MOTOVOX™

MVX70

4-Speed Automatic Off Road Dirt Bike

OWNERS MANUAL

Important Information. Read thoroughly before driving the first time.

Attaching handlebars: See page 7.

MOTOVOX.COM

VISIT US ON THE WEB FOR MORE INFORMATION

If you have any problems with this product
DO NOT RETURN TO THE STORE
contact us and we will make it right every time.
888-488-MOTO (6686)
or email info@motovox.com

MVX70

This operators manual contains important safety information and maintenance information. Read it carefully before using this vehicle. Failure to follow the warnings contained in this operators manual could result in INJURY or DEATH.

Keep this manual in a safe place. It is very important that this owners manual be reviewed by any rider and it should remain with the vehicle when transferred to a new owner.

All information, images and specifications contained in this manual are based on the latest product information available at the time of publication. Due to improvements or production changes, there could be discrepancies in this manual. Motovox reserves the right to make product changes at any time, without notice and without obligation to make the same or similar changes to any vehicle previously built or sold.

Avoid operating this vehicle on paved surfaces including, but not limited to highways, parking lots, sidewalks and driveways. Never operate this or any designated off-road vehicle on a public street, road or highway where it will be in violation of local traffic laws and restrictions.

MOTOVOX™

CONTENTS

PRODUCT WARRANTY

PLEASE SEE PAGE 41 FOR EMISSIONS CONTROL WARRANTY

MotoVox warrants to the first buyer of the Product ("Buyer") that on the date of purchase of the Product, as shown on Buyer's sales receipt ("Purchase Date"), the Product shall be free from defects in material or workmanship subject to and in accordance with the terms and conditions set forth herein. The duration of this Limited Warranty is ninety (90) days from the Purchase Date (the "Warranty Period"). MotoVox will correct, at its option, by repair or by furnishing replacement parts, any parts determined in MotoVox's sole discretion to have a defect in material or workmanship of the Product reported to MotoVox during the Warranty Period, subject to the terms, conditions and limitations of this Limited Warranty. At its option, MotoVox may require the Buyer to return to MotoVox, at its address set forth below, at Buyer's expense, the part claimed to be defective for MotoVox's inspection. MotoVox's sole obligation under this Limited Warranty is to repair and/or replace parts on the Product. If MotoVox determines that any claimed defect or problem reported by Buyer is not covered by this Limited Warranty, Buyer shall pay MotoVox its then existing charge for any repair or replacement made by MotoVox.

TO QUALIFY FOR WARRANTY SERVICE:
1. You must present a copy of the sales receipt.
2. This product can not be used for rental or commercial use.
3. This product can not be used for competition.

LIMITATIONS OF LIABILITY

- This Limited Warranty is non-transferable after the Product's initial sale.
- No unapproved modifications can be made to the Product, its performance or otherwise, in order for this Limited Warranty to remain in effect.
- No reimbursement is provided for towing, loss of time, loss of use, inconvenience, incidental or consequential damages.
- This Limited Warranty covers only parts and labor due to manufacturer defect. Damage due to misuse or neglect, use other than as specified in the Owner's Manual, or use under abnormal conditions are is not covered by this Limited Warranty.
- MotoVox makes no warranty with respect to products or trade accessories not made by MotoVox, including, but not limited to, engines, tires, wheels, batteries and transmissions, such products or trade accessories, such items being subject to the manufacturer's warranty, if any.
- This Limited Warranty does not cover minor surface blemishes, rips, tears, or other cosmetic damages due to normal use, or other intentional or unintentional damage to the Product.
- This Limited Warranty will not cover any damage which results from the application of improper cleaners, solvents or chemicals to the Product, or from smoke or soot, or from exposure to saltwater, sea breeze or salt.
- This Limited Warranty will not cover any damage which results from aging, such as fading of paint, deterioration of plated surfaces, deterioration of rubber or plastics, or rusting.
- This Limited Warranty does not cover improper repair or misdiagnosis of problem.

OWNER'S WARRANTY RESPONSIBILITIES

As the vehicle owner, you are responsible for the performance of the required maintenance. You should maintain a record of all maintenance performed your vehicle and retail all receipts covering maintenance on yoru vehicle. You may not be denied a warranty claim solely because of your failure to ensure the performance of all scheduled maintenance or lack of maintenance records or receipts. As the vehicle owner, you should be aware that you may be denied your warranty coverage if your vehicle or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.

For any issue regarding your Motovox product, call toll free 1-888-488-MOTO (6686)

INTRODUCTION

Congratulations on choosing your Motovox MVX70 dirt bike.

Your Motovox dirt bike was designed as a recreational motorcycle for off-road use only and by a single rider only. This motorcycle is ideal for younger riders with basic experience.

Before riding, please take your time to get acquainted with your dirt bike and how it works. To protect your investment we urge you to keep it well maintained. In addition to regular maintenance it is important to observe and perform all pre ride and periodic checks outlined in this manual. In this manual you will find helpful safety information, instructions and helpful tips. To make it easier to use, there is a table of contents at the beginning and an index at the end of the manual.

As you read through this manual you will find information that is noted with a NOTICE symbol. This is to point out key bits of information that will help you avoid damage to your dirt bike and property around you. This manual covers basic maintenance procedures as well. For problems with your dirt bike that are not covered in this manual, please refer to an authorized Motovox Service Center, which can be located at Motovox.com.

Read the warranty page carefully so that you understand your rights and responsibilities.

Whenever you ride, tread lightly by staying on established trails and in approved areas. Protect the environment and keep off-road riding areas open for future use.

Please be sure to register your Motovox product and notify us of any address changes so we may contact you in the future with any important product information.

Enjoy your Motovox dirt bike!

IMPORTANT SAFETY INFORMATION

Your personal safety and the safety of those around you is our primary concern. Operating this dirt bike safely is an important responsibility and should not be taken lightly.

Motovox has provided you with safe operating procedures and warning labels on your dirt bike and in this manual. This information will alert you to potential hazards that could harm you or others.

It is understood that it is not practical or possible to warn you about all possible hazards associated with off-road riding and maintaining your dirt bike. You must always use your own best judgement.

Safety information is presented in a variety of forms, including:

- Safety labels and tags on the dirt bike
- Safety messages proceeded by a safety symbol ⚠ and one of these three signal words: DANGER, WARNING and CAUTION.

⚠DANGER **⚠WARNING** **⚠CAUTION**

Any of the above labels can indicate a danger where you or someone around you can be KILLED or SERIOUSLY INJURED if the instructions that it accompanies are not followed carefully.

- Safety Headings such as important safety reminders and/or precautions.
- Safety Sections, such as Motorcycle Safety
- Instructions, such as Riding Techniques or Braking Techniques

This manual is filled with important safety information, please read it carefully and be sure that you understand it.

MOTOVOX

IMPORTANT SAFETY INFORMATION

A motorcycle can provide many years of service and pleasure, provided you take responsibility for safety, proper maintenance and understand the challenges you may encounter while riding.

This motorcycle has been designed for younger riders. However, not all young riders meet the physical and emotional needs for safe riding. Before parents allow any children to ride this motorcycle, we strongly recommend that they read this entire manual to be fully informed before making the determination if their children are ready to ride. Listed below are some of the most important safety measures one should take before and when riding.

⚠DANGER Never ride without a helmet. Helmets significantly reduce the number and severity of head injuries. An approved DOT motorcycle helmet is the most important part of your safety gear. Choose one that fits properly and is snug on your head. Motorcycle dealers can help in selecting a good quality helmet with proper fit.

⚠DANGER Never carry a passenger. This dirt bike was designed for one rider at a time only. There are no passenger foot pegs, foot rests, handles or seat room for a passenger. Riding with a passenger can impair the driver's ability to operate the dirt bike which may result in serious injury or death.

⚠DANGER Ride off-road only. This dirt bike has been designed and built for off-road riding only. It is not equipped with a headlight, signals, brake lights or horn which are all required for public road usage. The tires are not designed for pavement and could become unstable. If you have to cross a paved area or road, dismount and walk the bike across the pavement.

⚠DANGER Ride within your limits. Never attempt to operate this dirt bike in a manner that is beyond your skill level. It takes time to learn off-road riding skills. Learn to ride step-by-step. Start by riding on safe terrain at slow speeds and gradually build your skills. Instruction from a more experienced rider is strongly recommended.

⚠DANGER Be alert for hazards. Any area you ride can present many hazards. Always scan the terrain ahead of you continuously. Watch for unexpected turns, drop-offs, ditches, rocks, low-hanging limbs and other riders. Always maintain a low enough speed to stop under control and react to hazards.

⚠DANGER Never drink alcohol and ride. Even one drink can impair your ability to ride safely and each additional drink worsens your ability to do so. Remember, it is illegal to operate a motorcycle while intoxicated, including off-road motorcycles.

IMPORTANT SAFETY INFORMATION

As a parent, your child's safety is your first priority. Riding a dirt bike is very fun, but just like riding a bicycle, bad decisions can result in injury or death. As a parent you can prevent accidents by making informed decisions about if, when and how your child will ride. Always supervise your child when he/she is riding.

Before you allow your child to ride you need to determine if he/she is ready. Riding readiness can vary from one person to another. Age and size are not the only factors that help to determine riding readiness. There are three other factors that you should consider before deciding if your child is ready to ride.

First, consider your child's physical ability. A rider must be able to hold the dirt bike up, get on and sit comfortably with both feet on the ground. The rider must also be able to reach all of the controls on the handlebars and work the brake lever.

Second, consider your child's athletic ability. Your child should also be good at riding a bicycle before riding a dirt bike, Determine if your child is a good judge of speed and distance while riding a bicycle and that they react with proper foot and hand actions. Any person who does not have good coordination, balance and agility should not attempt to ride this dirt bike.

Finally, determine your childs mental maturity. It is imperative that you are honest with yourself when you answer the following questions: Does your child think through problems and come to logical conclusions? Does your child obey the rules when they ride their bicycle? If your child makes bad judgements, takes unnecessary risks and ignores the rules, they should not ride this dirt bike.

If you have determined that your child is ready to ride please remember the following points:

- Never let your child ride without a helmet.
- Your child's safety is your responsibility. Do not take it lightly.
- Never push you child to try things before they are ready.
- Always supervise your child when they are riding.
- Proper maintenance and upkeep of the dirt bike is key to safe riding.

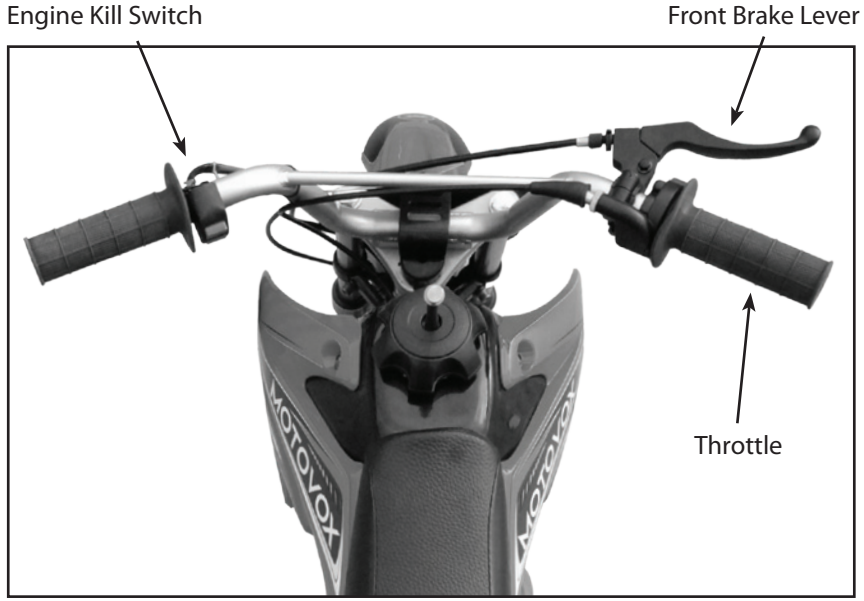
⚠DANGER Any modifications or improper accessories added to the dirt bike with parts that are not manufactured by Motovox can make it unsafe. Motovox strongly recommends that you do not remove any of the original equipment or make any modifications that alter the design and/or operation of the dirt bike.

IMPORTANT SAFETY INFORMATION

This page will show you where to find safety labels on your dirt bike. You will find that some labels warn you of potential hazards. Others will provide important safety and maintenance information. Please read them carefully and do not remove them. If your label wears off or becomes hard to read, contact Motovox for a replacement.

OPERATING CONTROLS

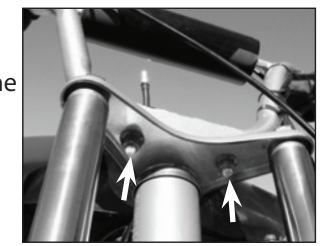
When you operate a dirt bike you need to be able to operate the throttle, brakes and other controls without stopping to look at them. Please study the image below carefully to become familiar with the function and the location of each control.



ATTACHING THE HANDLEBARS

Your MVX70 dirt bike is shipped with the handlebars NOT bolted on. To attach the handlebars follow these steps:

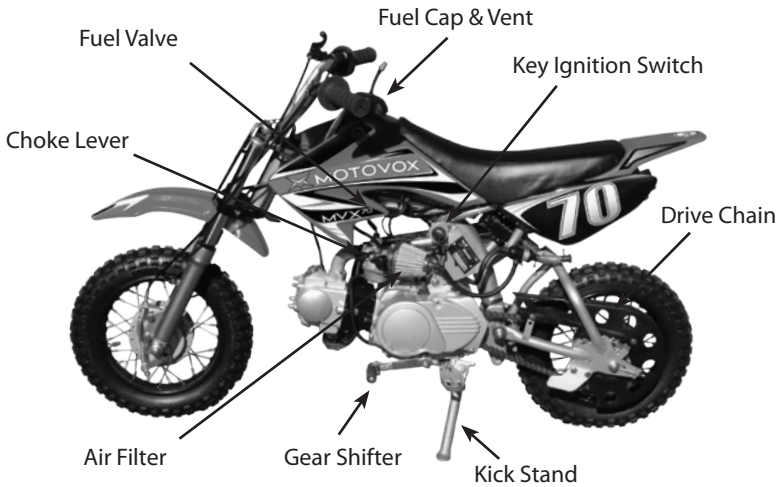
1. After unpacking your dirt bike, stand it on the kick stand on a level surface.
2. Locate the handlebar mounting bolts at the bottom of the handlebar assembly.
3. Remove the locking nuts and washers from the handlebar mounting bolts and set aside.
3. Insert bolts into holes in upper triple clamp.
4. From underneath, put washers and locking nuts onto bolts (pictured at right).
5. Tighten securely.



Mounting bolts and lock nuts.

OPERATING CONTROLS

MAJOR COMPONENT LOCATION



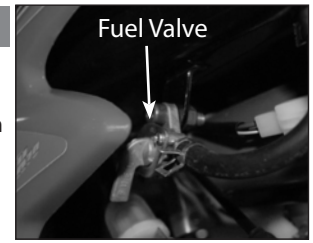
OPERATING CONTROLS

BEFORE STARTING

Before starting your MVx70, be sure these four components are in the RUN position:
1. Fuel Valve 2. Choke Lever 3. Engine Kill Switch 4. Ignition Key Switch
The location and operating information for each of these controls is shown below:

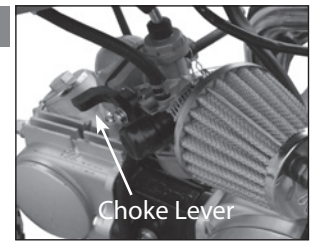
FUEL VALVE

The two-way fuel valve is used to control the flow of fuel to the engine. The valve is located on the left side under the fuel tank. Turing the lever to the ON position allows fuel to flow to the carburetor and turning it to the OFF position stops the flow. Always keep the fuel valve in the OFF position when not using the dirt bike.



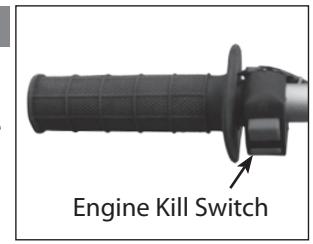
CHOKE LEVER

The choke lever is used to start the engine when it is cold and is located on the left side of the carburetor. It is used to restrict the amount of air in the fuel mixture to start easier and warm up. Flip the lever up to the FULL position to start, and then as the engine warms up move the lever down to the OFF position.



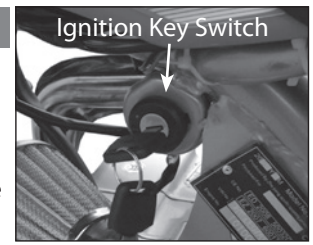
ENGINE KILL SWITCH

The engine kill switch is located next to the left hand grip on the handlebars. The kill switch must be in the START/RUN position for the engine to start. To stop the engine, flip the button down to the STOP position.



IGNITION KEY SWITCH

The Ignition Key Switch is used to start the engine and is located on the left side of the dirt bike, under the fuel tank. Before attempting to start the engine, be sure the key is in the START/RUN position which is indicated by a red dot. When finished riding switch the key to the OFF position, indicated by a blue dot.



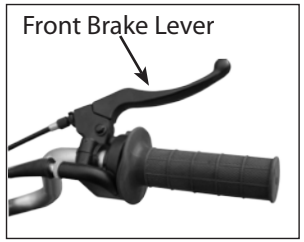
OPERATING CONTROLS

When operating your MVx70 there are several key operating controls that allow you to operate your dirt bike. Their location and operation information is shown below.

1. Front Brake Lever 2. Throttle 3. Shift Lever 4. Rear Brake Pedal

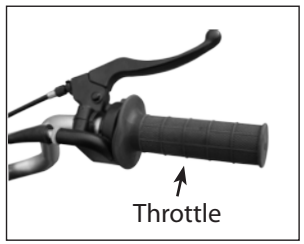
FRONT BRAKE LEVER

The Front Brake Lever is used to apply braking to the front wheel. When you pull the lever back, braking power is applied to the front wheel. The harder it is pulled, the more braking power is applied to the wheel. To release the front brake, release the front brake lever.



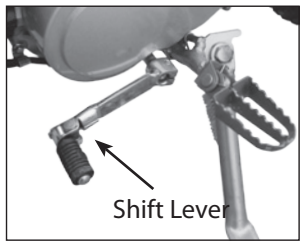
THROTTLE

The Throttle controls the speed of the engine and is located in the right grip on the handlebars. To increase the engine speed, twist the throttle grip toward you, or downward. To decrease the engine speed, twist the grip away from you, or upward. The throttle grip is spring loaded so it will return to the lowest position as you release it.



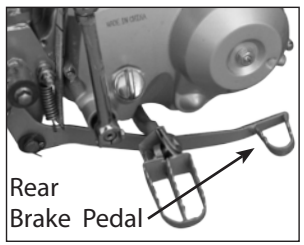
SHIFT LEVER

The Shift Lever is used to change the gears and is located ahead of the left foot peg. To select the next higher gear, pull up until it clicks. To select the next lower one, push down until it clicks. The MVx70 is equipped with four gears and does not use a clutch. Let off on the throttle when shifting.



REAR BRAKE PEDAL

The Rear Brake Pedal is used to apply braking to the rear wheel and is located ahead of the right foot peg. When you push the pedal down, braking power is applied to the rear wheel. The harder it is pushed, the more braking power is applied to the wheel. To release the rear brake, release the rear brake pedal.



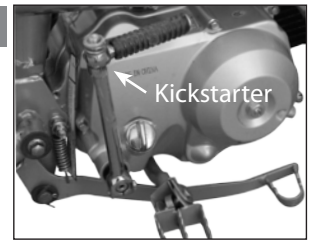
OPERATING CONTROLS

When operating your MVx70 there are several key operating controls and components that allow you to operate your dirt bike and perform routine maintenance. Their location and operation information is shown below.

1. Kick Starter 2. Air Filter 3. Spark Plug 4. Kick Stand

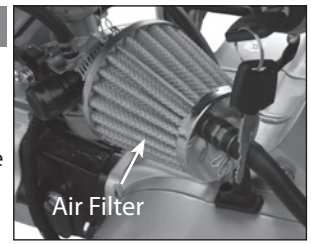
KICKSTARTER

The kickstarter is used to start the engine and is located on the right side of the engine behind the right foot peg. To use the kickstarter flip it outward from its stored position, hold the bike firmly while straddling the bike. Place your right foot on the kickstarter and push down quickly. The kickstarter will return to its stored position when released.



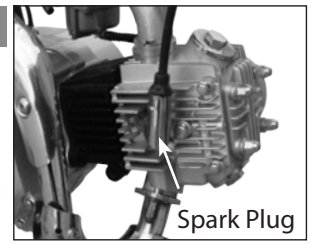
AIR FILTER

The air filter is used to keep dirt and debris out of the carburetor air supply. Examine the air filter before each ride to be sure that it is not clogged with dirt and dust to keep your dirt bike running well. The air filter can be removed and tapped gently on a hard surface to clean out most of the dust. Replace the air filter periodically.



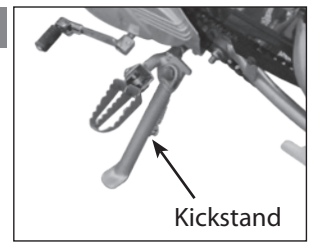
SPARK PLUG

The spark plug is used to provide spark to the engine to make it run. You should never touch the spark plug when the engine is running as you could be shocked. The spark plug will become worn or plugged after many hours of operation. Refer to the servicing section of this manual for cleaning/replacing instructions.



Kick Stand

The Kickstand is used to support the dirt bike when it is parked and is located on the left side of the bike below the left foot peg. To operate it, use your foot to swing the kickstand to its downward position and lean the bike onto it. Be sure to raise the kickstand up when riding or serious injury can result.



BEFORE RIDING

Before you ride you must be certain that you and your dirt bike are ready to ride. Below is your pre-ride checklist. Be sure to review all the topics and determine your readiness to ride.

PRE-RIDE CHECKLIST

1. **Have you completely read and do you thoroughly understand this owners manual?**
2. **Have you found all the safety messages on your dirt bike and do you understand them?**
3. **Do you understand the location of, and how all the operating controls on your dirt bike work?**
4. **Are you in good mental and physical condition?**
5. **Are you drug and alcohol free?**
6. **Are you wearing a DOT-approved helmet that fits properly?**
7. **Are you wearing eye protection?**
8. **Are you wearing sturdy shoes and protective clothing?**

Additional suggested protective clothing.

1. Gloves to protect your hands.
2. Sturdy riding boots that support your ankles.
3. Riding pants with knee and hip pads.
4. Riding jersey with elbow pads and chest/shoulder protection.

As a reminder:

⚠DANGER Never ride without a helmet. Helmets significantly reduce the number and severity of head injuries. An approved DOT motorcycle helmet is the most important part of your safety gear. Choose one that fits properly and is snug on your head. Motorcycle dealers can help in selecting a good quality helmet with proper fit.

BEFORE RIDING

Before you ride you must be certain that you and your dirt bike are ready to ride. Below is your pre-ride checklist. Be sure to review all the topics and determine your readiness to ride.

PRE-RIDE INSPECTION

1. **Check tire pressure with a tire gauge. Recommended tire pressure is 32psi for the front tire and 36psi for the rear.**
2. **Check spokes and rims to make sure spokes are tight and rims are not bent or damaged.**
3. **Inspect the engine for oil or fuel leaks.**
4. **Check engine oil level and add if needed.**
5. **Check the level of fuel in the gas tank.**
6. **Check the drive chain to see if it needs to be lubed or tightened.**
7. **Check the brakes to be sure they are working properly.**
8. **Look over the entire bike for loose nuts and bolts.**
9. **Check the throttle to be sure it rotates freely and returns to the low position on its own when released.**
10. **Be sure that the handlebars turn freely.**

⚠DANGER Failure to properly maintain your dirt bike can lead to a crash in which you can be seriously injured or killed. Always perform a pre-ride inspection on your dirt bike and keep it in good condition to get the most out of your Motovox dirt bike.

STARTING THE ENGINE

The following section of the manual provides some basic information on how to begin riding your dirt bike. We will cover how to start and stop the engine, how to use the throttle and brakes, shift gears and what you should do when you stop riding.

SAFE RIDING PRECAUTIONS

Before riding this dirt bike, be sure that you have read and understand this entire owners manual up to this point, including the sections that are titled Important Safety Information and Before You Ride. Even if you have ridden other motorcycles in the past, take time to become familiar with how this dirt bike runs and how it handles. Different bikes have different handling characteristics. Always practice in a safe area until you feel comfortable with how this dirt bike runs.

⚠DANGER For your safety, always avoid running the engine in an enclosed space with poor ventilation, such as a garage. The dirt bike's exhaust contains poisonous carbon monoxide which can collect rapidly and cause illness or death.

⚠DANGER Not equipped with lights. Do not ride after dark.

STARTING THE ENGINE

1. Turn the Key Ignition to the ON position.
2. Move the engine kill switch to the ON position.
3. Make sure the engine is in neutral.
4. Turn the fuel valve to the ON position.
5. If the engine is cold, flip the choke lever up into the FULL position. If the engine is warm, you may not need to use the choke at all.
6. Stand over the dirt bike, flip the kick starter out and hold the handlebars.
7. Twist the throttle down some, to give it a little gas.
8. Using your right foot push the kickstarter down swiftly. It may take a few tries.

NOTE: To avoid damage to the side case of the motor, don't let the kickstarter flip back into its neutral position from the bottom of the stroke.

BASIC OPERATION

9. Once the engine starts to run, let it warm up by operating the throttle up and down for about 20 seconds, then move the choke lever down to the OFF position.
10. Be patient and let it warm up a little. Once the engine is warm, the idle will smooth out and it will be ready to ride.

NOTE: Extended running with the choke fully on will cause the engine to run poorly and can cause damage to the spark plug and cylinder wall.

A FLOODED ENGINE

If the engine fails to start after repeated attempts, it may mean that it is flooded with excess fuel. A common indication of a flooded engine is a strong smell of fuel around the dirt bike. Follow the steps below to clear a flooded engine.

1. Move the engine kill switch to the OFF position.
2. Switch the choke lever to the off position.
3. Twist the throttle all the way down to the full open position.
4. Using the kickstarter, crank the engine over 10 or 15 times.
5. Move the kill switch back to the ON position.
6. Start the dirt bike using the kickstarter and NO CHOKE.

STOPPING THE ENGINE

To stop the engine, move the kill switch located on the left hand grip to the OFF position. The engine will stop.

NOTE: Be sure to switch the Key Ignition off, close the Fuel Valve and lean the bike over onto the kickstand when done riding.

SHIFTING GEARS

This dirt bike has four forward gears. To start riding, after the engine is fully warmed up and the kickstand is raised, follow these steps.

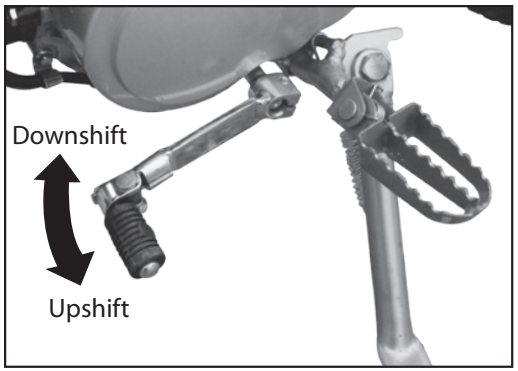
STARTING AND UPSHIFTING

1. With the engine running, squeeze the front brake tightly.
2. Push the shift lever down until you feel it click into first gear, then release the lever and let it return to its neutral position.
3. Release the front brake and open the throttle slightly to increase the engine speed. You will feel the dirt bike start to ease forward.
4. As the bike speed increases, let off on the throttle and push down on the shift lever again until you feel it click into second gear. Once again, let the shifter return to its neutral position and open the throttle a little to increase your speed.
5. To go faster, repeat this process to get to third and fourth gears.

NOTE: Learning when to shift up or down will come with experience and practice. Shift up when you feel that the engine speed is getting high and you want to go faster. Shift down when you want to slow the dirt bike down.

DOWNSHIFTING AND STOPPING

To downshift to a lower gear and slow down, let off on the throttle and pull up on the shift lever until you feel it click. This will be the next lower gear.



The neutral position is before first gear. To return the dirt bike to neutral when it is in gear, click up on the gear shifter as many times as needed to reach neutral.

⚠DANGER Never attempt to start the engine when the dirt bike is in gear. Doing so could cause a crash that could result in serious injury or death.

BRAKING TECHNIQUE

This section will cover basic braking technique for your dirt bike. To slow or stop the bike, squeeze the front brake lever and push down on the rear brake pedal firmly and smoothly. You can use engine speed to slow the bike along with braking power by downshifting at the same time. Gradually increase your braking pressure as you feel it is needed. The more pressure you apply to the brakes, the more braking power will be applied. When you come to a full stop, put your left foot on the ground first so that your right foot can remain on the brake pedal as needed.

For maximum braking, let off completely on the throttle and firmly apply both front and rear brakes at the same time while downshifting with your left foot at the same time. Remember that on any motorcycle, the front brake provides 60% - 70% of the braking power while the rear provides the rest, so most of your braking power comes from the front brake. Just be careful to apply it carefully to avoid sending the bike into a front wheel skid which will cause you to lose control.

If you apply the brakes too quickly and start to skid, release the brakes to regain control and then apply braking power carefully.

When riding on wet, or loose rocky conditions your braking power can be reduced greatly and it will be much easier to put the bike into a skid and lose control. If the surface is wet or loose, you must reduce your speed and allow more room to stop safely.

Avoid jamming on the brakes suddenly or accelerating too quickly as either of these actions can cause you to lose control of the dirt bike.

When descending a long, steep grade use engine compression to slow your dirt bike by downshifting and using the brakes at the same time.

PARKING AND POST-RIDE INSPECTION

With the bike stopped, switch it off with the kill switch, flip down the kick-stand and lean the bike over on it to park. Turn the Key Ignition to the off position and turn the fuel valve to OFF. Always park your dirt bike on a flat surface to avoid tipping over.

If you are going to store the dirt bike for an extended period of time, close the fuel valve with the engine still running until it stops. This will burn all the fuel out of the carburetor and reduce fuel system problems in the future.

MAINTAINING YOUR MVx70

Keeping your motorcycle in perfect operating condition is absolutely essential to your safety. It is also the best way to protect your investment, get maximum performance, avoid breakdowns, and have more fun. To help keep your motorcycle well maintained, this section includes a maintenance schedule for required servicing and step-by-step instructions on how to perform specific maintenance tasks. In this section you will also find important safety precautions, information on oils, and tips for keeping your Motovox mini bike looking good.

Careful pre-ride inspections and good maintenance are invaluable because your motorcycle is designed to be ridden over rough, off-road terrain. To help you properly care for your motorcycle, this section provides you with a maintenance schedule. The service intervals in this section are based on average riding conditions. More frequent service is needed if you subject your motorcycle to severe use, such as competition, or ride in unusually wet and dusty areas. Frequent checks of the air cleaner are very important to help you avoid engine damage.

⚠DANGER Improperly maintaining this motorcycle or failing to correct a problem before you ride can cause a crash in which you can be seriously hurt or killed. Always follow the inspection and maintenance recommendations and schedules in this manual.

Remember, proper maintenance is the responsibility of the owner. Be sure to inspect your motorcycle before each ride and follow the maintenance schedule in this section.

Note to Parents: As a parent, it is up to you to make sure the motorcycle is properly maintained and kept in safe operating condition. For youngsters, learning how to take care of a motorcycle and perform basic maintenance can be an important part of their riding experience. However, if you allow a youngster to perform or assist in any maintenance task, such as filling the tank with gasoline, you need to provide close supervision and make sure the task is performed safely.

⚠DANGER Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed. Always follow the procedures and precautions in this manual.

IMPORTANT SAFETY PRECAUTIONS

Make sure the engine is off before you begin any maintenance or repairs. This will help eliminate the following hazards:

1. **Carbon monoxide poisoning from engine exhaust** - Be sure you have adequate ventilation whenever you operate the engine.
2. **Burns from hot motorcycle parts** - Let the engine and exhaust system cool off before you touch them.
3. **Injury from moving parts** - Do not run the engine unless instructed to do so.

Read all instructions before you begin a procedure. Make sure you have all of the tools and skills required. To help prevent the motorcycle from falling over, park it on a firm, level surface, using the side stand or a maintenance stand to provide support. To reduce the chance of a fire or explosion, be careful when working around gasoline. Use only a non-flammable (high flash point) solvent such as kerosene to clean parts. Keep cigarettes, sparks, and flames away from all fuel related parts.

MAINTENANCE SCHEDULE

To keep your motorcycle safe and reliable when you ride, regular inspections and service is required. Below you will find a maintenance schedule that describes when components need to be inspected or serviced. The maintenance schedule lists items that can be performed with basic mechanical skills and hand tools. In addition, the maintenance schedule will list items that involve more extensive procedures and could require special training, tools, and/or equipment.

Because this motorcycle does not have an odometer, service intervals in the maintenance schedule are expressed in terms of riding days. To avoid missing required maintenace, we suggest that you develop a good way to record the amount of the time you spend riding your motorcycle. If you do not feel capable of performance any of the procedures described in this manual or if you need assistance, please contact your nearest Motovox dealer. If you decide to do your own maintenance, use on ly replacement parts that you have purchased directly from Motovox, Inc. This will ensure the best quality and reliability for your motorcycle.

Always perform the pre-ride inspection described on page 13 at each scheduled maintenance inverval.

Each item on the maintenance schedule requires some mechanical knowledge. You will find that some items in the table (marked * and **) may require a higher level of mechanical skill and special tools. If you do not feel capable of performing any procedure, please consult Motovox.

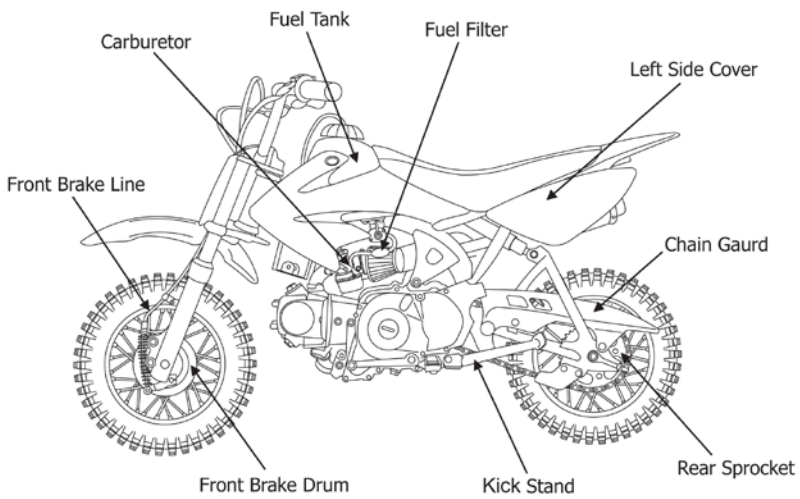
Note: Service your motorcycle more frequently when you ride in wet or dusty conditions.

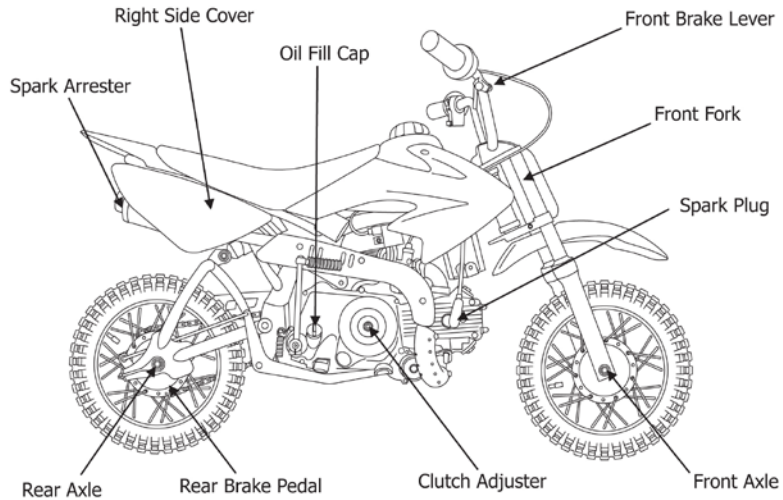
	Every Use	First Month (20 Hours)	Every 3 Months	Every 6 Months	Every Year (200 Hours)
Check engine oil	X				
Change engine oil*		X		X	
Check air filter	X				
Clean air filter*			X		
Change air filter*					X
Clean carburetor sediment cup*			X		
Clean and adjust spark plug*				X	
Replace spark plug*					X
Clean & lubricate drive chain			X		
Check/adjust valve clearance**					X
Clean fuel tank and filter*					X
Check fuel tube					X
Tighten all nuts and bolts			X		
Check/adjust chain tension	X				
Check brakes	X				
Check throttle	X				

** Can be performed by owner with proper tools and knowledge, otherwise consult with a service center.*

*** Recommended to be performed by authorized service center.*

COMPONENT LOCATIONS





MAINTENANCE PROCEDURES

FUEL

Fuel Recommendation - Any unleaded gasoline with a pump octane rating of 92 or higher.

The engine in your motorcycle has been designed to run on any gasoline with a pump octane rating of 86 or higher. Most service stations will display the octane rating above each pump. Although it is not required, Motovox recommends the use of gasoline with a 92 octane rating or higher to ensure maximum performance and reliability.

Use of a lower octane gasoline can cause pre-detonation in the engine. When this occurs, you will hear a persistent "pinging" or "spark knock" which, if severe, can cause engine damage. It is however no cause for concern if you hear light pinging while the engine is under hard acceleration, such as climbing up a hill. If pinging occurs under normal load and a steady engine speed, switch brands of gasoline and be sure you are using the proper octane rating. Use of unleaded fuel is recommended because it produces fewer engine deposits and extends the life of the engine and exhaust components.

Never use stale or contaminated gasoline. Never use gasoline that has been mixed with oil. Avoid getting dust, dirt and water into the fuel tank.

REFUELING PROCEDURE

1. Twist the fuel tank cap counter-clockwise and remove the cap from the tank.
2. Using a funnel, add fuel to the tank until the level reaches about 2 inches from the top of the tank.
3. Twist the fuel cap clockwise until you feel it click.
4. Be sure that you have the breather tube connected to the gas tank cap.

⚠WARNING Gasoline is highly flammable and explosive. You can be burned or seriously injured when handling gasoline. Always stop the engine. Only handle gasoline outdoors. Clean all spills immediately.

ENGINE OIL RECOMMENDATION

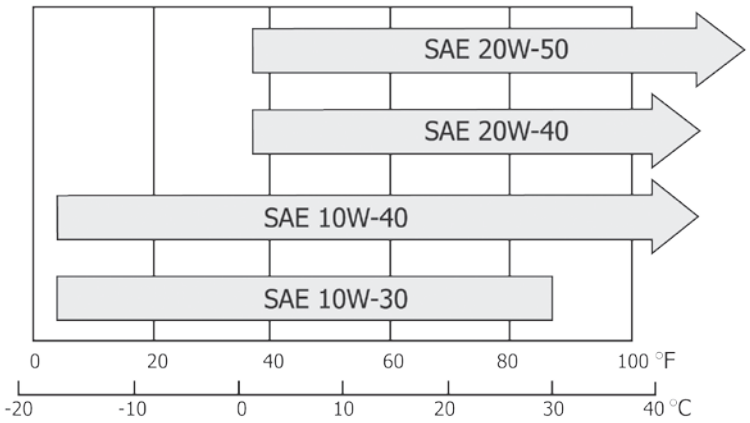
Engine Oil Recommendation- SAE 10W-30 Motor Oil. *

* Indicates Oil for regular air temperatures. Please see the oil / air temperature chart to help you choose the best oil for your climate.

⚠WARNING Your motorcycle does not need oil additives. Only use the recommended oil. Do not use oils with graphite or molybdenum additives, they may adversely affect the clutch operation. Do not use motor oils that display the API circular logo that is labeled "energy conserving", they may affect the lubrication and clutch performance.

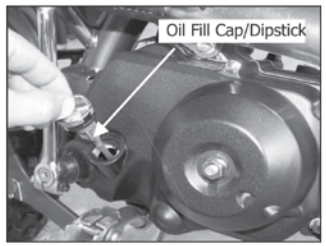
ENGINE OIL RECOMMENDATIONS *(continued)*

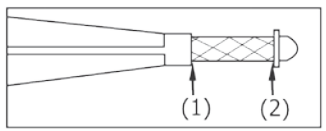
Other viscosities shown in the chart below can be used when the average temperature in your riding area are within the indicated range.



CHECKING AND ADDING OIL

1. Park the motorcycle on a firm level surface.
2. Clean around the oil fill cap and any nearby surfaces.
3. Unscrew the oil fill cap and wipe it clean.
4. Hold the motorcycle upright so that it is not resting on the sidestand.
5. Insert the oil fill cap back into the engine until it seats, but do not screw it in.
6. Remove the oil fill cap and check the oil level. If the oil level is at or near the upper mark (1), you do need to add oil. If the oil level is below or near the lower level mark (2), add the recommended oil until it reaches the upper level mark (1). Do not overfill.
7. Insert the oil fill cap and screw it in tightly.
8. Start the engine and check for oil leaks.

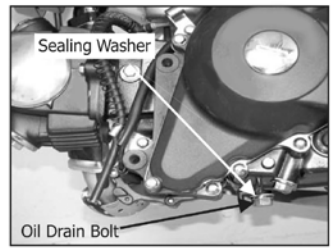




MAINTENANCE PROCEDURES

CHANGING ENGINE OIL

1. Park the motorcycle on a firm level surface.
2. Remove the oil fill cap/dipstick.
3. Place an oil drain pan under the engine.
4. Unscrew and remove the oil drain bolt.
5. Once most of the oil has drained, move the motorcycle from side to side to drain out any remaining oil.
6. Examine the sealing washer for damage and replace if any damage is present.
7. Install the oil drain bolt and tighten to the specified torque of 18 foot pounds.
8. Pour the recommended oil into the engine and fill until the oil level is correct.
9. Install the oil filler cap/dipstick and tighten securely.
10. Start the engine and let it run for a minute or two.
11. Shut off the engine and check the engine oil level, add oil if needed. Do not overfill.
12. Check for any oil leaks.
13. Dispose of waste oil in an approved manner.



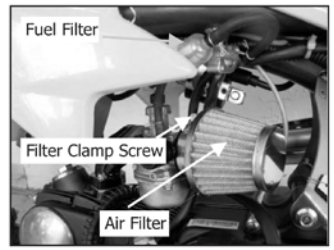
NOTICE

Always dispose of waste oil in the proper manner. Failure to do so is harmful to the environment and illegal in most states.

AIR & FUEL FILTERS

Proper air filter maintenance is extremely important for off-road vehicles. Dirty, water-soaked, worn out, or defective air filters will allow dirt, dust, mud and other impurities to pass into the engine. If you are riding in wet and muddy areas, you should service the air filter more often. Always replace the air filter with a filter of the same size and construction. Failure to do so can cause the engine to run in a lean or rich condition, which if severe, can cause damage to the engine and/or spark plug.

1. Unscrew the filter clamp screw using a flat screwdriver.
2. Remove the air filter.
3. Clean the filter element (foam) with a non-flammable solvent such as kerosene, not gasoline. After cleaning, try to squeeze out any remaining solvent. Be careful that you do not tear the air filter element.
4. Inspect the foam for tears or cracks and replace if needed.
5. Allow the air filter to dry before applying any air filter oil. A wet air filter will not absorb the air filter oil.
6. Apply a quality air filter oil to the filter element.
7. Install the air filter and tighten the filter clamp screw Securely.
8. Replace the fuel filter every 12 months or when it is clogged. See your Apollo dealer for replacements.

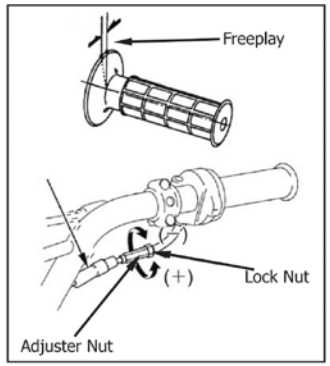


THROTTLE FREEPLAY

Throttle Freeplay - 1/16 - 1/4 inch (2 - 6mm)

1. Loosen the lock nut on the throttle cable mechanism.
2. Turn the adjuster nut in the direction needed to obtain the proper throttle freeplay.
3. Tighten the lock nut.
4. After adjustment, check the throttle for smooth rotation from fully closed to fully open in all steering positions.

If you cannot obtain proper freeplay, contact your local Motovox Service Center for assistance.

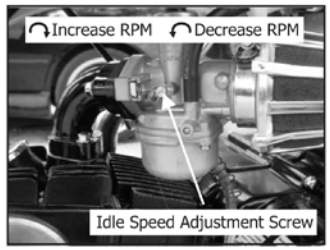


ENGINE IDLE SPEED ADJUSTMENT

The engine must be at normal operating temperature in order to have an accurate idle speed adjustment. Ten minutes of normal riding is sufficient to warm up the engine. Never attempt to compensate for faults in other systems by adjusting the idle speed. If you are having trouble, please contact Motovox Service Center for assistance.

Idle Speed - 1,400 rpm plus or minus 100 rpm.

1. Warm up the engine, shift into neutral and place the motorcycle on its side stand.
2. Connect a tachometer to the engine using the procedure outlined by the tachometer manufacturer. If you do not have a suitable tachometer, small digital units can be purchased at most local auto part stores.
3. Adjust the idle by turning the idle speed adjustment screw in the desired direction. The idle adjustment screw is located on the left side of the carburetor.



SPARK PLUG MAINTENANCE

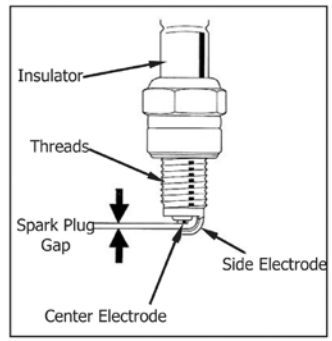
Standard	Torch A7TC or NGK C7HSA
For Cold Climate	Torch A6TC or NGK C6HSA
For Extended High Speed Riding	Torch A8TC or NGK C8HSA

The recommended standard spark plug will work well in most riding conditions. However, if you plan on riding for extended periods of time at high speed or high engine rpm in hot climates, or plan extended riding in cold climates, a different plug may be recommended.

MAINTENANCE PROCEDURES

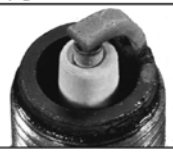
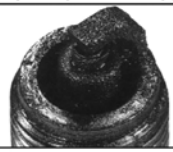
SPARK PLUG MAINTENANCE *(continued)*

A fouled (dirty) spark plug can cause your motorcycle to run poorly and lose performance. Follow the steps below to inspect, clean and/or replace the spark plug if needed.



1. Clean any dust and dirt from around the spark plug base.
2. Disconnect the spark plug cap.
3. Remove the spark plug using a 5/8 in socket or wrench.
4. Using the photos below for reference, examine the plug to determine it's cleanliness. If the plug is a normal color, go on to step 6. If the plug is fouled (dirty), go to step 5.
5. Using a moderate grit sandpaper (220-400), sand between the center electrode and the side electrode Until all carbon and oil deposits are removed. Apollo Motors recommends that you use a spark plug cleaner or a new spark plug if the plug is very dirty.
6. Inspect the spark plug electrodes for wear. The center electrode should have square edges. The side electrode should not be eroded at all. The insulator should not be cracked or chipped. Replace the plug if any electrode wear and/or cracks are present.
7. Check the spark plug gap using a spark plug gapper. Gappers can be purchased at your local auto parts store. The spark plug gap should be .02 - .03 in (0.6 - 0.7mm). Always check the gap of a new spark plug before you install it. 8. Be sure all dirt has been cleaned from the threads. Install the spark plug by hand. This will prevent stripping and/or cross threading of the threads. Use a 5/8 in socket or wrench to securely tighten the spark plug. Do not over or under tighten the spark plug.

Notice: Improperly tightened spark plugs can damage the engine. Too loose, you can burn a hole in the piston. Too tight, you can damage the threads of the engine.

Normal Spark Plug (light brown center)	Lean Spark Plug (White center)	Fouled Spark Plug (Heavy carbon buildup)	Fouled Spark Plug (Heavy oil buildup)
			

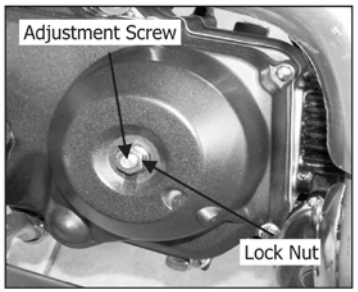
When you inspect the spark plug, generally it will fit into one of the four categories shown above. A normal/clean spark plug will have a light brown center and displays no wear around the electrodes. A spark plug with a bright white center indicates a lean condition in the engine. If your plug looks like this, have your motorcycle serviced by a Motovox tech immediately. A carbon fouled plug will be completely black with no gloss. An oil fouled plug will appear a dark shiny brown or shiny black as shown above. An oil fouled plug is caused when the engine oil seeps by the piston ring and is burned with the fuel. Oil fouled plugs are not uncommon, however, if your motorcycle is consistently oil fouling spark plugs, have it serviced by your local Motovox Service Center immediately.

CLUTCH ADJUSTMENT

In order to ensure the best performance and durability from the clutch, always be sure you have proper clutch adjustment. When the clutch discs wear, the clutch will need adjustment. Adjust the clutch only when you feel it slipping under acceleration. Follow the procedure below to adjust the clutch.

Clutch Freeplay - 1/16 - 1/4 inch (2 - 6mm)

1. Loosen the clutch adjuster lock nut.
2. Turn the adjusting screw clockwise one full turn. Do not turn excessively.
3. Slowly turn the adjusting screw counter clockwise until resistance is felt.
4. Turn the adjusting screw 1/8 turn clockwise From the position, and tighten the lock nut while holding the adjusting screw.
5. Check that the clutch is not slipping and is properly disengaging by test riding the bike.



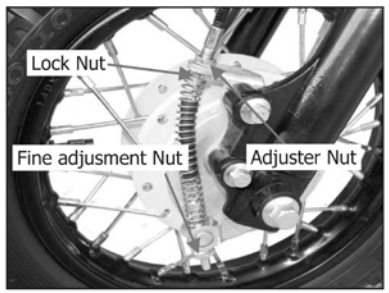
If adjustment of the clutch fails to solve the problem, it is likely that the clutch discs have worn excessively and/or a graphite based lubricant or other un-approved lubricant was used in the engine. Contact your local Apollo motors dealer to have your motorcycle serviced.

FRONT BRAKE ADJUSTMENT

The front braking system has 2 adjustment points, one for major and one for minor adjustments. Follow the procedures below to adjust the front brakes. If adjustment fails to solve a braking problem, It is possible that the brake shoes may have excessive wear and need replacing. Contact your local Apollo motors dealer to have your motorcycle serviced.

Major Adjustment

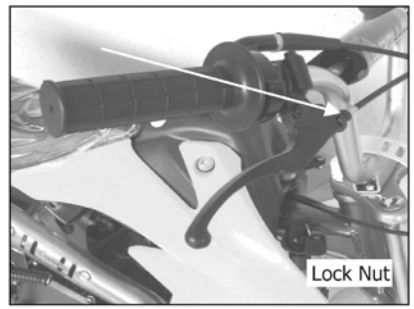
1. Loosen the cable adjust lock nut.
2. Turn the adjuster nut clockwise to increase the braking ability. Turn the adjuster nut counter-clockwise to decrease the braking ability.
3. Tighten the adjuster lock nut and test the front brake. The front wheel should spin freely when the brake is not being applied.



FRONT BRAKE ADJUSTMENT *(continued)*

Minor Adjustment

1. Loosen the cable adjust lock nut.
2. Turn the adjuster nut counter-clockwise to increase the braking ability. Turn the adjuster nut clockwise to decrease the braking ability.
3. Tighten the adjuster lock nut and test the front brake. The front wheel should spin freely when the brake is not being applied.
4. If a very fine adjustment is needed, you can turn the fine adjustment nut clockwise to increase brake ability and counter-clockwise to decrease braking ability. Refer to the photo on the previous page.



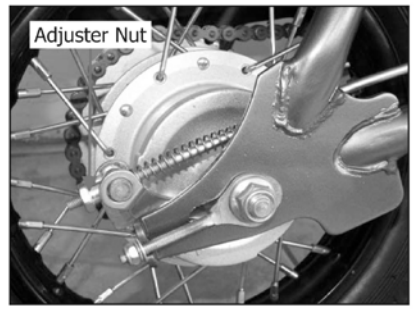
⚠DANGER *Never ride the motorcycle when the brakes are not working properly. If you cannot repair the brakes, have them serviced by your Motovox Dealer. DO NOT RIDE.*

REAR BRAKE ADJUSTMENT

Adjustment

1. Place the bike on the side stand with the engine off.
2. Turn the adjustment nut clockwise to increase braking ability.
3. Turn the adjustment nut counter clockwise to decrease braking ability.

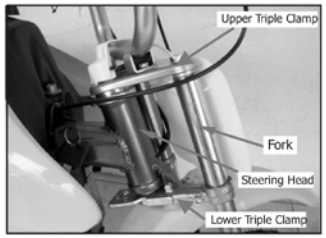
Once you have adjusted the rear brake, test ride the motorcycle. The rear wheel should spin freely when the brake is not being applied.



⚠DANGER *Never ride the motorcycle when the brakes are not working properly. If you cannot repair the brakes, have them serviced by your Motovox Dealer. DO NOT RIDE.*

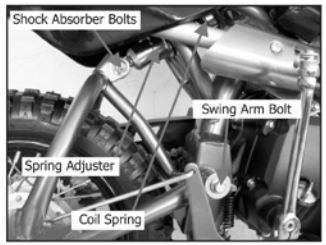
FRONT SUSPENSION INSPECTION

1. Check the fork operation. Pull in the front brake lever to lock the front wheel. Next, pump up and down on the forks several times. The suspension should feel clean and smooth.
2. Check the lower end of the forks (near the wheel) for oil leakage.
3. Inspect the upper and lower triple clamps for tightness. Be sure all of the triple clamp bolts are tight. Examine the metal for any cracks, wear, or other damage.
4. Be sure there is no freeplay in the steering head.



REAR SUSPENSION INSPECTION

1. Sit on the motorcycle and hold the handle bars firmly. Push the motorcycle firmly from side to side. Feel for any freeplay in the swingarm bushing and bearings.
2. Check all of the shock absorber bolts and swingarm bolts for tightness.
3. Pump up and down on the rear suspension. The suspension should feel clean and smooth.
4. Examine the coil spring for cracks or other damage.
5. Check the spring adjuster ring for tightness.
6. Check the shock absorber for any oil leaks.



Rear Suspension Adjustment

The rear suspension of your motorcycle comes from the factory set in the softest setting. If you wish to make the rear suspension harder, follow the procedure below. You will need a spring adjustment wrench.

1. Place the motorcycle on a maintenance stand.
2. Turn the spring adjuster ring counter-clockwise to make the rear suspension harder. Turn the ring counterclockwise to make the suspension softer. Notches in the spring allow for 5 positions of adjustments.
3. Place the motorcycle on a level surface and pump the rear suspension to be sure it is working smoothly.

MAINTENANCE PROCEDURES

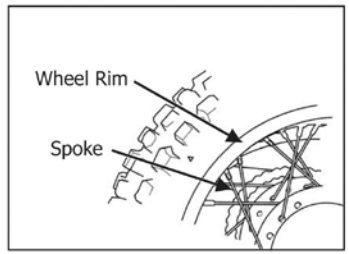
WHEEL RIMS & SPOKES

Maintenance of spoke tension and wheel trueness (roundness) is critical to safe motorcycle operation. During the first 100 miles of riding, spokes will loosen faster due to the initial seating of the parts. Excessively loose spokes will cause the motorcycle to become unstable at high speed and could cause you to lose control. Loose spokes can also cause rim and spoke damage (not covered in the warranty).

It is not necessary to remove the wheels for regular maintenance, however, information on wheel removal is available fro Apollo Motors or your Apollo dealer.

Wheel Rim Inspection Procedure

1. Inspect the wheel rims and spokes for damage. Feel all of the spokes with your fingers to make sure none are loose.
2. Tighten any loose spokes with a small adjustable wrench or spoke wrench.
3. Elevate each wheel off the ground, one at a time, and spin the wheel slowly. Look for a wobble in the wheel. If a wobble is evident, the wheel is not "true". See your Motovox Dealer for inspection.



TIRE AIR PRESSURE

Properly inflated tires will provide you with the best combination of handling, tread life, and riding comfort. Generally speaking, underinflated tires will wear unevenly and adversely affect handling. Underinflated tires are also more likely to fail from being overheated and can cause wheel damage on rocky terrain. Overinflated tires will cause the motorcycle to ride harshly, are prone to failure from surface hazards and wear unevenly.

⚠WARNING Using tires that are excessively worn or improperly inflated can cause a crash in which you can be seriously hurt or killed. Follow all instructions in this owners manual regarding tire inflation and maintenance.

Make sure the valve stem caps are secure, If needed, install a new cap. Always check air pressure when your tires are cold. If you check the air pressure when the tires are warm, you will get higher readings. If you let air out of warm tires to match the recommended cold tire pressure, the tires will be underinflated. The correct cold tire pressures are listed below. If you replace the tire, follow the tire pressure marked on the sidewall of the tire.

Front Tire (Cold)	32 PSI (220 kPa, 2.2 kgf/cm²)
Rear Tire (Cold)	36 PSI (248 kPa, 2.5 kgf/cm²)

TIRE INSPECTION

A flat tire or tire blowout can be very inconvenient and can even cause you to have an accident. Take the time to inspect your tires and wheels before you ride. For more information about handling a flat tire, refer to the section of this manual titled Resolving the Unexpected.

- Inspect the tire carefully for bumps or bulges in the sidewall of the tire and inside of the treads. Replace any tires that have bumps or bulges in them.
- Look closely for cuts, slits or cracks in the tires. Replace any tire if you can see a fabric or cord showing through.
- Check for rocks or other objects embedded in the tires or tread. Remove any foreign objects. Be sure there are no screws or nails in the tires.
- Measure the tread depth of the tires. Replace all tires before the read depth gets below 0.12in (3mm) or anytime you notice a reduction in your traction.
- Check the position of both valve stems. A tilted valve stem indicates that the tube is slipping inside of the tire or the tire is slipping on the rim.

TUBE & TIRE REPLACEMENT

If a tube has been punctured or damaged, it should be replaced immediately. You may repair the tube using a tube patch kit, however, a repaired tube may not have the same reliability as a new one and could fail while riding. For more information on a temporary repair, see the section titled Resolving the Unexpected.

Always use replacement tubes that are the same size as the original. We recommend that you have tubes changed at your Motovox dealer or your local motorcycle shop. Replacing a tube requires removal and installation of the wheel. Anytime you have a tube replaced, perform the tire inspection listed at the top of this page. The tires that came on your motorcycle were designed to provide a good combination of handling, braking, durability and comfort across a broad range of riding conditions.

⚠WARNING Installing improper tires on your motorcycle can affect handling and stability, which, if severe, can cause a crash in which you can be seriously hurt or killed. Always use the size and type of tires recommended in this owner's manual.

Front Tire	19 x 7-8
Rear Tire	19 x 7-8
Type	Bias-ply, tube type

- Use a replacement tire equivalent in size and type to the original tire.
- Replace the tube anytime you replace a tire. Old tubes are usually stretched and, if installed in a new tire, could fail.
- Have the wheel balanced after a new tire has been installed.
- We recommend that tires be replaced by your Motovox Service Center.

MAINTENANCE PROCEDURES

DRIVE CHAIN INSPECTION

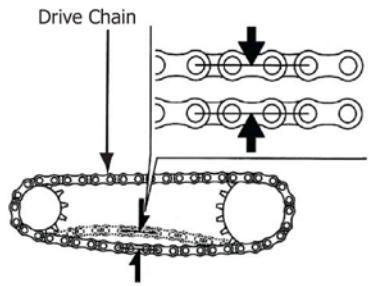
The service life of your drive chain will depend on several factors including proper lubrication, adjustment, and riding style. If you are an experienced rider and tend to ride in a more intense manner, or you ride in muddy/dusty areas, you will need to check the drive chain more frequently. Poor maintenance will cause pre-mature wear and/or damage to the drive chain and sprockets.

Before you service your drive chain, be sure you are parked on a level surface and you turn the engine OFF. Be sure the transmission is in neutral. It is not necessary to remove or replace the chain to perform recommended maintenance service.

1. Check the slack in the lower drive chain midway between the sprockets (2). Push upward on the chain with your finger. The vertical movement should measure between 3/8-3/16in (10-20mm).
2. Repeat step 1 along several points of the drive chain. The slack should remain constant through out. If it is not, some links may be kinked and binding. Lubricating the chain will often stop this.

NOTICE

Excessive drive chain slack may allow the drive chain to damage the engine cases.



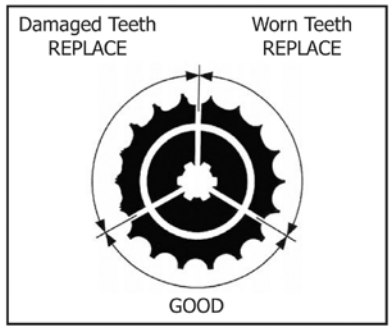
3. Inspect the drive chain for the following: damaged rollers, loose pins, dry or rusted links, kinked or binding links and excessive wear. Replace the chain (page 37) if it has damaged rollers, loose pins, or kinks that cannot be freed. Lubricate the drive chain if it appears dry or shows signs of rust. Lubricate any kinked or binding links and work them free.
4. You should replace the drive chain once the rear axle is moved as far back as possible and slack still remains. This indicates that the chain is worn beyond it's service limit.
5. Inspect the front and rear sprockets for excessive wear or damage. Refer to the illustration at the top of page 30. If needed, replace any worn or damaged sprockets. See your local Motovox dealer for assistance.

DRIVE CHAIN INSPECTION

Use the diagram below to determine if the sprockets need to be replaced. Never use a new chain with a damaged or worn sprocket.

NOTICE

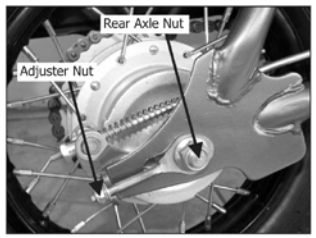
Use of a new chain on worn sprockets will cause rapid chain wear.

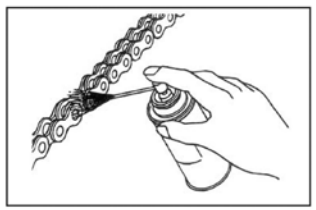


DRIVE CHAIN SLACK ADJUSTMENT

Follow the procedure below to adjust the drive chain slack. Be sure that you are parked on a level surface and the engine is turned OFF.

1. Loosen the rear axle nut.
2. To decrease chain slack, turn both the left and right chain adjuster bolts clockwise equally. To increase chain slack, turn both the left and right chain adjuster bolts counter-clockwise equally. Be sure that the wheel is aligned properly with the chain.
3. Tighten the rear axle nut.
4. Recheck the drive chain slack.
5. Once you have obtained proper slack, torque the rear axle nut to 43 foot pounds (59 Nm, 6.0 kgfm).

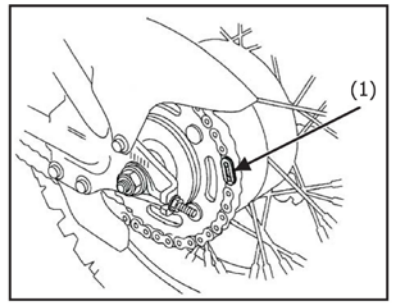




DRIVE CHAIN INSPECTION

If you have been riding in extremely muddy or dusty conditions, the drive chain should be removed and cleaned before you apply lubricant. Follow the procedure below to remove and clean or replace the drive chain with a new one.

1. Remove the master link retaining clip (1) with needle nose pliers. Do not bend or twist the clip. Remove the master link and remove the drive chain.
2. Clean the drive chain with a non-flammable solvent such as kerosene - not gasoline - and allow it to dry.
3. Inspect the drive chain for possible wear or damage. Replace the drive chain if it has any damaged rollers, loose fitting links, or otherwise appears unserviceable.
4. Inspect the sprockets for wear or damage. Motovox recommends that you replace the sprockets when you install a new drive chain.
5. Pass the chain over the sprockets and join the ends of the chain with the master link. For ease of assembly, hold the chain ends against adjacent rear sprocket teeth while inserting the master link. Install the master link retaining clip so that the closed end of the retaining clip will face the direction of forward wheel rotation.
6. Lubricate the chain.



The master link is the most critical element of drive chain security. Master links are reusable, as long as they are in excellent condition. We recommend installing a new master link when you install a new drive chain. You may find it easier to install a new chain by connecting it to the old chain using a master link and pulling the old chain to position the new chain on the sprockets.

To clean the motorcycle you can use any of the following: water, mild neutral detergents, mild spray and wipe cleaner, mild spray and rinse cleaner/degreaser. Avoid products that contain harsh detergents or chemical solvents that can damage the metal, paint and plastic on your motorcycle.

We recommend that you use a garden hose to wash your motorcycle. High pressure washers (like coin operated car washers) can damage certain parts of the motorcycle. If you must use a high pressure washer, avoid spraying the following areas: Wheel hubs, muffler outlet, underneath the seat, engine stop switch, underneath the gas tank, drive chain and carburetor.

NOTICE

High pressure water or air can damage certain parts of the motorcycle. Never wash the motorcycle while the engine is running. Always lubricate the drive chain after you are finished washing and the motorcycle is dry.

ENGINE DOES NOT START

1. ***Examine the Carburetor*** - Be sure there is fuel flowing into the carburetor.
   Is there fuel flowing into the carburetor?
   No - Clogged fuel hose/line or clogged fuel filter
   - Clogged Fuel Valve
   - Clogged fuel tank breather hose
   - Sticking or stuck carburetor float

   Yes - SEE STEP 2

2. ***Examine the Spark Plug*** - Remove the spark plug and inspect.
   Is the spark plug in good working condition?
   No - Flooded engine and/or carburetor
   - Choke valve is closed
   - Throttle is stuck open
   - Dirty or clogged air filter
   - Excessively worn piston rings (replace engine)

   Yes - SEE STEP 3

3. ***Spark Test*** - Test for ignition spark by removing the spark plug and inserting it into the spark plug cap. Place the open end of the spark plug on a metal part of the engine and kickstart the engine. You should see a nice blue spark on the end of the spark plug. A faint spark will not start the engine.

⚠WARNING Do not touch the spark plug or plug cap while kickstarting the engine. You will receive an electrical shock which could result in serious injury.

   Is there a good spark?
   No - Fouled or faulty spark plug
   - Broken or shorted spark plug wire or spark plug cap
   - Broken or shorted ignition coil
   - Faulty ignition CDI Box
   - Faulty or shorted magneto assembly
   - Broken or shorted engine stop switch
   - Loose or corroded wires and/or connectors (always clean bad electrical connections)

   Yes - SEE STEP 4

4. ***Cylinder Compression Test*** - Perform a simple compression test by kickstarting the engine slowly. Be sure you have the spark plug installed. While pushing down on the kickstarter slowly, you should feel a very hard firmness that will abrubptly soften as the kickstart lever moves further down. No hard firmness in the kickstart lever means you have poor compression.
   Is the compression normal?
   No - Valve stuck open/seized or improper valve timing (see your Motovox Service Center)
   - Worn cylinder wall and/or piston rings (replace engine)
   - Leaking or damaged cylinder head gasket (see your Motovox Service Center)

   Yes - SEE STEP 5

5. ***Engine Start Condition*** - Start the engine by using the normal starting procedure
   Does the engine start but then stop quickly afterward?
   Yes - Improper choke operation
   - Dirty or improperly adjusted carburetor (see your Motovox Service Center)
   - Intake manifold/pipe leak
   - Improper ignition timing (see your Motovox Service Center)
   - Dirty or contaminated gasoline

TROUBLESHOOTING

ENGINE LACKS POWER

1. ***Examine the Drivetrain*** - Raise the rear wheel off of the ground and spin by hand.
   Does the wheel spin freely?
   No - Brake dragging, improperly mounted brake pads
   - Worn or damaged wheel bearings
   - Bent axle

   Yes - SEE STEP 2

2. ***Check the Tire Pressure*** - Use a tire pressure gauge to check the tire pressure of each tire
   Is the tire pressure correct?
   No - Faulty tire valve
   - Punctured tire and/or inner tube

   Yes - SEE STEP 3

3. ***Clutch Inspection*** - Accelerate rapidly through first and second gears.
   Does the engine speed/RPM decrease properly when you shift from first gear to second gear?
   No - Slipping clutch, adjust
   - Worn out clutch discs and/or plates
   - Weak clutch springs
   - Contaminating additive in the engine oil

   Yes - SEE STEP 4

4. ***Engine Performance Inspection*** - Accelerate lightly.
   Does the engine speed increase?
   No - Clogged air filter
   - Restricted or clogged fuel line and/or fuel filter
   - Clogged muffler/spark arrester
   - Choke valve is closed
   - Clogged fuel tank breather hose

   Yes - SEE STEP 5

5. ***Spark Plug inspection*** - Remove the spark plug and inspect
   Is the spark plug in good working condition?
   No - Spark plug is not serviced frequently enough
   - Incorrect spark plug heat range
   - Incorrect spark plug gap

   Yes - SEE STEP 6

6. ***Engine Oil Inspection*** - Check the oil level and the condition of the oil
   Is the engine oil level correct and in clean condition?
   No - Oil level too high
   - Oil level too low
   - Contaminated oil

   Yes - SEE STEP 7

7. ***Cylinder Compression Inspection*** - Check the cylinder compression.
   Is the engine compression normal?
   No - Valve stuck open/seized or improper valve timing (see your Motovox Service Center)
   - Worn cylinder wall and/or piston rings (replace engine)
   - Leaking or damaged cylinder head gasket (see your Motovox Service Center)

   Yes - SEE STEP 8

ENGINE LACKS POWER *(continued)*

8. Carburetor Inspection - Disassemble the carburetor and check for clogs
Was the carburetor clogged and dirty?
No - SEE STEP 9
Yes - Carburetor is not serviced frequently enough
- Contaminated fuel

9. Over Heating Inspection - Check the engine for overheating
Is the engine overheating?
No - GO TO STEP 10
Yes - Excessive carbon buildup in the combustion chamber
- Use of poor quality fuel
- Clutch slipping
- Lean fuel mixture or improper octane rating of fuel

10. Engine Condition Inspection - Accelerate rapidly through all gears and ride at high speed.
Does the engine knock?
No - SEE STEP 11
Yes - Worn piston and cylinder (replace engine)
- wrong type of fuel (octane rating)
- Lean fuel mixture
- Excessive carbon buildup in the combustion chamber

11. Ignition Timing Inspection - See your Motovox Service Center to have the ignition timing and engine lubrication system inspected. Only attempt these procedures if you are qualified and have the proper tools needed.

Is the ignition timing normal?
No - Faulty CDI ignition box
- Faulty ignition pulse generator
Yes - SEE STEP 12

12. Lubrication Inspection - Remove the valve adjuster hole cap on the cylinder head and inspect for lubrication.
Is the valve train lubricated properly?
No - Clogged oil passage (replace engine)
- Dirty and/or contaminated engine oil
Yes - See your Motovox Service Center to have your dirt bike serviced.

POOR PERFORMANCE AT IDLE & LOW SPEED

1. Intake Manifold Inspection - Check the intake manifold for leaks
Is there a leak in the manifold?
No - SEE STEP 2
Yes - Loose carburetor mounting bolts
- Damaged insulator/spacer
- Damaged intake manifold gasket
- Cracked or broken intake manifold/pipe

POOR PERFORMANCE AT IDLE AND LOW SPEED *(continued)*

2. Spark Test - Test for ignition spark by removing the spark plug and inserting it into the spark plug cap. Place the open end of the spark plug on a metal part of the engine and kickstart the engine. You should see a nice blue spark on the end of the spark plug. A faint spark will not start the engine.

⚠DANGER Do not touch the spark plug or plug cap while kickstarting the engine. You will receive an electrical shock wich could result in serious injury or death.

Is there a good spark?
No - Fouled or faulty spark plug
- Broken or shorted spark plug wire or spark plug cap
- Broken or shorted ignition coil
- Faulty ignition CDI Box
- Faulty or shorted magneto assembly
- Broken or shorted engine stop switch
- Loose or corroded wires and/or connectors (always clean bad electrical connections)
Yes - SEE STEP 3

3. Carburetor Air Screw Inspection - Check the carburetor air screw. Turn the screw clockwise until you feel it stop. Do not tighten. Back out the screw counter clockwise 1.5 turns.
Is the air screw setting correct?
No - Adjust using the procedure above.
Yes - SEE STEP 4

4. Ignition Timing Inspection - See your Motovox Service Center to have the ignition timing inspected. Only attempt these procedures if you are qualified and have the proper tools needed.
Is the ignition timing normal?
No - Faulty CDI ignition box
- Faulty ignition pulse generator
Yes - See your Motovox Service Center to have your motorcycle serviced

POOR PERFORMANCE AT HIGH SPEED

1. Examine the Fuel Line - Disconnect the fuel hose at the carburetor.
Is there fuel flowing freely?
No - Clogged fuel hose/line or clogged fuel filter
- Clogged Fuel Valve
- Clogged fuel tank breather hose
Yes - SEE STEP 2

2. Carburetor Inspection - Disassemble the carburetor and check for cloggs.
Was the carburetor clogged and dirty?
No - SEE STEP 3
Yes - Carburetor is not serviced frequently enough, contaminated fuel

3. Ignition Timing & Valve train Inspection - See your Motovox Service Center to have the ignition timing inspected. Only attempt these procedures if you are qualified and have the proper tools needed.
Are the ignition timing, valve timing and valve springs normal?
No - Faulty CDI ignition box
- Faulty ignition pulse generator
- Broken valve spring
- Broken or damaged camshaft sprocket
Yes - See your Motovox Service Center to have your motorcycle serviced

GENERAL GUIDELINES

If you encounter trouble during a ride, the first thing you should do is stop as soon as it is safely possible. Do not continue to ride if you have a flat tire, if you hear an unusual noise, or if your motor cycle just does not feel right. If you continue to ride, you will cause more damage the motorcycle and endanger your own safety.

After you stop, take time to carefully look over your motorcycle and identify the problem. Always consider all of your options before you make a decision. Sometimes a problem can be relatively minor and can be permanently repaired on the trail provided you have the tools, supplies and skills needed to do so. In addition, you may be able to make a temporary repair and ride slowly back to your base where you can get further help and/or supplies.

When a problem appears to be more serious; or you do not have the tools, supplies and skills needed to make a repair, you will need to choose a safe way to get yourself and the motorcycle back to your base. If you are close enough, you can often push the motorcycle back.

Whatever the problem may be, always follow the instructions below:

1. Always put safety first.
2. If the problem is minor and you have the tools, supplies and skills needed to make a temporary repair, be sure to make permanent repairs as soon as possible.
3. Do not continue riding if you are hurt or if your motorcycle is not in safe riding condition.

Recommendations for specific problems follow.

ENGINE QUITS OR WON'T START

If the engine was not making unusal noises before it quit running, and it feels normal when you operate the kickstarter, you can probably rule out a major mechanical problem

First, Check the fuel system:

1. Make sure you have fuel in the gas tank and the fuel valve is set to the "ON" position.
2. Check the fuel tank cap breather hose to be sure it is not pinched or clogged.
3. Turn the fuel valve to the "OFF" position. Disconnect the fuel line from the carburetor and momentarily turn the fuel valve to "ON." If fuel does not flow out, there is an obstruction in the fuel tank, fuel filter, or in the fuel line.

If the fuel system appears to be okay, check the ignition system.

1. Check the spark plug cap. Be sure that it is not loose or disconnected.
2. Disconnect the spark plug cap and remove the spark plug. Connect the spark plug to the plug cap and place the threaded end of the spark plug on a metal part of the engine.
3. Kick the kickstarter while you watch the spark plug. If it sparks, the ignition system is probably working. If there is no spark, replace the spark plug with a new one. If there is still no spark, there is a problem with the ignition system.

If you cannot identify or correct a problem, you will have to push your motorcycle back to your base or get some help.

RESOLVING THE UNEXPECTED

IF YOU HAVE A FLAT TIRE

How you handle a flat tire on the trail will depend on the severity of the damage to the tire and/or the inner tube and what tools and supplies you keep with you. If you have a slow leak or a minor puncture, there are two ways you can try to make a temporary repair:

1. Use an aerosol tire sealer to seal the puncture and inflate the tube. You can do this without removing the wheel.
2. Use a tube repair kit to patch the hole in the inner tube. This requires removal of the wheel and tire.

If the leak is more severe, or a temporary repair does not hold up, you will need to replace the inner tube. If the tire is also severely damaged, you will need to replace the tire as well.

If you cannot repair the flat tire on the trail, you will need to push the motorcycle back to your base or send for help. Do not ride on a flat tire. The motorcycle will be hard to handle, and if the tire comes of the rim, it can lock up the wheel and cause you to crash.

IF YOU CRASH

Personal safety is the first priority after an accident. If you or anyone else has been injured, take plenty of time to assess the severity of the injuries and determine if it is safe to continue riding. If you cannot ride safely, send someone for help. Do not ride if you will risk further injury or if your motorcycle has been damaged too severely.

If you decide you are capable of riding safely, carefully inspect the motorcycle for damage. Check the tightness of critical nuts and bolts such as the handle bars, control levers, brakes and wheels. If there is minor damage, or you are not sure about possible damage but decide to ride back to your base, ride slowly and cautiously.

Sometimes crash damage is hidden or not immediately apparent. Once you get home, go over your motorcycle thoroughly and fix any problems that you find. Also, be sure to have your Apollo dealer inspect the frame and suspension after a serious crash.

IF A COMPONENT FAILS

The drive chain, master link, control cables, brake controls, and other components can be damaged if you ride in dense brush or over rocky terrain. As mentioned earlier, making the repair on the trail will depend on the severity of the damage, tools, supplies, and skills that you have.

1. If the drive chain comes off because the master link clip has been knocked off, you may be able to repair the chain with a new master link. However, if the chain is broken or causes damage when it comes off, you may not be able to make a trailside repair.
2. If any component of the front braking system is damaged, you may be able to ride back to your base carefully using the rear brake for slowing and stopping. Likewise, if a component of the rear braking system fails, you can use the front brake for slowing and stopping.
3. If you damage the throttle cable or some other critical component, the motorcycle may be unsafe ride. Carefully assess the damage and make any repairs that you can. But if you have any doubts, it is best to be *conservative* and safe.

EMISSION CONTROL WARRANTY

YOUR WARRANTY RIGHTS AND OBLIGATIONS

The manufacturer warrants that each new 2010 and later vehicle:

- is designed, built and equipped so as to conform at the time of initial retail purchase with all applicable regulations of the United States Environmental Protection Agency.
- is free from defects in material and workmanship which cause such vehicle to fail to conform with applicable regulations of the United States Environmental Protection Agency or the California Air Resources Board for the periods specified below.

The emission control system warranty period for this vehicle is 30 months, which applies to the owner and each subsequent purchaser, begins on the date the vehicle is delivered to the first purchaser provided there has been no modification, abuse, neglect or improper maintenance of your vehicle. Where a warrantable condition exists, the manufacturer will repair your vehicle at no cost to you, including diagnosis, parts and labor. This is your emission control defects warrantly.

EMISSION CONTROL WARRANTY INFORMATION

Your emission control system warranty covers components whose failure would increase an engine's emission, including electronic controls, carburetor, the ignition system, or any other system utilized in this vehicle to control emission if it is originally equipped. Also included may be hoses, connectors and other emission-related assemblies. Replacing or repairing other components (including parts, labor, and other costs) not covered by this emission control system warranty or the standard warranty is the responsibility of the owner.

Coverage of repairs under this emissions warranty applies when repairs are completed at a dealer repair facility or person of thge owner's choosing for the maintenance, replacement or repair of emissions-related devices. The Distributor will not cover repairs performed outside of an authorized dealer or repair facility. The use of replacement parts not equivalent to the original parts may impair the effectiveness of your vehicle's emission control system. If such a replacement part is used and an authorized dealer determines it is defective or causes a failure of a warranted part, your claim for repair to bring your vehicle into compliance with applicable standards may be denied.

MODIFICATION OF ANY EMISSION CONTROL COMPONENT OR SETTING IS STRICTLY PROHIBITED BY LAW AND CAN RESULT IN SUBSTANTIAL PENALTIES AND FINES.

THIS EMISSION CONTROL SYSTEM WARRANTY IS IN ADDITION TO THE STANDARD PRODUCT WARRANTY.

EMISSION CONTROL WARRANTY

EMISSIONS CONTROL WARRANTY EXCLUSIONS AND LIMITATIONS

This warranty does not cover the following:

- Failures or malfunctions of the emission control systems caused by abuse, alteration, accident, misuse or the use of leaded gasoline.
- Replacement of expendable maintenance items unless they are original equipment defective in material or workmanship under normal use, and the first required replacement interval for the item has not been reached.

Expendable maintenance items include but are not limited to spark plugs, filters and lubricants.

- Replacement of parts and other services and adjustments for required maintenance.
- Repairs or replacements as a result of
  - Accident
  - Misuse
  - Use of replacement parts or accessories not conforming to the original specifications which adversely affect performance
  - Physical damage, corrosion, or defects caused by fire, explosions or similar causes beyond the control of the Distributor.
  - Failures not caused by a defect in material or workmanship.

- Use of this vehicle in any type of competitive racing, rental or any commercial use completely voids this and all other warranties.

LIMITED LIABILITY

The liability of the manufacturer under this Emission Control System Warranty is limited solely to the remedying of defects in material workmanship by an authorized dealer at its place of business during customary business hours. This warranty does not cover inconvenience or loss of use of the vehicle or transportation of the vehicle to/from the authorized dealer. The Distributor is not liable to any person for incidental, consequential or special damages of any description, whether arising out of express or implied warranty or any other contract, negligence or other tort or otherwise.

No express emission control system warranty is given by the manufacturer except as specifically set forth therein. Any emission control system warranty implied by law, including any warranty of merchantability or fitness for a particular purpose is limited to the express emission control system warranty terms stated in this warranty. The foregoing statements of warranty are exclusive and in lieu of all other remedies. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply if it is inconsistent with the controlling state law.

No dealer is authorized to modify this Emission Control System Warranty. If you have any questions regarding your warranty rights and responsibilities, you should contact Motovox by calling (888)488-MOTO (6686).

TROUBLE? DO NOT RETURN TO STORE contact us! **888-488-MOTO (6686)** or email info@motovox.com

Register your Motovox MVx70 Dirt Bike so that we can provide you fast solutions to any problems you may have with your product and so that we can keep in touch with you regarding any product updates.

Simply detach the regsitration form on the next page, fill it out and mail it to

Motovox
8844 Hillcrest Road
Kansas City, Missouri 64138

Or go to motovox.com and click on ACTION to fill out your registration form online.

Motovox MVx70 Product Registration

Please complete and mail this card within 10 days of purchase.

Name _____ Age _____

Address _____

City _____ State _____ Zip _____

Email _____

Home Phone _____

Work Phone _____

Purchase Date _____ Purchased from _____

VIN Number _____

Male Female Occupation _____

Is this your first Motovox product? _____

Other similar product owned before _____

How did you hear about the MVx70? _____

How do you plan to use your MVx70?

Just for fun ☐ Work ☐ Sport ☐ Commuting ☐

Complete this form and mail it to:

MOTOVOX™

8844 Hillcrest Road, Kansas City, Missouri 64138
Attention: Product Regsitration

TROUBLE? DO NOT RETURN TO STORE contact us! **888-488-MOTO (6686)** or email info@motovox.com

Motovox would sincerely like to thank you for choosing one of our fine products and we hope you will have many years of safe, fun enjoyment with your new dirt bike!

MOTOVOX™

MVX 70

IF YOU HAVE TROUBLE

DO NOT RETURN TO STORE

CALL MOTOVOX AND WE WILL MAKE IT RIGHT.

Motovox Motorsports

8844 Hillcrest Road, Kansas City, MO 64138-3759

Toll Free: 1-888-488-MOTO (6686)

Motovox.com

email info@motovox.com