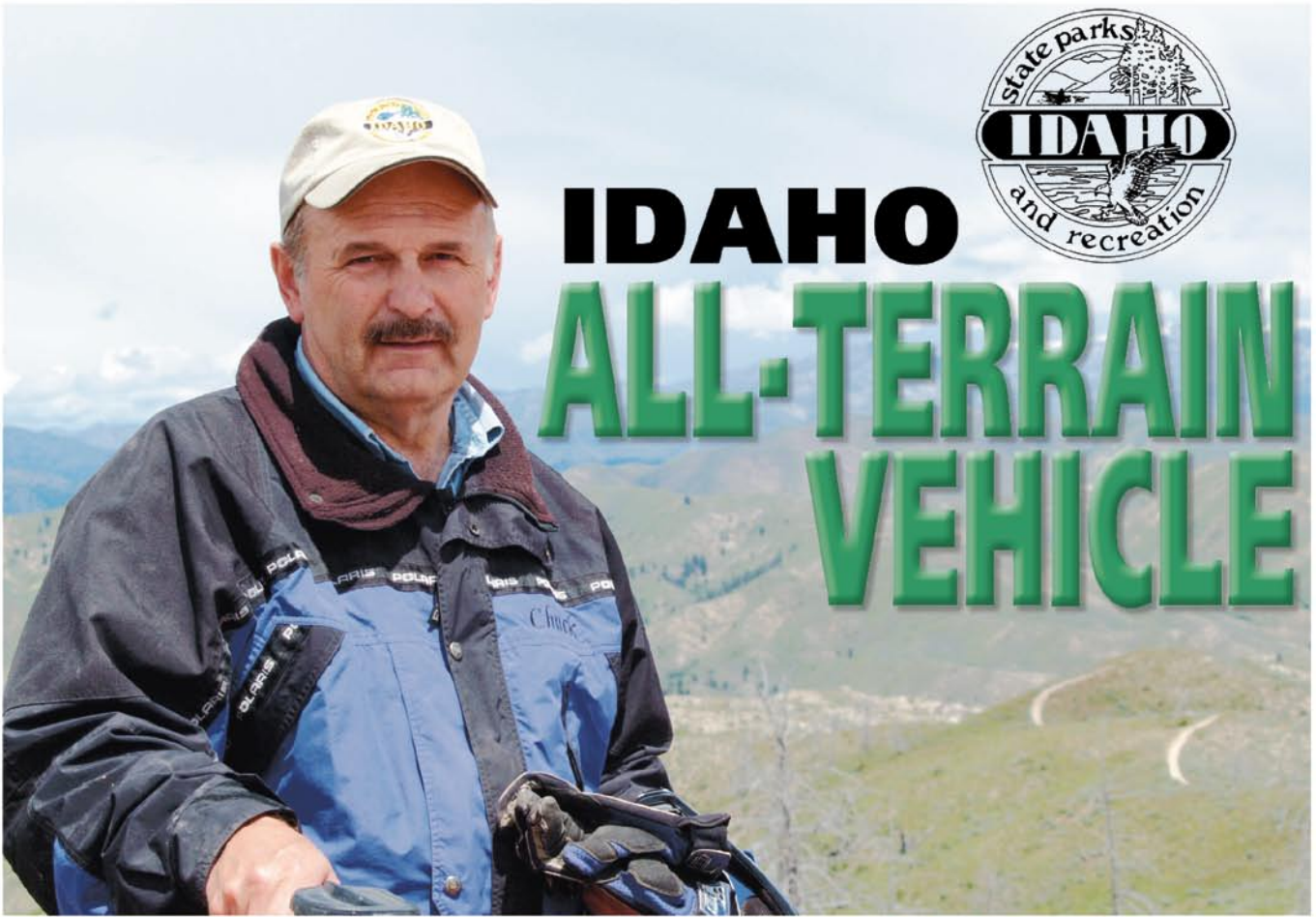




**IDAHO**

**ALL-TERRAIN  
VEHICLE**



**1-208-334-4199**

The information contained in this publication is offered for the benefit of those who have an interest in and ride All Terrain Vehicles (ATVs). The information has been compiled from publications, interviews and observations of individuals and organizations familiar with the use of ATVs. Because there are many differences in product design, riding terrain and styles, there may be organizations and individuals who hold differing opinions. The course also covers protective gear, environmental concerns, state regulations and equipment requirements and safety techniques. The training includes pre-ride inspections, starting and stopping, turning, hills, emergency stopping and swerving and riding over obstacles. Being responsible, using common sense and practicing important skills are all important ingredients in making ATV riding more rewarding.

## INTRODUCTION

Riding your ATV is an exciting off-road activity. ATVs are very different, though, from cars. Not only are they for off-road use only, they require special, different safety skills and handling which must be successfully mastered. These vehicles can be hazardous to operate. You must practice safe operation at all times. If not, serious injury or death could happen.

Once you have learned the correct skills, received proper, certified hands-on training and successfully mastered a safety course, ATV riding presents some new responsibilities. These responsibilities involve safe operation, courtesy and environmental concerns, for others and yourself, while riding your ATV.

This guide will help you be more aware of your responsibilities as an ATV rider. It also will help you to understand why you must be safe at all times around these vehicles.

In Chapter One you will understand the risks involved in ATV riding and how to reduce them. In Chapter Two you will learn about the kinds of protective clothing you need to wear.

ATV riding is more than just riding. Taking care of yourself and the environment must be considered. Chapter Three discusses the sport and the environment. Since ATVs are for off-road use only, many ATV riders will be in areas far away from city life.

Chapter Four will let you know how to prepare for the unexpected.

Chapter Five will explain ATV parts and how the all-terrain vehicle works.

Chapter Six will let you know what you need to know before you ride. Chapters Seven and Eight will explain starting out

and basic ATV riding skills. Chapter Nine introduces intermediate riding skills. Chapter Ten will explain riding your ATV in different terrains.

Chapter Eleven explains the importance of preventing the spread of noxious weeds.

Chapter Twelve is a section for parents to review to help identify the needs of youngsters and ATVs. Activities and skills exercises are placed throughout this book. This will help your progress toward becoming a safe, skilled, responsible ATV operator.

Take enough time to carefully read and understand your owner's manual. Paying close attention to the manual could save you from severe or even fatal injury. Read and comply with all the labels on your ATV. These labels address warnings about potential hazards. If you are unsure about something, check your owner's manual or see your ATV dealer.

Let's go and learn about ATVs!



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# Part 1

## Riding Skills

ATVs, off-highway motorbikes and snowmobiles are used by people of all ages. ATVs are used as work vehicles by farmers, foresters, hunters, ski areas, airports, and the military. State and Federal agencies use ATVs for patrolling the woodlands, and for conducting search and rescue missions. Biologists use them for accessing remote places to study wildlife. Firefighters use them to transport water and supplies.

Many people use ATVs for fun. Exploring new places, seeing the woods, and just being outdoors are part of the fun of off-highway riding. Those who enjoy competition can become involved in motocross racing, hare scrambles, trials riding, ice racing and enduro competition. Joining an ATV club is a good way to meet other riders, and find out about trails in the area or off-road events.

Some people think that ATVs are dangerous. At one time, so many people were getting hurt and killed that the United States Consumer Products Safety Commission (CPSC) concluded that ATVs may present a risk of death and severe personal injury. The CPSC's investigation resulted in the end of 3-wheeled ATVs being manufactured.

You can get hurt doing many of the things you enjoy if you don't abide by safety rules. Whether you are riding a bicycle, skiing, rollerblading, or just going for a hike, there are certain precautions that you must take to avoid injury; off-road riding is no different.

What are the risks you face down the trail? How can we find out what they are and prepare for them? These questions are explored in this *Off-highway Vehicle Student Reference Guide*. You will learn how to "manage the risks" associated with off-road riding and reduce the chance of getting hurt.

ATVs are not toys. Your accident risk increases if you do not know how to operate your ATV properly, especially on different kinds of terrain and situations. They are in one way like a bicycle because you must continually adjust your body position for better handling and control. The improper use of body position could cause the loss of control on your ATV, resulting in an accident involving severe injury or death.

Remember to practice safe riding strategies and know terrain hazards. Being a responsible rider is to become a safe rider.

## Chapter 1

### ATVs— Reducing the Risk

#### Objectives:

- Know the risks in riding ATVs.
- Know ways of reducing risks of ATV riding.
- Know Before You Go!

#### Safe Riding Strategy SEE

1. **Scan the area**
2. **Evaluate any potential hazards**
3. **Execute your decision to avoid the hazard**

This is a way of safely managing the risks of ATV riding which will add to your enjoyment and fun. It helps to organize your thinking and reactions while riding.

The next chapter covers protective gear which is another method of reducing the risks of ATV riding. All of these methods are your responsibility. Being a responsible rider is to become a safe rider.

### Know Before You Go!

#### WHAT ARE THE REQUIREMENTS TO RIDE AN OFF-HIGHWAY ATV OR MOTORCYCLE?

The requirements for ATVs and Motorcycles are dependent upon where you are riding. Generally, riding areas can be broken down into five different categories: 1) off-highway, 2) on-highway, 3) unpaved roads on state and federal public land, 4) highways specifically designated by ordinance for off-highway use, and 5) ATVs on groomed snowmobile trails. Each section has specific legislation giving guidance to that specific area. For specific information please visit the Idaho Department of Parks and Recreation website and review the content within the Recreation section.

#### Where do I register for off-highway use?

- Most motorbike and ATV dealers.
- Most county motor vehicle departments.
- Idaho Dept. of Parks & Recreation offices.

#### Where can I get my ATV/Motorbike sound tested?

Idaho Dept. of Parks & Recreation offices  
Boise: 208-334-4199  
Idaho Falls: 208-525-7121  
Coeur d'Alene: 208-769-1511



**Where do I register for highway use?**  
County Department of Motor Vehicles

**Where can I ride?**

Idaho has some of the best off-highway motorbike and ATV riding opportunities in the nation. Over 95% of these opportunities are on National Forest and Public Land. The U.S. Forest Service provides **travel plan maps** that identify open and closed roads and trails, closure dates and other details to help you plan an enjoyable ride. The Bureau of Land Management has similar information. Use the graphic below to locate the office nearest you.

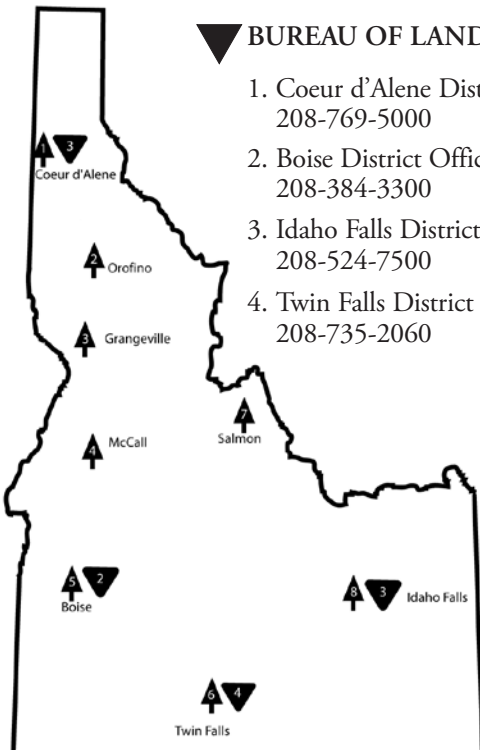
Idaho Title 67 defines the specific legislation governing recreational activities in Idaho. For further information please review that content by visiting: <http://www3.state.id.us/idstat/TOC/67071KTOC.html>

**▲ U.S. FOREST SERVICE**

1. Idaho Panhandle National Forests  
208-765-7223
2. Clearwater National Forest  
208-476-4541
3. Nez Perce National Forest  
208-983-1950
4. Payette National Forest  
208-634-0700
5. Boise National Forest  
208-373-4100
6. Sawtooth National Forest  
208-737-3200
7. Salmon/Challis National Forest  
208-756-5100
8. Caribou/Targhee National Forests  
208-524-7500

**▼ BUREAU OF LAND MANAGEMENT**

1. Coeur d'Alene District Office  
208-769-5000
2. Boise District Office  
208-384-3300
3. Idaho Falls District Office  
208-524-7500
4. Twin Falls District Office  
208-735-2060



## Chapter 2 Protective Clothing

**Objectives:**

- Know the protective gear ATV riders must wear.
- Know what types of ATV gear to wear in warm and cold weather.

Once you get your new ATV, you will no doubt be anxious to start riding as soon as possible. But before you do, be sure you and your machine are ready. Here are some basic rules to keep in mind before you ride:

1. Wear the proper clothing.
2. Know your ATV.
3. Attend an education class and know your limits.
4. Learn the proper way of starting off and stopping.
5. Keep your feet on the footrests at all times.

### Protective Clothing

The nature of ATV riding makes it essential that you wear protective clothing. Knowing what to wear and how to wear it can make you more comfortable when you ride. More important, it greatly reduces the chance of injury in case of a spill.

**Helmets**—Helmets have been *proven* to prevent serious head injury in the event of a collision. Helmets give good protection from not only collisions, but tree branches and falls. In addition, they provide warmth and some protection from loud noises. Not only should you wear a helmet, but you should advise friends and family to wear them, too.

**Malcolm Smith said,  
“Dress for the crash, not the ride!”**

*Off-Road Racing Champion Star of “On Any Sunday”*

When you purchase one, select a good quality helmet, one that meets or exceeds the following safety standards. It should bear either the Department of Transportation (DOT) label, the American National Standards Institute label (ANSIz90.1), or the Snell Memorial Foundation label.

Your helmet should fit snugly, have a good strap and should be securely fastened. Full face helmets protect your face as well as your head. Open face helmets are lighter and cooler and should be used with eye and mouth protection. Mounting strips of reflective tape on your helmet will add extra visibility if you ride after dark.

There are also times when not to wear a helmet. It is important to take your helmet off when talking with landowners and other people you meet on the trail, so they can see who you are.

***A helmet is the single most important piece of protection an ATV rider can wear!  
Never ride an ATV without a helmet!***

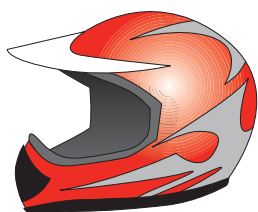
ride safely. Any object such as a small stone, a branch or even a bug that hits you in the face can distract you. But if you are hit in the eye, you can be blinded. Regular sunglasses do not offer the proper eye protection. A pair of goggles or bubble visor shield will help protect you. They should be free from scratches and shatter resistant, bearing the standard markings z87.1 or VESC 8 (V-8), or constructed of a hard coated polycarbonate. They should be well ventilated to prevent fogging, and securely fastened. Goggles or visors with gray/brown or green lenses are preferred for bright days. Amber or yellow lenses are very useful for dark days or late afternoons. These lenses, used in the proper light, can reveal potential hazards in the terrain—especially depressions in the snow. Use clear lenses for night riding which help you see shadows. In extremely cold weather protective lenses can add both protection and comfort. A helmet visor and wind screen on your ATV also help protect your eyes. Be certain to replace eye protection devices if they become scratched.

**Gloves**—A pair of good gloves will keep your hands warm in the winter and cool in the summer. They will also prevent your hands from getting sore, or tired as well as help improve your grip on the controls. They will offer good protection in the event of a spill. Off-road style gloves, available at motorcycle shops, provide the best combination of protection and comfort. They are also padded over the knuckles to prevent bruising.

**Boots**—The footwear which provides the most protection is a pair of strong, over-the-calf boots with heels to prevent your feet from slipping off the footrests. Off-road style ATV motorcycle boots offer the best protection for feet, ankles and legs.

**Protective Outer Clothing**—A sturdy jacket and pants can do a lot for you in the event of a spill on the ground or gravel. Plain lightweight shirts and pants do not offer as much protection. It is important to protect your skin from scratches.

A long sleeved shirt or jacket and long pants are minimal requirements for rider protection. Even better protection can be provided by off-road riding gear such as off-road pants with knee pads, jacket and shoulder pads. You can look stylish and ready for action and still be well protected.



Clothing also offers warmth in winter and helps prevent dehydration in summer.

## Winter Clothing

**Wind Chill Factor**—ATV riding in the winter months demands common sense protection against moisture and low temperatures. Keeping your body warm and dry on the winter trail is essential for comfort, safety and health. While the thermometer may indicate a pleasant temperature, don't forget what the weather forecasters often call the "wind chill factor." It indicates the cooling power of cold air on exposed skin at different wind speeds or ATV speeds. For example, if the temperature on a calm day is 10 degrees above zero and you are riding your ATV at 30 miles per hour, the "wind chill" temperature is equivalent to 30 degrees below zero.

You should select the right combination of clothing to stay warm. Your entire trip can be miserable if you are not wearing the right clothes. If you dress properly, moisture will evaporate from your body. If you become too hot and your clothing traps the moisture, you will get cold. Clothing should be windproof and water repellent. It should be snug, so that it does not catch in the machine. But it should be loose enough to permit freedom of movement and blood circulation.

**First Layer**—The first layer of clothing should be some type of underwear which ventilates, or "breathes." Wear any light winter under clothing with special attention to covering arms and legs. Avoid underwear that clings to the body. Beware of tight fitting cuffs and elastic bands that cut off circulation. A couple of light layers work better than one heavy layer. The thermal "waffle-weave" underwear is a good type to wear. If the fabric stretches too much, it loses its ability to retain heat so choose a size that fits you snugly.

**Second Layer**—The second layer of clothing should provide comfort, utility and durability, such as wool shirts and heavy pants. In colder weather, slip on a wool sweater.

**Head Coverings**—In addition to your helmet, a cap or some covering over your ears and head should be worn. Avoid the fixed bubble type of face guards as they may frost up. Always keep your helmet strap buckled.

A face mask is usually not necessary except in extreme cold or if no other face protection is available. Such a mask helps to reduce the possibility of frostbite. Orlon knit pullover face masks are most commonly used.

**A word of caution: Never wear a loose scarf when riding an ATV. It can get caught in the moving parts on the machine.** It is better to use a turtle neck sweater or “dicky” for neck warmth.

**Winter Suit**—Snowmobile suits are ideal for winter ATV fun. They are distinguished by their water-resistant outer shell of nylon or similar material and a lining of orlon fleece or other lightweight high-insulating material. One-piece jumpsuits generally provide the most warmth, but the two-piece outfits are warm enough for most occasions. This outer clothing should fit loosely. Reflective strips sewn to the outer garment or other pieces of reflective clothing will give you extra visibility during the long hours of darkness in winter months.

**Hand Coverings**—For hand protection a good pair of gloves add yet another essential safety precaution. On an ATV, your hands are exposed to the airstream and can become chilled in a hurry. In wooded areas, your hands are also exposed to snapping twigs and branches. The sport of snowmobiling has brought some very warm, new styles of gloves to the market. They are usually padded, have warm orlon fleece lining and gauntlets (straps on the portion extending up your arm) to keep cold air and snow from getting up your sleeves. Gloves or mittens should not fit tightly nor have an outer shell which gets stiff when cold. A light cotton inner glove or liner will prevent your skin from freezing if you must remove outer gloves to handle small items. It is recommended that you carry an extra pair of gloves if possible.

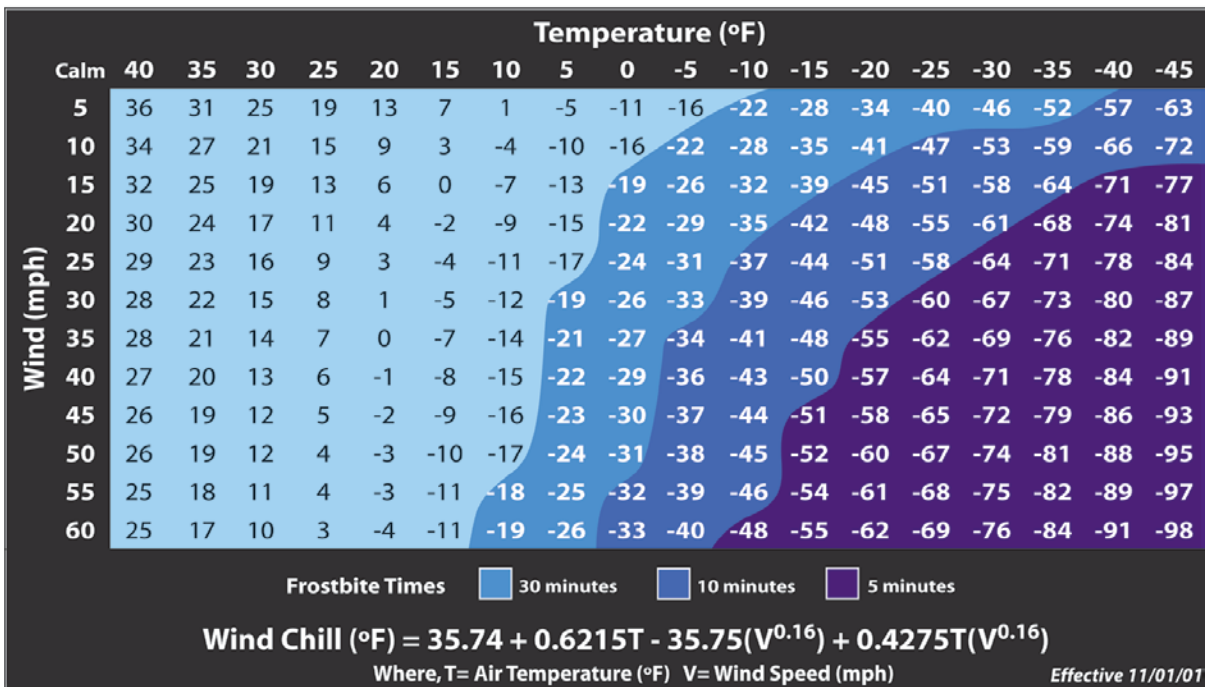
**Foot Protection**—Socks for winter riding should keep your feet warm and dry. They should not be so bulky that they make your boots too tight, which can cut off circulation and cause cold feet. Socks should allow your feet a little movement inside the boots, plus a layer of air to help the feet breathe.

If the weather is extremely cold, wearing two pair of socks can help keep your feet warmer. A light pair of socks under a heavy wool pair is ideal.

Boots must be capable of keeping your feet warm and dry even though you do little walking. Be sure that they are not too tight. Again, some of the best footwear are those designed for use by snowmobile operators. They are boots that are actually two boots: a felt liner and a separate outer boot with nylon or leather tops and rubber lowers or soles. This combination keeps cold air and moisture out with an air barrier next to your feet to keep body heat in.



## Wind Chill Chart





## Chapter 3

# Sport and the Environment

### Objectives:

- To learn how ATV models differ.
- To understand ATVs and their relation to the environment.
- To leave it better than you found it.

Most ATVs are built for recreation. Learning all you can about your ATV and the places you can ride are good things to do for safe and fun riding. But before riding your ATV for the first time, you need to learn about how it runs and how to operate it safely.

ATVs are different from other vehicles. Since they are designed for off-road use only, ATVs should not be operated on paved roads. They are also different from one another in many ways. For instance, there are three-wheeled and four-wheeled ATVs. They vary in control and operation just enough that you should learn about each one before riding.

Some ATVs have rear brakes only, while others have front *and* rear brakes. Be sure to learn the recommended stopping methods for your machine. **Read your owner's manual.** There are ATVs with electric starters, kick starters and pull starters. There are water-cooled ATVs and air-cooled ATVs. Some ATV transmissions have clutches that are hand-operated, while others have fully-automatic clutches.

Other ATVs have a reverse gear. There are ATVs with chain drives and ATVs with shaft drives. Some ATV throttles are controlled by twisting the hand grip. Others by pushing a thumb lever next to the hand grip. Other ATVs have solid drive axles, while some have differentials. Controls and their locations differ from one ATV model to another enough so that you should always refer to the owner's manual for exact location and operation of the controls on the ATV you ride. ATVs are made for off-road use only. You need to learn to protect and preserve your riding areas by allowing for future use of the outdoors and leaving it better than you found it. By using common sense and taking a few precautions, you can assure that the riding area will remain available and in good condition for future use.

### Enjoying Nature on Your ATV

Any new method of transportation brings changes to the environment. As an ATV rider you will get a first hand look at nature's best; from winter's snowy mantle to sandy desert dunes. Be sure that other ATV riders traveling on the terrain after you enjoy the same undisturbed view.

You need to learn to protect and preserve your riding areas. It is not hard, with a few basic guidelines. Stay on existing designated trails wherever possible. Be careful of the vegetation, especially in sensitive areas like sand dunes, marshes and

alpine areas. As you ride on the trail you may see animals like rabbits, deer, elk or other species. While you may be curious about them, do not be tempted to leave the trail to get a closer look, because it may frighten the animals. Stay on your ATV and enjoy watching all animals from a distance. Remember, livestock such as horses, cattle and sheep may be encountered. Range animals should be treated as you would an unknown dog. Any sudden movements or noises may startle livestock. Proceed with caution when encountering livestock. Often around livestock you may find a gate for private or public land. Please respect the landowners by leaving gates as you found them. It is best to shut off your engine when you meet horseback riders.



It is annoying and can be a sign of something wrong to see an ATV releasing excessive exhaust or creating excessive noise. Keep your ATV properly tuned and muffled to reduce exhaust and noise. Never remove the muffler. Check with local government agencies to receive noise decibel ratings. Many states and land managers require spark arrestors on internal combustion engines. Do your part in preventing wildfires by checking and cleaning your spark arrestor. Carrying a shovel and fire extinguisher in your vehicle is a good idea in case a fire has occurred.

### ATVs and the Environment

The environment is a fragile place. If each of us takes full responsibility for our actions while out in nature's areas, we would help current and future generations to enjoy what we enjoy now.

ATV operators should be aware of how simple acts of irresponsibility can lead to environmental damage. For example, vegetation is nature's method of lessening erosion by increasing the stability of the soil. If an ATV or heavier vehicle destroys the plant cover, the dry soil can be eroded by the wind or rain. Vegetation is very susceptible when covered in frost. Although vegetation damage may appear harmless, you should avoid causing this type of damage because of the serious environmental problems that can result.

Staying on designated trails is the best way to protect the environment. You should know the area you are riding in when you do ride. Keep in mind that the wetter the soil, the easier it is to tear up. Stay out of swampy areas and bogs where the soil is very wet. Try to ride in those areas that have lots of sand, clay or gravel, since the soil here is less easily

# ATV Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- T—F 1. When riding an ATV in a national forest, you should remove the muffler.  
T—F 2. If hunting, you may shoot while sitting on your ATV.  
T—F 3. ATV riders should use only designated trails.  
T—F 4. Vegetation helps prevent soil erosion.  
T—F 5. ATVs are for off-road use only.  
T—F 6. Staying on the trail is a good way to protect the environment.  
T—F 7. The term “off-highway vehicle” means you may drive anywhere you want as long as it is off the highway.

eroded, Steeper slopes are also easier to erode than lesser grades, since water runs off more quickly. To ease the grade, look for a switchback; or if you must climb, try to stay on the rockiest terrain.

The soil and sediment of fish spawning grounds are very easily stirred up and damaged by mechanical disturbance. You can help prevent this disturbance by avoiding the small streams and creeks. If you have to cross a stream or go up and down streambanks, it is best to use an established ford or ride where the banks have a gradual incline. This is safer for you while it also reduces the impact on the streambank. ATV operators should strive to reduce this negative impact. Caring for the environment is everyone’s responsibility. Know that others use the same trails as you. Don’t be a trail hog. Respect the rights of others regardless of their means of transportation; everyone deserves to enjoy the outdoors. Please yield the right of way to all non-motorized users. ATV users yield the right of way to hill climbing users and users on the right at intersections. Be considerate of others on the road, trail and camping areas. Being kind to others on the trail goes a long way to building a positive image about ATV users.

**The rule that all responsible outdoor enthusiasts follow is:**

**If you pack it in, pack it out!**

There are some terrains that are very vulnerable to damage by man. Tundra and sand dunes, for example, have only thin layers of soil and vegetation. Some of these areas may be protected by federal or state regulations, and could take years to recover if their surfaces are damaged. Soil erosion from the ATV tires can also disturb ground nesting animals, which affect the food chain balance.

Another factor with ATVs and the environment is a basic problem known to all outdoor enthusiasts: *litter*. As well as being unsightly, litter will result in long-range environmental impact. For example, dumped oil can make its way to spawning areas, small streams and creeks, and destroy the fish life. Take out all trash that you bring on the ride. Follow the rule of “if you pack it in, pack it out.” Don’t litter, and properly dispose of waste by bringing plenty of garbage bags.

## ATVs and Hunting

### *We Need Your Help*

The use of ATVs during hunting season has skyrocketed in recent years. This increased use causes increased conflict in the field. ATV equipped hunters are encroaching on some areas previously accessed solely by hunters on horseback or on foot. Increasing numbers of ATVs traveling cross-country creates trails that may cause soil erosion and damage to vegetation. Remember, ATVs must obey all vehicle laws, especially never shooting a gun while sitting on your ATV and always remember never to trespass during hunting season.

## What Can I Do to Prevent Future Closures?

- Single-track trails are for motorcycles, not ATVs.
- Get off your ATV to hunt/shoot.
- Stay on existing roadways and trails.
- Make sure the trail is at least as wide as your ATV.
- Know the ATV use regulations for the area you are hunting in.
- The best use of your ATV during hunting season is to recover the animal once it is down. Do this during the middle of the day (10 a.m. to 2 p.m.) and only in areas where offroad/trail travel is allowed.
- Keep your ATV properly tuned and muffled to reduce exhaust noise. USDA Forest Service approved spark arrestors are required on public land.
- Respect the other hunters and their access methods.

## Responsibility or Regulation?

### *The Choice is Yours!*

So what does this mean for the typical hunter with an ATV? It’s simple. If ATV users are irresponsible with the use of their machines, then there will be increasing pressure on land and wildlife management agencies to restrict ATV use during hunting season. There are people, among them other hunters, who are asking for a total ban on ATV use during hunting season. Regulations are being considered that limit ATV use to certain times of the day and further restrict, or prohibit completely, off-trail travel.

Nobody likes regulations; but if irresponsible ATV use continues to cause unacceptable impacts, then regulations will become necessary to ensure protection of public lands. A better alternative would be for ATV users to recognize the impacts their activity can cause and voluntarily take steps to reduce those impacts. ATV users are not unique in this respect—as more and more people use public lands for recreation, the potential impacts of these activities are growing fast. Virtually all recreation users—jeepers, horse enthusiasts, rafters, snowmobilers, hikers, campers, rock climbers, motorcyclists, fishermen and mountain bikers—are being asked to reduce the impact of their activities, so that public lands can be enjoyed by this and future generations.

## Chapter 4 Facing the Unexpected

### Objectives:

- How to make a survival kit.
- How to prepare for the unknown.

If your ATV breaks down and you are unable to fix it or walk out, it is extremely important to remember that you must conserve energy in order to survive. Seek shelter from the wind and restrict your body movements to reduce sweating. Your machine can be used as a windbreak or as part of a lean-to. Seek shelter in a protected area. An overhanging rock shelf, or a clearing at the base of a tree make ideal shelters.

In a timbered area, you can make a lean-to by placing one horizontal bar between two trees or crotches in upright poles. Lean small branches against the horizontal bar. Interweave branches to thatch the shelter. Snowbanks and deep drifts offer protection possibilities. Dig a snow cave facing away from the wind, slightly larger than your body size. Line with any extra material you may have such as the seat of the ATV. Place a six-inch diameter ventilating hole in the top of the cave.



Good planning, systematic maintenance of your ATV, and traveling with a companion on another ATV will eliminate most emergencies. To be better prepared, learn and follow these steps in case of an emergency:

1. Prepare a checklist of supplies, tools and other items necessary for your ride and consult it prior to your departure.
2. Let someone know where you will be and when you will be back.
3. If a fire is needed, choose a protected spot that is not under overhanging branches with snow on them. Pick small dead branches to get a fire going. Dead brush works well also. Larger dead wood is added after small branches have a good start. Collect enough fuel before dark if you have to spend the night.
4. Do not travel on foot in strange areas at night. Conserve your energy, because it will help keep you warm. Moderate exercise can help circulation to cold limbs, but don't overdo it. Good judgment, and common sense are always necessary to make the best of an emergency. If you become unsure of your location during a heavy storm, find shelter and keep warm.
5. In all cases, attend to injuries first, then sit down and calmly think out solutions and possibilities. ***Panic is your worst enemy.***
6. We recommend riding with someone else, a friend or a local club.

### ATV Laws

Laws are necessary to protect people, property and ATV riding. States have different laws covering registration, equipment and operation. Idaho State Parks and Recreation will help you learn the exact laws in Idaho. Please call 1-208-334-4199 for information. Remember, before you travel in another state, consult the law enforcement agencies of that state to be sure you operate within laws of that state. Refer to back of book for local states' phone numbers.

The future of ATV use depends on the attitude of ATV riders towards the sport and safe, lawful operation of all off-highway recreational vehicles. Your assistance as a rider in this effort will be greatly appreciated and assure safe ATV riding for all.

The future of ATV riding also depends on the amount of lands open for ATV use. Respect landowners and their rights. Always seek landowner permission. Trespassing is defined as entering any enclosed (fenced) or cultivated land without the expressed or implied consent of the owner.



## Crossing Roads

ATVs are designed for and must be operated *OFFROAD only*. However, on occasion you may find it necessary to cross a road. This is common in farm areas where the ATV is used for various work purposes. *A leading cause of accidents and fatalities for ATV riders is from riding on or crossing the road illegally.* The hazards of crossing a road cannot be overemphasized.

Besides using common sense, caution and courtesy, you must also follow the laws of your state when crossing a road. Also use the following procedures:

1. Bring your ATV to a complete stop on the shoulder of the road.
2. Yield the right of way to all oncoming traffic. Look both ways.
3. Cross at a 90-degree angle at a place where there are no obstructions and your visibility is good.
4. Laws governing ATV operation and highway crossings should be consulted before you attempt any road crossings. General knowledge of all ATV laws is a must for all ATV users.
5. Remember, crossing the road, or illegally riding on the road is ***a major cause of serious accidents or fatalities of ATV users***, so use extra caution.

## Survival Kit in a Can

A survival kit is an absolute necessity when planning a long back-country trip on your ATV. Whether with a friend or a group, a survival kit should be included with your supplies at all times.

The kit easily fits into a can. It can be prepared to fit the local conditions. Just like the tool kit and emergency food supply, this survival kit applies to all-terrains, from the woods to the desert. Ask your instructor about items needed for your local area.

## How to Make a Survival Kit in a Can

1. One foot of heavy cotton string, dipped in melted paraffin and then wrapped in waxed paper. Cut off 1½" piece, fray end, light with match, and use to start fire. Burns longer and hotter than match alone.
2. Salt, wrapped in foil packet. Improves flavor of food.
3. Two snelled fish hooks. May be used with leader to catch fish.
4. Four feet of black plastic electrician's tape. Used originally to seal and waterproof can. May also be used to fasten splints on broken limb, repair torn clothing, etc.
5. Steel wool, 00 or finer. Makes excellent tinder, even after being wet. Water can be shaken out and it will start from small spark. Burns very hot but very quickly so should be used with other tinder (such as pine needles, twigs, etc.) wrapped inside to start fire.
6. Picture hanging wire. Makes excellent snare wire; may also be used in erecting shelter.
7. Water purification tablets. Use if there is any doubt about purity of drinking water.
8. Metal container, with mirror glued in lid. Mirror may be used to signal searching aircraft. Container used to melt snow for water; also may be used to mix up small quantities of soup.
9. Small tube of antibiotic ointment. Use on small cuts and burns to avoid infection.
10. Wooden matches, dipped in paraffin to make them waterproof; stick broken off to be shorter.
11. Safety pins. Use to fasten torn clothing or replace lost buttons.
12. Packet of condensed soup mix. May be mixed, small amount at a time, with water in a can.
13. Vitamin pills (one per day type). To help maintain health on inadequate diet.
14. Small whistle. Use to signal. Three blasts are recognized distress signal. Saves voice.
15. Adhesive bandages. Use on small cuts, abrasions, burns.
16. 20-lb. test leader. Use with hooks for fishing; use with needle to sew clothing, use for snares; use to lash shelter together.
17. Razor blade (single edge). Use to make fuzz stick to start fire; use to clean and skin small creatures caught for food; use to cut up belt or other material to make thongs, ties.
18. Needle with large eye. Use with leader for sewing; use to remove splinters.
19. A sealable plastic bag to protect things from moisture.
20. A surplus army belt ammo pouch for carrying and storage.

## Understanding Trail Signs

When riding your ATV, you may encounter trail signs. They are designated to help trail riders by supplying needed information about the area. Many of the signs you encounter will be used for snowmobilers as well. Below are some of the most common trail signs for you to learn.

### Regulatory Signs



#### Stop Sign

**Purpose:** To be used along a trail prior to a road crossing.

**Color:** Red and white.



#### Trail Marker

**Purpose:** To indicate where ATV riding is permitted.

**Color:** Brown with white symbol and border.



#### Yield Sign

**Purpose:** To be used at trail intersections or prior to driveways.

**Color:** Red and white.



#### Restrictive

**Purpose:** To indicate areas where ATV riding is not permitted.

**Color:** Red circle with a red slash across center on white background, with black ATV symbol.

### Warning Signs

**Purpose:** Advise ATV operator to proceed with caution at a reduced speed or warn user of a specific trail hazard.

**Color:** Yellow with black letters or symbol.



#### Blazer

**Purpose:** Shows ATV user is still on the trail.

**Color:** Green.

### Trail Signs



#### Directional Blazer

**Purpose:** To indicate changes in trail direction.

**Color:** Green with black border and arrow.

### Route Sign

**Size:** 24" x 18"

**Color:** Reflective green background with reflective white border, symbol and lettering.



### Route Signs

#### ATV Route Arrow

**Size:** 12" x 9"

**Color:** Reflective green background and reflective white border and symbol.



# Part 2

# All Terrain Vehicles

## Chapter 5

## The Names of Parts

### Objectives:

- To learn the names of the main ATV parts.
- To be able to locate and operate parts without looking at your hands.
- To identify safety features.

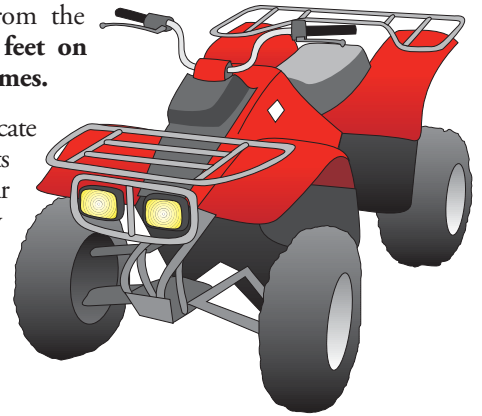
This chapter is not intended to make you a mechanic but rather to show you the basic parts of your ATV. By increasing your knowledge and skills you will decrease your chances of injury and mishap. Those who have ridden motorcycles may need to relearn control locations for ATVs. Be sure you know the control locations before you ride.

Before attempting to ride your ATV, you should **read the owner's manual carefully**. Study your manual as well as actually looking at your ATV, to memorize the location of the controls.

To help you learn, a friend could help you by calling out the names of parts at random. If you try this method, mount the ATV and physically locate the controls when the part is called out. The ATV's engine should always be off when doing this exercise.

Mount the ATV from the left, **keeping both feet on the footrest at all times**.

By being able to locate the controls and parts without looking, your attention can stay focused on the lay of the land while riding, thus avoiding sudden obstacles or hazards.



### Common ATV Parts

The following is a list of the most common ATV parts, which you should be able to identify. (Consult your owner's manual to learn control locations for your model ATV.)

**Brake (Foot) Pedal (most models)**—Usually operated by the right foot.

**Brake (Hand) Lever(s)**—Located on the left (and/or right) handlebar(s).

**Choke**—Used for cold engine start-up.

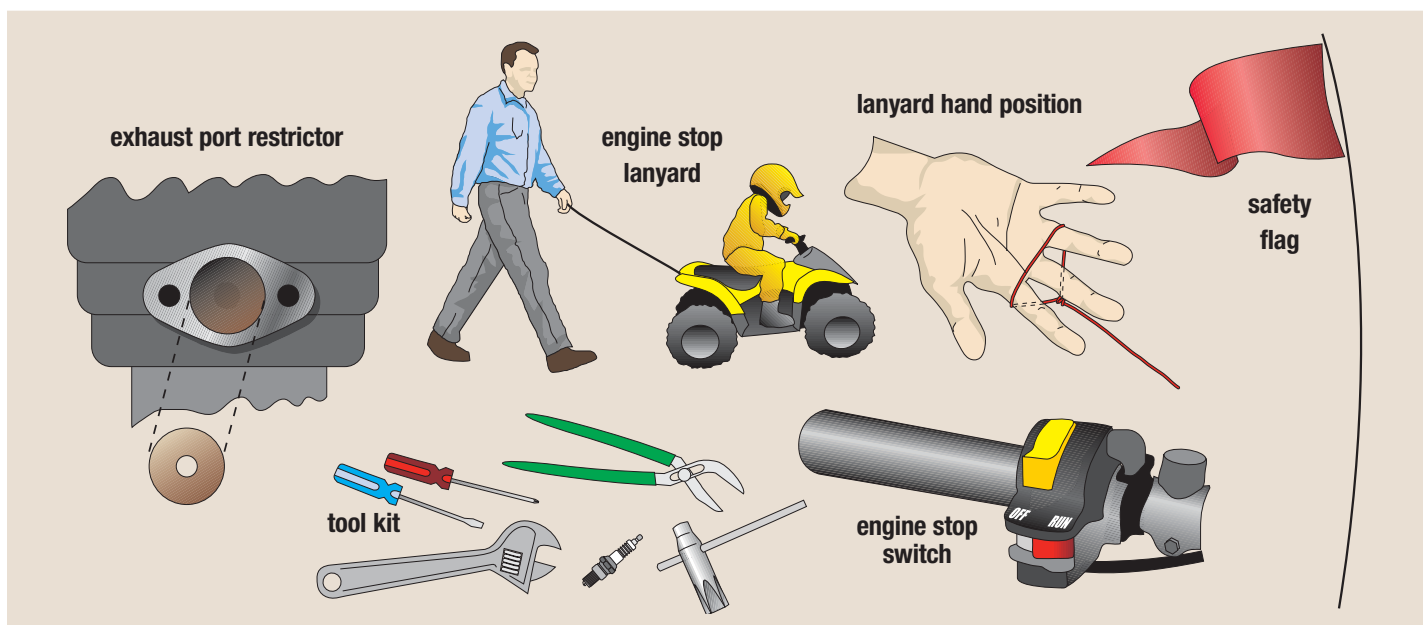
**Clutch**—Used to connect and disconnect the engine and driving gears. Allows gears to be shifted or changed (on some models).

### Drive System:

**Drive Chain**—Connects the engine to the rear axle to give an ATV "drive" or forward motion.

**Drive Shaft**—Connects the engine to the rear axle to give an ATV "drive" or forward motion.

**Engine**—The source of power in an ATV where combustion takes place.





## ATV Learning Activity—Self Quiz

Circle the letter which best completes the sentence.

- The most important piece of protective clothing an ATV rider can wear is:  
(a) boots. (b) a pair of good gloves. (c) a helmet.
- Which agency is in charge of the ATV education program in Idaho?  
(a) Bureau of Land Management (b) U.S. Forest Service  
(c) Idaho Department of Parks and Recreation (d) Idaho Department of Motor Vehicles
- Which of these is not an ATV?  
(a) Four-wheel ATV (b) Enduro motorcycle (c) Dune buggy  
(d) Snowmobile (e) Tractor
- What piece of safety equipment should be attached to your ATV while on sand dunes?  
(a) Trailer (b) Tow bar (c) Safety flag
- Which of the following should ATV riders wear for protection?  
(a) Over-the-ankle boots (b) Goggles (c) Gloves (d) All of the above
- The cooling power of cold air on exposed skin at different ATV speeds is called the:  
(a) wind chill factor. (b) celsius factor. (c) Yukon Wind Syndrome.

**Engine Stop Switch**—Used to stop the engine quickly, without removing the hands from the handlebars.

**Footrest(s)**—Bars or platforms located below the engine on which a rider rests his feet.

**Fuel Valve**—Usually hand operated, with an on, off, and “reserve” position, which controls gas flow to the carburetor.

**Ignition Switch**—Allows the engine to start.

**Parking Brake**—A mechanism which locks the brake so the ATV cannot roll.

**Shift Pedal**—Usually operated by the left foot, which is used to change gears for various riding conditions.

**Spark Arrester/Muffler**—This combination appears on all new ATVs sold. The spark arrester helps prevent fires, while the muffler helps to lower the noise level.

**Throttle Lever**—The control operated by the right hand or thumb which controls the engine speed.

### ATV Safety Features

The following safety features are found on many ATVs. See if you can find them on your vehicle. Additional features maybe found on some models such as the stepguard located by the footrests. Check your owner’s manual for additional items.

**Brake Wear Indicator**—Indicates if and when the brakes are worn past the service limit and must be replaced.

**Engine Stop Lanyard (Tether)**—A leash-like rope attached to the rear of some ATV models which enable a person to pull the rope and stop the engine from a short distance. These models are smaller ones built for youngsters. The parent or guardian who trains the young rider should always

use this lanyard until the rider develops sufficient skills for safe, independent operation.

**Exhaust Port Restrictor**—A device that limits the amount of power from the engine.

**Safety Flag**—An orange fluorescent or brightly colored flag, eight feet from the ground, must be attached to the back of the machine by a whip antenna, provides a good safety feature. When dune riding, a flag is required by law in designated dunes.

**Tool Kit**—A basic set of tools are usually supplied with your ATV. If your tool kit does not contain the following items, add what is missing before you go on your next ride: (1) pliers, (2) screwdrivers, Phillips and standard, (3) adjustable wrench, (4) spark plug and spark plug wrench. With these basic tools you can take care of most adjustments or basic repairs. Carry them in your machine at all times.

*Remember that if you start your ATV, you are responsible for controlling it. Many accidents occur because the driver was not ready to take control of the machine.*

# ATV Learning Activity—Name the Parts

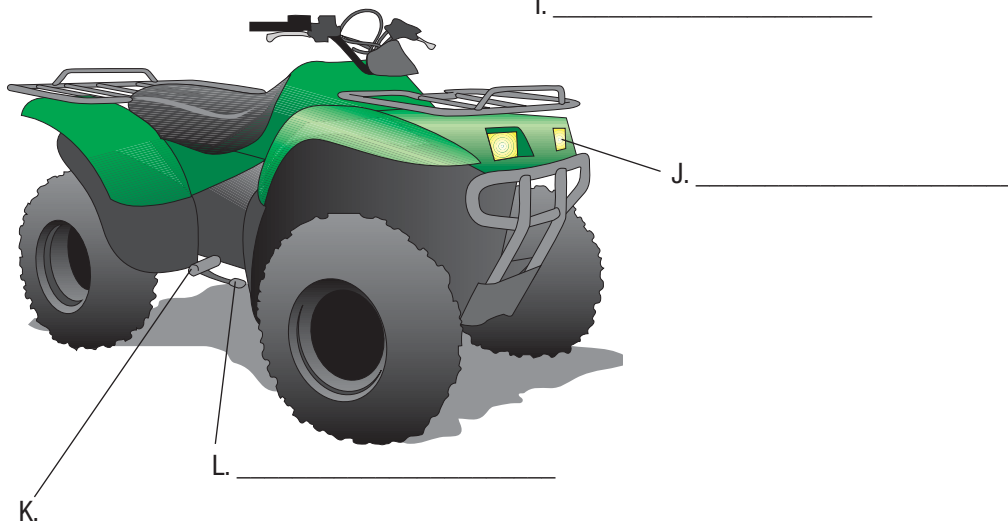
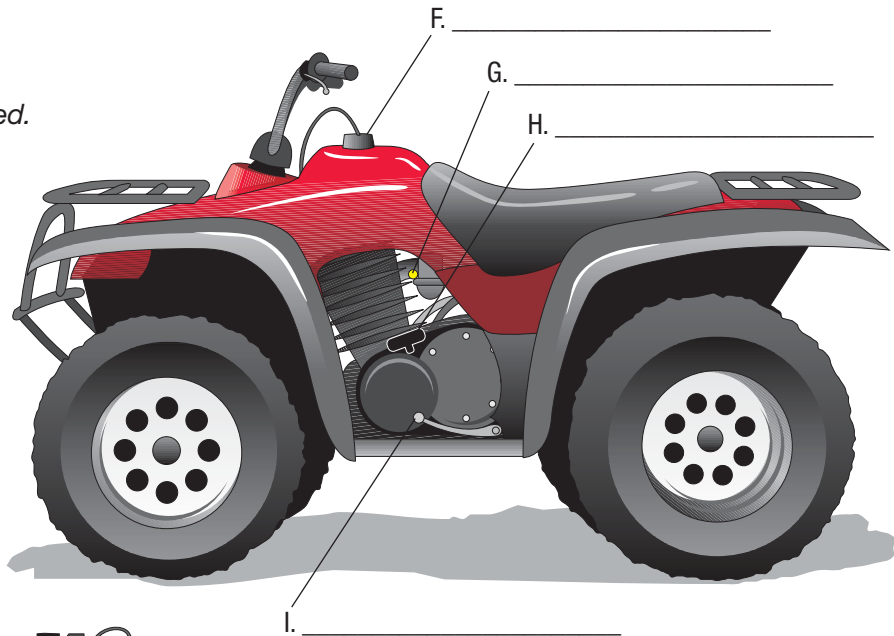
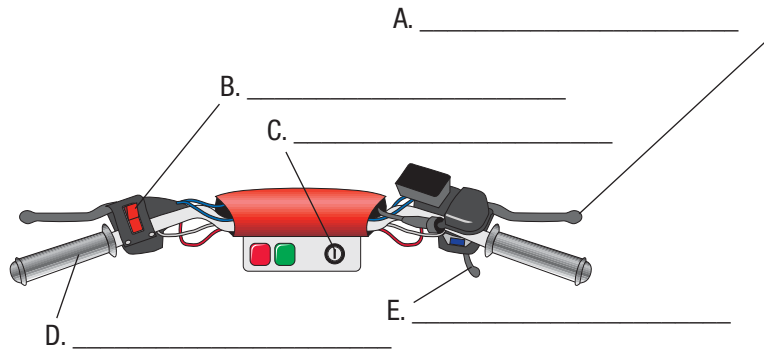
*You must be able to locate and operate ATV controls without looking or hesitating.*

*Practicing these exercises will help you maintain control of your ATV under various conditions.*

*Identify the ATV controls in the following diagrams. Use the list of controls to help you match the part.*

1. parking brake
2. choke (on some models)
3. headlight
4. gas tank
5. pull starter\*
6. foot shifter
7. footrest
8. ignition switch\*
9. engine stop switch
10. handlebar front brake lever\*
11. rear brake pedal\*
12. throttle lever

*\* If your ATV is so equipped.*



## TCLOC: Pre-Ride Inspection

<b>TIRES AND WHEELS</b>	<ol style="list-style-type: none"> <li><b>Air pressure</b>—Always have the recommended tire pressure. ATVers be sure front tire(s) and both rear tires are inflated to equal pressures. If the tire pressure on one side is higher than the other side, the vehicle may pull to one side</li> <li><b>Condition</b>—Check for cuts or gouges that could cause air leakage.</li> <li><b>Wheels</b>—To avoid loss of control or injury, make sure axle nuts are tightened and secured by cotter pins. Check these before every run.</li> </ol>
<b>CONTROLS AND CABLES</b>	<ol style="list-style-type: none"> <li><b>Controls</b>—Check the location of all the controls by sitting on the ATV. Make sure they work properly.</li> <li><b>Throttle and other cables</b>—Make sure the throttle moves smoothly and snaps closed with the handlebars in any position. An off-road environment is hard on them.</li> <li><b>Brakes</b>—Do the controls operate smoothly and are the controls adjusted according to the owner's manual? Are they positioned for easy reach? Your brakes are a crucial part of riding and must always be in tip-top condition.</li> <li><b>Foot shifter</b>—Is it firmly attached and positioned for safe operation?</li> </ol>
<b>LIGHTS AND ELECTRICS</b>	<ol style="list-style-type: none"> <li><b>Ignition switch (if so equipped)</b>—Check the condition of the switch and make sure it works properly by switching it off and on during your warm-up period.</li> <li><b>Engine stop switch</b>—Does it turn off the engine?</li> <li><b>Headlight and taillight (if so equipped)</b>—Are they working? You could be caught out after dark.</li> <li><b>Brake light.</b></li> </ol>
<b>OIL AND FUEL</b>	<ol style="list-style-type: none"> <li>Don't get stranded because you are out of oil or fuel. Know your ATV's cruising range.</li> <li>Check oil level with dipstick or sight glass while the engine is off. Check your owner's manual for procedure.</li> <li>Always start your ride with a full fuel tank.</li> <li>Check for fuel or oil leaks.</li> <li>Take off the filter cover and check the condition of the air filter element. Be sure it is clean and not torn or blocked.</li> </ol>
<b>CHAIN &amp; DRIVE SHAFT CHASSIS</b>	<ol style="list-style-type: none"> <li><b>Chain</b>—Inspect, adjust and lubricate the chain regularly. Your chain is the vital link from the engine to the wheels. Check for chain slack or free play so that it is within specifications as described in your owner's manual.</li> <li><b>Drive shaft</b>—If your ATV is equipped with a drive shaft rather than a drive chain, check for oil leaks. Maintain its oil supply as outlined in your owner's manual.</li> <li><b>Nuts n' Bolts</b>—Rough terrain will loosen parts. Look and feel for loose parts while the engine is off. Shake handlebars, footrests, etc., before each ride and periodically check major fasteners with a wrench.</li> </ol>

### ATV Checklist

#### For Short Trips:

- tool kit
- two extra spark plugs
- flashlight
- spare headlamp
- tail light bulb
- electrical tape
- 25' of ¼" nylon rope
- waterproof matches
- knife
- hand axe
- first aid kit
- compass
- map
- tarpaulin
- signal flares
- food and water supply
- fuel de-icer (in winter)

#### For Extended Trips:

- throttle and brake cables
- brake fluid
- master links
- gas hoses
- lug nuts
- grips
- tire tubes
- low pressure tire gauge
- assorted springs, nuts & bolts
- survival kit (see page 13)
- starter rope





# Chapter 6

## Before You Ride

### Objectives:

- To learn the steps in a pre-ride inspection.
- To be able to troubleshoot minor problems.

Now that you know what proper and safe protective clothing to wear, you are almost ready to go for a ride. Prior to each ride, you should always perform a pre-ride inspection to see that your ATV is in proper working order.

### ATV Pre-Ride Inspection

This section will give you some important pointers for personal safety and the safety of your ATV. Inspecting the mechanical condition of your equipment before each ride is very important to help minimize the chance of injury or being stranded, as well as to ensure long-term performance from your ATV. Remember you can ride farther in an hour than you can walk in a day.

Your owner's manual will list what to check on your particular model; follow the maintenance procedure outlined in your owner's manual. The basic items to be inspected can be identified by using the TCLOC acronym as described in Chapter 5.

***Completing a pre-ride inspection before you ride your ATV should become an automatic routine with each outing.***

There are a few other tips that you should pay close attention to before riding.

1. Always tell someone where you are going and when you expect to return.
2. Never go alone. Use the buddy system—ride with other ATVerS.
3. Under-inflated or over-inflated tires may cause wheel damage when riding over bumpy terrain, or your ATV may not handle properly.
4. Accurately check your tire pressure (usually ATV tires are around three to six psi or, pounds per square inch). You'll need a low pressure gauge. Consult your owner's manual for proper pressure.
5. Make sure wheel lug nuts are tight. Grasp the tire at the front and rear and try to rock it on its axle to detect worn out bearings or loose nuts. There should be no free play as you rock the wheel.
6. Check the brake wear indicator. Periodically disassemble and clean the brakes. Check your owner's manual for the correct procedure.

Learning to ride an ATV can at times be a frustrating experience, but everyone must go through the beginner stage. Even seasoned riders don't know it all. This book can help guide you in ATV safety operation, but nothing will help you as much as your own riding experiences. That experience, plus constant attention to good riding practices, will put you on your way to becoming a skillful, safe rider.

### Trouble-Shooting

Emergency situations can occur with any type of mechanized vehicle—unknown hazards on the trail, a burned-out light at night, an empty fuel tank in the middle of nowhere. These are not only inconvenient, but are unsafe conditions for ATV riders.

Since ATVs are designed for OFF-ROAD use only, ATV riders must be prepared with the right safety precautions. It is not like being in a disabled car which may be within walking distance of help. Fortunately, most problems can be fixed on the spot if you carry a minimum assortment of tools and spare parts.

### Tools and Supplies

A basic set of tools is supplied with your ATV. In addition, you should carry one or two extra spark plugs with your machine. The most frequent cause of engine stalling or poor performance is a bad spark plug.

On long rides or extended trips, other items that should be carried include: flashlight, spare headlamp and tail light bulb, electrical tape, at least 25' of ¼" nylon rope, waterproof matches, knife, hand axe, first aid kit, compass, map, tarpaulin, signal flares, an emergency food and water supply, with fuel de-icer and snowshoes in the winter.

Regular maintenance will prevent most breakdowns. However, once in awhile your ATV may fail. If you are in an unpopulated area when this occurs, carrying the above items could save a long walk.

Problems may be caused by one or a combination of factors. Use the Trouble-Shooting Chart on page 29 to determine the possible causes of a problem, and then check the recommended solution to each cause.

By forming teams of individuals or partners, you can use this chart for a contest. One person asks another what might be wrong, if for example, the engine does not start. The other must answer and tell what he/she would do. Score one point for each correct answer, naming both the probably cause and its remedy.

### Preparing for Long Trips

When you are planning a long outing into a remote area, there are some items you should bring in addition to the ones already mentioned.

For ATVs with pull starters, bring extra starter rope. Other spare parts, for all types of ATVs should include throttle and brake cables, brake fluid, master links, gas hoses, lug nuts, grips, extra levers, tire tubes, low pressure tire gauge, assorted springs, nuts and bolts.

In cold conditions be aware that a dramatic altitude change, i.e., from sea level to 8,000 feet elevation will bring about a change in tire pressure. Recheck your tire's p.s.i. if you get into a higher altitude. Follow the recommended p.s.i. for your model ATV (listed in your owner's manual), but be sure you know what it is before you set out.

If you ride in dunes during evening hours, be sure you and your ATV are well lighted. A product called Cyalume lightstick can provide this extra needed light. The lightstick lasts about six hours and is then disposable. It is a small three inch clear plastic tube that contains chemicals which when mixed together, by bending the tube, create a bright fluorescent light. They come in a variety of colors. Whip antennas are available with a plastic holder on top in which this Cyalume lightstick fits neatly, thus providing a night light for safety. Remember, in Idaho it's the law to have a whip flag on designated dunes.

## Chapter 7 Starting Up

### Objectives:

- To know the procedures for starting an ATV engine.
- To know the proper way to start the ATV moving.
- To know how to shift the ATV's gears.

The owner's manual gives instructions for all aspects of running your ATV. Many ATVs are alike, but different makes and models start in different ways and parts may be in different locations. For example, those machines that have a manual starter (pull, auto-rewind type) usually have the starter found on the left side of the engine. The key and the choke are commonly located on the panel in front of the driver. It is always a safe procedure to check with your owner's manual first to note the placement of the controls. Your owner's manual will list how to start your particular model. The starting procedure is represented in the words *brake, on, neutral, engine, and choke*.

BONE-C: Start-Up Procedure	
<b>BRAKE</b>	1. Set the PARKING BRAKE.
<b>ON</b>	2. Turn gas cap vent to ON position. Also turn the gas valve to ON or RESERVE position, depending on how much fuel is in the machine. Turn ignition key on, if so equipped.
<b>NEUTRAL</b>	3. Check that the transmission is in NEUTRAL. To make sure it is in neutral, check the NEUTRAL indicator, if equipped, or you can release the PARKING BRAKE and try to roll the machine back and forth. Reset the PARKING BRAKE.
<b>ENGINE</b>	4. Check that the engine stop switch is in the RUN or START position. The engine stop switch is usually found by either the left-hand or right-hand grip.
<b>CHOKE</b>	5. If the engine is cold, put the CHOKE in the ON position. Your owner's manual will show where the choke is located on your ATV. 6. Start the engine according to the directions in your owner's manual. 7. Once the machine is warmed up, return the choke to its normal position. This is very important because if you don't, the machine will not run properly, using too much gas. This may also cause damage to the engine if allowed to run with the choke in the START position.

# Exercise — Know Your ATV

## Part 1: Parts and Controls

Identify each of the following items and describe what they do:

throttle	starter	headlight	gear shaft
choke	parking brake	ignition	tail light
brake light	stop switch	rear brake lever	fuel vent
front brake lever	clutch	fuel valve	spark plug
chain/drive shaft	dip stick	air filter	

While sitting on the ATV, be able to locate all the controls you will need to operate it without looking down to find them. Practice on a stationary ATV until you have mastered this exercise.

*Whether the engine is running or not, your feet should be on the footrests at all times, or injury could result.*

## Part 2: Pre-Ride Inspection

Know how to check off the following parts and controls before each ride.

gas/oil	throttle
electrics (lights/ignition)	tires
shifter	wheels
chain/drive shaft	
brakes	



## Starting Out

Before attempting to ride your ATV, please make sure that the area you ride in is open to off-road vehicles. Remember you are riding *off-highway* only, for these vehicles are not street legal. Also make sure you have the property owner's permission.

You should be seated with both hands on the handlebars and **both feet on the footrests**. When mounting, take care not to step on the shifter. Be sure that the engine is warmed up before you take off.

- Hold the rear brake and shift into first gear.
- Release the parking brake.
- Release the rear brake and slowly advance the throttle.
- If your machine has a manual clutch, release it slowly. If the clutch is engaged suddenly, the ATV might move suddenly, causing you to lose control or fall off. ATVs can flip over backward if the clutch is engaged too suddenly.

**Always keep your feet on the footrests to prevent injury.** Many people have had their ankles and legs broken from the rear wheel running over them when not using the footrest. Driving an ATV is similar to riding a bicycle or snowmobile. Balance is kept by shifting your body weight. Do not put your foot out for balance like you do on a bike. The throttle and brake also help you to control the machine. Be prepared to shift your weight quickly

to counteract the bumps and dips of the land. You must learn to adapt to weather and differing changes in the terrain. Many accidents happen from hitting a dip or rock—be prepared.

## Changing Gears

Always close the throttle when changing gears to prevent front wheel(s) from lifting. Learn the sounds of your engine so you can shift to keep the engine speed in the most efficient range.

If your ATV has a manual clutch, learn where the engagement point is to prevent stalling, and allow smooth shifting.

**To change gears, you must learn to coordinate your throttle lever and clutch pedal (if so equipped).**

1. Release throttle.
2. Change gears (use clutch if equipped).
3. Release shift pedal as you slowly apply throttle again.



## Chapter 8

# Basic Riding Skills

### Objectives:

- To learn the correct procedure for braking.
- To learn how to park the ATV.
- To learn how to turn the ATV at various speeds.

Mastering the basic skills of braking, turning and parking are very important. If you are not completely trained to use these basic skills, you will not be ready to go ahead to intermediate and advanced riding. The exercises at the end of this chapter should be performed with ease before you attempt any other skills.

### Braking

Your owner's manual describes your ATV's braking system. You may have both a front and rear brake or a rear brake only. Of course, your braking technique will depend upon your ATV's braking system.

Some good tips for braking are:

1. Release the throttle.
2. Shift to a lower gear to use the engine to slow the vehicle.
3. Apply both brakes equally (if equipped).
4. Avoid excessive braking while cornering. Do most of your braking before the turn.
5. Apply brakes lightly on slippery surfaces.
6. Shift to low gear when descending a hill and don't ride the rear brake for long periods. **Do not use the front only. Use both front and rear brakes together.** Use of front brake only can cause you to be thrown from your ATV and injured or killed.
7. Keep your eyes and head up.

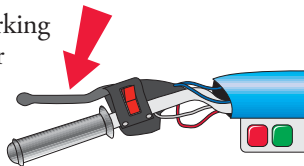
#### Special Note:

*If your ATV stalls while traveling up a hill, do not let it roll backwards or it could flip over.*

### Parking

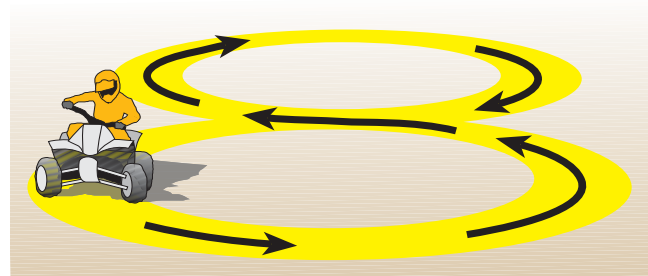
When parking your ATV, you should stop the engine and:

1. Shift into neutral and set parking brake. Or, shift into low gear if you don't have a parking brake, to keep it from rolling.
2. Avoid parking on an incline.



### Turning

When turning, the outside wheels must cover a greater distance than the inside wheels (but in the same time). ATVs with solid rear axles turn both rear wheels at the same speed. On some ATVs a differential gear case mounted between the wheels, on the rear axle, allows the wheels to spin at different rates upon demand so that the outside wheel in a turn can spin faster as required. This type of ATV is like a car with its unlocked differential. Both types require their own special turning skills. Always check your owner's manual to determine your vehicle type.

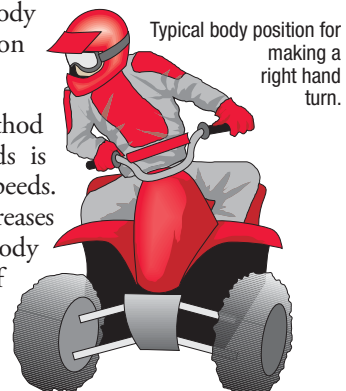


Riding in a figure 8 is an excellent method to develop turning and weight-shifting skills.

Most ATVs, however, have a "live" or solid rear axle: both wheels must spin at the same rate at all times. Putting weight on the outside footrest while leaning in with the upper torso positions the rider's weight correctly for normal turning. Here are some tips for turning solid rear axle ATVs:

**At low speeds:** As you turn the handlebars in the direction of the turn, shift your body weight forward and to the outside of the turn (weight is supported on the outer footrest) while leaning your upper body in slightly. Be sure to maintain throttle through the turn. In turning, the objective is to reduce weight off the inside rear wheel by shifting your body weight. If you do not follow this technique, the ATV will plow straight ahead, resisting your efforts to steer with the handlebars, or roll on its side, possibly on you. So remember, shift your body weight to reduce weight on the inside rear wheel.

**At higher speeds:** The method of turning at higher speeds is similar to turning at low speeds. The difference is as speed increases you must lean your upper body farther toward the inside of the turn, while keeping your weight on the outer footrest. This is to balance the higher cornering force as vehicle speed increases.



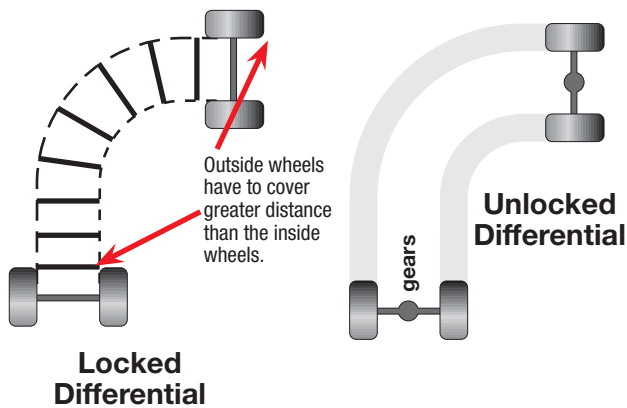
#### WARNING:

**Avoid steep grades until you are an experienced rider.**



## Unlocked vs. Locked Differential

The solid rear axle pays dividends in traction when the going gets tough. Even if one rear wheel loses traction, the other wheel can bite and move the vehicle forward. Two-track vehicles equipped with a differential between the drive wheels cannot move if only one rear wheel loses all traction. The “on demand” feature of the differential allows the slipping wheel to spin, while the one wheel with traction stays dead. This is very similar to a car with one rear wheel spinning on glare ice while the other rear wheel rests motionless on dry asphalt. While the solid rear axle offers a bonus in the traction department, the differential steers much easier and barely tends to plow the front wheel. Some ATVs have a differential which can be locked by throwing a lever, so you can have the best of both worlds.



Use the differential mode for relaxed driving on flat terrain and enjoy easy steering. If the going gets rough, switch to solid mode for best traction. Don't turn real fast when in differential mode. When the inside rear wheel loses a bit of traction, you will lose all power to the other drive wheel, dropping the inside wheel back down and adversely affecting control.

Regardless of rear axle type, the rider must also transfer weight to front and rear as needed. Bend the elbows, slide forward on the seat and lean the torso forward. This adds weight to the front wheel for increased steering traction during slight upgrades or hard acceleration. Severe upgrades or stopping a backwards roll involve rising on the footrests and pulling the handlebars into your thighs while craning the torso forwards so your nose almost touches the front fender.

Sliding way back on the seat increases rear weight bias for improved drive traction and lightens the front end to clear obstacles or skim deep sand. Severe downgrades and extremely poor traction require nearly straightening the knees and elbows, bending over double at the waist and projecting the posterior as far backwards as possible.

**Shifting body weight smoothly and quickly is an important part of ATV riding.**

## Exercise Skills Preview

**All exercises can be practiced after you receive your Idaho Education Certificate.**

The exercises in this book apply to ATVs with *locked differentials*. If your ATV has an unlocked differential be sure to lock the rear axles before practicing the exercises which follow.

**Choosing a practice area**—Choose an open, off-road area (about 100' x 200') away from other riders and free of obstructions. The terrain should be flat for the first few exercises. When you reach the chapter on hills, you should select a hill that is not very steep; it should be easy to climb on foot. Practicing on a hard dirt surface will make it easier for you to learn the basic maneuvers. If you are riding on private property, be sure you have permission from the owner. Do not do these exercises on pavement. ATVs are designed for off-road use only.

## ATV Learning Activity—Self Quiz

**Circle the letter which best completes the sentence.**

- Once the machine is warmed up, you should:  
(a) return the choke to its normal position. (b) place the choke in the ON position.  
(c) keep adjusting the choke.
- In the pre-start routine, the engine stop switch should be set in the:  
(a) OFF position. (b) START or RUN position. (c) NEUTRAL position.
- Once your ATV is ready to start up, make sure that the area you are to ride is:  
(a) clear of obstacles. (b) flat, with plenty of space to ride around.  
(c) off-road only, with the property owner's permission.
- You should keep your feet on the footrests:  
(a) only when starting. (b) at all times.  
(c) when making turns, climbing, descending hills and on rough terrain.
- When mounting an ATV, you should take care:  
(a) not to step on the shifter. (b) not to touch the handlebars. (c) to shift your weight.
- While shifting, you should:  
(a) always close the throttle. (b) gently ease the throttle to one-third of your speed.  
(c) keep the throttle on.

**What to bring**—Bring five objects that you can use as markers. Milk cartons or plastic bottles with sand in them work well. Don't use glass bottles or other breakable items. You should also bring a tape measure to mark distances; or at least measure your stride so you can pace off the distances (one hundred feet usually equals 35 to 40 paces).

**Safety considerations**—Follow instructions exactly for these practice exercises. Also, review these safety rules:

- Wear proper protective clothing.
- Inspect your ATV before you begin. Consult your owner's manual.
- Check the practice area for potential hazards.
- Bring an experienced friend along to help if you have problems, and to critique your progress.
- Don't mix alcohol or other drugs with ATV riding.
- DO NOT carry passengers.
- Pay attention to additional safety tips found throughout this workbook.

### Exercise: Starting and Stopping

#### Starting, Shifting and Stopping

Mount the ATV and check to see that it is in neutral. Set the parking brake. Use the choke if necessary to start the ATV (remember to shut choke off when it is warmed up or you may damage the engine). Release the parking brake. While holding the brakes, shift the ATV into first gear. Release the brakes. Slowly and steadily press the throttle. As speed slowly increases release the throttle and press the shift lever with your left foot to shift back to first gear, then apply brakes steadily and come to a complete stop. **Always keep your feet on the footrests.** Keep your head up and look ahead.

Practice above exercise, shifting to higher gears and then back down again.

### Exercise: Quick Stops

#### Quick Stops

There may be times on the trail when you need to stop very quickly and do not have time to downshift, such as when another ATV or pedestrian is coming towards you on the same trail. By always looking ahead, you will be prepared to stop as soon as possible. By always travelling at safe and reasonable speeds and following the other safety precautions in this book, you will always be in control of the ATV. As soon as you recognize the need to stop quickly, you need to do several things all at once:

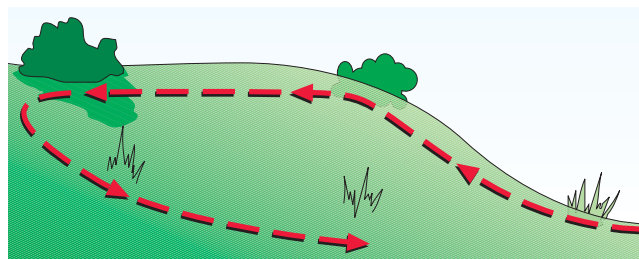
- Center your body to keep the ATV from turning left or right.
- Keep the handlebars straight to keep the ATV from turning.

- Move back as far as possible on the seat. Don't stand up. Keep your body low. Lock your knees and arms to prevent you from going over the handlebars.
- Apply rear brakes only or front and rear brakes evenly. **Do not apply front brakes only.**

Practice this exercise at speeds you feel are comfortable. Do not operate at speeds greater than you can safely stop.

### Exercise: Riding Across a Slope

Riding an ATV across a hill (also called side-hilling or traversing) is one of the trickiest maneuvers you will learn to do on an ATV. Select a hillside that is not too steep and does not have trees, rocks or other obstacles on it. This exercise is similar to riding up and down on the same slope. Approach the hill as you would going up. Turn the front tire across the hill, shifting your weight uphill while keeping your weight on the uphill footrest. Keep your momentum and turn the front tire(s) slightly uphill to keep the ATV from going down. If the ATV starts to tip, lean more into the hill. If you feel that the ATV is going to flip, or if you have lost too much momentum to continue, turn the tire(s) to the left and drive the ATV down the hill. If the ATV starts to flip over, immediately get off on the UPHILL side and let the ATV go.



### Exercise: Going Up and Down

#### Going Up

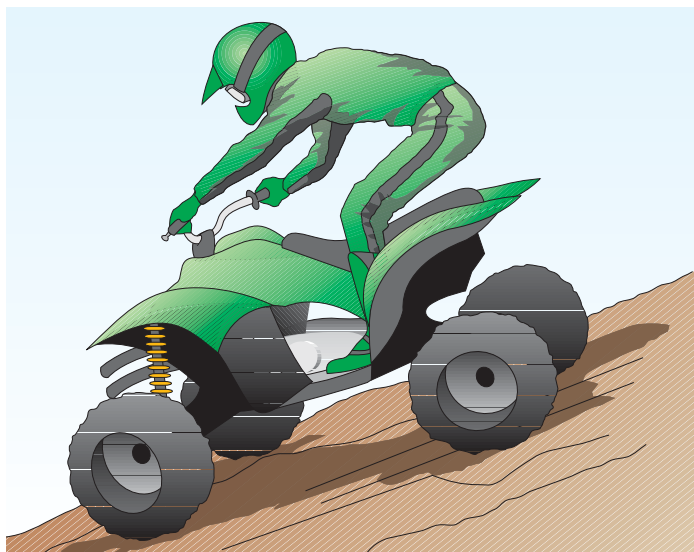
Find a gradually sloping hill to practice this exercise. Position your ATV at least 30 feet from the base of the hill to get a



“running start.” You need to build up momentum in order to make it up the hill, but you should not be going so fast that you cannot stop at the crest of the hill to see what is on the other side. Begin applying the throttle very smoothly. As you drive toward the hill, keep your front tire(s) pointed straight toward the hill. As soon as your front tire(s) hit the bottom of the hill, move your body weight over the front of the ATV by leaning forward. For steeper hills, you may even be standing, leaning way over the handlebars. It is very important that the front tire(s) stay firmly on the ground in order to steer the ATV straight up the hill. As you approach the top crest of the hill, slow the ATV by gradually decreasing the throttle. Do not stop or lose too much momentum before reaching the top. Always use both front and rear brakes before reaching the top. Always use both front and rear brakes to slow down when climbing a hill.

### Coming Down

As you begin descending a hill, move your weight back over the rear of the ATV by sliding way back on the seat. Keep the front tire(s) pointing straight down the hill. Apply the throttle smoothly and use a low gear. Do not coast down the hill. You will maintain much better control of the ATV by maintaining slower speeds and equal use of your front and rear brakes. If you must use your brakes to slow down, use only the rear brakes. When you reach the bottom of the hill, slide back to the center of the seat.



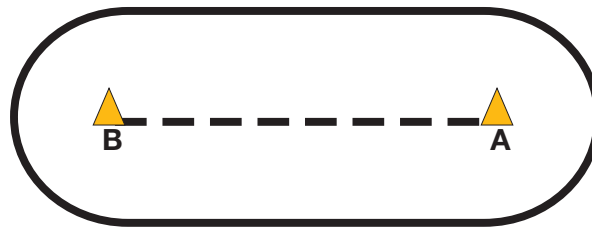
removed  
"Part 3: **Up and Down the Same Slope**

In this exercise, you will be going up and down on the same hillside without going over the top of the hill, like in a horseshoe or upside-down U formation. Begin the exercise as you would start climbing a hill (see previous page). Instead of traveling all the way to the top of the hill, turn the ATV to the left and go back down. As you turn to go down, shift your weight from over the handlebars to the uphill side (the right side) by leaning uphill and putting weight on the right footrest, then as you begin descending, shift your weight over the rear of the ATV. When you reach the bottom, shift your weight back over the center of the ATV. Practice this exercise in the opposite direction also.

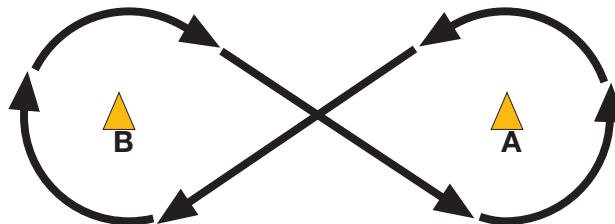
## Exercise: Turning

### Turning

Turning an ATV requires a special weighting and balancing technique. Practice this next exercise in a large oval. Mark the oval using two markers—cones or rocks—and place them approximately 50 feet apart.



Start your ATV on a straight section of the course. As you approach a turn or corner, you must turn the handlebars, lean **into** the turn, and press your weight on the **outside** footrest. Keep your knees in close to the gas tank. Once you have completed the turn, move your weight back to the center of the ATV. Ride around the oval, practicing the turning technique in first gear, then second and third gear. Avoid shifting gears or braking in the corners. Remember to keep your head up and look ahead. Change direction so that you are turning the ATV to the opposite side. Then travel in a figure-eight around the cones so that you must change turning directions.



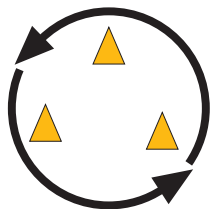
### Slalom

Place five or six markers in a straight line approximately 25 feet apart. You will be weaving in and out of these cones. Start at one end in first gear and drive through the course. You must remember to shift your body weight like you do in a turn as you go around each cone. Try the exercise in second gear, using a short burst of throttle to get around each cone. As you finish one turn and begin to shift your body weight in the other direction, “push-off” with your outside foot on the footrest. This will cause the tires to break loose from traction and spin slightly. Keep your head up. Don’t look down as you pass each cone. Look ahead to the next cone. Be careful not to run over any cones.



**Tight Turns**

Place three cones or markers in a triangle. When you go around each corner, stay as close to the cone as possible. Turn your handlebars and use leaning and weighting to turn. Lean far into the turn. Use a short burst of throttle as you did in the slalom exercise to “spin the tires” and quickly get around the corners. Keep your head up. Do not look down. Look ahead to the next corner as you maneuver around each turn.



## ATV Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- T—F 1. While making quicker turns, lean the upper body to the outside of the turn.
- T—F 2. Always keep your feet on the footrests.
- T—F 3. To turn at low speeds, reduce weight on the inside rear wheel.
- T—F 4. You should brake excessively while cornering so you won't plow ahead.
- T—F 5. If the ATV starts to tip while turning, lean your upper body farther into the turn while gradually reducing throttle and making the turn wider.
- T—F 6. When making turns at low speeds, you should maintain the throttle.
- T—F 7. While turning, it is necessary to look ahead at your intended patch of travel.
- T—F 8. You should apply your brakes smoothly on slippery surfaces.
- T—F 9. The best way to do a quick stop is to shift to a lower gear and apply both brakes.
- T—F 10. Shifting body weight smoothly and quickly is an integral part of the fun of ATV riding.



# Chapter 9

## Intermediate Riding Skills

### Objectives:

- To learn how to climb a hill.
- To understand the method for descending a hill properly.
- To learn the techniques used when traversing a slope.

You have to know the land you're riding on and what your machine will do in order to get the most out of the ride. Choose the places you ride carefully. Use existing designated trails. Stay away from terrain where you really don't belong, like dangerous slopes and impassable swamps. Watch carefully for sharp bumps.

Learn to read the trail as you ride. An expert rider looks well ahead on the trail. Know what's coming; be prepared to react long before you get there. Be constantly alert for hazards. Don't ride in situations beyond your capabilities. Know how to adjust your speed to trail conditions and visibility. An expert rider stays out of trouble not simply by handling the machine well, but by being safe and avoiding risky situations in the first place.

### SPECIAL NOTE:

***Do not let your ATV roll backwards on a hill. If your ATV begins to roll backwards, dismount to the side immediately.***

***DO NOT attempt to back down a hill using the rear brake. Use of the rear brake could cause you to roll over backwards with the machine on top of you.***

## Climbing a Hill

### Remember:

- Some hills are too steep for your abilities. Use your common sense. If it looks too steep, it is.
- Some hills are too steep for any ATV regardless of your abilities.
- Never ride past your limit of visibility—if you can't see what is on the other side of the crest of a hill, slow down until you can get a clear view. The key to being a good hill rider is to keep your weight uphill at all times.

*When approaching a hill, you must:*

- Keep both feet firmly on the footrests.
- Shift the ATV into a low gear and speed up BEFORE ascending the hill.

- For small hills, shift your body weight forward by sliding forward on the seat. For steep hills stand on the footrests and lean well over the front wheel(s) in order to shift as much weight forward as possible. Make sure you have boots with good heels.
- If the hill is steep and you must downshift to prevent stalling, shift quickly and smoothly. Also, don't forget to close the throttle while shifting. This will prevent front wheel lifting.
- If you don't have enough power to continue uphill but you have forward momentum and enough space to turn around safely, turn before you lose speed and then proceed downhill. Keep your weight uphill.



If you are riding up a hill and you lose forward momentum, apply the parking brake before you roll backwards, and dismount to the uphill side. If you are physically able to do so, drag the rear end of the ATV uphill. Stay on the uphill side and never stand downhill of the ATV. Keep dragging it around until the ATV is angled downhill. Remount the ATV while keeping as much of your weight as possible into the hill (uphill). Turn the handlebars downhill, slowly release the parking brake and ride downhill.

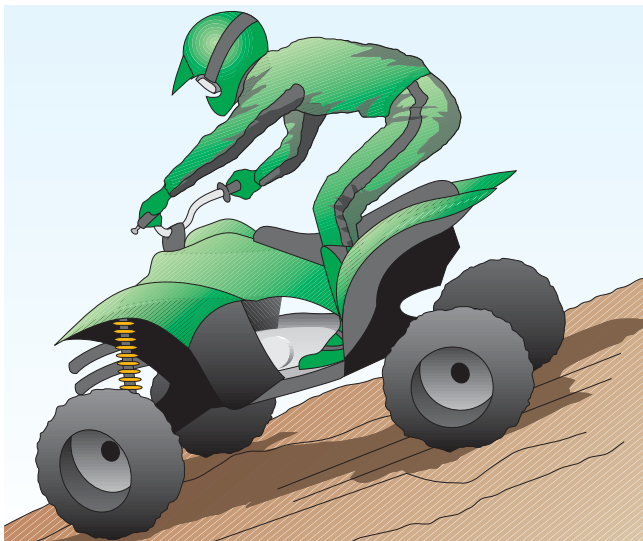
If you cannot drag the rear end of the ATV uphill, set the parking brake, dismount to the left and turn the handlebars fully to the left. As you stand on the uphill side, release the parking brake and pump the handbrake to let the ATV roll backwards. This will turn the ATV sideways to the hill. Reset the parking brake. Turn the handlebars to the right. Staying on the uphill side, release the parking brake and pump the handbrake to let the ATV roll until it is angled downhill. Set the parking brake and remount the ATV on the uphill side while keeping as much of your weight as possible into the hill. Slowly release the parking brake and ride downhill. This should work on most hills, but on a steep hill, remounting is extremely difficult. In this situation, concentrate on keeping as much weight uphill as possible.

If your ATV has a front brake, you can try to stop the ATV using the *front brake only*. Move your body weight forward and use the front brake to slow the ATV to a stop. If the front brake does not slow the ATV, dismount to the uphill side immediately.

## Going Down the Other Side

*When descending a hill you should:*

- Keep both feet firmly on the footrests.
- Point the ATV directly downhill.
- Transfer your weight to the rear, or it could flip forward.
- Shift the transmission into low gear and descend with the throttle closed.
- Apply rear or both brakes to reduce speed. Do not use front brakes only or it will flip forward throwing you off or landing on top of you.



### Traversing a Slope

Traversing a slope means to go across it. Often when a hill is too steep it is necessary to climb it by traversing. The same is true when descending a steep hill—if it's unsafe to go straight downhill then traversing the hill from side to side is necessary.

Traversing a slope is tricky. Use *caution* and avoid traversing slopes where there is slippery or very bumpy terrain. Here are some basic guidelines to follow:

1. Keep both feet firmly on the footrests.
2. Lean uphill. You may want to put weight on the uphill footrest to increase traction, but most importantly, lean your upper body into the hill and steer slightly uphill.
3. When riding on soft terrain, gently turn your wheel(s) uphill to keep your ATV on a straight line across the hill.
4. If your ATV begins to tip, turn the front wheel(s) downhill if the terrain allows you to. If the terrain doesn't allow you to, dismount on the uphill side immediately.

### Tailgating and Towing

When you and your friends are riding single file, remember to maintain a safe speed and allow for time to stop if the vehicle in front of you must brake suddenly.

Check your brakes and brake lights before going on a ride. Do your brake lights work? Do the lights on the other vehicles work? Have you checked?

Do you and your friends know the proper hand signals for turning, slowing down and stopping? Not knowing how to signal or how to understand a hand signal could lead to serious injury. Be sure you know the proper signals. Don't turn a fun trip into an accident.

Your ATV is also a great utility vehicle. It can tow heavy loads a lot easier than you can carry them. But when using your ATV for towing, use the proper equipment and position the load correctly to avoid possible damage to the load and to avoid possible injury to yourself or others.

Use a rigid hitch when towing anything behind your ATV. If you plan to pull a cargo trailer or wagon, use a tow bar and load the cargo to get the lowest possible center of gravity. Secure the load so that it will not shift when you turn or brake.

Remember, when towing a load, use the engine to slow the vehicle. Downshift. Do not apply brakes suddenly. On slippery surfaces, downshift and apply brakes equally (if equipped with dual brakes) and lightly. Always shift to lower gear when descending a hill.

### Environmental Tips: Tread Lightly

'Tread Lightly!' was initially started by the U.S. Forest Service in 1985 in response to the increasing visitor impact in both private and public recreation areas. The U.S. Bureau of Land Management adopted Tread Lightly! shortly thereafter, and in 1990 it was transferred into the private sector in order to increase its effectiveness. Thus, today Tread Lightly! is an apolitical, not-for-profit organization which unites a broad spectrum of federal and state government agencies, manufacturers of recreational products, media, enthusiast groups, and concerned individuals who share a common goal to care for natural resources. Tread Lightly! focuses on increasing public awareness of how to enjoy the great outdoors while minimizing impacts. It emphasizes responsible use of off-highway vehicles, other forms of travel and low impact principles related to outdoor recreational activities.

#### Travel and Recreate with Minimum Impact.

- Stay on designated trails and routes. Do not cut switchbacks or take shortcuts. Resist the urge to create new trails or roads.
- Avoid roads and/or trails that are obviously wet and muddy to minimize trail damage.
- Travel only on land or water areas that are open to your type of recreation.

#### Respect the Environment and the Rights of Others.

- Remember, designated wilderness areas are reserved for travel by foot and horse only.
- Be considerate and honor others' desire for solitude and a peaceful outdoor experience. Keep the noise, speed and dust down.

- When driving, be especially cautious around horses, hikers and bikers. Pull to the side of the road or trail, shut off the engine, and allow them to pass. Always yield the right of way to those traveling uphill.
- If you brought it in, bring it back out. Don't litter on the trail and don't leave anything behind.

### Educate Yourself, Plan and Prepare Before You Go.

- Have the right information, maps, and equipment to make your trip safe.
- As you travel, comply with all signage. Honor all gates, fences and barriers and make sure to get permission before crossing private land.
- Make a realistic plan and stick to it. Let family and friends know where you are going and travel with a group of two or more people or vehicles in case problems arise.

### Allow for Future Use of the Outdoors, Leave it Better Than You Found it.

- Avoid sensitive areas at all times (i.e. stream banks, lakeshores and meadows). Remember to cross streams at 90-degree angles, at fording points only.

- Be sensitive to the life-sustaining needs of wildlife and livestock. Avoid “spooking” any livestock you encounter.
- Thoroughly clean your vehicle and all your gear right after your trip to avoid the spread of noxious weeds.

### Discover the Rewards of Responsible Recreation.

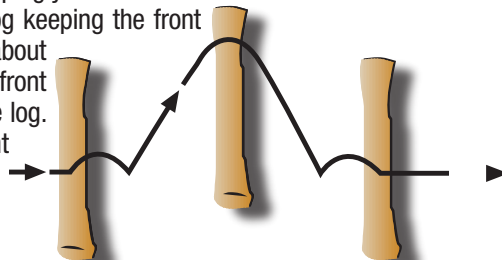
- Respect the environment and other trail users. By using common sense and common courtesy, what is available today will be here to enjoy tomorrow.
- Remember, if you abuse it, you'll probably lose it.

Enjoyment of the great outdoors provides the opportunity to get away from it all. Help preserve the beauty and inspiring attributes of the great outdoors for yourself and generations to follow by recreating responsibly.

Trouble	Probable Cause	Remedy <small>Consult your Owner's Manual for proper procedures.</small>
<b>1. Engine hard to start or does not start at all.</b>	• Engine stop switch off	Turn on.
	• Ignition switch off	Turn on
	• Spark plug fouled	Clean or replace.
	• Empty fuel tank	Fill.
	• Plugged fuel line/filter	Check condition of fuel lines, filter, and tank. Clean or change filter. Clean fuel tank if necessary. Check to see if fuel supply valve is clogged or off. Also check that the fuel cap vent is “ON.”
	• Improper or no ignition	Have your parent check spark plug leads. Check for correct spark plug gap and condition. Check to see that wire is on spark plug.
<b>2. Engine stalls.</b>	• Engine floods	Disengage choke, wait 60 seconds or more. Then depress throttle fully and crank engine. Release throttle immediately after engine starts.
	• Fuel cap vent closed	Open
	• Fuel tank empty	Fill.
	• Fuel supply valve off	Turn on.
	• Air filter or fuel tank vent clogged	Clean according to directions in owner's manual.
	• Spark plug fouled	Clean or replace.
<b>3. Engine does not develop enough power.</b>	• Engine overheated	Too much idling/low speed running, turn engine off to cool down. Cooling fins could be packed with mud or dirt; clean. Engine oil low, replace with sufficient amount. Wrong spark plug; correct.
	• Compression leakage	Have a parent tighten cylinder head. You may have to replace head or base gasket.
	• Clutch slipping	Have a parent readjust clutch cable.
	• Clogged muffler	Consult your dealer.
	• Air filter or spark plug dirty	Clean or replace.
<b>4. Poor handling and hard steering.</b>	• Choke on when engine warm	Turn off.
	• Front, rear tires not properly inflated	Check air pressure and properly inflate tires.
	• Rear tires have unequal pressure	Equalize air pressure of both rear tires.

## Exercise — Rocks, Logs and Bumps

Locate three logs about four to six feet long, no more than 10 inches in diameter. Place them 35 feet apart. You will be driving the ATV over each of these logs, one at a time. Begin at least 25 feet from the first log. Accelerate to second gear. As you approach the log, stand up, keeping your knees and elbows flexible and bent. Lean forward slightly. Approach the log keeping the front tire(s) at a 90-degree angle to the log. When the front tire(s) is about one foot from the log, apply a small burst of throttle just as the front tire(s) touches the log. Keep your momentum as you go over the log. Lean further forward as the rear tires go over the log to prevent being hit by the seat or the rear of the ATV. Keep your head up and prepare to go over the next log.



## ATV Learning Activity — Self Quiz

Circle the letter which best completes the sentence.

- Traversing a hill involves a weight shift: (a) to the downhill side. (b) to the uphill side. (c) forward, to the uphill side and then to the rear.
- When climbing hills you should: (a) speed up before climbing the hill, shifting into a higher gear. (b) speed up before climbing the hill and shift into a lower gear. (c) shift body weight backwards and shift into low gear.
- When going down hills, you should: (a) transfer your weight by leaning forward. (b) transfer your weight equally to both footpegs. (c) transfer your weight to the back of the ATV.
- To prevent front end lifting while climbing a hill, you should: (a) open the throttle while shifting. (b) lean on the uphill footrest. (c) transfer your weight forward.
- When on hills, keep your weight: (a) uphill. (b) downhill. (c) in the center.
- If you can't see what is on the other side of the hill, you should: (a) slow down until you can get a clear view. (b) stop, dismount and check it out first. (c) both a & b, depending upon how steep the hill is.
- If you have to dismount when climbing a hill, you should always dismount on the: (a) downhill side. (b) uphill side. (c) to the rear.
- When riding over an obstacle: (a) lock your knees and elbows. (b) go as fast as possible. (c) stand on the footrests and keep your knees and elbows flexed.
- Which of the following would be the right thing to do when trail riding: (a) ride off the trail to see how many plants you can run over. (b) chase wildlife. (c) be courteous and stay on approved trail. (d) get angry with horseback riders because they should not be on the trail.



# Chapter 10

## Different Terrains

### Objectives:

- To learn precautions for winter riding.
- To realize there are differences in handling an ATV on different terrains.
- To learn how to ride through water safely.

When you feel you have safely mastered skills for climbing and descending hills and traversing slopes, the next task is to learn to be totally aware of the types of terrain in which you can ride. In this chapter we will discuss various types of terrain, from riding in water and mud to dune and snow riding. Your state may not have all of these terrains, but it is wise to know how to ride through them safely.

### Reading the Lay of the Land

Always look well ahead of you by scanning the trail before you. Keep your eyes moving, looking where you want to go. Sometimes people have a tendency to focus on a point just ahead of the front wheel(s). If an obstacle comes up, there is not enough time to avoid it. Instead of focusing on the road ahead there is a good rule of thumb to follow.

**At any given speed, you should be looking that many yards ahead. For example, at 30 m.p.h. you should be looking 30 yards ahead.**

By looking far enough before you, you'll be able to pick the best "lines" over and around obstacles, knowing when to slow down. If you approach a hazard, you will not need to look directly at it. Instead, by having scanned ahead, you will be aware of its presence as you avoid it. You should always be scanning ahead for the next obstacle.

There are good phrases to remember when reading the lay of the land. They are: *scan the area, evaluate what could/will happen, and execute your decision to avoid the hazard.*

### Riding Through Water and Mud

Your ATV is designed to ride in water and mud, but there are some precautions that must be taken. When riding through water you should keep your feet firmly on the footrests. Never cross any stream with deep water because your tires may float, making it difficult to maintain control. Smaller ATVs can be submerged up to about eight inches; larger ATVs up to twelve inches. Always check your owner's manual to find out the maximum depth your ATV can travel in.

Choose a course through a stream where both banks have a gradual incline. Try to cross at a known ford, or where you personally know it is safe. Safely determine the depth of the water or mud before riding through it. A clue to look for is the grass height or

## SEE

You should know the use of the SEE process as a system for safe riding strategies, and how you can apply them in different situations.

<p><b>SCAN</b></p>	<ul style="list-style-type: none"> <li>• Look far ahead (sight steering)</li> <li>• Don't focus on any one obstacle (target fixation)</li> <li>• Visible and hidden</li> <li>• Surface composition</li> <li>• Other trail users, wildlife</li> <li>• Stationary objects</li> </ul>
<p><b>EVALUATE</b></p>	<ul style="list-style-type: none"> <li>• Handling</li> <li>• Collision or fall</li> </ul>
<p><b>EXECUTE</b></p>	<ul style="list-style-type: none"> <li>• Pick a good line</li> <li>• Good traction</li> <li>• Visibility</li> <li>• Minimum of obstacles</li> <li>• Adjust speed</li> <li>• Adjust technique</li> </ul>

rocks emerging from the surface. Use a stick to help determine depth. Be careful of swift moving water.

Proceed at a slow, steady speed to avoid submerged obstacles and slippery rocks. Dry the brakes after crossing by applying light pressure to them while riding until they return to normal power.

Avoid water crossings where you may cause damage to stream beds, fish spawning grounds, or erosion to the banks of the stream. By this precaution you are not only ensuring your own personal safety, but are preserving the environment for others to enjoy as well.

Don't ride through too fast. Water and mud slow the vehicle very quickly and could cause you to lose control if you approach too fast. Try a moderate speed with higher than usual RPMs.

After running in the water, be sure to drain the trapped water by removing the drain screw. Please refer to your owner's manual for the exact position of the drain screw. Wash the machine with fresh water if you have driven your ATV in sea water.

Body positioning is very important. At times you may need to take weight off the rear by leaning far forward, while other times you may need to sit right over the rear to gain traction. You may also need to rock the vehicle from side to side to work the ATV out of a hole. By scanning ahead, you will rarely need to look directly in front of your front wheel(s).

When traction is low as in mud or snow, allow the tires to rotate at a speed that allows them to "bite." Don't rev the engine up thinking you'll go faster—you won't. Watch for mud buildup.

## Riding in Snow

TITLE 67 - STATE GOVERNMENT AND STATE AFFAIRS - CHAPTER 71 - RECREATIONAL ACTIVITIES 67-7112. GROOMED SNOWMOBILE TRAILS. Any all-terrain vehicle operating on groomed snowmobile trails during the winter snowmobiling season when the trails are groomed shall be registered as a snowmobile under the provision of section 67-7103, Idaho Code. Counties shall have the option to allow all-terrain vehicles, if registered, to use snowmobile trails in the county.

ATVs are fun in the snow. Riding in snow requires that you learn to correctly interpret snow conditions to pick the best riding areas. There is less traction than in dirt, so start slowly and progress gradually until you know the limits.

On firm snow you can have a great time and cause no problems. In soft snow, under the wrong conditions, your ride can be a disaster. ATVs do not work well in slushy snow. Be aware that a frozen trail may be nice at the start of a ride in the morning, but that by early afternoon when you may be many miles out, the trail could warm from the sun and become nearly unusable by ATVs.

Know the weather conditions and the weather forecast. Having to push your ATV through snowdrifts is no fun. Careless winter riding can spoil things for you and everyone else. Snowmobilers can get pretty upset and rightfully so when ATVs run in slushy snow, and ruin their carefully groomed trails. Landowners get upset when they have given permission for snowmobile trails and find others on them.

**SPECIAL NOTE:**  
Know the avalanche conditions.  
Visit [www.avalanche.org](http://www.avalanche.org) for conditions and take an avalanche awareness course.

You can prevent these problems however. Choose the snow conditions carefully. Know who owns the land you ride on. Get to know your local snowmobilers. If there are snowmobile clubs in your area, get to know them, too. By working together you can help to preserve riding opportunities for you and fellow outdoorsmen.

You will also need to change your transmission oil to a lighter weight when you ride in the snow. If your ATV is water cooled, keep antifreeze in it. Again please refer to your owner's manual for manufacturer's recommendations.

**ALWAYS LEAVE A HEADLIGHT AND TAIL LAMP ON AT NIGHT**

When night riding, be certain your tail lamp and headlight are operating. Never stop just before or after a turn on the trail. Give yourself plenty of visibility to other riders. Leave a light on if you stop in the trail. If you want to ride across lakes that are frozen, be sure to check the ice thickness. There should be a minimum of 8" of ice present to support the weight of you and your ATV.

**RIDING ON ICE IS NOT RECOMMENDED**

## Trail Riding

Be careful of going from a sunny to shaded trail. Rocks or ruts may "hide" in the shade and your eyes cannot adjust quickly enough to see them. Gradient lenses will help this condition. Most properly designed trails are "outsloped" to allow rain to run off the surface. This means your ATV may be more "tippy" and you will especially need to keep your weight shifted into the hill.

**NEVER RIDE ON SINGLE TRACK TRAILS.  
USE ONLY TRAILS DESIGNATED FOR ATVs.**

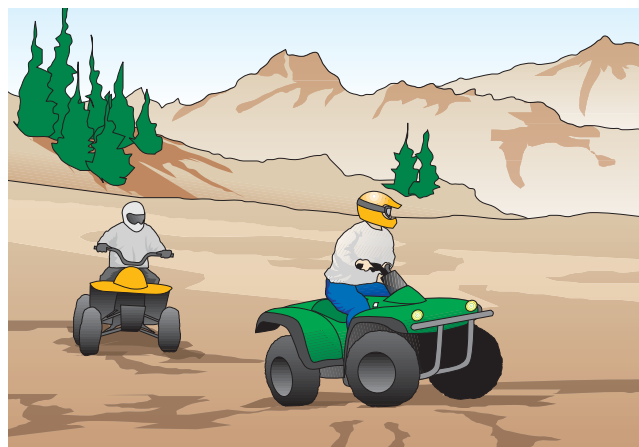
Plan out your ride. Don't take a trail you know you can't make. Always ride within your limits. Remember that one short difficult section on an otherwise easy trail would put the trail beyond your capabilities. Standing up on the footrests slightly will aid your ability to take on rough terrain. Always be prepared to meet oncoming traffic, as most trails allow two-way travel. Maintain a safe distance between your ATV and those of others in your group. Following too closely can cause rear-end collisions.

Night riding requires extra caution. Night time is the most dangerous time for riding your ATV. Be sure your lights work properly. Don't overrun your lights! Slow down and avoid unfamiliar terrain. Carry a flashlight.

## Speed and Handling

No matter how experienced you are, an ATV can only go so fast over rough terrain. Never operate your ATV at a speed that is not reasonable for the conditions. Many operators who have been involved in accidents claim that they "lost control" of their vehicle. What this really means is that they were going too fast for the conditions to maintain control of their vehicle.

When you drive too fast, you risk the chance of crashing and hurting yourself or hurting someone else. If other people are around, you also give the impression of being a reckless driver. Your reckless actions reflect on all ATV operators and lead to a bad image of ATV riders. Being a "good rider" means being safe, responsible and knowing your limitations, as well as the limitations of your vehicle.



## Dune Riding

Dune riding offers great thrills and fun, but certainly safety precautions are necessary to fully enjoy this type of terrain. Make certain that your ATV is equipped with an antenna flag so others can see you better. The antenna and safety flag should be at least ten feet from ground to tip (with the tip lighted at night).

Assume that wet sand is soft and could be quicksand. Do not attempt to cross unless it is a known, safe place.

Keep off vegetation because it helps stabilize the dunes and may hide an obstacle or hazard. Be aware of “razorback” dunes which have a gradual incline on one side (usually the windward side) and nearly a sheer drop on the other side (leeward). Dunes shift in size and shape. Never assume that everything is the same from one visit to the next.

Be extra careful when the sun is directly overhead because no shadows are created. Sunny days produce a three to four inch heat haze on top of the sand that may create the illusion that the sand is level where large bumps and holes exist. Travel slowly under these conditions. Night riding demands extra caution. The best bet is to *slow down*. When stopping for a rest, always park at the crest of a dune.

## ATV Learning Activity— Responsibility Discussion

**The chart which follows asks questions about the laws in your state. Your instructor will help you find the laws to fill in the chart. Make sure you know these laws before you ride your ATV.**

**Check “Yes” or “No” for each question. If you answer yes, fill in the explanation under “Details.”**

In Your State	Yes	No	Details
1. Is there an agency in your state government in charge of ATV riding?			
2. Is registration of your ATV required?			
3. Is it illegal to cross roads?			
4. Is there a law about chasing animals on your ATV?			
5. Are helmets mandatory when riding an ATV?			
6. Is there a law concerning alcohol or drug use when ATV riding?			
7. Does the law require youngsters aged 8-15 to take a safety training course before they can operate on public land?			
8. Are headlights and taillights required on an ATV?			
9. Are brakes required on an ATV?			
10. Are you required to report an accident if there is personal injury?			

## ATV Performance Test

If you would like to test yourself to see how your skills are developing, try our ATV Performance Test. Always perform the test with an observer who can point out things you need to work on.

The course used for the ATV Performance Test should be a dry, flat, off-road surface, free of obstacles. You will also need an obstacle at least 4" x 4" x 4', and five traffic cones or objects to use as cones.

Add other performance tests on braking and turning if you like, to further test your skills.

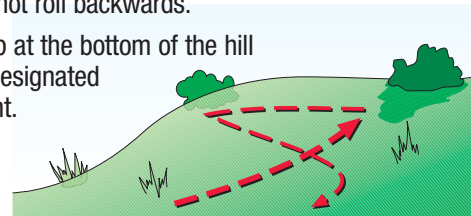
Test # Activity	Pass/Fail
1. Check for all safety clothing	
2. Perform "pre-ride" inspection	
3. Start ATV using "start-up" procedure	
4. Show proper sitting position	
5. Show proper standing position	
6. Show proper hill climbing position	
7. Show proper hill descending position	
8. Show proper traversing left position	
9. Show proper traversing right position	

If you passed all nine tests, proceed to test 10.

### Test 10

Turning and Stopping on a Hill—Begin going uphill toward the practice area. Start from 25' away.

1. Keep weight uphill.
2. Do not roll backwards.
3. Stop at the bottom of the hill at designated point.



### Test 11

Slalom—Using the cones in the center of the course, you will zigzag through them without knocking them down.

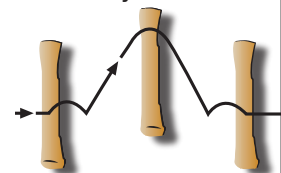
1. Do not hit cones.
2. Do not skip cones.



### Test 12

Obstacle—Place the obstacle in a clear area, free of cones, and approach it at an angle. Allow no more than five feet from the starting point to where you encounter the obstacle.

1. Do not plow.
2. Do not hang up on the obstacle.



## ATV Learning Activity—Self Quiz

Decide whether each statement is true or false. Circle T or F.

- T—F 1. Always have a headlight and taillight on while riding at night.
- T—F 2. ATVs work very well in slushy snow conditions.
- T—F 3. The best place to park your ATV when stopping for a rest is in the middle of the trail.
- T—F 4. By looking far enough ahead, you should be able to pick the best "lines" over and around obstacles.
- T—F 5. Larger ATVs are designed to ford streams and creeks up to twenty inches in depth.
- T—F 6. When riding in water, one good method to work your ATV out of a hole is to rock the vehicle from side to side.
- T—F 7. Gradient lenses are good for such trail conditions as moving from shaded to sunny areas.



## Chapter 11 Weed Awareness

### Objectives:

- To learn what you can do to stop the spread of noxious weeds.
- To learn how to report noxious weed infestations.

### ATTENTION RECREATIONISTS— WE NEED YOUR HELP!

Be on the lookout for Noxious Weeds!

Noxious weeds are non-native invasive plants that may be impacting the land or wildlife in your favorite recreational area.

You can help stop the spread of noxious weeds in Idaho by doing a few simple things:

- Staying on designated trails away from weed infested areas
- Cleaning your machine after riding in the wilderness
- Flushing the undercarriage of your ATV after riding
- Using Certified Weed Free Forage and Straw for pack animals
- Cleaning clothing gear, camping gear and pets before leaving a wildlife area

To report noxious weed infestations try to first map the area with a GPS and then call your County Weed Superintendent's office. To learn more about noxious weeds in Idaho log on to the Idaho Weed Awareness Campaign's website at [www.idahoweedawareness.org](http://www.idahoweedawareness.org).



**CLEAN YOUR ATV AFTER RIDING!**

# Part 3 Parents, Youngsters, and ATVs

## Chapter 12 Parents, Youngsters, and ATVs

### Objectives:

- To determine your youngster's readiness to ride an ATV.
- To learn pre-operating instructions.
- To learn operating procedures.
- To learn the readiness checklist.

### Important Note to Parents

Once your youngster is ready to learn to ride, YOU must be familiar with the ATV. You will be serving as teacher, coach and safety supervisor for your youngster. You must know the controls, handling characteristics, maintenance requirements and proper riding techniques. Read and understand the owner's manual, the hang tags, and labels provided with the vehicle. Make sure that the ATV to be ridden is one that is recommended for use by your youngster's age group. Review all instructions, requirements and warnings with your youngster. Take the time to review Idaho's ATV laws and regulations.

We know that you, as a parent, will have your youngster's safety foremost in mind. ATVs are not toys. Serious injury can result from improper use of All Terrain Vehicles. Your youngster's safety will depend on you taking a "safety first" approach to ATV riding at all times.

### Readiness Guidelines

The first important decision you will need to make concerning your youngster and ATVs is whether your youngster is ready to ride.

Physical size, strength, coordination, visual perception, emotional maturity, and the ability to reason and make good decisions are important.



There is no sure way to predict whether your child will be able to ride an ATV safely. However, the following guidelines can help you determine your youngsters readiness to ride. Remember, only parents can decide if their youngster has the capabilities and qualities to safely operate an ATV.

ATV SIZE	MINIMUM AGE
Under 70cc	6 years and older
70-90 cc	12 years and older
Over 90 cc	16 years and older

### Physical Development

Physical size and ability are important considerations. To help determine whether a youngster is big enough for a particular ATV, have him/her stand up on the footrests and grasp the handgrips. While the youngster holds this position, check that there is at least three inches of clearance between the ATV seat and the youngster's "seat of the pants." A rider needs at least three inches of clearance so he/she can stand up for balance and comfort, and to shift his/her body forward, backward and from side to side.

Also make sure your youngster can comfortably reach and work all the controls. For example, can he/she turn the handlebars all the way to the right and left? Can he/she easily use their feet to work the brake pedal and gearshift lever? Can he/she operate the throttle and brake levers while they hold onto the handgrips? If not, the youngster may not be able to maintain balance and control and is not physically ready to ride this ATV.

Athletic ability is another consideration for riding an ATV. Generally speaking, your youngster should be good at riding a bicycle before he/she gets on an ATV.

Can your youngster judge speeds and distances while riding a bicycle and react with proper hand and foot actions? Anyone who does not have good coordination, balance and agility is not ready to ride an ATV.

### Social/Emotional Development

How a youngster behaves in a social setting can be a sign of social/emotional development. A youngster needs to know about and understand rules. Certain rules are necessary for

the safe operation of any vehicle. Youngsters must be willing to follow rules. A good example is a youngster who obeys rules set by parents. A youngster who does not follow rules is not ready for an ATV.

One indicator that youngsters are ready to ride an ATV is when they demonstrate safety-conscious attitudes and are aware of possible injury from reckless ATV operation. If the youngster has a habit of recklessness or is often involved in accidents while using bicycles or skateboards, the youngster is not ready to ride an ATV.

### Reasoning and Decision-Making Ability

Youngsters should have some knowledge about what may happen if something is done wrong. They must understand that unsafe actions can result in injury. An example of this is knowing to look both directions before crossing a street. The ability to make good decisions relates to a youngster's ability to reason. When presented with a problem, the youngster should be able to come up with a sensible answer. Ask your youngster to tell you what causes accidents and injuries. Your youngster needs to be able to tell what causes accidents and how to avoid them. In general, a youngster should understand that he or she can get hurt as a result of making poor choices.

### Visual Perceptions and Motor Development

Visual perception and motor skill development is how well a youngster sees and how vision is used with other physical movements. In other words, can a youngster see and react with proper hand, foot and body movements?

Several types of sight-ability characteristics are important. The ability to see to the sides while looking straight ahead is called peripheral or side vision. You can determine a youngster's side vision by having him or her look straight ahead while you move objects to the side. The youngster should be able to see objects 90 degrees to the side while looking straight ahead. Rider awareness and safety improves with good side vision.

Being able to judge distance is another visual skill helpful when operating an ATV. Is your youngster able to tell how far one object is from another, or which of two objects is closer? ATV riding requires a person to judge distance and react properly.

Being good at playing video games, or being able to hit a baseball, for example, are good signs that a youngster's eye and hand movements are fairly well coordinated.

In summary, you must consider many things before you decide to put your youngster on an ATV. There is no exact formula to use in making that decision. The Readiness Checklist can assist you with some points to evaluate. If you are not able to check off most of the statements, your youngster is probably not ready to ride an ATV.

## Steps for Safe and Responsible ATV Riding

Once you determine that ATV use is proper for your youngster, it is time to prepare yourself to be a good ATV teacher and supervisor.

### STEP 1:

#### **Educate yourself about ATV safety and proper riding techniques.**

You must learn as much as possible about ATVs in general and especially your youngster's ATV. You must be qualified to instruct and supervise your youngster. This means that you will need to understand features of the ATV and the proper riding techniques. The best source of reference is the owner's manual supplied with the ATV. Read the owner's manual before you begin to instruct your youngster about ATV safety. Pay particular attention to the warning labels and stickers on the ATV. For a "hands-on" learning experience, consider taking the Idaho ATV Rider Safety Course.

### STEP 2:

#### **Teach your youngster safety and proper riding techniques.**

Teaching your youngster ATV safety is a step-by-step process. It begins with safety rules and moves to actual riding procedures. Since youngsters learn at different rates, it will be up to you to set the pace of your youngster's progress. At some point you may decide that he or she is not ready to ride an ATV.

### STEP 3:

#### **Avoid unsafe situations through close supervision.**

ALWAYS closely supervise your youngster's riding. This is needed even if your youngster has learned and mastered the rules and skills of safe ATV riding. Youngsters can get tired easily and become careless. They do not always see everything that is important around them. Your close supervision and good judgment are important.

### STEP 4:

#### **Let's start riding!**

- For a "hands-on" learning experience, consider taking the Idaho ATV Rider Safety Course.
- Use the activities and lessons within this guide to review: protective gear and clothing, mastering the controls, naming the parts of his/her ATV, pre-ride check (TCLOC), and starting the ATV using BONE-C.

- Mounting and dismounting. Correct riding posture helps your youngster operate the controls. Proper straight-line riding posture includes:
  - Head and eyes up, looking well ahead.
  - Shoulders relaxed, back straight.
  - Elbows bent, slightly out and away from the body.
  - Hands on the handlebars.
  - Knees in.
  - Feet on the footrests, toes pointing straight ahead.
- Learning area/riding area: the best place for learning is a level area 100' x 200' that is free from obstacles such as rocks, stumps or holes. The learning area may have a loose or hard dirt surface. A grassy surface is also acceptable. It should not have two different surfaces. **Under no circumstances should the surface be concrete or asphalt.** ATVs are not designed to be used on paved surfaces because pavement may seriously affect handling and control. Be sure there is room enough to maneuver, you have checked with local land managers and are in a designated ride area and that no other riders are close by.

## Final Note to Parents

We hope this section has helped you and your youngster take a "safety-first" approach to ATV riding. ALL ATV riders must use good judgment and be responsible. It is up to YOU to set a good example for ATV safety. You must help your youngster to ride sensibly and safely at all times.

Be sure that your youngster rides slowly over unfamiliar terrain to locate and avoid bumps, holes and other possible obstacles. You should check the area first.

It is also recommended that you and your youngster read the information in the owner's manual. To find out more about rider education and safety programs offered by the Idaho Department of Parks and Recreation, visit our website at [www.parksandrecreation.idaho.gov](http://www.parksandrecreation.idaho.gov) or call 208-334-4199.

## Answers to ATV Learning Activities

### Self Quiz, page 11

1. F      5. T
2. F      6. T
3. T      7. F
4. T

### Self Quiz, page 16

1. c (a helmet)
2. c (Idaho Department of Parks and Recreation)
3. e (Tractor)
4. c (Safety flag)
5. d (All of the above)
6. a (wind chill factor)

### Name the Parts, page 17

1. b (parking brake)
2. g (choke)
3. j (headlight)
4. f (gas tank)
5. h (pull starter)
6. i (foot shifter)
7. k (footrest)
8. c (ignition switch)
9. d (engine stop switch)

10. a (handlebar front brake lever)
11. l (rear brake pedal)
12. e (throttle lever)

### Self Quiz, page 23

1. a (return the choke to its normal position)
2. b (START or RUN position)
3. c (off-road only, with the property owner's permission)
4. b (at all times)
5. a (not to step on the shifter)
6. a (always close the throttle)

### Self Quiz, page 26

1. F      6. T
2. T      7. T
3. T      8. T
4. F      9. T
5. T      10. T

### Self Quiz, page 30

1. b (to the uphill side)

2. b (speed up before climbing the hill and shift into a lower gear)
3. c (transfer your weight to the back of the ATV)
4. c (transfer your weight forward)
5. a (uphill)
6. c (both a & b, depending upon how steep the hill is)
7. b (uphill side)
8. c (stand on the footrests and keep your knees and elbows flexed)
9. c (be courteous and stay on approved trail)

### Self Quiz, page 34

1. T      6. T
2. F      7. T
3. F      8. F
4. T      9. T
5. F



# OHV Education Course Registration

Complete form and mail to: Idaho Parks and Recreation OHV Education, 5657 Warm Springs Ave, Boise, ID 83716

Please list the names of all children in the same household who need training. Training is required for young operators 6 years old or older who do not have a valid drivers license. Each student will have up to one year, from the date their registration is received, to complete the course.

**Last Name:**

(Please indicate if any students have a different last name)

First Name	Age	Birth Date	Sex	Eye Color	Hair Color	Social Security #	(check types wanted) <input type="checkbox"/> ATV <input type="checkbox"/> Off-highway motorcycle <input type="checkbox"/> Snowmobile
First Name	Age	Birth Date	Sex	Eye Color	Hair Color	Social Security #	(check types wanted) <input type="checkbox"/> ATV <input type="checkbox"/> Off-highway motorcycle <input type="checkbox"/> Snowmobile
First Name	Age	Birth Date	Sex	Eye Color	Hair Color	Social Security #	(check types wanted) <input type="checkbox"/> ATV <input type="checkbox"/> Off-highway motorcycle <input type="checkbox"/> Snowmobile
First Name	Age	Birth Date	Sex	Eye Color	Hair Color	Social Security #	(check types wanted) <input type="checkbox"/> ATV <input type="checkbox"/> Off-highway motorcycle <input type="checkbox"/> Snowmobile
Mailing Address: Street or PO Box _____ City _____ State _____ Zip _____							Day Phone:  Business Phone:
County in which you live:			Parent or Guardian Name:				
Desired Date:							
In Which County: (1st Choice):				OR:(2nd Choice):			

\*There are three different skills modules (ATV, Off-highway Motorcycle, and Snowmobile) offered. A student is only required to take the written test once for ATV and Off-highway motorcycle and a separate test for Snowmobile.

Please indicate if any of the above students have special needs (hearing impairment, etc) which would require accommodation: \_\_\_\_\_

I certify that the above named are at least 6 years old, and request enrollment of the above students in the Idaho OHV Education Program.

\_\_\_\_\_  
Parent or Guardian's Signature

\_\_\_\_\_  
Date

<b>FOR OFFICE USE ONLY:</b>
Received: _____
Home Study Course Sent: _____
Post Card Sent: _____

# IDAHO STATE PARKS AND RECREATION OHV EDUCATION COURSE OFF-HIGHWAY MOTORCYCLE (OHM) - FACT SHEET

The Idaho Responsible Rider Course teaches basic riding skills through a building block style instruction format along with State laws and responsibilities, environmental issues and safety equipment. Each class consists of two parts a home study course with a written test administered before the four-hour hands-on riding course focusing on your particular type of Off-Highway Vehicle, OHV, and how to safely operate it. The course is designed for children 6 - 16 but all are welcome to attend.

## WHAT ARE THE REQUIREMENTS?

Each OHV must have current registration, and each rider must have the right safety gear as outlined in the Student Reference Guide. A parent or guardian is required to stay with their child/children under 12 during the entire class. Parents or guardians of children over the age of 12 are encouraged to stay during the entire class. Each student must have pass a knowledge test prior to the skills portion and their own OHV to use during the class. Because we will be riding together as a group, sharing of OHV's will not work.

IDPR will allow children that "fit" an OHM to participate in the skills portion of the course.

A student **must** be able to straddle the OHM with a slight bend in the knees while the feet on the foot rests and have a slight bend at the elbows while the hands are on the hand grips.

The IDPR class size will be:

Limited to four (4) students only ages 6 - 11

Limited to six (6) students only ages 12 - 16

Limited to ten (10) students only ages over 16

## HOW MUCH DOES IT COST?

Currently there is no cost associated with Idaho's OHV Education Courses.

## WHAT SHOULD I BRING?

You **must** wear the proper riding gear at all times during training. Bring the following:

DOT-approved motorcycle helmet	Goggles or face shield	Over-the-ankle boots
Full finger gloves	Long pants	Long sleeve shirt or jacket

## SOUNDS GREAT! HOW DO I ENROLL?

Call the Idaho Department of Parks and Recreation at 1-208-334-4180 extension 286 or complete an online registration at [www.parksandrecreation.idaho.gov](http://www.parksandrecreation.idaho.gov).

# Glossary of ATV terms

## A

**ANTENNA FLAG**—A 10-foot long fiberglass pole topped with an orange triangular flag fixed to an ATV to improve visibility in very hilly terrain, such as sand dunes. Also referred to as “whip antenna.”

**AXLE**—The drive rod on which the rear wheels turn.

## B

**BODY ENGLISH**—A deliberate shifting of body weight and position by the ATV rider used to accomplish ordinary ATV maneuvers.

**BRAKES**—The parts of an ATV which allow the operator to slow down or stop the machine.

**BRAKE LEVER**—The hand brake located on the left handlebar. On some ATVs the left handle is the clutch lever.

**BRAKE PEDAL**—The foot brake which is operated by the right foot.

## C

**CABLES**—Heavy insulated wires. There are two kinds: mechanical and electrical. Brake cables are mechanical. The headlamp cable is electrical.

**CARBON MONOXIDE**—A poisonous gas which is also colorless and odorless. It comes out of the exhaust pipe of an ATV when the engine is running. Breathing carbon monoxide can be fatal.

**CARBURETOR**—Device which feeds the engine the proper mixture of fuel and air.

**CHOKE**—A device which alters the mixture of gasoline and air supplied to the engine to provide the gassy mixture required for cold engine start-up.

**CLUTCH**—Device attached to the gear change pedal which momentarily disconnects the spinning engine from the gears so that the gears may be shifted or changed.

## D

**DRIVE CHAIN**—The chain which connects the engine to the rear axle to give an ATV drive or forward motion.

## E

**ENGINE STOP SWITCH**—Switch used to stop the engine quickly, without removing the hands from the handlebars.

**ENVIRONMENT**—All natural things in our surroundings including air, land, water, wildlife, plant life and people.

**EYE PROTECTION**—Goggles or a shatter resistant shield worn over the eyes while riding to protect against dust, flying insects, small branches or other debris. Such eye protection is also effective against bright sun or snow-glare conditions.

## F

**FLOODING**—A condition which occurs in the engine when the cylinder fills with raw gas and fails to start. This condition usually resolves itself if the engine is allowed to sit quietly and drain.

**FOOT REST**—Horizontal bar below the engine on which an ATV operator should rest his feet while riding.

**FUEL VALVE**—A valve, usually hand operated, with an on, off and “reserve” position, which controls gas flow to the carburetor

## H

**HANDLEBAR**—The metal bar attached to the front end of the ATV which you hold with one hand at each end. Many of the controls for the ATV are located on the handlebar.

## K

**KNOBBIES**—Tires with square rubber protrusions or knobs for good off-highway traction.

## O

**OFF-ROAD** or **OFF-HIGHWAY VEHICLE**—Any vehicle, including ATVs, which is restricted by law from operating on public roads reserved for general motor vehicle traffic.

## P

**PARKING BRAKE**—A mechanism located on the handlebar which holds the brake so the ATV cannot roll.

**PLOWING**—A condition in which the front wheel(s) turn, but the ATV continues to go straight ahead, causing the front tire(s) to slide.

**PSI**—Refers to air pressure in the tires and stands for Pounds per Square Inch, the American unit of air pressure.

## R

**RAZORBACK** (see Slipface)—A dune with a sharp edge. One side has a gradual slope, the other has a steep, sharp incline.

**RECOIL STARTER**—The pull cord mechanism used to start many ATVs.

**READING THE TERRAIN**—Looking well ahead during off-road riding, to anticipate hazards, and choose the best line of travel.

**RPM**—Revolutions per minute, used to describe the engine speed.

## S

**SAFETY**—The prime thing to aim for when operating an ATV. Safe operation of an ATV includes maintaining your vehicle in good condition, wearing the recommended protective clothing, plus staying alert to terrain/trail conditions while riding.

**SHIFT PEDAL**—On those ATVs equipped with a shift pedal, it allows the operator to change gears to suit the needs of the terrain. The shift pedal is operated by the left foot.

**SHOW-OFF**—A careless, thoughtless rider who operates an ATV without regard for the personal safety or private property of others—usually for the main purpose of getting attention.

**SLIPFACE**—A hazard peculiar to sand dunes. A very steep slope that occurs on the side of the dune opposite to the prevailing wind. Generally it is hard to see from the windward side of the dune.

**SPARK PLUG**—A user-servicable part within the engine which provides the spark for ignition of the gassy mixture in the cylinder.

**SWITCHBACK**—A sharp curve that leads into a sharp curve in the opposite direction.

## T

**TAILPIPE**—That part of the exhaust system which expels waste gases.

**THREE-WHEELER**—One type of ATV.

**THROTTLE LEVER**—The lever operated by the right thumb which controls the engine speed.

**TRACTION**—Tread friction between the ground and the tires.

**TRANSMISSION**—The series of gears, shafts, belts, chains and sprockets used to transmit motive force from the engine to the wheels.

## W

**WEIGHT TRANSFER**—The temporary change in weight distribution which occurs during maneuvering.



P.O. Box 83720, Boise, ID 83720-0065  
208-334-4199  
[www.idahoparks.org](http://www.idahoparks.org)



Utah State Parks and Recreation  
1594 West North Temple #116, Salt Lake City, UT 84114  
1-800-ATV-RIDE  
[www.stateparks.utah.gov](http://www.stateparks.utah.gov)



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