a hill
 - D. In mud or other slick flat surfaces

18. When loading or transporting a UTV on a trailer:
- A. The operator shall wear all the required PPE.
 - B. The UTV must be well secured to the trailer with four tiedown straps at each corner.
 - C. The UTV transmission must be placed in park with the parking brake engaged.
 - D. Forest Service personnel shall not exceed 75 percent of the combined gross vehicle weight rating (GVWR) for a truck and trailer.
 - E. All of the above.
19. When using a ramp to load or unload a UTV, ramps must be:
- A. Made of wood
 - B. Made of aluminum or welded steel
 - C. Rigid with no hinges and one piece
 - D. B and C
 - E. All of the above
20. Before riding a UTV:
- A. Be familiar with the UTV job hazard analysis.
 - B. Inform dispatch and your supervisor of your route and expected arrival and return time.
 - C. Perform the preride inspection checklist.
 - D. All the above.
21. True or False. Never attempt to turn around when climbing or descending a significant slope.
22. True or False. Loading ramps must be secured with two tiedown straps, chains, or ropes to the transport trailer.
23. Which one of the following UTV cargo hauling statements is **false**?
- A. If you have heavy cargo in challenging terrain, consider removing half of it and making two trips.
 - B. Solid cargo can shift, so always make sure it is well secured.
 - C. Liquid loads in tanks can slosh and instantly shift large amounts of weight to the downhill side.
 - D. Secure heavier cargo on top of the light cargo for better balance.
24. True or false. Operating a UTV alone in isolated areas is prohibited unless authorized by your supervisor and addressed in the JHA.
25. True or false. If your UTV is involved in an accident that causes damage to the UTV but no personal injury to you, you don't have to report it in SHIPS.



Appendix C—Answers for the UTV Operator Written Test





Answers for the UTV Operator Written Test

Questions contained in this test are based on one or more of the following: UTV Training Course, UTV Owner's Manual, Driver-Operator Guide (EM-7130-2), or Health and Safety Code Handbook (6709.11).

General Information

Name:	Date:	Phone:
Address:		
District/Agency:	Forest:	
Previously Certified? ☐ Yes ☐ No	Where:	Year:
Score:		

Questions

- The preride inspection shall include:
 - Tires and wheels
 - Controls and cables
 - Lights and electrics
 - Oil, fuel, fluids, and air filter
 - Chassis, suspension, driveshaft, and external equipment
 - All of the above**
- True** or false. Helmets must be replaced as recommended by their manufacturer or sooner if a helmet is involved in an impact-related accident or shows significant sign of wear.
- Forest Service "industrial use" of a UTV does **NOT** include which of the following:
 - Pesticide application
 - Fuel firing device application
 - Transporting the operator plus liquid cargo (up to 15 gallons)**
 - Transporting liquid cargo (more than 15 gallons)
- True or **false**. UTVs are street legal in all states.
- Which of the following is required when operating a UTV?
 - Helmet (approved by DOT, ANSI Z90.1, or Snell)
 - Eye protection
 - Long pants and long-sleeved shirt or jacket
 - First aid kit
 - Personal communication device
 - All the above**
- Backcountry PPE that is **required** includes all of the following, except:
 - Map and compass
 - Food and water for 1 to 3 days
 - A GPS receiver**
 - Whistle and signal mirror

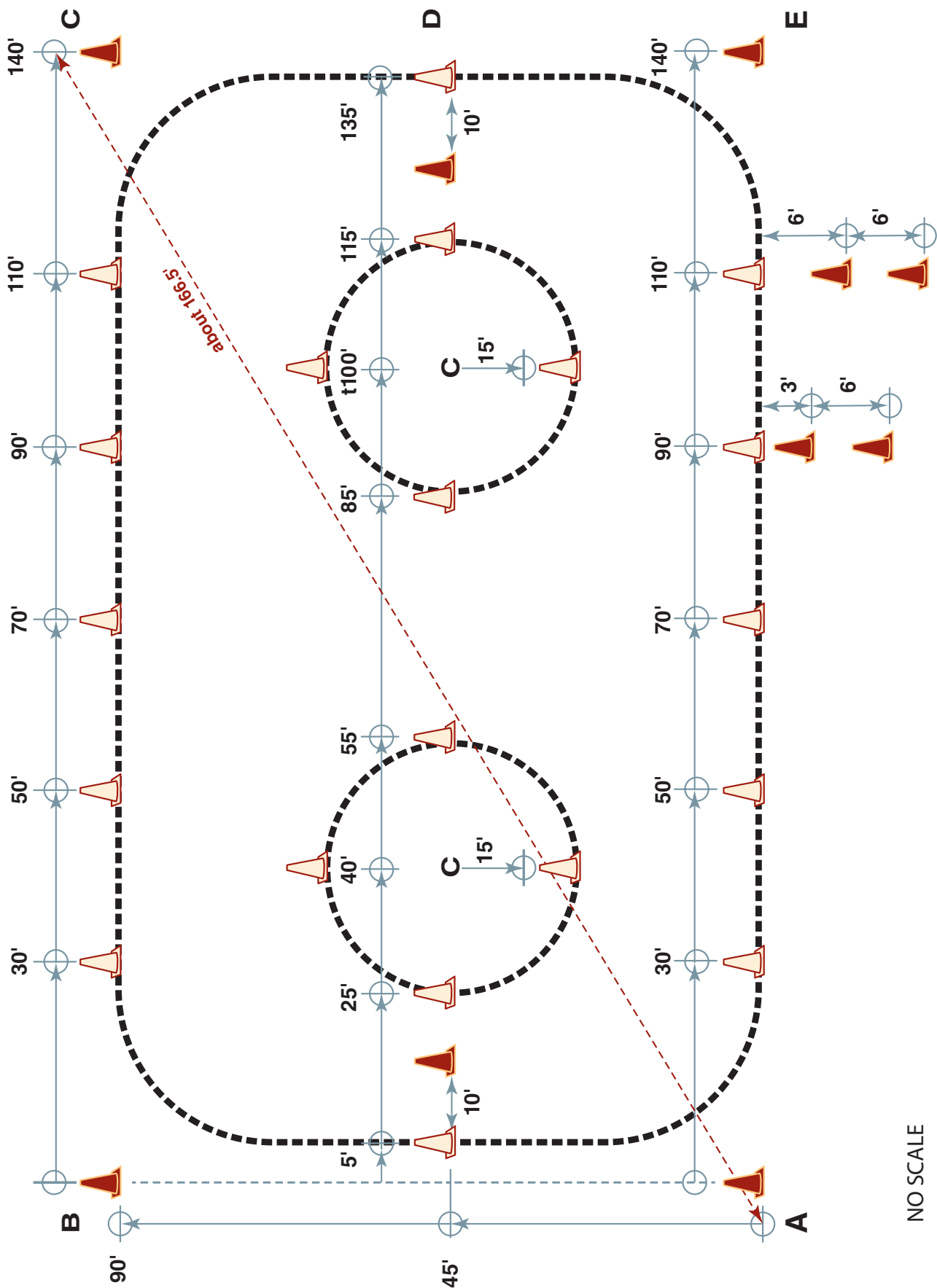
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8. Which of the following helmet guidelines is **false**:
- A. Must be three quarter or full face
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- A. 79 percent
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 - D. **Four ratchet tiedown straps rated at a minimum of 2,500 lbs**
16. True or **false**. Employees are allowed to operate a UTV if it does not have ROPS.
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 - C. The UTV transmission must be placed in park with the parking brake engaged.
 - D. Forest Service personnel shall not exceed 75 percent of the combined gross vehicle weight rating (GVWR) for a truck and trailer.
 - E. **All of the above.**
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- A. Made of wood
 - B. **Made of aluminum or welded steel**
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- A. Be familiar with the UTV job hazard analysis.
 - B. Inform dispatch and your supervisor of your route and expected arrival and return time.
 - C. Perform the pre-ride inspection checklist.
 - D. **All the above.**
21. **True** or False. Never attempt to turn around when climbing or descending a significant slope.
22. **True** or False. Loading ramps must be secured with two tiedown straps, chains, or ropes to the transport trailer.
23. Which one of the following UTV cargo hauling statements is **false**?
- A. If you have heavy cargo in challenging terrain, consider removing half of it and making two trips.
 - B. Solid cargo can shift, so always make sure it is well secured.
 - C. Liquid loads in tanks can slosh and instantly shift large amounts of weight to the downhill side.
 - D. **Secure heavier cargo on top of the light cargo for better balance.**
24. **True** or false. Operating a UTV alone in isolated areas is prohibited unless authorized by your supervisor and addressed in the JHA.
25. True or **false**. If your UTV is involved in an accident that causes damage to the UTV but no personal injury to you, you don't have to report it in SHIPS.



Appendix D—Field Evaluation Driving Course







Appendix E—UTV Operator Field Evaluation





UTV Operator Field Evaluation

General Information

Name:	Date:	Phone:
Address:		
District/Agency:	Forest:	
Previously Certified? ☐ Yes ☐ No	Where:	Year:

Skill Evaluation

Instructors: All blanks need to be filled in. Use C for Complete and I for Incomplete to rate each area. N/A means applicant was not tested in this area.

Safety Requirements—Chapter 2

- | | |
|--|--|
| ☐ Helmet with chinstrap | ☐ Long-sleeved shirt, jersey, or jacket |
| ☐ Gloves | ☐ Appropriate footwear |
| ☐ Long pants | ☐ Eye protection |

Transportation—Chapter 4

- ☐ Using trailer and ramps
- ☐ Loading
- ☐ Unloading
- ☐ Hazardous materials

Safe Operating Practices—Chapter 6

- | | |
|--|---|
| ☐ Loading cargo | ☐ Trail etiquette |
| ☐ Before starting | ☐ Braking |
| ☐ Startup | ☐ Turning |
| ☐ Getting going | ☐ Parking |
| ☐ SIPDE process | ☐ After use inspection |

Optional Safe Operating Practices—Chapter 6

- ☐ Handling slopes
- ☐ Encountering obstacles
- ☐ Crossing water and streams
- ☐ Crossing roads

Pass: ☐ Yes ☐ No

Comments

Use this space to make additional comments about such things as attitude, technical skills, verbal skills (weak, strong, and so forth).

Restrictions (if any)**Signature**

Classroom instruction given at:	Date:	
Instructor's signature:	Title:	
Field Examination given at:	Date:	
Field Examiner's signature:	Title:	
Supervisor's signature:	Title:	Date:



Notes



Appendix F—Form FS-6700-41

Appendix F—Form FS-6700-41





Appendix G—UTV Operator Training Certificate



**Forest Service
UTV Training Course**

Certificate of Achievement

is awarded to

for successful completion of training.



U.S. Department of Agriculture



Forest Service

UTV Trainer

Date



Appendix H—Training Course Assessment





Training Course Assessment

This assessment is to be utilized by the instructor (or designated representative) to assess the quality and effectiveness of training in meeting class objectives. This assessment should be used to help improve the effectiveness of safety and health training for the unit.

Training Details		
Topic:	Location:	Date:
Instructor(s)/Presenter(s):		
Training Duration/Length:		
Training fulfills a mandatory safety and health training requirement: ☐ Yes ☐ No		
I am attending this training because (you may select both): ☐ Yes ☐ No		
Training was: ☐ Classroom Instruction ☐ Field Instruction ☐ Both Classroom and Field		

Training Structure	
Were the goals and objectives for the class clearly stated?	☐ Yes ☐ No
Was adequate time provided for the class?	☐ Yes ☐ No
Was the class provided in a relaxed and positive manner?	☐ Yes ☐ No
Was the information provided relevant to the topic?	☐ Yes ☐ No
Was the class material interesting?	☐ Yes ☐ No
Were supporting documents and materials appropriate (if applicable)?	☐ Yes ☐ No
Training Instruction	
Was the instructor prepared for the class?	☐ Yes ☐ No
Was the instructor knowledgeable about the material?	☐ Yes ☐ No
Was the instructor effective in delivering the information in an engaging manner?	☐ Yes ☐ No
Observations/Conclusions	
Overall, the class was effective in meeting stated goals and objectives.	☐ Yes ☐ No
I am more knowledgeable about the topic after the training than I was before the training.	☐ Yes ☐ No
I will utilize this training during my job/work projects.	☐ Yes ☐ No
I would recommend this class to someone else.	☐ Yes ☐ No

Comments, Suggestions, and Recommendations

About the Author

Lisa Outka-Perkins received her master's degree in sociology with an emphasis in criminology from the University of Montana. She works for MTDC as a sociologist and project leader. Her recent DVDs include "Firefighter Cohesion and Entrapment Avoidance," "Working Along the United States-Mexico Border," "Collecting Fees in the Field: Mitigating Dangers," and "Calibrating Your Rangeland Drill." Her most recent interactive safety training program is "Keeping Frontliners Safe and Secure."

Library Card

Outka-Perkins, Lisa. 2011. Utility-Terrain Vehicle Operator Training Course: Instructor's Guide. 1167-2828-MTDC. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center.

This instructor's guide provides the information and training materials needed to teach the training course. The entire course is available on the DVD "Utility-Terrain Vehicle Operator Training Course" (1167-2D05-MTDC). The DVD includes a video-enhanced PowerPoint presentation, instructor's guide, and forms.

Keywords: all-terrain vehicles, ATVs, equipment, off-highway vehicles, safety at work, safety refreshers, transportation, vehicle safety, utility-vehicles, UTVs



Additional single copies of this document may be ordered from:

USDA Forest Service
Missoula Technology and Development Center
5785 Hwy. 10 West
Missoula, MT 59808-9361
Phone: 406-329-3900
Fax: 406-329-3719
Email: wo_mtdc_pubs@fs.fed.us

Forest Service and Bureau of Land Management employees can search MTDC's documents, CDs, DVDs, and videos on their internal computer networks at:

<http://fsweb.mtdc.wo.fs.fed.us/search/>

For additional information about this utility-terrain vehicle operator training course, contact MTDC:

Phone: 406-329-3900
Fax: 406-329-3719

Electronic copies of MTDC's documents are available on the Internet at:

<http://www.fs.fed.us/eng/pubs>

