

## **Know before you buy**

When I purchased my second ATV, I found the game to be more challenging the second time than it was the first. Knowledge was not power, it was confusion. There are lots of things to consider. What are the ages of the riders? What are the skills of the riders? What terrain is going to be experienced? Do you need four wheel drive, or will two wheel drive do? Do you need a snow removal blade? Will the machine be used for agricultural purposes only? Is this machine for competitive racing? How much noise are you willing to put up with? And the big one, Price?

The purpose of this article is to help you make a decision that is right for you and to give you as much information to do so. While I will admit that my own choice is what seemed best for me, I'll grant you the right to make your own mistakes.

## **If you are really serious about buying an ATV go out and buy the helmets you will need first.**

Seriously! Many have said; "There was no money for helmets after we bought the ATVs." The grim reaper doesn't care what you paid for your ATV. Seventy eight percent (78%) of all ATV deaths involved those who had no helmet. Just get a helmet for everyone who is planning to ride.

I'll admit it. When I bought my first ATV my criteria for purchase was primarily price, but utility and reliability were important enough to me, that I was willing to pay more to get more utility and reliability. After all, what good is a machine that you can't use?

## **Do your homework.**

My first exploratory trips into the local dealerships were somewhat frustrating, to be brutally honest. As a bald man in my mid fifties (ooh, that's hard to admit), there didn't seem to be an immediate rapport with the local mid twenties sales staff. As a matter of fact. If someone, anyone, had asked me if they could help me, I would have likely purchased my first ATV several years earlier. Well so much for salesmanship in the rising generation. I wanted to find out some basic information, like price, features, what I should come to expect from an ATV. Several times I terminated my search for a machine, simply because I didn't have the time to listen to the sales staff talk to their girlfriend on the phone, while I waited for them. I guess I didn't match the optimal buyer profile they had been taught to spot.

Now that I've vented my frustration, I'll get back to the purpose of the article.

## **Rent VS Buy**

Nothing influenced my decision to buy an ATV as much as having the experience of riding an ATV. If you are reading this perhaps you too have become hooked by the enjoyment of traversing a trail on an ATV owned by a friend or rented from a dealership.

My neighbor has one ATV and when he and his son want to go riding, they rent an additional machine. It costs about \$100.00 a day to rent a machine. If you are not planning to have frequent ATV requirements, like if you are the president of the the United States or something like that, then the five or six times you go riding a year would be well covered by a daily rental. One of the things that tends to make renting a drag is that you have to go to the dealership and wait while they load up a machine. This frequently occurs, even if you made arrangements in advance. About an hour will be lost in the rental, before you even hit the road. Be prepared to leave your credit card for damage repair. Even the smallest tick can result in a fairly large cost to repair. The dealers tend to replace rather than re-paint. It is not a negotiation. They simply charge your credit card. Be sure you have your machine back on time or a late fee of \$30. per hour will be appropriate.

If you are lucky enough to come out ahead on the rental program you win. On the other hand if you buy, you win when you have used your ATV 20 or 30 times, depending on what you paid for your machine. By the way, my neighbor finally purchased a second machine.

If you have interest in a particular machine, see if you can rent it for a day. It could make all the difference in the world in your decision.

## **Types of ATV's**

There are basically two different categories of ATV's presently available out there on the market. There is the Utility vehicle and the Sport Model. There are some Utility vehicles that attempt to be sporty and Sport Vehicles that attempt to have utility, so there is some legitimate gray area in there. For the most part it is easy to distinguish between a Sport and Utility vehicle. The Sport ATV will have no front and rear racks. Some of the crossover models will have a rear rack only.

If you are looking for something to do a job for you, like take you hunting and camping or plow snow from your drive way, then your are most likely interested in a utility model. On the other hand, if you have dreams of jumping, speed, color and style are features you value, then you are most likely interested in a sport model. What ever your preference there are many different solutions that will work for you.



There is one other type of ATV that stretches the definition of an ATV. It is actually a cross between an ATV, a boat, and a jeep. Sounds pretty kinky, I know, but the combination is one that may be valuable to certain people with some unique needs like being able to carry passengers and traversing water or mud hazards but not speed. This last type is actually a predecessor of the ATV they have been building them since the early sixties, so you can't really claim they are a descendent of the ATV. The last type is Amphibians.

## **Engine types**

Before you go to far you will want to know that ATV's come with basically two different engines, four stroke engine and the two stroke engine. Each have their advantages. Four stroke engines have an oil sump that continuously oils the moving parts of the engine. They are typically air cooled, but some larger engines may be liquid cooled. Four stroke engines run at lower RPM and will be well suited for the most quiet operation. Four stroke engines are also more fuel efficient, in terms of miles per gallon. I rode my ATV which has a four stroke engine for several hours recently and it used less than one quart of gas. (Oh, that my SUV and the same efficiency) Fuel efficiency can be an important feature for you if you are interested in taking long trails.

Two stroke engines actually lubricate themselves by burning fuel. In a two stroke (or two cycle engine, as they are some times called) it is required that the oil and gas are mixed before it is consumed by the engine. Many (not all) models have an oil reservoir that is filled once for every five or six tanks of gas. If an oil reservoir is not available then each tank of gas is mixed at a certain ratio of oil to gas. Two cycle engines tend to make more smoke exhaust when first started and will offer a smokier exhaust even after starting and warming up. In my opinion, the biggest draw back of the two stroke engine is the noise. A two cycle engine will never win any awards for pleasing the neighbors which includes environmentalists, backpackers, joggers, cross country skiers. They run at higher RPM and have greater power and pickup and speed. Two stroke engines are burning gas (and oil) every time the piston goes to the top of the cylinder chamber, so it can be counted on to idle faster, and burn more fuel. The final death nail has not been placed on the 2 cycle machine, but their noise and visible pollution factor are a primary concern. There is a new generation of 4 stroke engines that offer the same high performance capabilities of the two stroke. It is only a matter of time and you are likely to find only 4 stroke engines offered in new ATV's of any configuration.

Many Sport models will come equipped with a two stroke engine, but don't assume, ask in each case. The newer models will have a high performance 4 stroke. You never really know for sure in the show room. Once you hear the engine running, you will know for sure. If it is a constant slow blub blub blub its is a four stroke. If it is a pop, pop, pop, nreeeeear, ne, ne, ne, ne,... its a two stroke.

### **Automatic Clutch/Transmission**

Your sales person will likely describe the transmission as an "automatic". You will be wise to learn that there is a difference between an automatic transmission and an automatic clutch. An automatic transmission will take you through the gears just like your Chrysler or Ford. You won't even have to choose the gear, aside from Hi, Low and Reverse. Once you are in gear you give it gas and on you go. There is no foot pedal to change the gear.

A transmission with an automatic clutch will require that you change the gear when you reach the maximum rpm for that gear. It is much like a manual transmission, only you don't have to mess with a clutch. You still have to change gears.

There is a feature called electronic shift ("ES") Honda has this feature on many of their models. The electronic shift has the gear change switch on the handlebar (left hand side). Models with this feature will not have a foot shift. This feature does not change gears automatically but permits you to change gears with your thumb rather than your foot.

Some sport models have a manual clutch and transmission. Some do not have a reverse gear. These are not very handy in the field when you need to turn in a tight spot. Be sure you know what the machine has before you buy.

Automatic Transmission ATVs are sometimes considered the top of the line. Some of these models are less inclined to successfully climb steep rocky mountainous areas. The problem is that in order for the transmission to engage you must keep the RPM up on the machine. When climbing a steep rock staircase you can not crawl over the rocks at high speed. 2 MPH is too fast in such conditions. Many of these machines have a high and low range selection. Be sure that you engage the low range selection feature before you attempt the climb up the steep rock staircases.

### **How big/small?**

Next consideration is the size of the machine to buy. For many, bigger is always better. This is not always true. I'll bet I was lead away from the machine I thought would be

appropriate, to a larger one, by ninety percent of the salesmen I forced my attention on. Why? well, it is a matter of simple economics, their economics, not yours. The larger machines cost a lot more. Sure they are nice and have all the bells and whistles, but you know what? There are only a rare set of circumstances where all those additional features are really going to pay off for a buyer. I looked longingly at machines that cost six thousand dollars. They were real beaut's, but my meager income will likely never support one of them until I can afford a luxury car for my wife. (Don't hold your breath, Dear.)

Size has a second dimension. There is not only the physical size of the machine (front to back, top to bottom), but the size of the engine installed in it. All the current manufacturers rate their engines by an optimistic displacement value. A machine that is referred to as a "250" can be anything from a 229 cc to a 243 cc in actual displacement. You have to think in terms of rounded up to the nearest multiple of 50. Some ATV makers produce a machine with a 700 cc engine. I remember Volkswagens that had a 600 cc engine. That is ample power to do just about any thing imaginable for an ATV. Most machines will range from 300 cc to 500 cc in size. The trade off in the larger engines is fuel efficiency and overall machine weight. (Remember you are planning to trail this machine following your current automobile, SUV or pickup, not a semi tractor.)

It will only be in the case that you tell your sales person that the rider of the machine will be under age 16 that you will be shown the smaller machines.

The payload you plan to carry will pose the most serious physical limitations on your choice. I would not recommend planning to carry or haul a payload that has more pounds than the cc rating of your machine. You may be able to do it, but you can expect the automatic clutch to wear out more quickly if you do so regularly. In the end it will be a balancing act between what you can afford and what you can haul. In the end price is most likely to win out, realizing that there are limitations to what you can do.

Lets talk small for a while, shall we. In Maine an ATV driver must be at least 10 years old. There are some small machines that would accommodate even smaller drivers, but keep in mind, you won't be driving these on BLM or State or National Forest land. You may be able to use a tiny machine in your back yard at home, but not on public land. If you really want small, get an ATV tie tack and wait until your children are at least 10 years old before you get them an ATV.

Several manufacturers have 50 cc and 90 cc machines for the younger ATV drivers. On these machines, my only advise is to be sure that you only purchase a machine that is within the ability of the driver to control. Helmets are also required in Maine for

all drivers (and riders) under the age of 18. (Just a reminder) Helmets are also highly recommended, and not just as a fashion statement, for drivers over 18. Trust me, your brains are worth it.

Also, be sure that you enroll your children in the Maine Department of Inland, Fisheries and Wildlife Safety course. This safety course will teach you and your child many important safety considerations. Adults may participate and certify, although, they are not required to do so to legally drive.

## **2 or 4 wheel drive ATV?**

Now the question of the four by four or two by four machine. For the sake of the novice, perhaps I should explain that a four by four machine is one that has four wheel drive, or all four wheels will receive power when you put on the gas. A two by four machine is one that only the rear wheels are driven by the engine. If you have already decided on a Sport model, the decision is made for you. Sport models most frequently come in four by two configurations. If you are after speed you will never achieve it with four wheel drive, although some models will do 50 MPH. There may be exceptions, but I'm not presently aware of any. You can avoid asking the embarrassing question by looking at the front wheels of the machine. If it is a four by four you will see a drive shaft coming from the front wheels to a differential in the center and another shaft or drive assembly going back to the engine. Generally speaking, the price between a two wheel drive machine and a four wheel drive machine is about a thousand dollars. Now that I've had about a year's worth of experience I can tell you that you are likely to run into the need for four wheel drive about 5% of the time. When you need it you will wish you had it. The most frequent time you will be glad you have four wheel drive is when you are attempting to climb steep/rough hills with payload in excess of 300 pounds. My old 250 cc two wheel drive machine would make it up this type of hill with a heavy payload, but it is a strain.

Newer four wheel drive machines permit engaging the front wheels on the fly as you need them. This is a great advantage when it comes to fuel efficiency. If you are going to buy a four wheel drive machine, look for that feature, you will be glad you did.

Two wheel drive machines have some definite disadvantages in climbing steep rocky slopes. The added advantage of 4 wheel drive in these locations makes a real difference. A four wheel drive ATV will be able to crawl over the rock strewn staircases as though they were there for a purpose. A two wheel drive must force the front wheels over an obstacle rather than having them pull their share of the load. Steep rock staircases are not that frequent, but when you come upon them you will praise the day that you invested the extra money for the four wheel drive. If you did not invest the

money, then you will be wise to make your plans for a trail without such obstacles.

### **Drive Shaft, Drive Chain or Belt Drive?**

I suppose it is a matter of personal preference, but I personally like the notion of the closed drive shaft to a differential. They have worked for ages in the automobile without frequent failure. There is an element of security, I suppose. However, every bicycle (and motorcycle) I've ever had with a chain drive had at least one instance of losing or breaking the chain. When you consider that you are using an ATV in terrain that is strewn with boulders the size of Nebraska, it just seems smart to have a machine that isn't prone to damage by the terrain. Well, at least that's my opinion. Machines with drive chains are lower in cost, generally. The engineers among us will also attest that there is a loss of power when the motion changes direction, as in the drive shaft. Well, that's okay. It isn't enough to have made that much of a difference to me.

A third drive mechanism is also available. Snowmobiles have used drive belts for years with outstanding success. There are some manufacturers who have ported this technology over to the ATV. It seems to be a fairly reliable solution. I have heard of occasions where the belt has slipped with a surprising result. I don't think this is common, but it is very surprising. You decide if it is best for you.

A machine with a chain drive with an exposed sprocket are prone to damage in very rocky areas. Most Utility models do not have the exposed chain and sprocket. The sport models will frequently have such features. Once you smash the bottom of your machine on a few big rocks you may be glad you went with the drive shaft or belt drive solution. If you went with the open sprocket solution, you may expect a trip to the repair shop if you use your machine to climb steep rock staircases.

### **Buying Used**

Not everyone can afford to go out and buy a new ATV. In some cases all you would miss in doing so is the interest you would pay on the loan for a new machine and the warranty that is associated with the new machine, of course. If you are mechanically estute and already blessed with a garage full of tools, as most ATV enthusiasts are, you would likely be well served by a used machine. Of course when you buy a used ATV, you buy it AS IS. and you may have to make some repairs on it, if you buy it from a source other than a local ATV dealer. The advantage that local dealers offer is that they will typically check a machine out and make sure it is in pretty good running order before they try to sell it. Even so in these sales there is no warranty.

Unlike a used car, ATV's infrequently have odometers. About the only way you have of determining the care of the machine is by the wear on the tires (if not replaced) and by the general condition, scratches, bent parts, sound of the engine when running. (Always check for smoke coming from the tail pipe. This could be a very bad sign) Like I mentioned earlier, if you are mechanically estute you may do well buying a used vehicle. If like me, you have a fair mechanical expertise, yet lack the actual time to devote to repairing something, then you may want to rethink your interest in a used machine. It may give you not a moment's problem. On the other hand, there's no guarantee of that. Even buying new will not completely protect you from all ills and hazards.

The local dealers won't really like me telling you this, but they just love to sell used machines. In many cases they can make a better profit on a used machine than on a new machine. When they take a machine in on trade they will offer a "fair market trade in value" for the machine. When they offer it for sale again, they will offer it at a price that frequently well exceeds the published "book price." Their explanation for this is that "in this area the demand is greater than the rest of the county" and "The book price is an "average". My only advise is that if you stand your ground and do your homework with the internet you can make an influential case for not paying an amount greater than the current published rate for a particular model and make.

If you buy from the internet or the paper see if you can negotiate a return without prejudice. In other words, if after you get it, you have a week to return it to the previous owner if it turns out that you didn't like it for any reason, or if it just doesn't work. You would be obligated to pay for any damage caused during that period of course. If you are thinking this would be an easy way to get a free rental, don't. If I were negotiating against you I would only be willing to accept the return, if you paid me as if you had rented it for the same period.

### **NON Factory Modifications**

If you get serious about buying a used ATV, I have just one warning to pass along. If the machine you are looking at has a modified exhaust system don't even touch it with a ten foot pole. The BLM and Forest Service pass out \$5,000.00 fines to riders of ATV's that don't have an approved spark arrestor on the machine. (This applies to Motor Cycles too) If you can't see a number stamped on the muffler go find another machine. If you notice that the machine roars like a lion and can be heard coming from a fair distance, don't bother to buy it. Their is no specific decibel level that is outlawed, only a machine that makes "excessive noise." The level of excess is in the ear of the beholder, or more appropriately, the conservation officer out in the field. Modified exhaust systems offer



greater power and speed, but the benefits don't outweigh the disadvantages.

### **Three Wheelers**

If you have ever wondered why you can no longer buy a new three wheel ATV at a dealership, it is because the makers of the ATV's found that the liability for the machine was greater than the value that comes from making them. In the early 80's you could see three wheel ATV's all over the place. Now they are a rare commodity indeed. Their danger is that they tend to tip over quite easily, even at low speeds and favorable conditions. If you choose a three wheeler just be sure that the use you have planned for it will not endanger its operator. I am aware of a cemetery that recently purchased a used one. Seems rather appropriate, don't you think?

### **Who makes ATVs**

If you think of the snowmobile manufacturers you know of, you are likely to have a fairly complete list of ATV manufacturers. I guess that off highway use runs in the business community blood, or not. Fortunately for us, most ATVs are well made and stand up under a lot of use, (but not abuse). Here's a list of the most common ATV manufacturers. This is not a complete list, just one of those who make machines for sale in Utah at the present time. (Listed in Alphabetic Order)

Arctic Cat ; Bombardier ; Honda ; Kawasaki ; Polaris ; Suzuki ; Yamaha

### **Warranties**

I make no claim to expertise on this subject, but I would be happy to share what I know. Many manufacturers offer a six month warranty. You may then purchase an extended warranty that can cover you for most problems for up to 4 years. If you purchase this additional coverage you can expect to pay as much as 25% of the cost of your machine for this insurance. This is a hint of what you may expect to pay in maintenance and repairs over the next four years. If you take care of your toys you may save a great deal. See the section on [Care and Feeding](#) of your ATV.

### **ATV Trailers**

When buying one ATV you may be able to get away with slipping it into the back of your truck or van. When the second one comes into your life, it is like getting that third baby, life changes. A trailer is really a good idea.

If money is no consideration then you will be interested in a covered trailer. Oh boy, they can be nice. Now if you are really covered in money, you can buy a motor home or a fifth wheel trailer that comes with an ATV or snowmobile garage in the rear. They are available. It is all a matter of priorities isn't it?

Now back to reality. You can get a trailer for one, two, four, and six ATV's. You can probably get one for more ATV's but I could never dream of owning one. Trailers come with ramps that can be pulled out and set at the rear or side of the trailer or they can have sides that drop down and can be used for loading ramps. You can expect to pay about \$600-\$900 for a single ATV trailer. A double trailer will run you from \$900 to \$1500. If you get the deluxe model with side ramps, heavy duty tires and axles it will run you \$1100 to \$1500 new. If you are dumb lucky and find a used trailer in the newspaper you could save significantly. Used prices generally run about half the prices mentioned above, unless the seller is your brother-in-law who owes you a favor.

There is one extra feature that makes trailers much easier to deal with. It is called a tongue wheel. Dealers will charge you about \$60 to \$100 more for this feature. They are great. If you'd like to save a buck or two, you can buy the same thing from your local WalMart and you can install it yourself in just a few minutes for less than \$50.00.

When it comes to trailers, you can never seem to get one big enough. No matter what size you get you are likely to wish you had a bigger one. If you think you need a single place trailer, get a two place. If you think you will need only a two place trailer, get a three place trailer. If you think you will need only a three place trailer, get a four place. You get the drift.

Why would you do this? Well, trust me, it will save you some time and some money. You will always have someone who would like to come along with you and having the ability to just toss their machines in with yours is a very handy solution.

Another ATV hauling solution is the truck bed rack. Owners of these racks report that they are very stable, even though the machines ride above the bed of the truck. These are often employed by those who pull camp/travel trailers.

## **Helmets and attire**

Helmets are one of the easiest things to overlook. In all the dickering I've done with sales people I've never once had any of them mention that helmets are required for riders under 18, and surely recommended for everyone else. If you are really serious about buying an ATV buy the helmet first. No kidding! Why? I just can't tell you how many people I've spoken with that have said; "Well, once we spent all our money on

ATVs we just couldn't afford a helmet." It would be a poor epitaph for your headstone. Helmet or headstone, you make the choice.

Fortunately there are lots of good choices for helmets. The only mistake you can make is that a helmet can be too loose fitting and thus be ineffective. Please make sure you have a helmet for all potential riders in your family. I found that having a few spare helmets was never a bad idea. Sometimes you can find used helmets at second hand stores and pawn shops for a pretty good deal. Inspect them carefully for cracks and you should be okay. I covered my old used helmets with camo-tape and now they look pretty cool. Well, cool compared with how they used to look, anyway.

Dealerships tend to be your high price alternative for helmets. Even when they are on sale at half off you will pay at least \$50.00 more than you would pay if you buy one from the internet. Auction houses such as e-bay are excellent sources for helmets. Just be sure of the measurements you need so you get the right size. The only drawback to internet shopping is you are not likely to find the color that matches your bike, or particular taste. If that makes a world of difference to you, go visit your dealers. They'll be glad to sell or even order just the right one for you and your outfit.

As far as other protective clothing you do need to wear clothing that covers your body when riding. Over the ankle boots, long pants, and shirts with long sleeves and gloves are a necessity. You can go crazy with full leather protective clothing with impact armor and the like, but unless you are planning to do professional racing on your ATV sometime soon, you are not likely to find much advantage to this attire.

There are no fashion police out on the trail. The idea here is to protect yourself. The only advantage that short shorts and halter tops will offer you is that they are easily cut off in the Emergency Room. Please, have the brains to go with your looks and protect your perfect body, don't display it. (Good advice for any occasion, really!)

## **Conclusion**

Hopefully you have learned more than you knew before you opened this page. Half the fun of spending money is making the best choice. Good luck in your search and buy mission. If you are successful, or have recently been successful, please visit the page for [NEW ATV owners](#). You'll be glad you did.