ATV Buggy - Safety Guide & Basic Riding Tutorial

NOTE: ALL ENTRANTS IN THE MOTOR SPORTS FORMULA: 1ST ATV SAND BUGGY CHAMPIONSHIP 2006 HAVE TO READ THIS SAFETY GUIDE AND BASIC RIDING TUTORIAL IRRESPECTIVE OF THEIR ATV RIDING SKILL LEVEL. AN ENTRANTS' SIGNATURE ENSURES THAT HE/SHE HAS READ AND UNDERSTOOD THIS DOCUMENT.

TIPS FOR THE ATV RIDER

If you have a youngster who is about to ride an ATV, there are special considerations that you should keep in mind. Although a child may be the recommended age to ride a particular size ATV, not all youngsters have the strength, skills, or judgment needed to operate an ATV. You should supervise your youngster's operation of the ATV at all times, and should permit continued use only if you determine that your youngster has the ability and judgment to operate the ATV safely.

Remember that riders under 16 years of age should be supervised by an adult. In addition, follow the ATV Model Size/Minimum Age information listed below. Do not ride an ATV that is not recommended for your age group.

ATV Model Size	**Minimum Age**
Under 70cc	6 years and older
70 – 90cc	12 years and older
Over 90cc	16 years and older

Be Cautious… ATV's are not toys. Serious injury can result from improper use of ATV's, but with preparation and practice, you can safely develop and expand your riding skills. Riding ATV's can be an enjoyable form of outdoor recreation when done properly.

Remember, it is important to carefully read and follow the instructions and warnings contained in the ATV owner's manual and labels. ATV's handle differently from other vehicles, such as motorcycles and cars. Proper instruction and practice are important.

INTRODUCTION

If you are new to ATV's, you can look forward to lots of fun and excitement. An ATV can be ridden on many types of off-road conditions, but its capability depends on your riding experience and ability.

Knowing all you can about your ATV and the places you can ride is good preparation for safe and enjoyable riding. Remember, ATV's are intended for off-road use only. Never operate an ATV on public roads or paved surfaces. ATV's are not designed to be used on pavement and may be difficult to control. ATV's are different from other vehicles, as well as from one another. The following is a list of some of these differences among ATV's:

- There are three-wheeled and four-wheeled varieties of ATV's.
- Handling characteristics among ATV's vary depending upon their basic design and how they are equipped.
- Most ATV's have front and rear brakes, while some may only have a rear brake. Be sure to learn the recommended stopping techniques for your machine.
- There are ATV's with electric starters, kick starters, and pull starters.
- There are water-cooled ATV's and air-cooled ATV's.
- Some ATV transmissions have automatic clutches; some have hand operated clutches; and some transmissions are fully automatic.
- Some ATV's have a reverse gear.
- Most ATV's have solid drive axles and some have differentials.
- Some ATV's have two-wheel drive, and some have four-wheel drive.
- There are ATV's with chain drives or shaft drives.
- Most throttles are controlled by pushing a thumb lever next to the hand-grip, others may be controlled by twisting a handgrip.
- Controls and their locations differ from one ATV model to another.

Be Prepared… You may be anxious to take a test run, but before you do, be sure you and your machine are ready. If you are not, the result can range from embarrassment to severe injuries.

Protective Gear… The nature of ATV riding demands that you wear protective clothing. Although complete protection is not possible, knowing what to wear and how to wear it can make you feel more comfortable when you ride and reduce the chance of injury. Never operate an ATV without an approved motorcycle helmet, eye protection, boots, gloves, long pants, and a long-sleeved shirt or jacket.

Helmets… Your helmet is the most important piece of protective gear for safe riding. A helmet can help prevent a serious head injury. There are a few basic tips to keep in mind when selecting a helmet. Your helmet should fit snugly and be securely fastened. Full face helmets help protect your face as well as your head. Open face helmets are lighter and may be cooler, but should be used with mouth protection. Eye protection should be used with both types of helmets.

Clothing… Good gloves can help keep your hands from getting sore, tired, or cold, as well as offer protection in the event of a spill. Off-highway style gloves are padded over the knuckles to help prevent bruising, and provide the best combination of protection and comfort. The recommended protective footwear is a pair of strong, over-the-calf boots with low heels to help prevent your feet from slipping off the footrests. Off-highway style boots offer the best protection for feet, ankles, and lower legs. It is important to protect your skin from scratches. A long-sleeved shirt or jersey and long pants are minimum requirements for rider protection. Off-highway riding gear such as off-highway pants with knee pads, jersey, and chest/shoulder protectors provide better protection. You can look stylish, ready for action, and still be well protected.

Eye Protection… You must be able to see clearly in order to ride safely. An object such as a rock, branch, or even a bug that hits you in the face can distract you. If you are hit in the eyes without proper protection, you can be blinded. Regular sunglasses do not provide proper protection while riding an ATV. A face shield or goggles will provide you more protection and should be:

- Free from scratches and/or should be made of a hard coated polycarbonate.
- Securely fastened.
- Well-ventilated to prevent fogging.
- In addition, you may wish to use tinted eye protection for riding on bright days or yellow for overcast days. Always use clear eye protection for riding at night.

PRE-RIDE INSPECTION

Inspecting the mechanical condition of your ATV before each ride is important to minimize the chance of being injured or stranded. This also ensures long-term enjoyment of your ATV. Remember, you can ride farther in one hour than you can walk in a day. Your owner's manual will show you what equipment to check on your particular machine. Listed are the most common items to check:

TIRES AND WHEELS

1. Air pressure — Always maintain the recommended tire pressure. Be sure that all tires are inflated to proper pressure. Check that tires on the left side of your ATV are inflated to the same pressure as the corresponding tire on the right side. If the tire pressure on one side is higher than the other side, the vehicle may pull to one side. Under inflated tires may also cause wheel damage when riding over bumpy terrain. Over-inflation may damage the tires. If the tires are over or under inflated, your ATV may not steer or handle properly. To measure pressure accurately (usually around 2 to 6 Psi), you will need a low pressure gauge. Automotive tire gauges are not accurate for this use.

2. Condition — Check for cuts or gouges that could cause air leakage.

3. Wheels — To avoid loss of control or injury, make sure axle nuts are tightened and secured by cotter pins, as well as checking the tightness of the wheel lug nuts. 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 or slip as you rock the wheel.

CONTROLS

1. Throttle and other cables — Make sure the throttle moves smoothly and snaps closed with the handlebars in any position. Check throttle operation while moving the handlebars from fully left to fully right. If your ATV is equipped with an adjustable throttle limiter, check to make sure the adjustment is appropriate for the rider, and that the adjustment is securely set. Check cables and controls for damage from a spill or accumulated dirt and mud, which may restrict full operation.

2. Brakes — Make sure the controls operate smoothly and are adjusted according to the instructions in the owner's manual. The controls should be positioned for easy reach. Your brakes are a crucial part of riding and they must always be in excellent working condition.

3. Foot-shifter — Make sure the foot-shifter is firmly attached and positioned for safe operation. It should not be so low that your toes are pointed downward at the ground or so high that shifting is awkward.

LIGHTS AND SWITCHES

1. Ignition switch (if equipped) — Check the condition of the switch and make sure it works properly by switching it off and on during your warm-up period.

2. Engine stop switch — Be sure it turns off the engine.

3. Lights (if equipped) — Be sure all lights are working.

OIL AND FUEL

1. Check oil level while the engine is off. You could get stranded because you are out of oil or fuel.

2. Always start your ride with a full tank of gas in case you get lost and need the extra fuel.

3. Check for fuel or oil leaks.

CHAIN/DRIVE SHAFT AND CHASSIS

1. Chain — Inspect your chain for proper adjustment and adequate lubrication. Check for wear.

2. Drive shaft — If your ATV is equipped with a drive shaft rather than a chain, check for oil leaks. Maintain the oil supply as outlined in your owner's manual.

3. Nuts & bolts — 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.

TOOL KIT

After completing the pre-ride inspection, check to make sure you have an adequate tool kit in case you encounter any mechanical problems.

Carrying the right tools and equipment with you when you go riding is important for the safe enjoyment of your ATV riding experience. Examine the tool kit that came with your machine. You may want to add a few spare parts — a spark plug or two, perhaps some wire and tape, maybe a headlight bulb. Prepare for the unexpected, and carry what you need to handle any emergencies. Consider carrying a good strong tow rope. Off-road riding is hard on your ATV, so it is especially important to perform periodic maintenance as outlined in your owner's manual. Do not risk injury or vehicle breakdown due to lack of proper maintenance.

LET’S PREPARE TO RIDE

RIDING AREA

Be sure you have a large, flat, open practice area, free of obstacles and hazards, to use while you practice.

STARTING PROCEDURE

- Check that the transmission is in NEUTRAL.
- Set PARKING BRAKE.
- Turn the FUEL valve on.
- Check that the engine stop switch is in the RUN or ON position.
- If the engine is cold, put the CHOKE in the ON position.

LET’S START RIDING

- Always keep your feet on the footrests while riding to prevent injury.
- Be sure that the engine is sufficiently warmed up before you start riding.
- Apply the rear brake and shift into first gear.
- Release the parking brake.
- Release the rear brake and apply the throttle slowly.
- If the vehicle has a manual clutch, release it slowly. If the clutch is engaged too quickly, the ATV may move suddenly, causing you to lose control or fall off the ATV.

SHIFTING GEARS

There are several types of transmissions on ATV's. Be certain you know how to operate the transmission of the ATV you are riding.

- Always close the throttle while shifting to prevent the 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 zone is to prevent stalling, and to allow for smooth shifting.

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 and the type of terrain you are riding on.

Several ATV's are currently available with 4-wheel drive. When operating in 4-wheel drive mode, keep in mind:

- Using only the front brake or only the rear brake has the effect of braking both the front and rear wheels.
- Abrupt deceleration from shifting to a lower gear (engine braking) will affect both the front and rear wheels.

Some tips for braking are:

- Releasing the throttle.
- Shifting to a lower gear to use the engine to slow the vehicle.
- Applying both brakes equally (if equipped).
- Avoiding excessive braking while cornering.
- Applying brakes lightly on slippery surfaces.
- Shifting to a low gear when descending a hill and not riding the brake for long periods of time.

SPECIAL NOTE: If your ATV stalls while traveling up a hill, do not let it roll backwards. *See the section on hills*.

PARKING

When parking your ATV you should:

- Shift into neutral and set the parking brake, or shift into low gear if you do not have a parking brake.
- Avoid parking on an incline.

TURNING BASICS

Always check your owner's manual for the recommended turning technique for your ATV. The following basic turning technique applies to ATV's being ridden at low to moderate speeds.

- Move your body weight forward and to the inside of the turn.
- Turn the handlebars while looking in the direction of the turn.

As you increase speed or turn more sharply, move your body weight farther toward the inside of the turn to maintain your balance. If your ATV starts to tip while turning, lean your body farther into the turn while gradually reducing the throttle and making the turn wider.

RIDING ON HILLS, GOING UP HILLS

Climbing hills improperly could cause loss of control or cause the ATV to overturn. Always follow procedures for your ATV contained in the owner's manual.

Remember:

- Some hills are too steep for your abilities. Use your common sense. If the hill you are approaching looks too steep, it probably is.
- Some hills are just too steep for your ATV, regardless of your abilities.
- Never ride past the limit of your visibility; if you cannot see what is on or over the crest of a hill, slow down until you have a clear view.
- The key to being a good hill rider is to keep your weight uphill at all times.

When approaching an uphill climb, you should:

- Keep your feet firmly on the footrests.
- Shift the ATV into a lower gear and speed up BEFORE climbing the hill so you can maintain momentum.
- When approaching the uphill climb, move up on the seat and lean forward, or stand and position your torso over the front wheel(s).

As you are climbing, you may need to shift to a lower gear to prevent lugging the engine or stalling. To shift into a lower gear on a hill, remember:

- Keep your body weight forward as you prepare to shift gears. For steeper hills, lean forward as much as possible.
- Shift quickly while momentarily releasing the throttle; this will help keep the front wheel(s) from lifting.

If you do not have enough power to reach the top of the hill, but still have forward momentum and enough room to turn around safely:

- Keep your weight uphill.
- Make a U-Turn before you lose speed.
- Proceed downhill in a lower gear, keeping your weight to the uphill side.

If you are riding uphill and lose all forward momentum:

- Keep your weight uphill, and apply the brakes to come to a stop. Never allow the ATV to roll backward.
- Apply the parking brake while keeping your weight uphill.
- Dismount on the uphill side or to a side if pointed straight uphill, and follow the procedure described in your owner's manual.

Do not attempt to ride backward down a hill. Should you begin rolling backward, do not apply the rear brake abruptly. Using the rear brake only or abruptly could cause the ATV to roll over backward.

If you begin rolling backwards follow these steps:

- Keep your weight uphill, and apply the front brake. If your ATV does not have a front brake, follow the procedure described in your owner's manual.
- When you have come to a complete stop, apply the rear brake. Then apply the parking brake and dismount on the uphill side. If pointed straight uphill, dismount to either side and follow the procedure described in your owner's manual.
- If the ATV continues to roll backward, dismount to the uphill side immediately.

GOING DOWN HILLS

Always check the terrain carefully before you start down any hill. Choose a straight downhill path as much as possible, with a minimum of obstacles. Shift your weight to the rear and use a low gear. Follow the procedures described in your owner's manual for special braking techniques for going down hills.

When going downhill, remember to:

- Shift your weight to the rear (uphill).
- Keep speed low.
- Use gradual braking.
- Use a lower gear.
- Look ahead.

TRAVERSING A SLOPE

Sometimes when a hill is steep it is necessary to climb it or descend it by traversing (going across a slope rather than directly up or down).

Traversing a slope requires additional attention. Avoid traversing slopes with excessively slippery, rough, or loose surfaces.

Here are some basic guidelines for traversing:

- Keep both feet firmly on the footrests.
- Lean your upper body uphill.
- When riding on soft terrain, you may need to turn your front wheel(s) gently uphill to keep your ATV on a straight line across the hill.
- If your ATV begins to tip, turn the front wheel(s) downhill if the terrain allows. If the terrain does not permit, dismount on the uphill side immediately.
- Avoid making sudden throttle changes.

READING TERRAIN

You have to know the land you are riding on and what your machine will do in order to get the most out of the ride. Carefully choose the places you ride. Use existing trails. Stay away from terrain where you really do not belong, such as dangerous slopes. Watch carefully for sharp bumps, holes, ruts, or obstacles.

An expert rider stays out of trouble by handling the ATV well and avoiding any risky situation. Learn to read the trail as you ride. An expert rider looks well ahead on the trail. Know what is coming up; be prepared to react long before you get there. Be constantly alert for hazards. Never operate an ATV at excessive speeds. Go at a speed which is proper for the terrain, visibility, operating conditions and your experience.

Always be careful when operating an ATV, especially when approaching hills, turns, obstacles, and when operating on unfamiliar terrain.

RIDING DIFFERENT TERRAIN

MUD AND WATER

Your ATV is equipped to ride through mud and shallow water, but you should avoid water crossings where you might damage streambeds and fish spawning grounds, or where you might cause erosion to the banks of a stream or creek. This precaution not only adds to your own personal safety and fun, but it preserves the environment for others to enjoy as well. If you are riding through mud and water remember:

- Footrests may become slippery.
- Determine water depth before attempting a crossing; do not exceed the water depth specified in your owner's manual.
- Avoid fast flowing water.
- Be prepared to shift your weight in any direction to maintain balance.
- Watch for submerged obstacles.
- Test brakes after leaving water.

SAFE RIDING PRACTICES - THE EFFECTS OF FATIGUE

Riding an ATV can be more demanding than driving a car. You have to be in good physical and mental condition to ride safely. Three factors that keep ATV riders from being in top shape for riding are alcohol, drugs, and fatigue. Each of these can affect your ability and your decision-making process.

Fatigue… Riding an ATV is more tiring than driving a car. Remember that fatigue can affect your ability to control your ATV. Here are some things you can do to keep from getting too tired:

- Protect yourself from the elements. Wind, cold, rain, and heat make you tire more quickly. Dress appropriately for the conditions.
- Limit your distance and riding time until you know your limits.
- Take frequent rest breaks. Stop and get off the ATV. No one should go more than one hour without pulling over, stopping, getting off the ATV, and walking around.

KNOW THE LAWS

Obey all traffic laws. They have been formulated for your safety and protection.

YOU AND THE REST OF THE WORLD

There is one fundamental factor that controls your riding — access to land. Developing and maintaining riding opportunities means getting along with the rest of the world — private landowners and people you might meet on the trails. The better you get along with these people, the easier it will be to locate and preserve good riding areas.

TREAD Lightly!

Riding behavior that harms the land is self-defeating and irresponsible. Learn to protect and preserve your riding areas. In other words, TREAD Lightly!

- Travel only where motorized vehicles are permitted.
- Respect the rights of hikers, skiers, campers and others to enjoy their activities undisturbed.
- Avoid streams, lake shores, meadows, muddy roads and trails, steep hillsides, and wildlife and livestock.
- Drive (ride) responsibly to protect the environment and preserve opportunities to enjoy your vehicle on wild lands.

Here are some tips to help you TREAD Lightly!

- Keep your ATV quiet. Do not make your exhaust system noisier - there is nothing people dislike more than a loud off-highway vehicle. Do not tamper with the spark arrester.
- Avoid running over young trees, shrubs, and grasses. You will damage or kill them.
- Stay off soft, wet roads and trails readily torn up by vehicles (particularly during hunting seasons). Repairing the damage is expensive.
- Travel around meadows, steep hillsides, stream banks, and lakeshores. They are easily scarred by spinning wheels.
- Resist the urge to blaze a new road or trail, or to cut across switchbacks.
- Be courteous when you meet others on the trail.

How do you find good places to ride? You can start by talking to your dealer and asking questions about:

- Where do other customers ride?
- What are the regulations for use?

All Terrain Vehicles (ATV's) may present a risk of **death or severe injur**y in certain circumstances. While accidents may occur for many reasons:

- Over a thousand people have died during the last 15 years worldwide, including many children, in accidents associated with ATV's.
- Many people have become severely paralyzed or suffered severe internal injuries as a result of accidents associated with ATV's.
- Every month thousands of people are treated in hospital emergency rooms for injuries received while riding an ATV. You should be aware that **an ATV is not a toy and can be hazardous to operate**. An ATV handles differently from other vehicles, including motorcycles and cars. A collision or roll-over can occur quickly, even during routine maneuvers such as turning and driving on hills and over obstacles, if you fail to take proper precautions.

DISCLAIMER/WAIVER

I have read and understood the safety guide and basic riding tutorial. I hereby acknowledge that this document provides basic safety tips and basic ATV riding knowledge and that this document does not warrant as the complete safety guide and riding tutorial in order for me to enter as a participant in the Motor Sport Formula: 1st ATV Sand Buggy Championship 2006 and that I remain committed to the terms and conditions and disclaimer/waiver endorsed by me in the Entry Form.

_____	_____	_____
Signature	Parent/Guardian	Date