



**READ THIS MANUAL CAREFULLY!**

This user manual contains important safety information.

# **Trex 110**



**WARNING**

This ATV should not be ridden by anyone under 10 years of age.





## SAFETY WARNING-MUST READ

### RISK OF ROLL OVERTS

We strongly encourage safe riding at all times. Accidents involving ATV/Quad Bikes are the second leading cause of injury and death on Australian soils. Most deaths are due to crash injuries associated with ATV/Quad Bike roll overs or by injuries associated with the victim being flung off onto a hard surface as a result of a serious crash.

Therefore we urge all riders to think carefully about their riding use of ATV/Quad Bikes, taking into account all the safety risks that are involved and how to safely ride your ATV/Quad Bike as well as keeping it serviced and maintained correctly before every ride.

### SAFETY TIPS FOR RIDING

Many ATV/Quad Bike accidents are caused when ATV/Quad Bike's roll over or overturn. The key to avoiding these accidents is maintaining total control of your ATV/Quad Bike. You do this by maintaining good balance and being aware of your centre of gravity. This is most important when you are riding on an incline, going around a turn or making a sudden stop. All of these situations are recipes for disaster because they shift the momentum of an ATV/Quad Bike in such a way that you need to shift the weight of your body to counteract that momentum before the ATV/Quad Bike rolls over or flips.

*Reduce your risk of injury & death by knowing exactly what your quad bike can and can not do. We strongly recommend the following:*

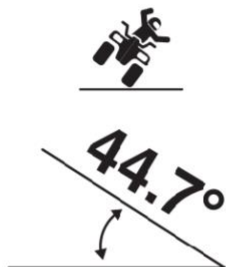
- Read the complete manual and pay particular attention to the safety instructions and warnings.
- Read all warning labels in this guide and on your ATV/Quad Bike, specially the roll over orange warning that is affixed to your ATV/Quad Bike. Also the yellow stability tipping point swing tag warning. We strongly recommend you study them before riding.
- Wear appropriate safety gear, that also includes an approved safety helmet that meets Australian standards.
- Make sure that other persons who operate the ATV/Quad Bike understand all riding instructions, all safety guides and warnings.
- Practise riding the ATV/Quad Bike in a safe environment until you feel confident.
- Do not allow any passengers. Only a sole Rider is permitted at all times.
- Do not modify or tamper with the ATV/Quad Bike, no aftermarket parts or equipment can be fitted as it may cause malfunction and cause serious injuries.
- Observe the load ratings, do not exceed the limit
- Regularly service and maintain your ATV/Quad Bike.
- Perform a safety check each time before you ride.
- Avoid travelling up or down steep inclines or declining hills.
- Do not perform any jumping or riding on terrains beyond your riding ability.
- Leave all safety guards in place.





## SAFETY WARNING-MUST READ

### Stability Test Result



**COMPARE VEHICLES**  
Quad bikes with higher numbers are  
more stable  
**ASK YOUR DEALER FOR ADVICE**

Crossfire Motorcycles Pty Ltd

Models: Trix 110

When tested to the quad bike safety standard, this is the minimum angle this quad bike tipped sideways on two wheels. The above result should be used for comparative purposes only.

Factors, such as uneven terrain, speed, loadings, accessories, modifications and rider position can effect a quad bike's stability.

Read the operator's manual for safe riding practices.

THIS HANG TAG IS NOT TO BE REMOVED BEFORE SALE

- Factors, such as uneven terrain, speed, loadings, accessories, modifications and rider position can effect a quad bike's stability.

- Whenever possible, ride on familiar tracks. Even then, think very carefully about the possibility of pot holes, large rocks, drains or other obstacles, the weather conditions, the nature of the surface and how fast you are able to ride.

- Ride cautiously when riding the ATV/Quad Bike on any terrain, as surfaces may compromise your control.

- Evaluate the terrain carefully before you ride. Steep hills, particularly if the dirt is loose or wet, should be avoided as they can cause the ATV/Quad Bike to roll over.

- Watch the ground ahead for potential hazards. Riding into or over rocks, pipes or any other obstacle can cause an accident.

- If you're not confident that you can negotiate a particular stretch of terrain, don't attempt it. Go another way or turn around.

- Remember that liquids within a spray tank can cause sudden shifts to your quad bike's centre of gravity when riding over uneven terrains. Make sure you are able to carry additional weight and that it doesn't exceed the load capacity.

### WARNING



**RISK of ROLLOVER even on flat terrain**

**ROLLOVERS could result in DEATH or SERIOUS INJURY**

**AVOID** sudden sharp turns

**AVOID** steep inclines

**AVOID** riding across slopes



To prevent potential fire hazards all our Quad Bikes/ATVs have been fitted with a Spark Arrestor that conforms with Australian standards.

A spark arrestor is designed to trap any glowing sparks before they exit your exhaust by acting as a filter. The mesh creates many tiny holes which the exhaust needs to flow through. Any particles larger than the holes in the mesh will be stopped.

## Dear Parents:

We believe your children should have the opportunity to enjoy the CROSSFIRE TREX riding experience along with you. We've provided this owner's manual to assist you and your children in learning about safe operation and care of your new ATV.

*AN CROSSFIRE TREX ATV is **not a toy** and can be hazardous to operate. Make sure any child who will operate the ATV takes a training course before operating the ATV. Make sure all operators understand and follow all of the instructions and warnings contained in this owner's manual.*

*Never allow a child under the age of 10 to operate an ATV without adult supervision.*

Children differ in skills, physical abilities and judgment. Some children may not be able to operate an ATV safely. Permit continued use only if you determine that your child has the ability and maturity to operate the ATV safely. *For your child's safety, be sure your child can reach and operate all ATV controls, including handlebars, brake levers, throttle lever and engine stop switch.*

The preventive maintenance program outlined in this manual is designed to ensure that all critical components on your child's ATV are thoroughly inspected at specific intervals.

Follow all of the instructions and recommendations in this manual.

- **Please contact your local dealer in your state to determine closest Quad bike training provider.**

**Dear Children:**

Before you ride your new CROSSFIRE TREX ATV, there are some important things that you need to know.

You must learn how to keep yourself and those around you safe while you're riding. Your parents and CROSSFIRE want you to enjoy riding your new ATV, and that's why you need to read and understand the information in your owner's manual.

You must also take an ATV training course before you begin riding.

Ask your parents to explain anything you don't understand, and pay close attention to the warnings and instructions you read. Your safety and the safety of others is the most important thing to think about at all times.

Never drive your ATV alone. Always make sure an adult is watching you when you ride. Drive safely and enjoy riding your new CROSSFIRE TREX ATV!

You are required to be supervised while riding the quad bike at all times.

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# Introduction

## Safety Words and Symbols

The following signal words and symbols appear throughout this manual and on your vehicle. Your safety is involved when these words and symbols are used. Become familiar with their meanings before reading the manual.



The safety alert symbol indicates a potential personal injury hazard.

### **DANGER**

A DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

### **WARNING**

A WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

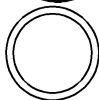
A CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

A NOTICE indicates a situation that could result in property damage.



The Prohibition Safety Sign indicates an action NOT to take in order to avoid a hazard.



The Mandatory Action Sign indicates an action that NEEDS to be taken to avoid a hazard.

## **▲WARNING**

Failure to follow the warnings and safety precautions contained in this manual can result in severe injury or death. AN CROSSFIRE TREX ATV is not a toy and can be hazardous to operate. This vehicle handles

differently than other vehicles, such as motorcycles and cars. A collision or rollover can occur quickly, even during routine maneuvers like turning, or driving on hills or over obstacles, if you fail to take proper precautions.

- Read this owner's manual. Understand all safety warnings, precautions and operating procedures before operating an ATV.  
Keep this manual with the ATV.
- Never operate an ATV without proper instruction. Take a training course.
- For your child's safety, be sure your child can reach and operate all ATV controls, including handlebars, brake levers, throttle lever and engine stop switch.

- Always follow the age guidelines for your vehicle. TREX models are designed for children not less than 10 years of age .  
No child under the age of 10 should ride any ATV designed and sold for an adult.
- Never permit a guest to operate the ATV unless the guest has read this manual and all product labels and has completed a certified safety training course

## Safety

### Riding Gear

Always wear clothing suited to the type of riding. ATV riding requires special protective clothing for comfort and to reduce the chance of injury.

### Helmets and eye protection

Your helmet is your most important piece of driving gear because it offers the best protection against head injuries.

A helmet should fit your head comfortably and securely.

An open-face helmet offers some protection, but a full-face helmet is recommended. Regardless of the style, look for a DOT (Department of Transportation) sticker in any helmet you buy. Always wear a face shield or goggles to protect your eyes and help your vision.



## **Gloves**

Off-road style gloves with knuckle pads are the best for comfort and protection.

## **Boots**

The best footwear is a pair of strong over-the-ankle boots with low heels.

## **Clothing**

Always wear long sleeves and long pants to protect arms and legs. Riding pants with knee pads and a jersey with shoulder pads provide the best protection.

## **Drive training**

Developing your driving skills is an on-going process. Even if you have driven another ATV, take time to become familiar with this ATV in a safe area to build your skills. Do not drive in rough terrain until you get familiar with this ATV controls, and feel comfortable with its size and weight.

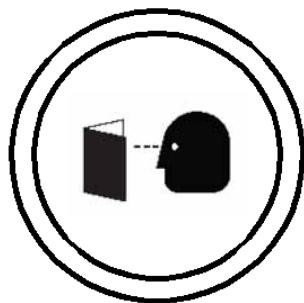
## **Safety Warnings**

### **Operating Without Instruction**

Operating this ATV without proper instruction increases the risk of an accident. The operator must understand how to operate the ATV properly in different situations and on different types of terrain.

Beginning and inexperienced operators should complete an ATV training course. They should then regularly practice the skills learned in the course and the operating techniques described in the Owner's Manual.

Never permit a guest to operate the ATV unless the guest has read this manual and all product labels and has completed a certified safety training course.



 **WARNING**

Failure to operate the ATV properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death.

Be sure to read all of the following warnings about driving hazards and how to avoid them. These warnings are provided for your child's safety. Be sure to explain to your young driver that the hazards outlined in this section of the owner's manual **MUST** be avoided at all times. See the RIDING RULES section and the OPERATION section of the owner's manual for proper operating procedures.

**Operator Restrictions/Age Restrictions**

This vehicle is for recreational use by young operators under adult supervision **ONLY**.

Operation is prohibited for anyone under age 10.



### **Handling Gasoline**

Gasoline is highly flammable and explosive under certain conditions.

- Never allow a child to refuel or handle gasoline.
- Always exercise extreme caution whenever handling gasoline.
- Always refuel with the engine stopped, and outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks

in or near the area where refueling is performed or where gasoline is stored.

- Do not overfill the tank. Do not fill the tank neck.
- If gasoline spills on your skin or clothing, immediately wash it off with soap and water and change clothing.

## **Exposure to Exhaust**

Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time. Never start the engine or let it run in an enclosed area.

Operate this vehicle only outdoors or in well-ventilated areas.

## **Failure to Inspect Before Operating**

Failure to inspect and verify that the ATV is in safe operating condition before operating increases the risk of an accident. Always inspect the ATV before each use to make sure it's in safe operating condition. Always follow all inspection and maintenance procedures and schedules described in the owner's manual.

## Protective Apparel

Operating this ATV without wearing an approved helmet increases the risk of a serious head injury in the event of an accident. Operating without

eye protection could result in an accident and could increase the chance of a serious injury in the event of an accident.

Always wear an approved helmet that fits properly. Always wear eye protection (goggles or face shield), gloves, boots, a long-sleeved shirt or jacket and long pants.



### **Carrying a Passenger**

Carrying a passenger greatly reduces the operator's ability to balance and control the ATV, which may result in an accident or overturn. Never carry a passenger on this ATV.



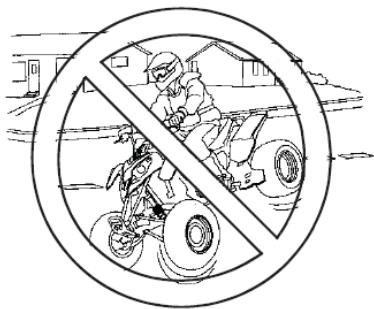
### **Using Alcohol or Drugs**

Operating the ATV after consuming alcohol or drugs could adversely affect operator judgment, reaction time, balance and perception. Never consume alcohol or drugs before or while operating an ATV.



## Operating on Pavement

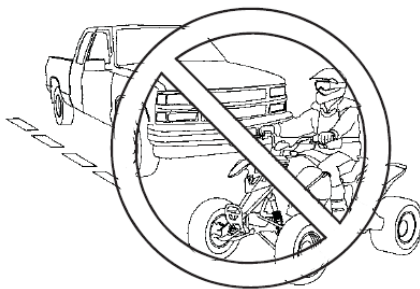
Operating an ATV on paved surfaces (including sidewalks, paths, parking lots and driveways) may adversely affect the handling of the ATV and could result in loss of control and accident or overturn. Avoid operating the ATV on pavement. ATV tires are designed for off-road use. If it's unavoidable, travel slowly and avoid sudden turns or stops.



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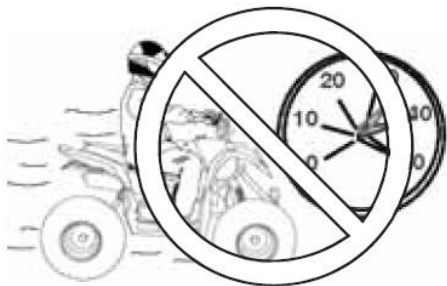
highways could result in a collision with another vehicle. Never operate the ATV on any public street, road or highway, including dirt and gravel roads. In many states it's unlawful to operate ATVs on public streets, roads and highways.



## **Operating at Excessive Speeds**

Operating the ATV at excessive speeds increases the operator's risk of losing control.

Always operate at a speed that's appropriate for the terrain, the visibility and operating conditions, and your experience.



## **Physical Control of the ATV**

Removing a hand from the handlebars or feet from the footrests during operation can reduce

your ability to control the vehicle or cause loss of balance and ejection from the ATV. If the operator's foot is not firmly planted on the footrest, it could also contact the rear wheels. Never remove your hands from the handlebars while operating, and always keep both feet on the footrests.



## Jumps and Stunts

Attempting wheelies, jumps and other stunts increases the risk of an accident or overturn. Never attempt wheelies, jumps, or other stunts. Avoid exhibition driving.



1

turn at high speeds. Practice turning at slow speeds before attempting to turn at faster

speeds.

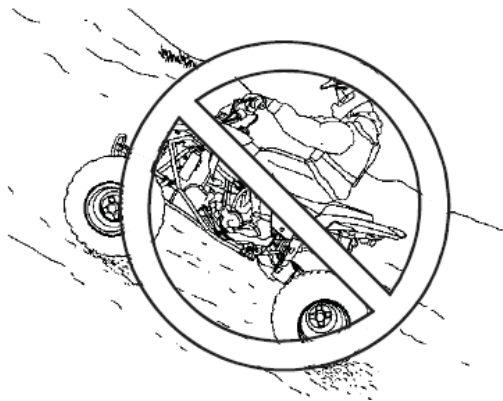
## Operating on Steep Hills

Operating on excessively steep hills could cause an overturn. Never operate on hills too steep for the ATV or for your abilities. Never operate the ATV on hills steeper than 15 degrees.



## Improper Hill Climbing

Improper hill climbing could cause loss of control or overturn. Always follow proper procedures for climbing hills as described in the owner's manual.



## Descending Hills Improperly

Improperly descending a hill could cause loss of control or overturn.

- Always follow proper procedures for traveling down hills as described in the owner's manual.

**NOTE:** A special technique is required when braking while traveling downhill.

- Always check the terrain carefully before descending a hill.
- Shift your weight rearward.
- Never travel down a hill at high speed.
- Avoid traveling down a hill at an angle, which would cause the vehicle to lean sharply to one side.

Travel straight down the hill when possible

## Crossing Hillsides

Driving on a sidehill is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.

If crossing a hillside is unavoidable, always follow proper procedures as described in the owner's manual. See page 62-page 67. Never attempt to turn the ATV around on any hill until you've mastered the turning technique (on level ground) as described in the owner's manual. See page 66.



## Stalling While Climbing a Hill

Stalling, rolling backwards or improperly dismounting while climbing a hill could cause an overturn.

Always maintain a steady speed when climbing a hill.

If all forward speed is lost

If you lose all forward speed: Keep your weight uphill. Apply the front brakes gradually (right lever). When fully stopped, apply the rear brake as well (left lever) and then lock the parking brake.

*If the ATV begins rolling downhill:* Keep weight uphill. Never apply engine power. Never apply the rear brake while rolling backwards. Apply the front brake slowly. When fully stopped, apply rear brake as well, and then lock the parking brake.

Dismount on uphill side, or to either side if pointed straight uphill.

Turn the ATV around and remount, following the procedure described in the Owner's Manual. See page 62.

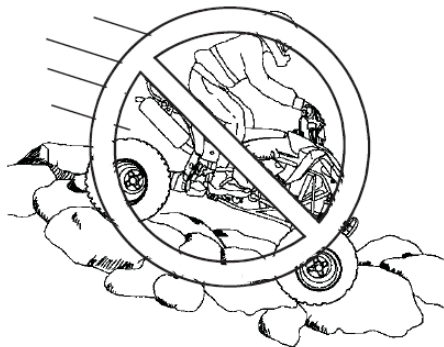


## **Operating on Slippery Terrain**

Failure to use extra caution when operating on excessively rough, slippery or loose terrain could cause loss of traction, loss of control, accident or overturn.

Do not operate on excessively rough, slippery or loose terrain until you've learned and practiced the skills necessary to control the ATV on such terrain.

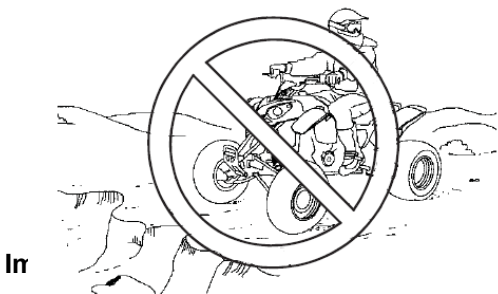
Always use extra caution on rough, slippery or loose terrain.



## **Operating in Unfamiliar Terrain**

Failure to use extra caution when operating on unfamiliar terrain could result in an accident or overturn. Unfamiliar terrain may contain hidden rocks, bumps, or holes that could cause loss of control or overturn.

Travel slowly and use extra caution when operating on unfamiliar terrain. Always be alert to changing terrain conditions.



In

Operating this ATV with improper tires or with improper or uneven tire pressure could cause loss of control or accident.

Always use the size and type of tires specified for your ATV. Always maintain proper tire pressure as described in the owner's manual and on safety labels.

## **Operating Improperly in Reverse**

Improperly operating in reverse could result in a collision with an obstacle or person. Always follow proper operating procedures as outlined in this manual. See page 56.

Before shifting into reverse gear, always check for obstacles or people behind the ATV. When it's safe to proceed, back slowly.

### **Improper Vehicle Modifications**

Improper installation of accessories or modification of the ATV may cause changes in handling, which could cause loss of control or an accident.

Never modify the ATV through improper installation or use of accessories.

Your CROSSFIRE TREX dealer can assist if necessary.

### **Operating Over Obstacles**

Improperly operating over obstacles could cause loss of control or overturn.

Before operating in a new area, check for obstacles. Avoid operating over large obstacles such as rocks and fallen trees. If unavoidable, use extreme caution and always follow proper operating procedures as outlined in this manual.

### **Skidding or Sliding**

Skidding or sliding can cause loss of control or overturn (if tires regain traction unexpectedly).

On slippery surfaces such as ice, travel slowly and use extra caution to reduce the chance of skidding or sliding.

## **Operating Through Deep Water**

Operating the ATV through deep or fast-flowing water could cause the tires to float, causing loss of control or overturn. Avoid operating through deep or fast-flowing water. If it's unavoidable to enter water that exceeds the height of the footrests:

- Travel slowly.
- Balance your weight carefully.
- Avoid sudden movements.
- Maintain a slow and steady forward motion. Do not make sudden turns or stops, and do not make sudden throttle changes.
- brakes may have reduced stopping ability. After leaving water, test the brakes. Apply them lightly several times while driving. The friction will help dry out the pads.

### **Improper Cargo Loading**

Overloading the ATV or carrying/towing cargo may cause changes in handling, which could cause loss of control or an accident. Never haul cargo or tow a load with this ATV.

Never tow or pull an object behind the ATV. A wagon, sled or other towed object does not have brakes or steering.

The object may overturn or collide with other objects.

Never exceed the stated load capacity for this ATV.

### **Operating on Frozen Bodies of Water**

Operating on frozen bodies of water may result in serious injury or death if the ATV and/or the operator fall through the ice. Never operate the ATV on a frozen body of water.

### **Operating a Damaged ATV**

Operating a damaged ATV can result in an accident. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage, including (but not limited to) brakes, throttle and steering systems.

### **Unauthorized Use of the ATV**

Leaving the keys in the ignition can lead to unauthorized use of the vehicle, which could result in an accident or overturn. Always remove the ignition key when the vehicle is not in use.

## Transportation

Make sure your vehicle is securely strapped in the upright position. Straps must be rated for the weight of the vehicle. Use chassis as base from which you mount you straps.

### WARNING

Improper handling of gasoline may cause fire and you could be burned.

Remember: Always turn off the engine when refueling. Do not refuel right after the engine has been stopped which is still very hot.

Do not spill gasoline on the engine or exhaust pipe/muffler when refueling.

No smoking while refueling.

Never refuel in the vicinity of sparks, open flames, or other sources of ignition such as the pilot lights of water heaters and clothes dryers.

When **transporting** the ATV in another vehicle, be sure it is in an upright position. Otherwise, fuel may leak out of the fuel tank.

Gasoline is poisonous and can cause injuries.

If you swallow gasoline or inhale gasoline fumes, or get gasoline in your eyes, see your doctor immediately. If gasoline spills on your skin, wash with soap and water. If gasoline spills on your clothing, change your clothes.



## **Physical Skills**

Safe operation of this rider-active vehicle requires good judgement and physical skills. Persons with cognitive or physical disabilities who operate this vehicle have an increased risk of overturn and loss of control.

## **Hot Exhaust Systems**

Exhaust system components are very hot during and after use of the vehicle. Hot components can cause burns and fire. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system. Use caution when traveling through tall grass, especially dry grass. Always inspect the underside of the ATV after driving through tall grass, weeds, brush and other tall ground cover. Promptly remove any grass or debris clinging to the vehicle.

## **Safety Labels**

Warning labels have been placed on the vehicle for your protection. Read and follow the instructions on each label carefully. If any of the labels shown in this manual differ from the labels on your vehicle, always read and follow the instructions of the labels on the vehicle. If an informational or graphic label becomes illegible or comes off, contact your Crossfire dealer to purchase a replacement.

## Age Warning

*Affixed to the front right front fender*

Operation of this ATV by children under age 10 increases the risk of severe injury or death **NEVER** children under age 10 to operate this ATV permit ...



## Operation Warning

### WARNING

*Label fitted to Left front fender*

Improper ATV use can result in SEVERE INJURY OR DEATH.

Always use an approved helmet and protective gear. Never use on public roads. Never carry passengers. Never use with drugs or alcohol.

**NEVER** operate: without proper training or instruction; at speeds too fast for your skills or the conditions; on public roads - a collision can occur with another vehicle; with a passenger - passengers affect balance and steering and increase risk of losing control.

**ALWAYS:** use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns; avoid paved surfaces - pavement may seriously affect handling and control.

LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.



## Tire Pressure Warning

### WARNING

*Label fitted to Left rear fender*

Inaccurate tire pressure or overloading will lead to the motorcycle out of control.

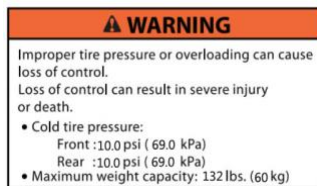
Out of control will lead to serious injury or death.

- The tire pressure of cold state:

Front: 10psi or 69kpa  $\pm$  5kpa

Rear: 10psi or 69kPa  $\pm$  5kpa

- Max load weight: 60kg



## No Passenger Warning

*Label affixed to Left rear fender*

WARNING

NEVER ride as a passenger.

Passengers can cause a loss of control, resulting in

SEVERE INJURY or DEATH.



## Know Your ATV

These units are not designed for adult use. Serious damage to the vehicle may occur if the maximum rider weight capacity is exceeded. See the specifications section beginning on page 115 for your ATV's capacity.

**CHILDREN: 10+ Years of age.** Before you ride your new CROSSFIRE TREX ATV, there are some important things that you need to know. Your safety and the safety of others is the most important thing to think about at all times. As the driver of the ATV, you must learn how to keep yourself and those around you safe while you're riding.

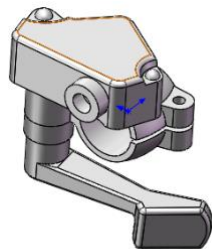
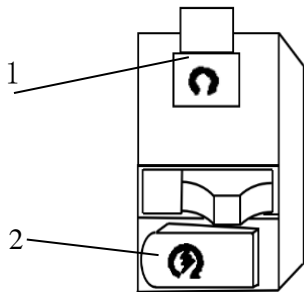
Pay attention when you see this symbol:



This is the safety alert symbol. When you see this symbol on your ATV or in this manual it means **PAY ATTENTION** because you could die or be seriously injured if you don't follow the instructions.

Before you have an adult start the engine for you for the first time, let's learn about the controls on your new ATV.

1. **Engine Stop Switch** - When the engine is running, push this button down to shut the engine off quickly. The button must be up before you can start the engine again.
2. **Engine start switch**- Press the button to start the engine.
3. **Throttle Control** - Press the throttle lever with your thumb when you want the ATV to go forward. Always make sure the throttle control does not stick before you drive your ATV.



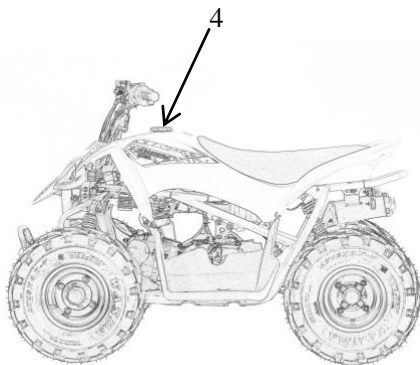
3  
3  
4. **Gas Cap** - The gas cap has to be taken

off when an adult puts gas in your ATV.

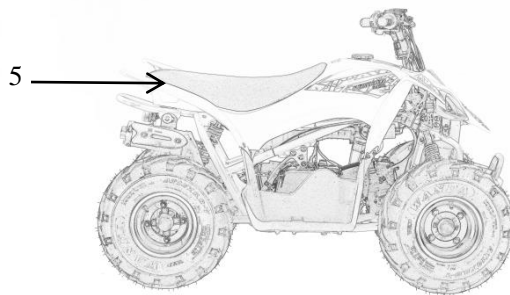
Never take the gas cap off. Always make sure it's tightly closed.



Always have an adult put gas in your ATV. Never try to do it yourself.



right rear side of the seat cushion. Pulling the latch up to remove the seat, To replace the seat, set it in place and push down on The seat above the latch. Always make sure the seat is locked in place before riding.



5. **Seat Latch** - The seat latch is located on the

6. **Brake Levers** - Squeeze the brake levers toward the handlebar to slow down or stop the

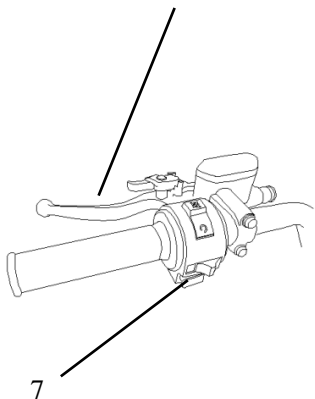
ATV. The left lever controls the rear brake. The right lever controls the front brake.

Always squeeze both brake levers at the same time.

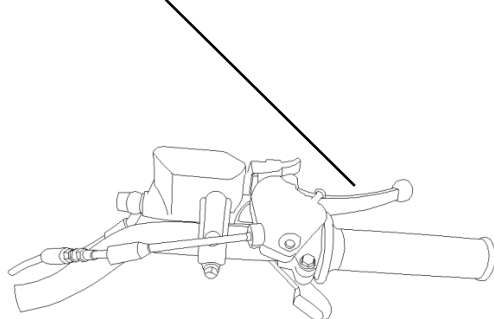


Always squeeze both brake levers at the same time or you could lose control of the ATV  
And be seriously injured. Always take your thumb off the throttle lever when you squeeze  
The brake levers.

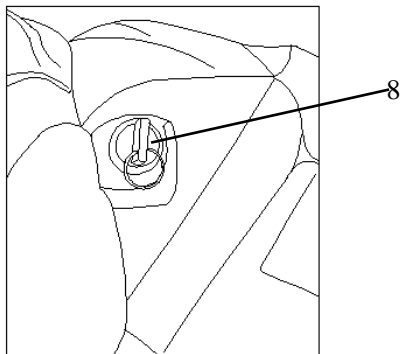
6 Rear Brakes



6 Front Brakes



7. **Start Button** - Use this button to start the engine when you're ready to drive.
8. **Ignition Switch** - The ignition switch key must be turned on before pushing the start button. You can also use this key to turn off the engine.





**Let's review the two ways to stop the engine of your ATV:**

1. Push the engine stop switch down.
2. Turn the key off.



## Pre-Ride Check

We're almost ready to have an adult start your ATV. But before the ATV is started for the first time, you must do a Pre-Ride Check. In fact, every time you want to ride you must have an adult help you check some things on your ATV before starting it. Let's learn about these things now.

1. Make sure the throttle doesn't stick. Check this by pushing the throttle lever toward the handlebar and then letting go. The lever should come right back to where it was before you pushed it. If it comes back slowly or stays close to the handlebar, the ATV has a sticky throttle. This means that something is wrong or broken and must be fixed before you can ride your ATV safely.



Never start the engine if you have a sticky throttle. You could be seriously hurt if you ride with a sticky throttle. Have an adult or your dealer fix the throttle before you ride.

2. Make sure the brakes don't stick. Check the brake levers by squeezing them toward the handlebar and then letting go. They should come right back to where they were before you squeezed. If they go back slowly or stay close to the handlebar, your ATV has sticky brakes. They must be fixed before you can ride your ATV safely.



Never start the engine if your ATV has sticky brakes. You could be seriously hurt if you ride with sticky brakes. Have an adult or your dealer fix the sticky brakes before you ride.

3. Have an adult check to see if your ATV needs more gas. Children must never add their own gasoline. This must always be done by an adult. Before anyone adds gasoline to your ATV they must read the instructions and warnings.



Always have an adult put gas in your ATV. Never try to do it yourself.

4. Make sure the seat is locked in place.
5. Have an adult check the engine oil level when the engine is cold. The engine is very hot after it has been running and it can burn your skin if you touch it. Children must never check the oil on their own. An adult should always be in charge of keeping the gas and oil levels at the full marks.
6. This last check is done with the engine running. You must check to make sure that all two ways to stop the engine of your ATV are working the way they should. Do you remember what they are? If you can't remember the two ways to stop the engine, go back and review. Then have an adult help you start the engine. Practice stopping the engine all two ways

## Riding Rules

Now you're ready to learn about riding your ATV. There are some things you can do and there are some things you must never do. Rules are very important when you're driving an ATV. Adults have riding rules, too. The rules help keep us safe when we ride.

➡ The adult with you is your teacher. Always pay attention to what your teacher says so you can learn how to always drive safely.

Let's learn how to ride!



Always follow the safe riding rules found on the next pages. You or others around you could be seriously hurt if you don't follow the safe riding rules.

➡ Always wear the right kind of clothing and safety gear when riding your ATV.



**Helmet:** Your helmet is very important for safe riding. A helmet can prevent a severe head injury.

**Eye Protection:** Always wear shatterproof goggles or a helmet face shield, and always keep them clean so you can see where you're driving.

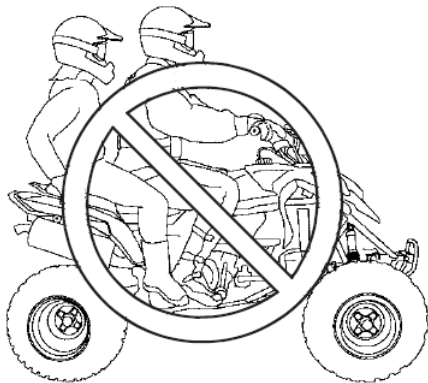
**Gloves:** Wear gloves to protect your hands from sun and wind. Gloves will also protect your hands from scrapes and scratches.

**Boots:** Wear sturdy over-the-ankle boots to keep your feet dry. Boots will also protect your feet and ankles from scrapes and scratches.

**Clothing:** Make sure your clothing fits properly. If it's too small, it could keep you from moving easily when you shift your weight. If it's too big, it could hang down and get caught in a moving part. Wear long sleeves and long pants

to protect your arms and legs.

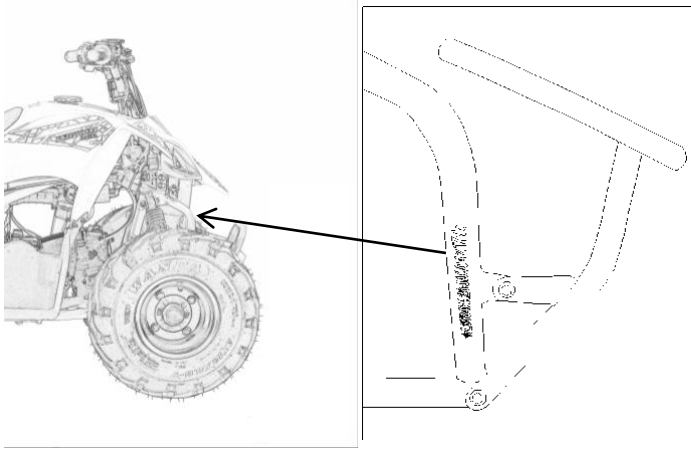
- ➡ Make sure you know where you're going to drive before your ATV is started. Make sure the area is safe all around your ATV.
- ➡ Your ATV is made for one person. Never carry a passenger. A passenger will make the ATV harder to drive. You may lose control and hurt yourself and your passenger.
- ➡ Always drive your ATV while sitting down. Keep both hands on the handlebars and keep both feet on the footrests.
- ➡ Always be alert and pay attention to where you're driving. Pay attention to other drivers, and be even more careful around them because you don't know what they're going to do.
- ➡ Never follow another ATV too closely. You need lots of time and space to stop your ATV.
- ➡ Never tow or pull an object behind the ATV.
- ➡ Never ride alone. An adult should always be watching you in case you need help. Always



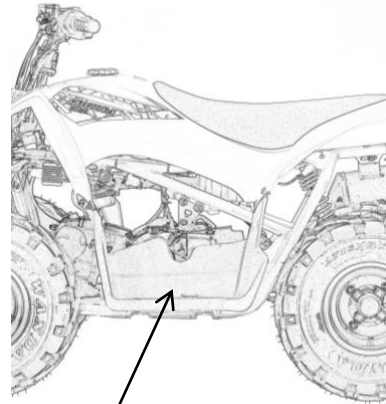
drive within the sight of an adult.

- ➡ Never ride on public trails.
- ➡ Don't ride your ATV on roads or over railroad tracks. Your ATV makes noise that will keep you from hearing cars, trucks or trains that may be coming towards you.
- ➡ Learn where there are lakes, rivers, ponds and ditches in your driving area. Stay away from them.
- ➡ Never ride on frozen water. You could get hurt or you could even die. All ice can be dangerous!
- ➡ Ride your ATV only where you know it is safe to drive and where you have permission to drive. Be careful of the things around you.
- ➡ Always be a polite driver. (Don't drive through the flower garden or over the little trees you planted!)
- ➡ Always do your best to help take care of nature.

## Engine and Vehicle Identification Number Location



1



2(EIN)

**TYPICAL (compliance plate is located on the front of the ATV)**

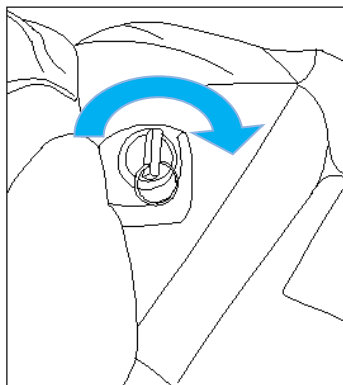
1. VIN (Vehicle Identification Number)

## 2. EIN (Engine Identification Number)

# Features and Controls

## Main Key Switch

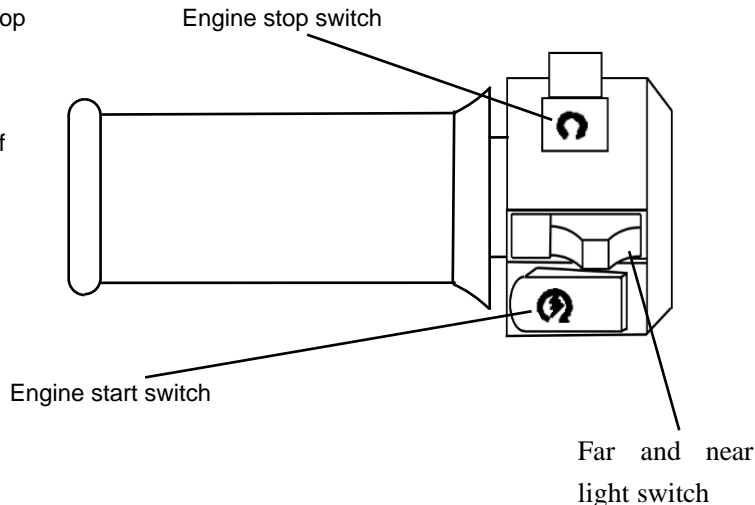
Turn the key clockwise to the ON position before starting the engine. To avoid draining the battery, always turn the key to the OFF position when the engine is not running. Always remove the ignition key when the vehicle is not in use.



## Engine Stop Switch

The engine will not start or run when the stop switch is down, in the OFF position. Its purpose is to provide the operator with a quick means of engine shutdown in case of stuck throttle or other emergency.

Both the main switch and the engine stop switch shut off all electrical power to the entire vehicle. To stop the engine quickly, push the stop switch down.



## Far and near light switch

Use the far and near light switch to illuminate the way forward at night

## Engine Start Button

The start button is located on the left handlebar control.

Follow the *Starting the Engine* procedure beginning on page 55

## Throttle Controls

### **WARNING**

Operating an ATV with sticking or improperly operating throttle controls could cause an accident and lead to severe injury or death.

Never start or operate an ATV with a sticking or improperly operating throttle. Always contact your dealer or other qualified person for service if throttle problems arise.

Failure to check or maintain proper operation of the throttle system can result in an accident if the throttle lever sticks during operation. Always check the lever for free movement and return before starting the engine. Also check occasionally during operation.

The throttle release switch limits engine speed in the event of a throttle system malfunction.

Modifications to the throttle release switch could result in failure to perform as designed, which could result in an accident. Do not attempt to modify the throttle control system or replace it with any after market throttle mechanism. Always ensure that the throttle cable is installed and properly routed to the throttle control.

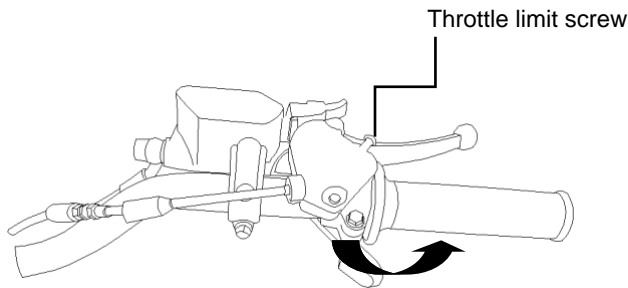
## Throttle Lever/limiting screw

Press the throttle lever toward the handlebar to increase engine speed and vehicle movement.

Engine speed returns to idle when the lever is released.

**NOTE:** Idle RPM is preset by the manufacturer. If the engine idle speed is not satisfactory, please see your dealer or other qualified service facility for adjustment.

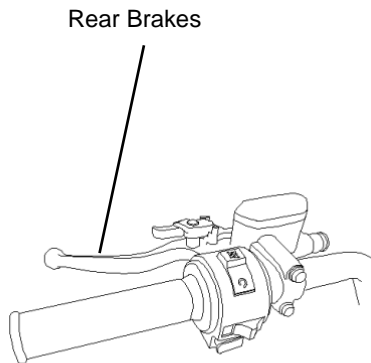
Throttle limiting screw. Loosen the 8mm lock nut screwing clockwise will limit the throttle. Once desire limit has been reached tighten the 8mm lock nut



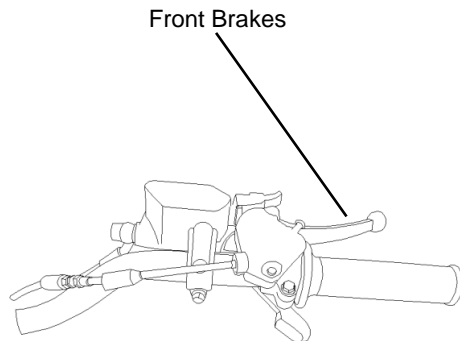
## Brakes

Squeeze both brake levers toward the handlebar at the same time to apply the brakes. The left lever controls the rear brakes. The right lever controls the front brakes.

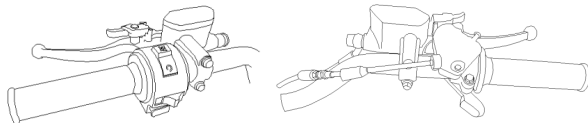
**WARNING!** Applying only one brake could cause loss of control and result in serious injury or death. Always apply both brakes at the same time.



**Parking  
Brake**  
Parking  
brake lock



1. Squeeze the left brake lever.
2. Push the parking brake lock back to lock the brake lever in place.
3. Release the brake lever.
4. To release the parking brake lock, squeeze and release the brake lever. The parking brake will release automatically.
5. Always lock the parking brake whenever the vehicle is left unattended.



**WARNING!** Operating the ATV while the parking brake is engaged could cause an accident resulting in serious injury or death. It could also result in driveline or engine damage. Always be sure to disengage the parking brake before operating the ATV.

## Fuel System

### Gas Cap

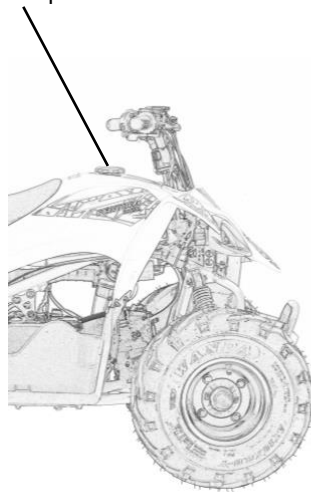
The fuel tank filler cap is located directly below the handlebars.

Use unleaded gasoline with a minimum pump octane number of  $90 = (R + M/2)$  octane. Non-ethanol fuel is recommended.

***Do not use fuel with ethanol content greater than 10 percent, such as E-85 fuel.***

Refer to the specifications section beginning on page 115 for fuel tank capacity.

Gas Cap



## Operation

### **WARNING**

Failure to operate the ATV properly can result in a collision, loss of control, accident or overturn, which may result in serious injury or death. Read and understand all safety warnings outlined in the safety section of this owner's manual.

### **Break-in Period**

The break-in period for your new CROSSFIRE TREX ATV is defined as the first ten hours of operation, or the time it takes to use the first two full tanks of gasoline. No single action on your part is as important as following the procedures for a proper break-in. Careful treatment of a new engine will result in more efficient performance and longer life for the engine.

Perform the following procedures carefully.

**NOTICE:** Excessive heat build-up during the first three hours of operation will damage close-fitted engine parts.

Do not operate at full throttle or high speeds for extended periods during the first three hours of use.

Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.

1. Fill the fuel tank with gasoline. Always exercise extreme caution whenever handling gasoline. See page 76.
2. Check the oil level. See page 77. Add the recommended oil as needed to maintain the oil level in the safe operating range.
3. Drive slowly at first. Select an open area that allows room to familiarize yourself with operation and handling.
4. Vary throttle positions. Do not operate at sustained idle.
5. Perform regular checks on fluid levels, controls and areas outlined on the daily pre-ride inspection checklist. See page 51.

## Pre-Ride Inspection

Failure to inspect and verify that the ATV is in safe operating condition before operating increases the risk of an accident. Always inspect the ATV before each use to make sure it's in safe operating condition.

Pre-Ride Checklist		
Item	Remarks	Page
Front suspension	Inspect, lubricate if necessary	91
Rear suspension	Inspect, lubricate if necessary	91
Steering	Ensure free operation, lubricate if necessary	91
Tires	Check condition and pressure	97
Wheels / fasteners	Inspect, ensure fastener tightness; check that axle nuts are secured by cotter pins	99
Fuel and oil	Check and fill as needed	48

<b>Pre-Ride Checklist</b>		
<b>Item</b>	<b>Remarks</b>	<b>Page</b>
Throttle	Check for proper operation	44
Engine stop switch	Check for proper function	29
Far and near light	Check for proper operation	43
Brakelight	Check for proper operation	100
Air filter, pre-filter	Inspect, clean or replace	94
Drive chain	Check condition and slack; refer to drive chain adjustment	93
Frame nuts, bolts, fasteners	Inspect, ensure tightness	--
Loose or damaged components	Visually inspect for any damaged components or loose fasteners	--
Riding gear	Wear helmet, goggles, protective clothing	3

## **Safe Operation Practices**

1. Complete the recommended safety training before operating this vehicle.
2. Do not allow anyone under age 10 to operate this vehicle.
3. Never carry a passenger on this ATV.
4. Engine exhaust fumes are poisonous. Never start the engine or let it run in an enclosed area.
5. Operate this vehicle off-road only.

Never operate the vehicle on pavement or on any public street, road or highway, including dirt and gravel roads.

6. Never exceed the maximum weight capacity of the vehicle. When determining the weight you are adding to the vehicle, include the weight of the operator, accessories and loads on the racks. The combined weight of these items must not exceed the maximum weight capacity.
7. Drive in a manner appropriate for your skills and operating conditions. Never operate at excessive speeds. Never attempt wheelies, jumps, or other stunts. Never remove your hands from the handlebars while operating, and always keep both feet on the footrests.
8. Never consume alcohol or drugs before or while operating an ATV.

9. Always use the size and type of tires specified for your vehicle. Always maintain proper tire pressure.
10. Never operate a damaged ATV. After any overturn or accident, have a qualified service dealer inspect the entire machine for possible damage.
11. Never operate the ATV on a frozen body of water.
12. Do not touch hot exhaust system components. Always keep combustible materials away from the exhaust system.
13. Always remove the ignition key when the vehicle is not in use to prevent unauthorized use.

## Starting the Engine

**NOTICE:** Operating the ATV immediately after starting could cause engine damage. Allow the engine to warm up for several minutes before operating.

1. Shift the transmission to neutral.
2. Lock the parking brake.
3. Push the engine stop switch up to the ON position.
4. Turn the ignition key to ON.
5. Squeeze the rear brake lever and press the start button. The rear brake lever must be engaged or the engine won't start.
6. Do not press the throttle while starting the engine. Activate the starter for a maximum of five seconds, releasing the button when the engine starts. If it doesn't start, release the starter, wait five seconds, then activate for another five seconds. Repeat until the engine starts.

## **Stopping the Engine**

1. Release the throttle completely.
2. Apply the brakes until the vehicle stops moving.
3. Shift the transmission to neutral.
4. Stop the engine. There are two ways to stop the engine:
  - Turn the key off.
  - Push the engine stop switch down.
5. Lock the parking brake.
6. To avoid draining the battery, always turn the key to the OFF position when the engine is not running.

## Driving Procedure

1. Sit upright with both feet on the footrests and both hands on the handlebars.
2. Shift the transmission to neutral.
3. Start the engine and allow it to warm up.
4. Check your surroundings and determine your path of travel.
5. Squeeze the left brake lever.
6. Shift the transmission to the desired gear.
7. Slowly release the brake lever.
8. Slowly press the throttle with your right thumb and begin driving.
9. Drive slowly at first. Practice turning and using the throttle and brakes on level surfaces.



## Making Turns

Your ATV is equipped with a solid rear axle, which drives both rear wheels equally at all times. This means that the wheel on the outside of the turn must travel a greater distance than the inside wheel when turning and the inside tire must slip traction slightly.

To turn, steer in the direction of the turn, leaning your upper body to the inside of the turn while supporting your weight on the outer footrest.

This technique alters the balance of traction between the rear wheels, allowing the turn to be made smoothly.

Practice making turns at slow speeds.

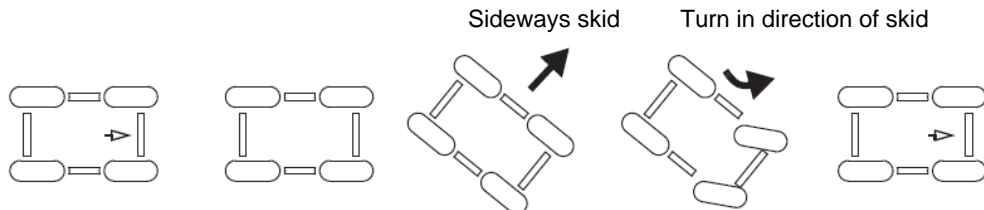


**WARNING!** Turning improperly can result in vehicle overturn. Never turn abruptly or at sharp angles. Never turn at high speeds.

## Driving on Slippery Surfaces

Whenever riding on slippery surfaces such as wet trails or loose gravel, or during freezing weather, follow these precautions:

1. Do not operate on excessively rough, slippery or loose terrain.
2. Slow down when entering slippery areas.
3. Maintain a high level of alertness, reading the trail and avoiding quick, sharp turns, which can cause skids.
4. Never apply the brakes during a skid. Correct a skid by turning the handlebars in the direction of the skid and shifting your body weight forward.

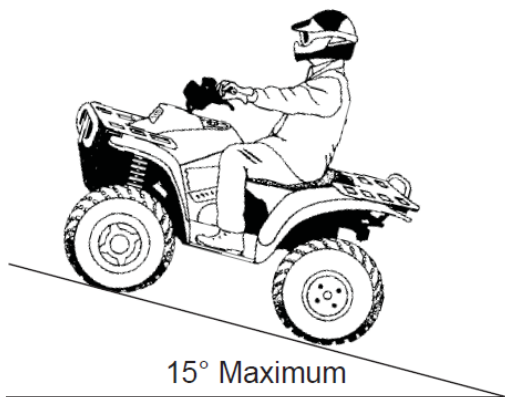


## Driving Uphill

Braking and handling are greatly affected when operating in hilly terrain. Improper procedure could cause loss of control or overturn.

Whenever traveling uphill, follow these precautions:

1. Drive straight uphill.
2. Avoid steep hills ( $15^{\circ}$  maximum).
3. Always check the terrain carefully before ascending any hill.
4. Never climb hills with excessively slippery or loose surfaces.



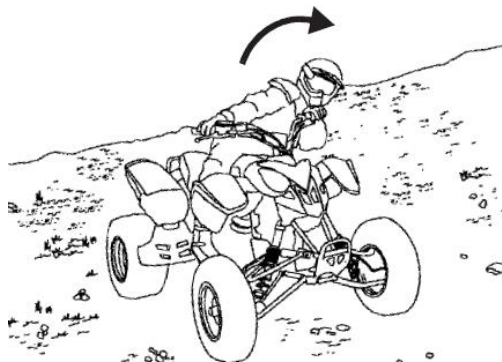
5. Keep both feet on the footrests.
6. Shift body weight uphill.
7. Proceed at a steady rate of speed and throttle opening. Opening the throttle suddenly could cause the ATV to flip over backwards.
8. Never go over the top of any hill at high speed. An obstacle, a sharp drop, or another vehicle or person could be on the other side of the hill.
9. Remain alert and be prepared to take emergency action. This may include quick dismounting of the vehicle.

## Driving on a hillside

Driving on a hillside is not recommended. Improper procedure could cause loss of control or overturn. Avoid crossing the side of any hill unless absolutely necessary.

If crossing a hillside is *unavoidable*, follow these precautions:

1. Slow down.
2. Lean into the hill, transferring your upper body weight uphill while keeping your feet on the footrests.
3. If the vehicle begins to slide or tip, quickly turn the front wheel downhill, if possible, or dismount on the uphill side *immediately*!



## Driving Downhill

When driving downhill, follow these precautions:

1. Avoid steep hills (15° maximum).
2. Shift body weight uphill. Transfer your weight to the rear of the vehicle.
3. Drive straight downhill.
4. Slow down. Excessive speed when traveling downhill can cause loss of control.
5. Apply the front and rear brakes at the same time, and very slightly, to aid in slowing.

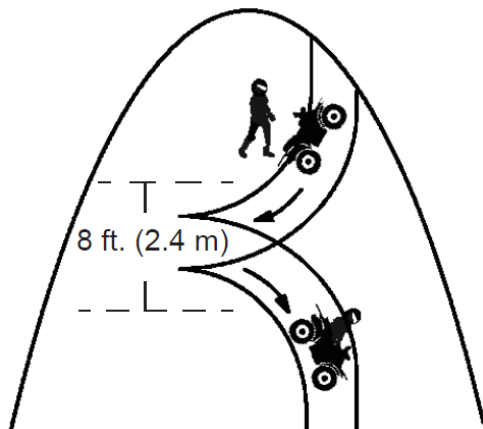


## **Turning Around on a Hill**

If the vehicle stalls while climbing a hill, never back it down the hill! Use the K-turn to turn around.

1. Stop the vehicle and lock the parking brake while keeping body weight uphill.
2. Shift the transmission to neutral.
3. Shut off the engine.
4. Dismount on the uphill side of the vehicle, or on the left if the vehicle is pointing straight uphill.
5. Staying uphill of the ATV, turn the handlebars full left.
6. While holding the brake, release the parking brake lock and slowly release the brake, allowing the ATV to roll around to your right until it's pointing across the hill or slightly downward.

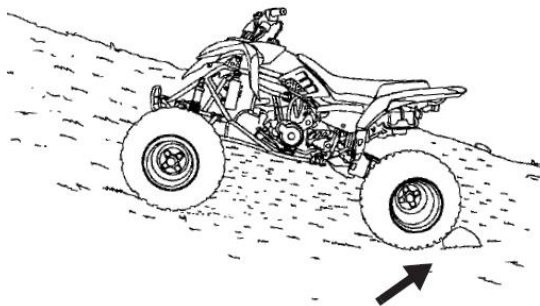
7. Lock the parking brake and remount the ATV from the uphill side, keeping body weight uphill.
8. Restart the engine.
9. Squeeze the rear brake lever.
10. Shift the transmission to forward gear.
11. Release the parking brake and drive slowly, controlling speed with the rear brake, until the ATV is on more level ground.



## Parking on a Hill or Incline

Avoid parking on a hill or incline if possible. If it's unavoidable, follow these precautions:

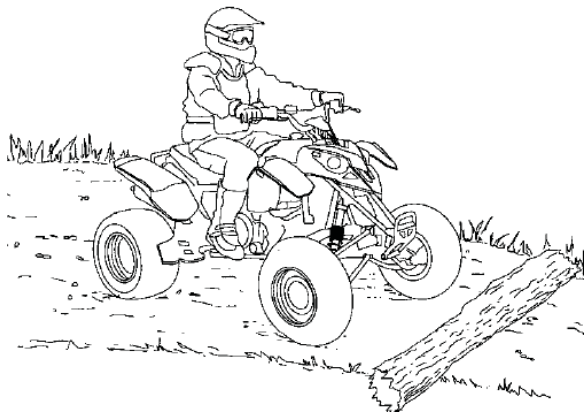
1. Stop the engine.
2. Lock the parking brake.
3. Always block the rear wheels on the downhill side as shown in the illustration.



## Driving Over Obstacles

Follow these precautions when operating over obstacles:

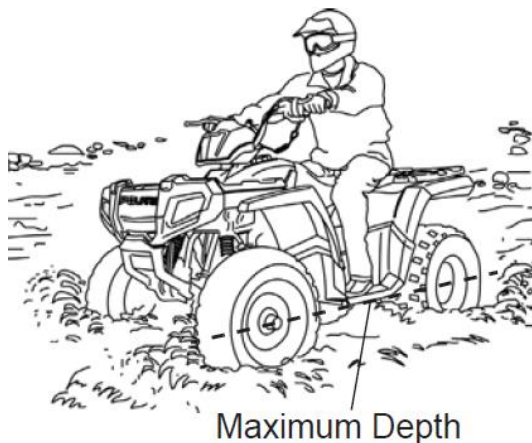
1. Always check for obstacles before operating in a new area.
2. Look ahead and learn to see the terrain.  
Be constantly alert for hazards such as logs, rocks and low hanging branches.
3. Travel slowly and use extra caution when operating on unfamiliar terrain. Not all obstacles are immediately visible.
4. Never attempt to operate over large obstacles, such as rocks or fallen trees.



## Driving Through Water

Your ATV can safely operate through shallow water. The recommended maximum depth for your ATV is below the bottom of the footrests. Follow these precautions when operating through water:

1. Determine water depth and current before entering water.
2. If crossing a stream, choose a crossing where both banks have gradual inclines.
3. Avoid operating through deep or fast-flowing water.



4. After driving through water, dry the brakes by applying light pressure to the levers (while moving) until braking action is normal. If you do not perform this procedure, your brakes may be ineffective.

**NOTICE:** Serious engine damage can result if the vehicle is not thoroughly inspected after operating in water deeper than the footrest level. As soon as possible, perform the inspections and maintenance services outlined in the periodic maintenance chart beginning on page 71.

Engine oil, gearcase oil and all grease fittings need special attention.

If the vehicle tips or overturns in water, or if the engine stops during or after operating in water, service is required before starting the engine. Your PENTORA dealer can provide this service. If it's impossible to bring the vehicle in before starting the engine, perform the service outlined on page 55, and take the vehicle in for service at the first opportunity.

# **Emission Control Systems**

## **Noise Emission Control System**

Do not modify the engine, intake or exhaust components, as doing so may affect compliance with local noise level requirements.

## **Crankcase Emission Control System**

This engine is equipped with a closed crankcase system. Blow-by gases are forced back to the combustion chamber by the intake system. All exhaust gases exit through the exhaust system.

## Maintenance

To keep the performance good, the vehicle should be checked and maintained at certain interval. The meanings of capital in following table are:

I: Inspection, including check, clean, lubricate, refuel, repair or replacing if necessary.

A: Inspection, adjusting if necessary C: Cleaning R: Replacing T: Tightening

## **Periodic and Anticipated Maintenance and Procedures**

To keep the performance good, the motorcycle should be checked and maintained at certain interval.

The meanings of capital in following table are:

I:Inspection, including check, clean, lubricate, refuel, repair or replacing if necessary.

A:Adjusting

C:Cleaning

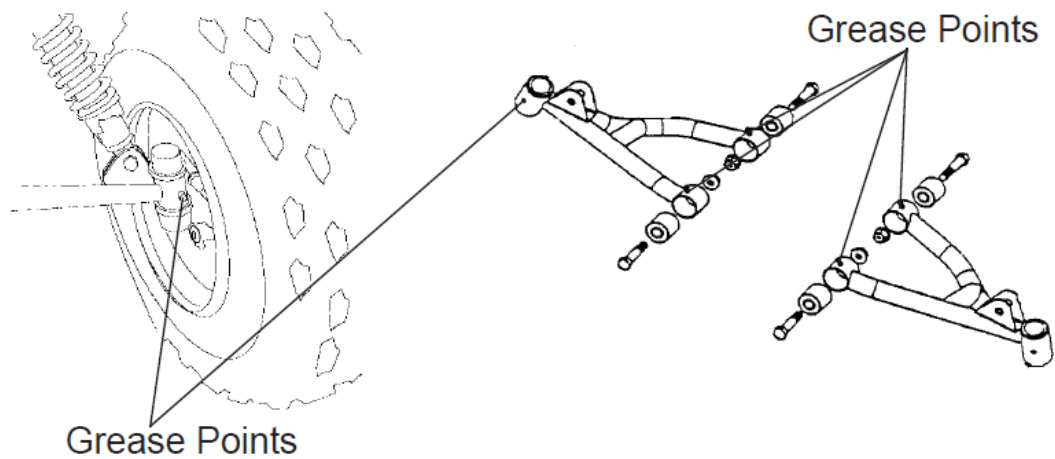
R:Replacing

T:Tighteni

## Lubrication Guide

Item	Lube	Method
Engine Oil	SF15W/40(in summer) SF15W/30(in winter)	
Gearcase (Transmission) Oil Level	Not Applicable due to integrated sump	
Drive Chain	CROSSFIRE TREX Chain Lube or SAE 80/90	
▲ Front Suspension (A-Arm)	All Season Grease or grease conforming to NLGI No. 2	Inspect; tighten fasteners; grease (also after washing ATV or driving in water).

▲ Perform these procedures more often for vehicles subjected to severe use.



## Engine Oil

### Oil Recommendations

Always check and change the engine oil at the intervals outlined in the Periodic Maintenance Chart beginning on page 71. CROSSFIRE TREX recommends the use of SF15W/40(in summer) SF15W/30(in winter).

Duty 4-Cycle engine oil for this vehicle. Oil may need to be changed more frequently if oil is not used. Do not use automotive oil.

**NOTICE:** Mixing brands or using a non-recommended oil may cause serious engine damage. Always use the recommended oil. Never substitute or mix oil brands.

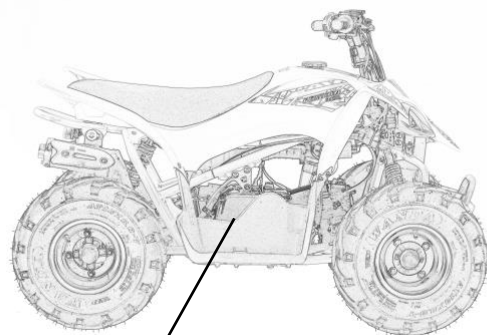
## Engine Oil Check

Maintain the oil level within the safe range on the dipstick. Do not overfill.

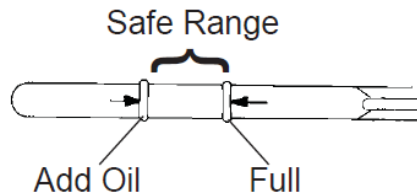
1. Position the vehicle on a level surface.
2. Remove the dipstick. Wipe it dry with a clean cloth.
3. Reinstall the dipstick completely.
4. Remove the dipstick and check the oil level.

**Tip:** A rising oil level between checks in cool weather driving can indicate contaminants such as gas or moisture collecting in the crankcase. If the oil level is over the full/safe mark, change the oil immediately.

5. Add the recommended oil as needed.
6. Reinstall the dipstick.



Dipstick

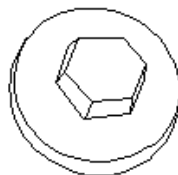


## Engine Oil Change

1. Position the vehicle on a level surface.
2. Clean the area around the pre-filter plug.
3. Start the engine. Allow it to idle for two to three minutes.
4. Stop the engine.

**CAUTION!** Hot oil can cause burns to skin. Do not allow hot oil to contact skin.

5. Place a drain pan under the engine crankcase.
6. Remove the pre-filter plug. Allow the oil to drain completely.
7. Wash the oil pre-filter screen with solvent to remove debris. Allow the screen to air dry.



8. Clean the pre-filter plug. Install a new sealing washer on the plug. The sealing surfaces on the plug and crankcase should be clean and free of burrs, nicks or scratches.
9. Reassemble the pre-filter screen and spring to the pre-filter plug.
10. Reinstall the pre-filter drain plug. Torque to 11 ft. lbs. (15 Nm).
11. Remove the dipstick. Add 25.3oz. (750 ml) of the recommended oil. Do not overfill. See the specifications section beginning on page 114 for capacities.
12. Reinstall the dipstick.
13. Start the engine. Allow it to idle for one to two minutes.
14. Stop the engine and inspect for leaks.
15. Check the oil level. Add oil as needed to bring the level to the upper mark on the dipstick.
10. Dispose of used oil properly.

## Engine Oil Change

1. Position the vehicle on a level surface.
2. Remove the fill plug.
3. Place a drain pan under the gearcase.
4. Remove the drain plug. Allow the oil to drain completely.
5. Clean and reinstall the drain plug. Torque to 14 ft. lbs. (19 Nm).
6. Add the recommended oil. Maintain the oil level at the bottom of the fill plug hole threads.
7. Reinstall the fill plug. Check for leaks.
8. Dispose of used oil properly.

**Gearcase Capacity:** 27.1 oz. (800 ml)

## **Spark Plugs (NGK C7HSA)**

Refer to the specifications section beginning on page 114 for spark plug and gap specifications.

**NOTICE:** Using non-recommended spark plugs can result in serious engine damage. Always use CROSSFIRE TREX -recommended spark plugs or their equivalent.

Spark plug condition is indicative of engine operation. The spark plug firing end condition should be read after the engine has been warmed up and the vehicle has been driven at higher speeds. Immediately check the spark plug for correct color.

**CAUTION!** A hot exhaust system and engine can cause burns. Wear protective gloves when removing a spark plug for inspection.

## **Spark Plug Change**

1. Remove the spark plug cap. Using the special wrench provided in the tool pouch, rotate the spark plug counter-clockwise to remove it.
2. Reverse the procedure for spark plug installation. Torque to 14 ft. lbs. (19 Nm).

## Cylinder Head Torque

Have your dealer or other qualified person check the ATV cylinder head for proper torque at the first service, or after 25 hours.

## Vehicle Immersion

If the vehicle tips or overturns in water deeper than the footrest level, or if the engine stops during or after operating in water, restarting WILL result in serious engine damage. Take the vehicle in for service before starting the engine. Your CROSSFIRE TREX dealer can provide this service. If this is not possible, follow the vehicle immersion inspection and drying procedures outlined below. This procedure will allow *short-term operation only* to drive the ATV to a trailer or towing vehicle.

1. Move the ATV to dry land or at the very least, to water below the footrests.
2. Check the air box for any water and dry it if water is present.
3. Remove the spark plug.

4. Turn the engine over several times using the electric start.
5. Dry the spark plug and reinstall it, or replace it with a new plug.
6. Attempt to start the engine. If necessary, repeat the drying procedure.
7. Take the vehicle in for service as soon as possible, whether you succeed in starting it or not. Your CROSSFIRE TREX dealer can provide the required service.
8. If water has been ingested into the transmission, follow the procedure on page 71 for drying the CVT.

Do not modify any component of the CVT system. Doing so may reduce its strength so that a failure may occur at a high speed. The CVT system has been precision balanced. Any modification will cause the system to be out of balance, creating vibration and additional loads on components.

The CVT system rotates at high speeds, creating large amounts of force on clutch components.

Extensive engineering and testing has been conducted to ensure the safety of this product. However, as the owner, you have the following responsibilities to make sure this system remains safe:

- Always follow all recommended maintenance procedures.
- See your CROSSFIRE TREX dealer or other qualified person for service and repair assistance.
- This CVT system is intended for use on CROSSFIRE TREX products only. Do not install it in any other product.
- Always make sure the CVT housing is securely in place during operation.

## Spark Arrester

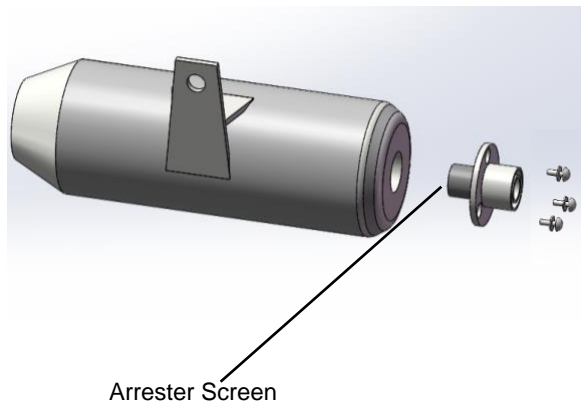
### **WARNING**

To remove accumulated carbon, clean the spark arrester at the intervals recommended in the Periodic Maintenance Chart beginning on page 71.

Failure to heed these warnings could result in serious injury or death.

- Do not perform service on the spark arrester while the system is hot. Allow components to cool sufficiently before proceeding.
- Wear eye protection and gloves.
- Never run the engine in an enclosed area. Exhaust contains poisonous carbon monoxide gas.

1. Remove the three bolts and remove the arrester from the end of the muffler.
2. Use a non-synthetic brush to clean the sidehillarrester screen. A synthetic brush may melt if components are warm. If necessary, blow debris from the screen with compressed air.
3. Inspect the screen for wear and damage.  
Replace the arrester if damage is found.
4. Reinstall the arrester.
5. Torque the bolts to . (5 Nm).



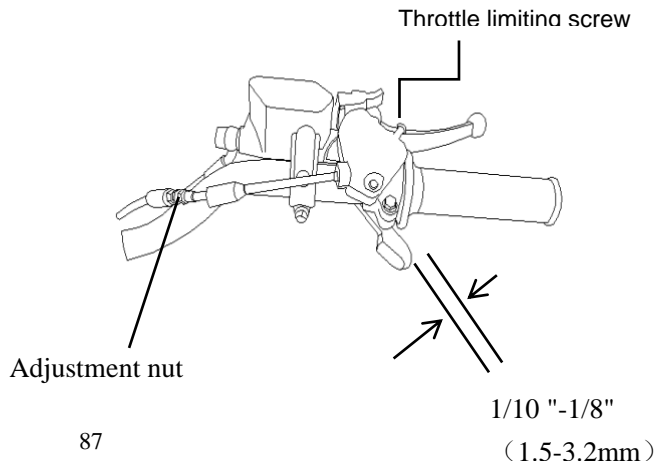
## Throttle control system

The dealer CANNOT, under any circumstances, either prior to the sale or later, even at the consumer's request, remove or adjust any speed limiting devices.

The top speed of this vehicle is 45km /h. The throttle limit screw is located on the throttle . Turning the screw clockwise will limit how much throttle you can use. The 8mm locking nut than is tightened to stop the screw coming undone.

## Throttle Cable Adjustment

Always check the throttle for smooth operation before riding. Periodically check the throttle free play. It should be kept between 1/10" and 1/8" (1.5 - 3.2 mm). If adjustment is required, turn the adjustment nut until the free play falls in to the acceptable limit.



## **Front Brake**

### **Brake Fluid Reservoir Level**

#### **Verification**

With vehicle on a level surface, check brake fluid in reservoir for proper level. Brake fluid level should be between MIN and MAX marks.

NOTE: A low level may indicate leaks or worn brake pads.

#### **Adding Brake Fluid**

Clean filler cap before removing. Add fluid as required. Do not overfill.

NOTE: Ensure filler cap diaphragm is pushed inside the cap before closing the brake fluid reservoir.

### **Recommended Brake Fluid**

Always use brake fluid meeting the specification DOT 4 only.

#### **WARNING**

To avoid serious damage to the braking system, do not use fluids other than the recommended one, nor mix different fluids for topping up.

#### **WARNING**

The brake fluid replacement or brake system maintenance and repairs should be performed by an authorized CROSSFIRE TREX dealer.

## **Rear Brake**

### **Brake Fluid Reservoir Level**

#### **Verification**

With vehicle on a level surface, check brake fluid in reservoir for proper level. Brake fluid level should be between MIN and MAX marks.

NOTE: A low level may indicate leaks or worn brake pads.

#### **Adding Brake Fluid**

Clean filler cap before removing. Add fluid as required. Do not overfill.

NOTE: Ensure filler cap diaphragm is pushed inside the cap before closing the brake fluid reservoir.

#### **Recommended Brake Fluid**

Always use brake fluid meeting the specification DOT 4 only.

#### **WARNING**

To avoid serious damage to the braking system, do not use fluids other than the recommended one, nor mix different fluids for topping up.

#### **WARNING**

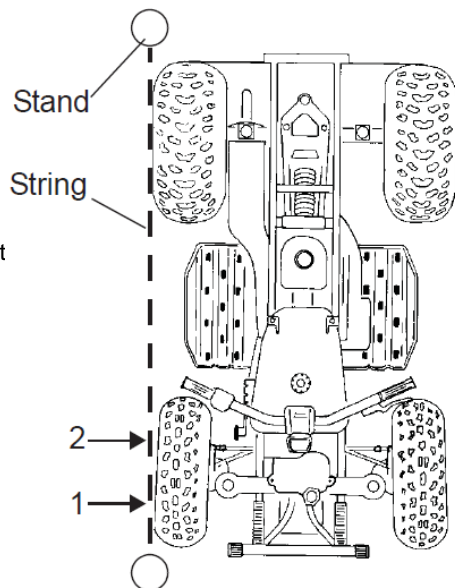
The brake fluid replacement or brake system maintenance and repairs should be performed by an authorized CROSSFIRE TREX dealer.

## Toe Alignment

Use the following procedure to check the toe alignment of the vehicle. The recommended toe alignment is 1/8" to 1/4" (3-6 mm) toe out.

**WARNING!** Severe injury or death can result from improper toe alignment and adjustment. Do not attempt to adjust tie rod alignment. All tie rod adjustments should be performed by an authorized CROSSFIRE TREX dealer or ot qualified service facility.

1. Position the vehicle on a level surface.
2. Place the handlebars in a straight-ahead position.
3. Tie a length of string between two stands as shown in the illustration. Position the stands so that the string is flush with the side of the rear tire. If available, you may use a long straightedge instead of string.



4. Measure the distance from the string to the rim at the front (1) and rear (2) of the front rim. The rear measurement should be 1/10"-1/8" (2-3 mm) more than the front measurement on each side of the vehicle to obtain the recommended 1/8" to 1/4" (3-6 mm) toe out alignment.
5. Repeat the measurement procedure on the other side of the vehicle.
6. If you discover improper alignment, see your CROSSFIRE TREX dealer for service.

## Steering Inspection

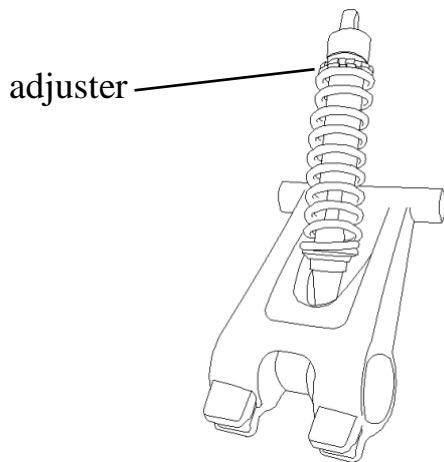
Check the steering assembly periodically for loose nuts and bolts. If loose nuts and bolts are found, see your CROSSFIRE TREX dealer or other qualified service facility before operating the vehicle.

## Camber and Caster

The camber and caster are non-adjustable.

## Shock Spring Adjustment

The front and rear shock absorber springs are adjustable to increase or decrease spring tension. Rotate the adjuster either clockwise or counter-clockwise to make adjustments.



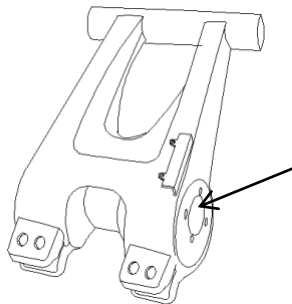
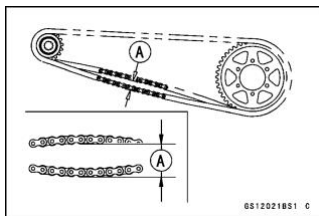
## Drive Chain

Lubricate the drive chain with chain spray lube or an approved chain lube at the general lubrication interval specified in the Periodic Maintenance Chart beginning on page 71. Lubricate more often under severe use, such as in dirty or wet conditions.

**NOTICE:** Washing the drive chain with a high pressure washer or gasoline can cause premature wear and drive chain failure. Don't use a high pressure washer or gasoline to clean the drive chain. Adjusting or operating the ATV with improper rear drive chain slack can result in severe damage to the transmission and drive components. Always make sure the slack is within the stated specifications.

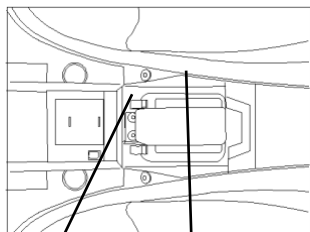
## Drive Chain Slack

1. Check the amount of chain slack by moving the vehicle slightly forward to gain slack at the top side of the chain.
2. The tool will be inserted into the rear axle (in the direction of the arrow) and the chain can be adjusted by rotating the rear axle.
3. Measure chain slack. It should have 1/4"-1/2" (6-12 mm) deflection. Diagram (A)
4. Adjust the 2 tensioner nuts symmetrically until desired tension is achieved



## Air Filter

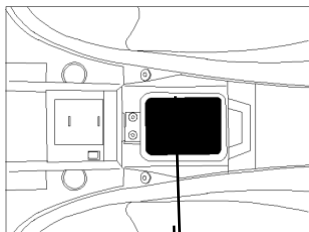
1. Remove the seat. See page 30.
2. Release the air box cover spring clips and remove the cover.
3. Remove the foam air filter. Wash the foam filter in warm soapy water, then rinse and let dry. If the filter is damaged, install a new foam filter.
4. Apply a commercially available foam filter lubricant to the foam filter.



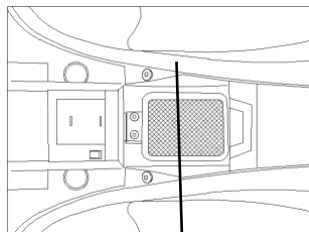
clips

cover

5. Clean away any oil or



Foam Filter



Support screen

sediments in the air box.

6. Reinstall the filter and air box cover. Secure the clips.

7. Reinstall the seat.

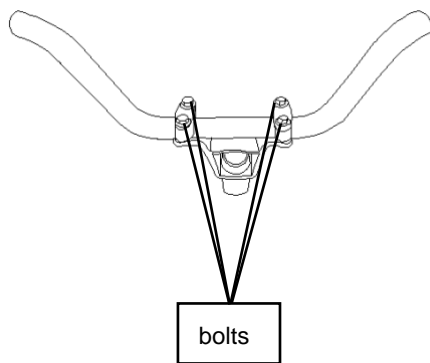
**NOTICE:** Never operate the ATV with the filter element removed. Dirt will enter the engine causing rapid wear and severe damage to the engine.

## Handlebar Adjustment

Improper adjustment of the handlebars or incorrect torquing of the adjuster block tightening bolts can cause limited steering or loosening of the handlebars, resulting in loss of control and possible serious personal injury or death. Follow the adjustment procedures exactly, or see your dealer or other qualified service person for service.

The handlebars can be adjusted for rider preference.

1. Remove the pod to access the handlebar bolts. Loosen the four bolts.
2. Adjust the handlebar to the desired height. Be sure the handlebars do not hit the gas tank or any other part of the vehicle when turned fully to the left or right.
3. Lightly tighten each bolt equally to prevent uneven gaps in the block. Torque the bolts to 24 Nm.



## Tires

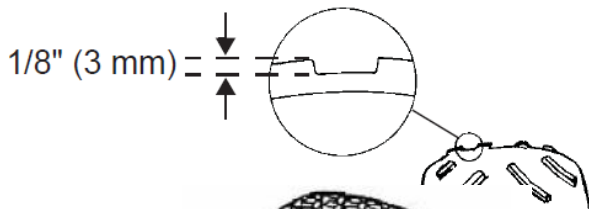
 <b>WARNING</b>
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Operating your ATV with worn tires, improperly inflated tires, non-standard tires or improperly installed tires will affect vehicle handling and could cause an accident resulting in serious injury or death. Always follow all tire maintenance procedures as outlined in this manual and on the labels on the vehicle.

Always use original equipment size and type when replacing tires.

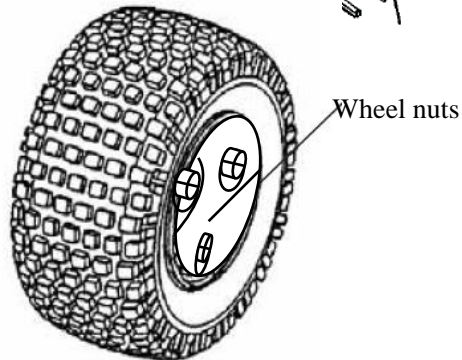
## Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (3 mm) or less.



## Wheel Removal

1. Stop the engine and lock the parking brake.
2. Loosen the wheel nuts slightly.
3. Elevate the side of the vehicle by placing a suitable stand under the footrest frame.
4. Remove the wheel nuts and remove the



whee

## **Wheel Installation**

1. Lock the parking brake.
2. Place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward forward rotation.
3. Install the wheel nuts and finger tighten them.
4. Lower the vehicle to the ground.
5. Securely tighten the nuts to 45 Nm.

## **Wheel Hub Tightening**

Front wheel bearing tightness and spindle nut retention are critical component operations.

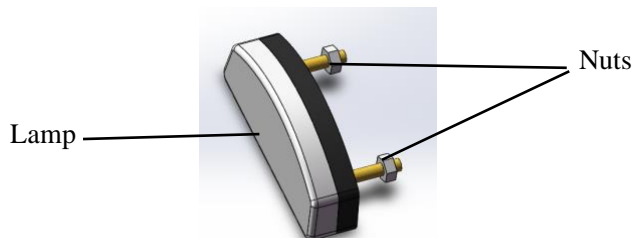
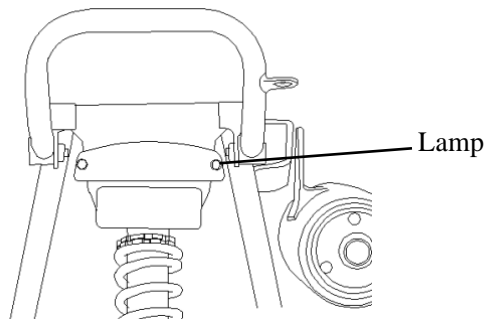
All service must be performed by your authorized CROSSFIRE TREX dealer or other qualified service facility

## Taillight Replacement

If the Taillight doesn't work, the lamp may need to be replaced.

1. Remove the two nuts
2. Remove the taillight
3. Test the light for proper operation.
4. Reinstall the nuts.

Note: Taillight with arc side up



## Battery

### **WARNING**

Improperly connecting or disconnecting battery cables can result in an explosion and cause serious injury or death. When removing the battery, always disconnect the negative (black) cable first. When reinstalling the battery, always connect the negative (black) cable last.

The battery in your CROSSFIRE TREX ATV is a sealed battery. The sealing strip cannot be removed. Never add water to this type of battery.

Keep the battery terminals and connections free of corrosion. If cleaning is necessary, remove the corrosion with a stiff wire brush. Wash with a solution of one tablespoon baking soda and one cup water. Rinse well with tap water and dry off with clean shop towels. Coat the terminals with dielectric grease or petroleum jelly to reduce oxidation and excessive power consumption.

## Battery Removal

1. Remove the battery hold-down strap.
2. Disconnect the black (negative) battery cable first.

3. Disconnect the red (positive) battery cable next.
4. Lift the battery out of the ATV.

### **Battery Installation and Connections**

Always install a fully charged battery. Using a new battery that has not been fully charged can damage the battery and result in a shorter life. It can also hinder vehicle performance. If recharging is necessary, use a .5 amp battery charger

1. Set the battery in its holder.
2. Coat the terminals with dielectric grease or petroleum jelly.
3. Connect and tighten the red (positive) cable first.
4. Connect and tighten the black (negative) cable last.
5. Attach the hold-down strap.
6. Verify that cables are properly routed.

### **Battery Storage**

Whenever the vehicle is not used for a period of three months or more, remove the battery from the vehicle, ensure that it's fully charged, and store it out of the sun in a cool, dry place.

Check battery voltage each month during storage and recharge as needed to maintain a full charge

## Cleaning

Keeping your ATV clean will not only improve its appearance but it can also extend the life of various components.

**NOTICE:** High water pressure may damage components. CROSSFIRE TREX recommends washing the vehicle

by hand or with a garden hose, using mild soap.

Certain products, including insect repellents and chemicals, will damage plastic surfaces.

Do not allow these types of products to contact the vehicle.

## **Washing the ATV**

The best and safest way to clean your CROSSFIRE TREX vehicle is with a garden hose and a pail of mild soap and water.

1. Use a professional-type washing cloth, cleaning the upper body first and the lower parts last.
2. Rinse with clean water frequently.
3. Dry surfaces with a chamois to prevent water spots.

## **Washing Tips**

- Avoid the use of harsh cleaners, which can scratch the finish.
- Do not use a power washer to clean the vehicle.
- Do not use medium to heavy duty compounds on the finish.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish.

## **Cleaning**

### **Washing the ATV**

If a high pressure water system is used for cleaning (not recommended), exercise extreme caution. The water may damage components and could remove paint and decals. Avoid

directing the water stream at the following items:

- Wheel bearings
- Cab and body panels
- Transmission seals
- Brakes
- Labels and decals

If warning and safety labels are damaged, contact your CROSSFIRE TREX dealer.

Grease all zerk fittings immediately after washing. Allow the engine to run for a while to evaporate any water that may have entered the engine or exhaust system.

## **Polishing**

CROSSFIRE TREX recommends the use of common household aerosol furniture polish for polishing the finish on your CROSSFIRE TREX vehicle. Follow the instructions on the container.

### **Polishing Tips**

- Avoid the use of automotive products, some of which can scratch the finish of your vehicle.
- Always use clean cloths and pads for cleaning and polishing. Old or reused cloths and pads may contain dirt particles that will scratch the finish

## **Storage**

### **Exterior**

Make necessary repairs and clean the vehicle as recommended. See page 108.

### **Battery Storage**

Remove the battery from the vehicle, ensure that it's fully charged, and store it out of the sun in a cool, dry place.

Check battery voltage each month during storage and recharge as needed to maintain a full charge

### **Engine Oil**

#### **Air Filter / Air Box**

Inspect and clean (or replace) the pre-cleaner and air filter. Clean the air box. Drain the sediment tube.

#### **Fluid Levels**

Inspect fluid levels. Change fluids as recommended in the Periodic Maintenance Chart beginning on page 73.

- Transmission Oil
- Engine Oil

#### **Lubricate**

Inspect all cables and lubricate all areas of the vehicle as recommended in the Periodic Maintenance Chart beginning on page 71.

## **Storage Area/Covers**

1. Make sure tire pressure is at specification.
2. Using suitable supports under the frame, raise the vehicle slightly so that the tires are not touching the ground.
3. Be sure the storage area is well ventilated.
4. Cover the vehicle with an appropriate cover. Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.

## Specifications

Model	Trex 90	
Vehicle Weight	75kg	
Loading capacity rider and cargo	60kg	
Length/Width/Height	1180*755*805mm	
Wheel Base	850mm	
Front Tires	16*8.00-7 @ 10PSI Nominal	
Rear Tires	16*8.00-7 @ 10PSI Nominal	
Fuel Capacity	2.5L	
Ground Clearance	90mm±15mm	
Engine type	4-Stroke	
Displacement	110ccccc	

Cooling	Air Cooled
Bore x Stroke	52.4 x 49.5 mm
Compression Ratio	9.1:1
Lubrication	Pressure and splash mixed lubrication
Oil Capacity	840ml
Starting System	Electric
Fuel System	Carburetor
Intake/Exhaust valve clearance	0.05-0.07 / 0.06-0.08
Ignition System	CDI
Spark Plug / Gap	A7RTC/ 0.6-0.8 mm
Drive System	Automatic
Final Drive	Chain
Front Brakes	Drum
Rear Brakes	Disc
Parking Brake	Mechanical Lock
Brake Light	LED

Far and near light	
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## Troubleshooting

See your CROSSFIRE TREX dealer if you're unable to identify solutions using the following charts.

### Engine Turns Over, Fails to Start

Possible Cause	Solution
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Clogged fuel filter	Replace the filter
Water is present in fuel	Drain the fuel system and refuel
Old or non-recommended fuel	Replace with fresh recommended fuel
Fouled or defective spark plugs	Inspect plugs and replace if necessary
No spark to spark plug	Inspect plugs, verify stop switch is on
Water or fuel in crankcase	Your CROSSFIRE TREX dealer can assist.
Low battery voltage	Recharge the battery to 12.8 VDC
Mechanical failure	Your CROSSFIRE TREX dealer can assist.

## Engine Doesn't Turn Over

Possible Cause	Solution
Low battery voltage	Recharge battery with .5 amp charger
Loose battery connections	Check all connections and tighten
Loose solenoid connections	Check all connections and tighten

## Engine Pings or Knocks

Possible Cause	Solution
Poor quality or low octane fuel	Replace with recommended fuel
Incorrect ignition timing	Your CROSSFIRE TREX dealer can assist.
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs

## Engine Runs Irregularly, Stalls or Misfires

Possible Cause	Solution
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs
Worn or defective spark plug wires	Your CROSSFIRE TREX dealer can assist.
Incorrect spark plug gap or heat range	Set gap to specs or replace plugs
Loose ignition connections	Check all connections and tighten
Water present in fuel	Replace with new fuel
Low battery voltage	Recharge battery to 12.8 VDC
Kinked or plugged fuel tank vent line	Inspect and replace
Incorrect fuel	Replace with recommended fuel
Clogged air filter	Inspect and clean or replace
Throttle release switch malfunction	Your CROSSFIRE TREX dealer can assist.
Other mechanical failure	Your CROSSFIRE TREX dealer can assist.
Low or contaminated fuel	Add or change fuel, clean the fuel system
Kinked or plugged fuel tank vent line	Inspect and replace

Low octane fuel	Replace with recommended fuel
Clogged fuel filter	Replace filter
Incorrect fuel	Replace with recommended fuel

## Engine Stops or Loses Power

Possible Cause	Solution
Out of fuel	Refuel, cycle key to ON position three times for 5 seconds each, then start
Kinked or plugged fuel vent line	Inspect and replace
Water is present in fuel	Replace with new fuel
Fouled or defective spark plugs	Inspect, clean and/or replace spark plugs. Clean Spark arrestor.
Worn or defective spark plug wires	Your CROSSFIRE TREX dealer can assist.
Incorrect spark plug gap or heat range	Set gap to specs or replace plug
Loose ignition connections	Check all connections and tighten
Low battery voltage	Recharge the battery to 12.8 VDC
Incorrect fuel	Replace with fresh recommended fuel
Clogged air filter	Inspect and clean or replace
Throttle release switch malfunction	Your CROSSFIRE TREX dealer can assist.
Other mechanical failure	Your CROSSFIRE TREX dealer can assist.

Overheated engine	Clean engine exterior. Your CROSSFIRE TREX dealer can assist.
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**⚠ WARNING**

**Improper ATV use can result in SEVERE INJURY or DEATH.**



**ALWAYS USE  
AN APPROVED  
HELMET AND  
PROTECTIVE GEAR**



**NEVER USE  
ON PAVED  
ROADS**



**NEVER CARRY  
PASSENGERS**



**NEVER USE  
WITH DRUGS  
OR ALCOHOL**

**NEVER operate:**

- without proper training or instruction.
- at speeds too fast for your skills or the conditions.
- on public roads—a collision can occur with another vehicle.
- with a passenger—passengers affect balance and steering and increase risk of losing control.

**ALWAYS:**

- use proper riding techniques to avoid vehicle overturns on hills and rough terrain and in turns.
- avoid paved surfaces—pavement may seriously affect handling and control.

**LOCATE AND READ OWNER'S MANUAL. FOLLOW ALL INSTRUCTIONS AND WARNINGS.**