13. BATTERY

Battery

⚠WARNING

Whenever removing the battery, disconnect the negative (black) cable first. When reinstalling the battery, connect the negative (black) cable last or explosive situation could result causing serious injury or death.

⚠WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.
If electrolyte comes in contact with skin: Flush with water.
If electrolyte is ingested: Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call physician immediately.
If electrolyte comes in contact with eyes: Flush with water for 15 minutes and get prompt medical attention.

Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield eyes when working near batteries. KEEP OUT OF REACH OF CHILDREN.

MF Battery

This battery is maintenance free type; it is not necessary to replenishing the battery fluid

Battery Removal

1. Disconnect hold down strap holding the electrical box and battery in position and remove battery cover.
2. Remove the battery vent tube from the battery.
3. Disconnect the black (negative) battery cable first.

13. BATTERY

4. Disconnect the red (positive) battery cable next.
5. Lift the battery out of the ATV, being careful not to tip it sideways and spill electrolyte.

⚠ CAUTION

If electrolyte spills, immediately wash it off with a solution of one tablespoon baking soda and one cup water to prevent damage to the ATV.

Battery Installation and Connections

⚠ WARNING

To avoid the possibility of explosion, always connect battery cables in the order specified. Connect red (positive) cable first, and black (negative) cable last. An exploding battery can cause serious injury or death.

Battery terminals and connections should be kept 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 rags. Coat the terminals with dialectic grease or petroleum jelly. Be careful not to allow cleaning solution or tap water into the battery.

13. BATTERY

1. Set the battery in its holder.
2. First connect and tighten the red (positive) cable.
3. Second connect and tighten the black (negative) cable.
4. Attach the hold down strap.
5. Verify that cables are properly routed.

NOTE:

- When your ATV is placed in storage for one month or more, the battery should be removed, charged to proper level, and stored in a cool dry place.
- Before reusing, take the battery to your dealer for testing and recharging.
- When installing a new battery, make certain it is fully charged prior to it is initial use. Using a new battery that has not been fully charged can damage the battery resulting in a shorter life of the battery,

⚠ CAUTION

Your ATV is equipped with a 5Ah Battery. This may not be sufficient to provide power for optional equipment. When installing optional equipment please upgrade your battery as necessary. See your dealer for the proper battery.

14. EXHAUST SYSTEM

WARNING

SYSTEM REGULATION

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED!

CAUTION: Exhaust system components are very hot during and after use of ATV.

- Do not touch exhaust system components. Serious burns can result.
- Traveling through tall grass is prohibited. The potential for fire exists.

Spark Arrestor

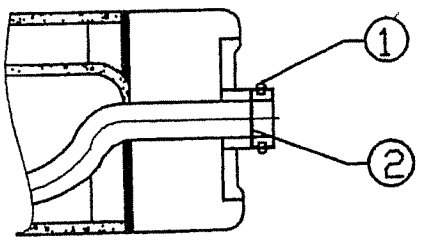
The exhaust pipe must be periodically purged of accumulated carbon as follows:

1. Remove the arrestor screw located on the bottom of the muffler, pull out the arrestor (the mesh).
2. Clean the arrestor or replace it.

WARNING

When cleaning the spark arrestor, you must follow the safe guards listed below to avoid serious injury.

- Do not perform this operation immediately after the engine has been run because the exhaust system will be very hot.
- Keep combustible materials away from exhaust system. Fire may result.



15. MAINTENANCE

CAUTION

Due to the nature of the adjustments marked with a D on the Following chart, it is recommended that an authorized dealer perform service.

- Perform maintenance on items marked with this dot more often under severe use, such as dirty or wet conditions to purge water or dirt contamination from grease fittings and other critical components.

Periodic Maintenance Schedule

Careful periodic maintenance will help keep your vehicle in the safest, most reliable condition. Inspection, adjustment and lubrication intervals of important components are explained in the chart on the following pages.

Maintenance intervals are based upon average riding conditions and an average vehicle speed of approximately 10 miles per hour (16km/h). Vehicles subjected to severe use, such as operation in wet or dusty areas, should be inspected and serviced more frequently.

Inspect, clean, lubricate, adjust or replace parts as necessary.

NOTE: Inspection may reveal the need for replacement parts. Always use genuine parts available from your dealer.

Service and adjustment are critical. If you are not familiar with safe service and adjustment procedures, have a qualified dealer perform these operations.

15. MAINTENANCE

	Item	Hours	When	Remarks
	Brake System	Pre-ride	Pre-ride	Pre-ride inspection item
	Tires	Pre-ride	Pre-ride	Inspect daily, pre-ride inspection item
	Wheels	Pre-ride	Pre-ride	Pre-ride inspection item
	Frame nuts, bolts fasteners	Pre-ride	Pre-ride	Pre-ride inspection item
●	Air Filter Element	Weekly	Weekly	Inspect –Replace if necessary
●	Transmission Oil Level	100 hrs	Yearly	Inspect yearly or 100hrs change annually
	Battery	20 hrs	Monthly	Check / clean Terminals;
D	Brake pad/ shoe wear	10 hrs	Monthly	Inspect periodically
	Engine Cylinder Head and Cylinder Base Fasteners	25 hrs	3 months	Inspect (re-torque required at first service only)
●	General Lubrication	50 hrs	3 months	Lubricate all fittings, pivots, cables, etc.
●	Engine Oil-Level/Change	30 hrs	3 months	Check Level Daily; Break in Service at 1 month. Change oil more often in cold weather use.
●	Oil Filter Screen	50 hrs	6 months	Inspect-clean

15. MAINTENANCE

	Item	Hours	When	Remarks
	Engine breather hose	100 hrs	6 months	Inspect
	Carburetor Float Bowl	50 hrs	6 months	Drain bowl periodically and prior to storage
D	Throttle Cable	50 hrs	6 months	Inspect –adjust, lubricate, replace if necessary; pre-ride inspection item
D	Drive belt	50 hrs	6 months	Inspect, replace if necessary
●	Steering	50 hrs	6 months	Inspect daily, lubricate
●	Rear Axle	50 hrs	6 months	Inspect bearings, Lube
●	Front Suspension	50 hrs	6 months	tighten fasteners
●	Rear Suspension	50 hrs	6 months	Inspect, tighten fasteners
	Spark Plug	100 hrs	12 months	Inspect-replace if necessary
D	Ignition Timing	100 hrs	12 months	Inspect and adjust as needed
D	Fuel System	100 hrs	12 months	Check for leaks at tank, cap, lines, fuel valve, filter, and carburetor. Replace lines every one year
D	Fuel Filter	100 hrs	12 months	Replace annually
	Chain	Before and after each use		After the first 2 hours of operation, and before and after each use, lubricate the chain and check the tension adjustment.

15. MAINTENANCE

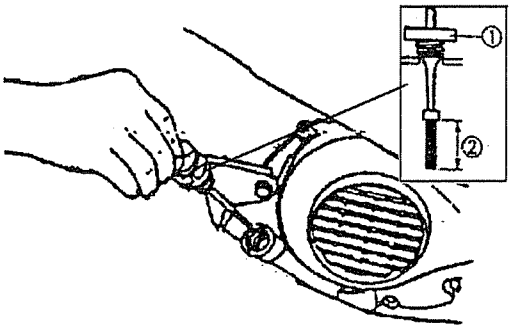
	Item	Hours	When	Remarks
	Spark arrestor	10 hrs	monthly	Clean out-replace if necessary
D	Clutches (drive and Driven)	25 hrs	3 months	Inspect, clean
	Engine mounts	25 hrs	3 months	Inspect
D	Valve clearance	100 hrs	12 months	Inspect/adjust
D	Brake fluid	200 hrs	24 months	Change every two years
	Idle Speed	As Required	As Required	Adjust
D	Toe adjustment	As Required	As Required	Periodic inspection, adjust when parts are replaced

15. MAINTENANCE

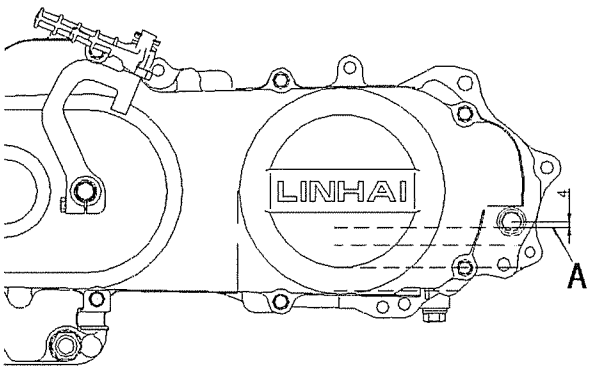
Lubrication Recommendations

	Item	Lube Rec.	Method	Frequency
	1. Engine Oil	SAE 15W/40SG	Add to proper level on dipstick	Check level daily
	2.Brake Fluid	DOT 3 Only	Maintain level Between fill lines. See "**7.CONTROL**"	As require; change every two years or 200 hours
	3.Transmission oil	SEA 15W/40SG	See "16.MAINTENANCE/TRANS-MISSION LUB"	Change annually or at 100 hours
	4.Chain lubricant	Graphite based	Spray-on graphite based chain lubricant	before and after each use

1.



3.

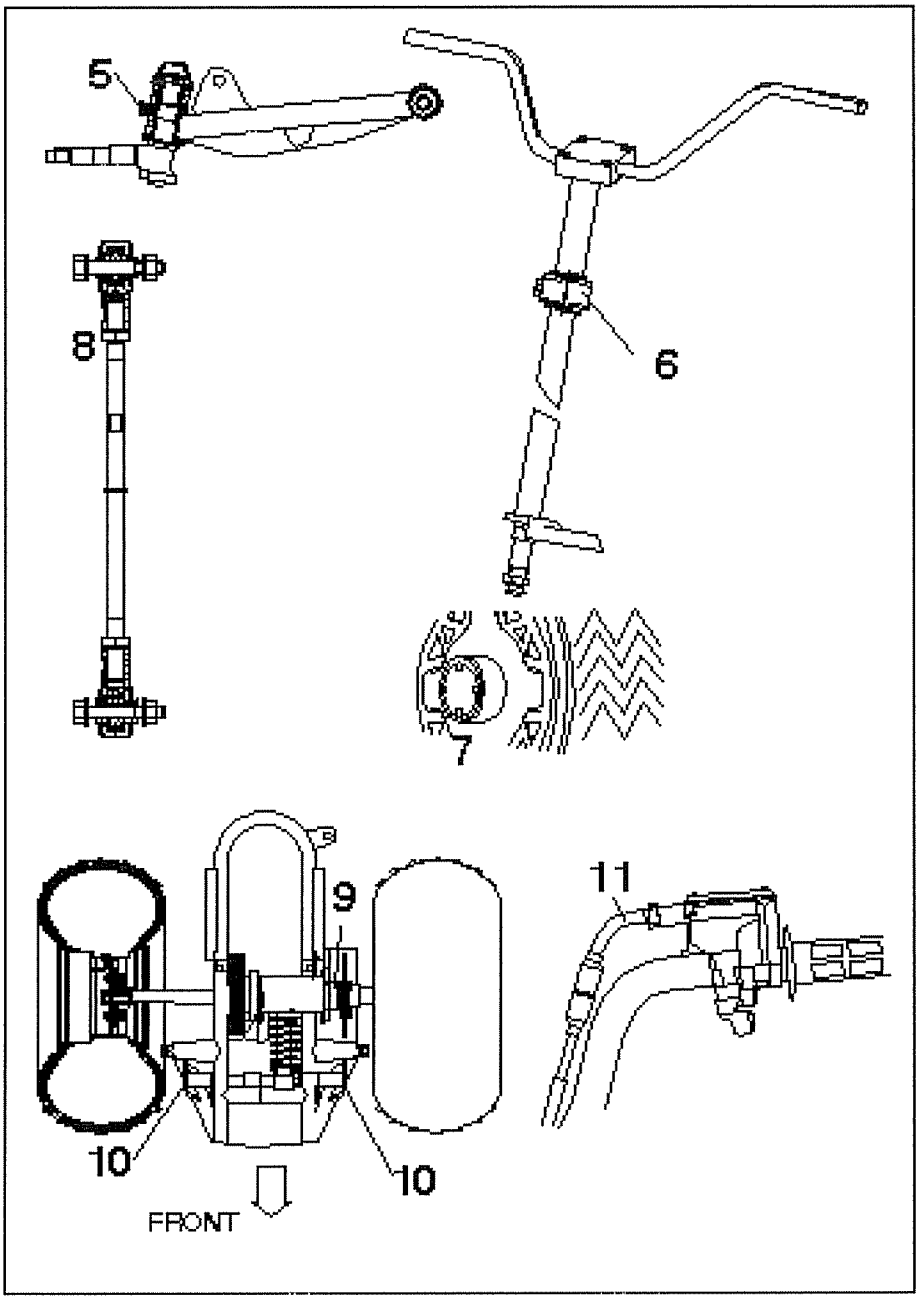


15. MAINTENANCE

Lubrication Recommendations

	Item	Lube Rec.	Method	Frequency
●	5. Front A-arm pivot Shaft	Grease	Locate fitting on pivot shaft and grease with grease gun	Every 3 months or 50 hours
●	6.Steering Post Bushings	Grease	Locate fitting on pivot shaft and grease with grease gun	Every 3 months or 50 hours
●	7.Front Wheel Bearings	Grease	Inspect and replace bearings if necessary	Semi-annually
	8.Tie rods	Grease	Locate fittings and grease	Semi-annually

15. MAINTENANCE



15. MAINTENANCE

Lubrication Recommendations

●	9.Rear Axle Bearing	Grease	Locate fittings and grease	Every 3 months or 50 hours
●	10. Swing Arm Bearing	Grease	Locate fittings and grease	Monthly or 20 hours
●	11.Throttle Cable	Grease M	Grease, inspect and replace it if necessary	Monthly or 20 hours

NOTE:

1. More often under severe use, such as wet or dusty conditions.
2. Grease: Light weight lithium-soap grease.
3. Grease M: molybdenum disulfide (MoS_2) grease (water resistant).
4. *When suspension action becomes stiff or after washing.
5. Hours are based on 10 mph (16Km/h) average.

15. MAINTENANCE

Periodic Maintenance Record

Use the following chart to record periodic maintenance work

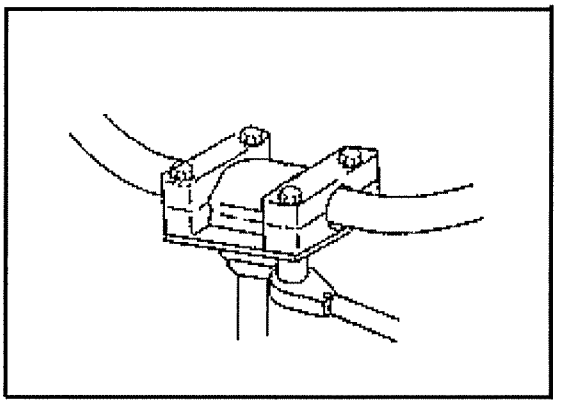
Maintenance Interval Performed	Servicing Date	Servicing Dealer or Person	Remark
First 5 Hrs			
10 Hrs			
15 Hrs			
20 Hrs			
25 Hrs			
50 Hrs			
75 Hrs			
100 Hrs			

15. MAINTENANCE

⚠ WARNING

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.

Handlebar Adjustment



Your ATV has handlebars that can be adjusted for your personal fit.

1. Remove the handlebar cover.
2. Loosen the four bolts.
3. Adjust handlebar to desired height. Be sure handlebars do not hit gas tank or any other part of machine when turned fully to left or right.
4. Torque handlebar adjuster block to 10-12 ft.lbs (14-16Nm).

NOTE: Tighten bolts so there is an equal gap at the front and rear of the handlebar block. Improper gap will result in improper fit of upper pod.

15. MAINTENANCE

The following items should be checked occasionally for tightness, or if they have been loosened for maintenance service.

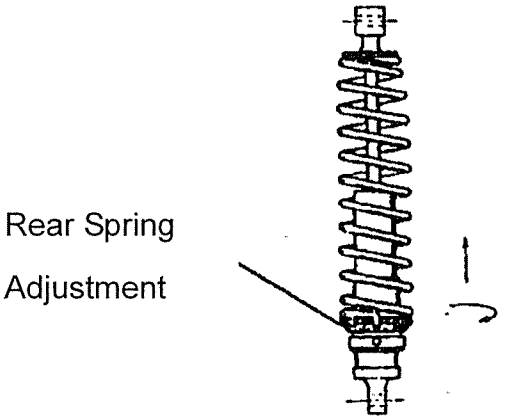
Wheel Nut Torque Specifications

Bolt Size	Specification	
Front M10X1.25	20Ft.Lbs	27N.m

NOTE: Apply thread-locking agent (LOCTITE®...)

Rear Spring Adjustment

The rear shock absorber spring is adjusted by rotating the adjuster in the direction required to increase or decrease spring tension.



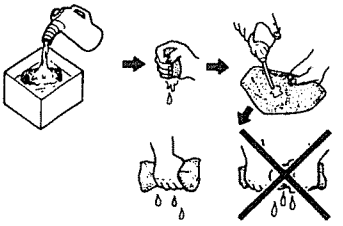
15. MAINTENANCE

Air Filter Service

1. Loosen the screws and remove filter cover

2. Remove the air filter element.

   Inspect: damaged → replace.



3. Clean: Immerse the element in a mild soap, squeeze it several times, and wrap it in a piece of dry cloth and squeeze again to remove the remaining solvent. Never twist the element.

NOTE

It is inappropriate to use low flash point solvents such as gasoline to clean the air filter element.

5. Apply some drops of engine oil to the element and squeeze it.

6. Reinstall the element and the filter cover.

15. MAINTENANCE

Steering Inspection

The steering assembly of the machine should be checked periodically for loose nuts and bolts. If loose nuts and bolts are found, have your dealer tighten them before riding your vehicle.

Camber and Caster

The camber and caster are non-adjustable.

⚠ WARNING

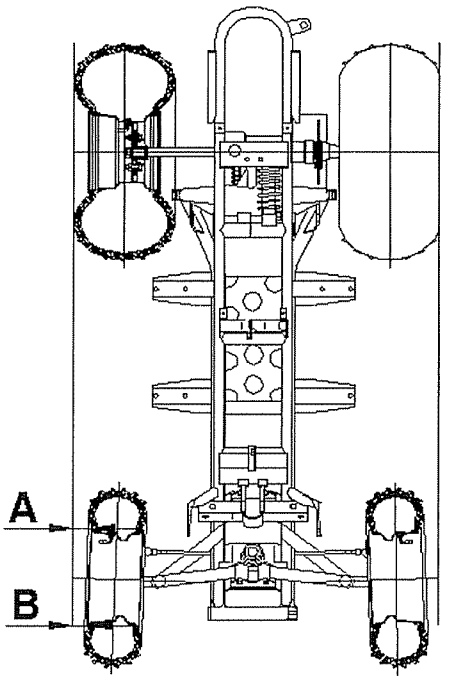
Do not attempt to adjust the tie rod for toe alignment. Severe injury or death can result from improper adjustment.

Contact your dealer. He/she has the training and tools to make these adjustments.

Toe Alignment Check

The recommended toe alignment is 1/8"to 1/4"(3to6mm) toe out.

1. Set the handlebars in a Straight ahead position and Hold them in this position.
2. Measure A and B, A minus B should be 1/16" to 1/8" (1.5 to 3mm).
3. If this measurement needs to be adjusted, contact your dealer for service.



15. MAINTENANCE

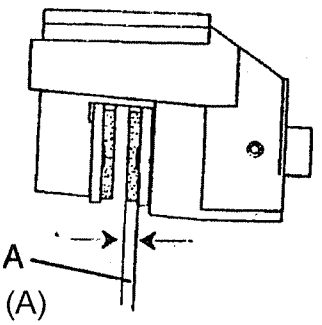
Rear Brake

⚠WARNING

Once a bottle of brake fluid is opened, use what is necessary and discard the rest. Do not store or use a partial bottle of fluid. Brake fluid is hygroscopic; meaning it rapidly absorbs moisture from the air. This causes the boiling temperature of the brake fluid to drop, which can lead to early brake fade and the possibility of serious injury.

The rear brake is a hydraulic disc brake, which is operated by depressing the lever on the left handlebar.
The following checks are recommended to keep the brake system in good operating condition. How often they need checking depends upon the type of driving that has been done.

- Keep fluid level in the master cylinder reservoir as described see "7.Control and functions". Normal functioning of the diaphragm is to extend into the reservoir as fluid level drops. If the fluid level is low and the diaphragm is not extended, a leak is indicated and the diaphragm should be replaced. Always fill the reservoir as indicated whenever the cover is loosened or removed to insure proper diaphragm operation. Use DOT 3 brake fluid.
- Check brake system for fluid leaks.
- Check brake for excessive travel or spongy feel.
- Check friction pads for wear, damage and loosened.
- Check surface condition of the disc.
- Pads should be changed when friction material is worn to 3/64"(1mm). (A)



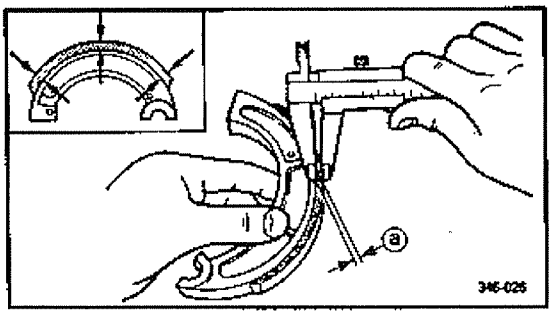
15. MAINTENANCE

Front Brakes

The front brakes are located on the right handlebar and are operated by the right hand. The front brakes are mechanical drum type brakes, which are activated by a single lever.
See "7.Control and functions"

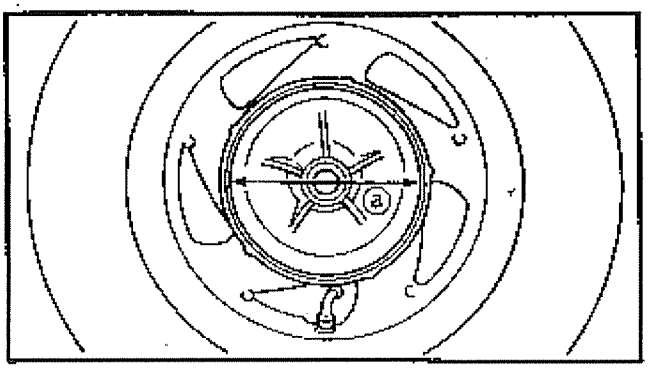
Brake shoes

- The standard thickness of lining is 5/32"(4mm)
- Shoes should be changed when friction material (lining) is worn to 2.5mm. (a)
- Replace the brake shoes as a set if either is worn to the limit.



Brake drum

- The standard brake drum inside diameter is 110mm, the allowable limit is 110.5mm.
- Measure the brake drum inside diameter (a)



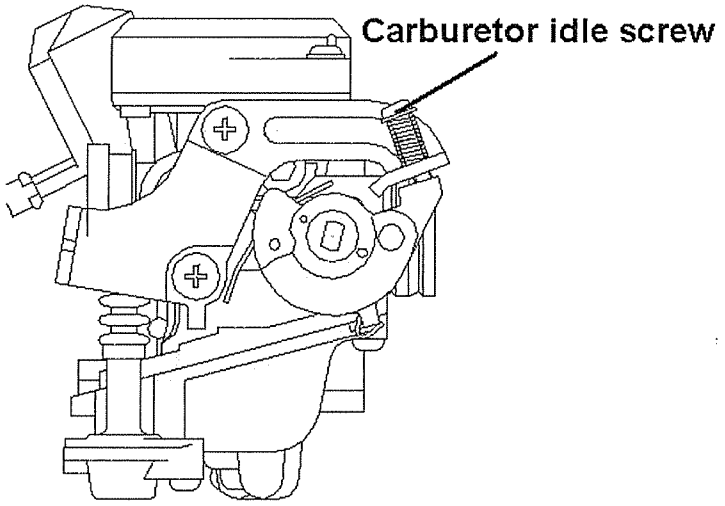
Out of specification → replace the hub.

15. MAINTENANCE

Carburetor/ Engine Idle RPM Adjustment

If the engine idle speed is not satisfactory, and all other conditions are favorable, the carburetor can be adjusted as follows:

1. Warm up the engine by running the vehicle approximately five minutes.
2. Make sure the parking brake is applied.
3. Adjust the carburetor idle screw in or out until the desired idle RPM is reached. Turning the screw in (clockwise) will raise RPM. Turning the screw out (counterclockwise) will lower RPM.
4. The standard idle RPM is 1900±10%



15. MAINTENANCE

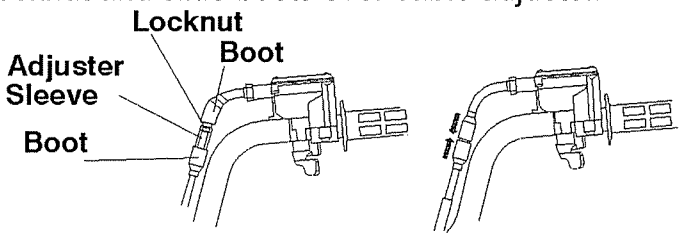
Throttle Cable Free Play Adjustment

Throttle cable free play is adjusted at the handlebar.

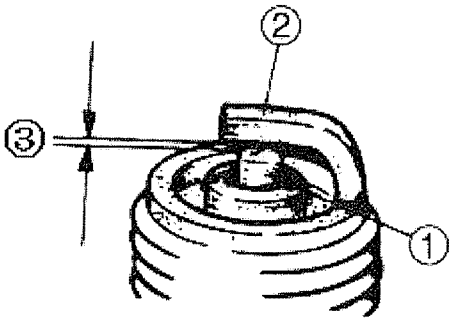
1. Slide the bolts off inline cable adjuster, Loosen adjuster locknut.

2. Turn adjuster until 1/16" to 1/8" (2to3mm) free play is achieved at thumb lever. **NOTE:** While adjusting free play, it is important you flip the throttle lever back and forth.

3. Tighten locknut and slide boots over cable adjuster.



Spark Plugs



(3) Gap:0.6-0.7mm

Inspect:

- Insulator (1)
  Abnormal color: Replace.
  Normal color is a medium- to-light tan color.
- Electrode (2)
  Wear/damage: Replace.

Clean:

- Spark plug
  (with spark plug cleaner or wire brush)

Measure:

- Spark plug gap (3)

Out of specification: Adjust gap.

15. MAINTENANCE

Spark Plug Removal and Replacement

⚠ WARNING

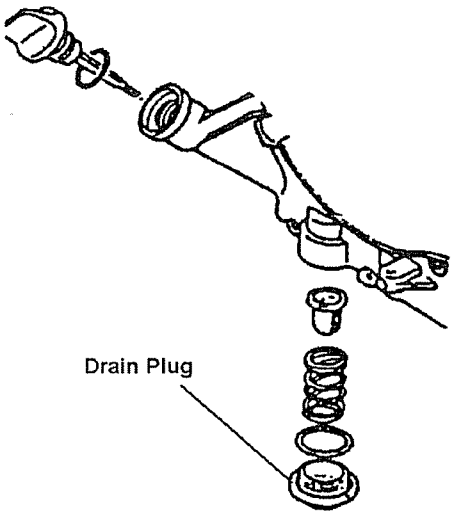
Never attempt to remove a spark plug while the engine is warm. The exhaust system or engine could burn you causing severe injury.

Remove the spark plug by rotating counterclockwise.

Reverse the procedure for spark plug installation. Torque to 17ft.lbs (23N.m).

15. MAINTENANCE

Oil and Filter Change



The recommended oil change interval is 30 hours, or every 3 months, whichever comes first. Suggested break in oil change is at 20 hours, or one month, whichever comes first. Severe use operation requires more frequent service. Severe use includes continuous duty in dusty or wet conditions, and cold weather riding.

NOTE: Severe use cold weather riding is all riding below 10°F (-12°C), and riding between 10°F (-12°C) AND 30°F (0° C) when most trips are slow speed and less than 5 mph (8km/h). Be sure to change the oil filter screen whenever changing oil

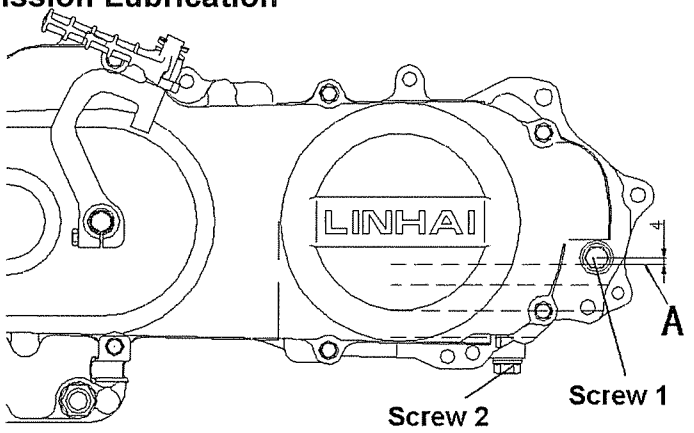
⚠ CAUTION

Oil may be hot. Do not allow hot oil to come into contact with skin as severe burns may result

1. Place vehicle on a level surface, lock the parking brake.
2. Run engine two or three minutes until warm, Stop engine.
3. Clean area around drain plug.
4. Place a drain pan under engine and remove drain plug.
5. Allow oil to drain completely.
6. Replace sealing washer O-ring of drain plug.
7. Reinstall drain plug and torque to 14ft.lbs (19N.m)

15. MAINTENANCE

Transmission Lubrication



The transmission fill plug is located on the right side of the machine.

The transmission lubricant level should be checked monthly or 20 hours, whichever comes first. Transmission oil should be changed annually. The correct transmission lubricant to use is SAE 15W/40SG Lubricant.

Transmission Oil Changing Procedure

1. Remove the screw (1)
2. Remove the screw (2) and drain the oil. Catch and discard used oil properly.
3. Clean and reinstall the screw (2) torque to 12-16 ft-lbs. (17-23Nm)
4. Add the correct amount of SAE 15W/40 SE Lubricant 120ml or to the level A
5. Clean and reinstall the screw (1) torque to 12-16 ft-lbs. (17-23Nm□
6. Check for leaks.

15. MAINTENANCE

⚠ WARNING

Operating your ATV with worn tires, improperly inflated tires, non-standard tires or improperly installed tire will affect vehicle handling which could cause an accident resulting in serious injury or death.

Follow the safeguards listed below to prevent this type of situation.

Important Safeguards

Maintain proper tire pressure according to charts below. Improper tire inflation may affect ATV maneuverability.

Do not use improper tires. The use of non-standard size or type tires may affect ATV handling.

Make certain the wheels are installed properly. If wheels are improperly installed it could affect vehicle handling and tire wear.

Wheel Removal Procedure:

1. Stop the engine, 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 wheel.

Tire Pressure	
Front	Rear
35kPa / 5PSI	35kPa / 5PSI

15. MAINTENANCE

Wheel Installation

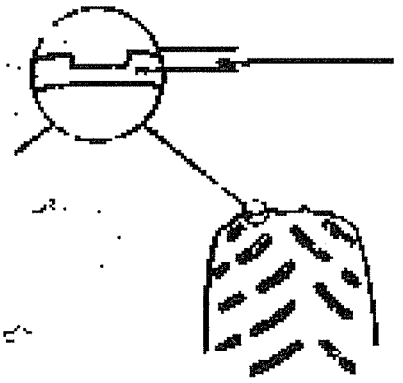
1. With the parking brake locked, place the wheel in the correct position on the wheel hub. Be sure the valve stem is toward the outside and rotation arrows on the tire point toward rotation.
2. Attach the wheel nuts and finger tighten them.
3. Lower the vehicle to the ground.
4. Securely tighten the wheel nuts according to the chart found in "**15.MAINTENANCE/Wheel Nut Torque**".

Tire Inspection

When replacing a tire always use original equipment size and type.

Tire Tread Depth

Always replace tires when tread depth is worn to 1/8" (3mm) or less. Please refer to your Owner's
Manual for tire specifications.



15. MAINTENANCE

Chain

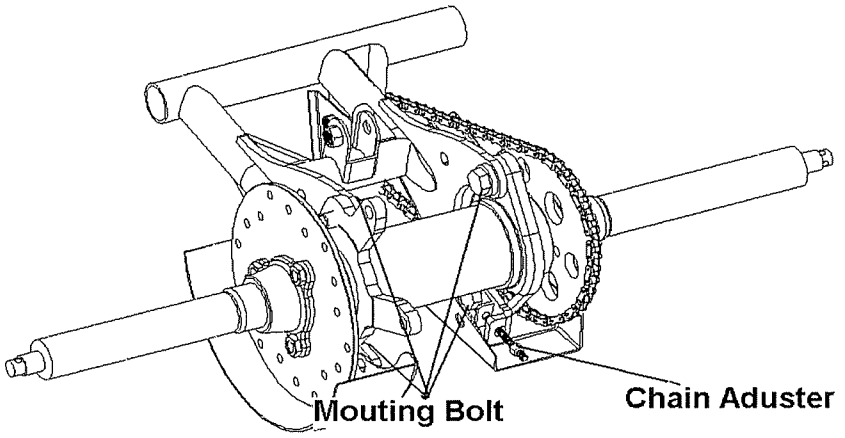
Use proper lubricants

Apply proper type spray-on chain lubricant thoroughly inside and outside plates and rollers of chain. Move ATV as needed to access entire chain.

Inspection

1. At the center point between the two sprockets, push and pull the chain and note total flex. If flex is more than 1/2"(12mm), adjust chain. Refer to **Adjustment.**
2. Inspect chain sprocket for wear.
3. If sprockets are worn, replace sprockets and chain as a set.
4. Replace guards if damaged.

Adjustment



1, Loosen, but do not remove, the four mounting bolts.

2, Turn the chain adjuster to obtain 1/4(6mm)" to 3/8"(10mm) chain flex. To tighten the chain, turn the chain adjuster clockwise. To loosen the chain, turn the chain adjuster count clockwise and push the rear axle forward.

3. Securely tighten the mounting bolts (1).

Torque Specifications: 41-44Ft.Lbs (55-60N.m)

4. Recheck the chain tension. Refer to **Inspection.**

15. MAINTENANCE

Removal

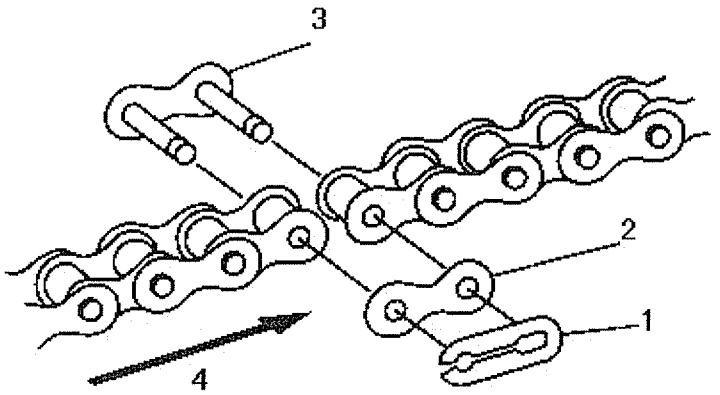
1. Rotate rear wheel to place master link (3) in accessible position between two sprockets.
2. Slide the retaining clip (1) of the master link (3) and remove clip and side plate (2).
3. Slide master link out and remove the chain.

Installation chain

1. Slide the pin portion of the master link (3) in to each end of chain to be connected.
2. Slide the side plate (2) portion of the master link on to the pins.
3. Slide the retaining clip (1) on to the pins until clip snaps securely in to place.

⚠ CAUTION

The master link should be installed with the open end of the retaining clip (1) facing away from direction of chain rotation (4).



15. MAINTENANCE

Cleaning Your ATV

Keeping your ATV clean will extend the life of various components.

Washing

Never use a high-pressure type car wash system, it can damage to the wheel bearings, transmission seals, body panels, brakes and warning labels, and water might enter the engine or exhaust system.

The best and safest way to clean your ATV is with a garden hose and a pail of mild soap and water. Use a professional type washing mitten, cleaning the upper body first and lower parts last. Rinse with water frequently and dry with a chamois to prevent water spots. **NOTE:** If warning labels are damaged, contact your dealer for replacement.

Waxing

Your ATV can be waxed with any non-abrasive automotive paste wax. Avoid the use of harsh cleaners since they can scratch the body finish.

⚠ CAUTION

Certain products, including insect repellants and chemicals, will damage plastic surfaces. Care must be taken when using these products plastic surfaces.

15. MAINTENANCE

Storage Tips

⚠CAUTION

Do not start the engine during the storage period. This will disturb the protective film created by fogging.

Cleaning——Clean the ATV thoroughly.

Fuel——Turn the fuel valve to "OFF" and drain the carburetor bowl completely.

Oil Add and Filter Screen Change——Warm the engine and change oil and filter screen.

Air Filter/Air Box——Inspect and clean or replace the air filter element. Clean the air box.

Inspect All Fluid Levels——Inspect the following fluid levels and change if necessary: transmission; brake fluid (change every two years or as required if fluid looks dark or contaminated).

Fog the Engine——Spray light oil into the cylinder through the spark plug hole.

Check and Lubricate Cables/Grease——Inspect all cables and lubricate.

Battery Maintenance——Remove the battery and Apply dielectric Grease to the terminal bolts and terminals. Charge the battery.

Storage Area/Covers——Set tire pressure and safely support the ATV with the tires 1-2"(25-50mm) off the ground. Be sure the storage area is well ventilated. Cover the machine with an ATV cover.

NOTE: Do not use plastic or coated materials. They do not allow enough ventilation to prevent condensation, and may promote corrosion and oxidation.