

## Rear Brakes

Pedal Adjustment	16
Brake Pads	17
Fluid and Level	17
Bleeding the Brakes	18

## Front Brakes

Changing Brake Pads	18
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## Idle Adjustment

Adjusting the Idle	19
--------------------	----

## Engine Maintenance

Oil Level	19
Oil Change	20
Oil Filter Replacement	21
Oil Sump Screen Cleaning	21
Clutch Adjustment	22
Cam Belt Adjustment	22
Valve Adjustment	23

## Technical Data

Technical Data	24
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THIS VEHICLE IS A COMPETITION MOTORCYCLE AND IS FOR USE EXCLUSIVELY IN A CLOSED COURSE COMPETITION AND IS NOT INTENDED FOR USE ON PUBLIC HIGHWAYS.

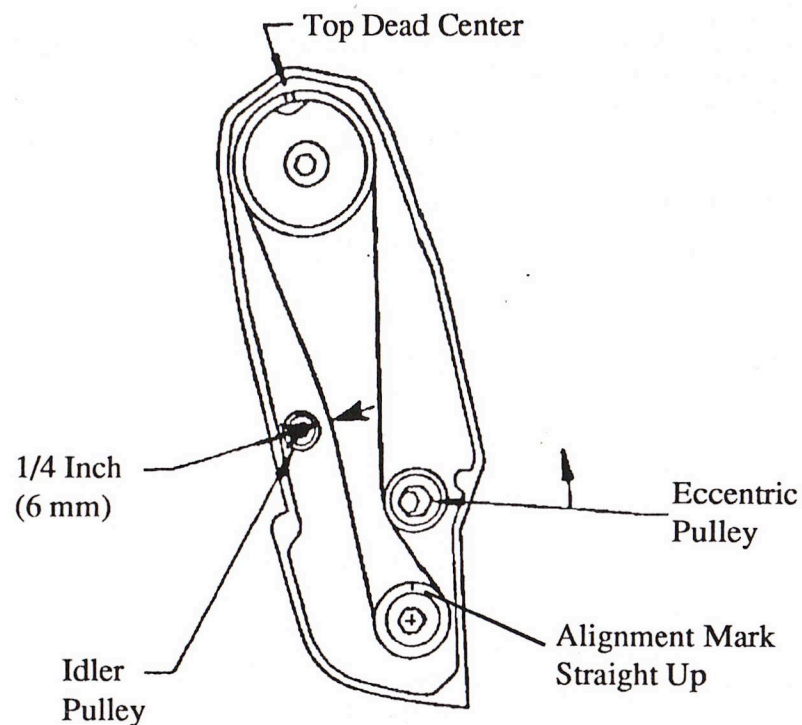


Figure 13.  
adjusting cam belt

## Valve Adjustment

Check the valves every 30 hours of riding time. Valve clearance is .002" (0.05mm) when the engine is cold. (See Figure 14)

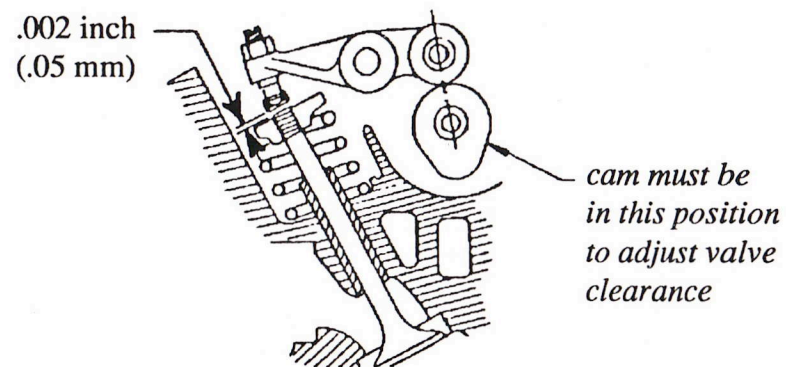


Figure 14.

## Clutch Adjustment

Remove the clutch cable from the clutch hand lever. Remove the rear plastic screw plug. Use the wrench provided in the tool kit. (See Figure 12) Screw in the threaded pin until it stops, then unscrew the pin 1/2 turn. Retighten the lock nut. Install the clutch cable to the clutch hand lever and allow 1/8" (3mm) of slack in the cable.

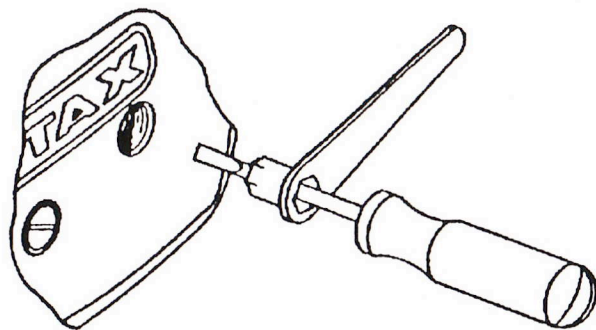


Figure 12.  
*adjusting the clutch*

## Cam Belt Adjustment

Turn the cold engine over to top dead center. Remove the cam belt cover. Turn the engine to top dead center of the compression stroke with the valves closed. The belt should be able to be pushed easily off the idler pulley, approximately 1/4" (6mm) (see Fig. 13). The belt will tighten when the engine heats up. Never over-tighten the belt; breakage may occur.

## BEFORE YOU RIDE

### Pre-Ride Inspection

Before jumping on your machine and "blasting" around, take caution and check the condition of some important items.

- 1) Be sure the throttle is free-moving and snaps back to a closed position when desired.
- 2) With the motor running, see if the **KILL** button stops the motor.
- 3) Check to see if the brakes stop the wheels.
- 4) Check to see if the chain is adjusted correctly.
- 5) Check the air pressure in the tires. The front should have at least 14 psi and the rear should have at least 10-12 psi.
- 6) Turn the fuel petcock lever to the **ON** position.
- 7) Read the remainder of this **Owner's Manual!!!**

### Break-In Period

Taking a little bit of care in the way you treat your motorcycle during the initial operation will reward you with extended life and increased performance.

In the first three hours of operation, the engine should not be subjected to excessive and prolonged Rpm or extreme loads. In other words-

**Don't lug the motor down or rev for extended periods!**

During the break-in period, adjustments may be necessary to the clutch, throttle, spokes, drive chain, and nuts and bolts.

Both front and rear brakes require a "seating in" process.



## **Oil Change**

**Engine Oil Recommendation:** Use only high detergent, premium quality motor oil certified to meet U.S. automobile manufacturer's requirements for service classification SE or SF. Motor oils intended for Service SE or SF will display this designation on the container. The use of special oil additives is unnecessary and will only increase operation expenses.

**CAUTION:** *Engine oil is a major factor affecting the performance and service life of the engine. Non-detergent, vegetable, or castor-based racing oils are not recommended.*

**To Change the Oil:** Drain the oil tank in the frame first then drain the oil in the engine.

**Frame Oil Tank:** Change the oil and oil filter every 20 hours of riding. Unscrew the oil line from the oil screen located at the bottom of the front down tube; drain the oil. Every 5th oil change clean the oil screen on the bottom of the frame downtube.

**Engine Oil:** Position the motorcycle level on a stand. Unscrew the drain plug from the engine. Once the oil stops pouring out, kick the engine over a few times to force out the remaining oil. Screw the drain plug back in.

## **STARTING PROCEDURE**

### **Cold Start**

1. Turn the fuel petcock to the **ON** position.
2. Pull the choke up to the open position.
3. Prime the engine. Kick the engine over until the compression is high. Pull the compression release in a little - just to get over the compression. Repeat this a few times.
4. Line up the white mark on the timing window and give it a hard kick with the throttle slightly open.

### **Warm Start**

To start the engine when it is warm, just line up the white mark on the timing window and kick it with the throttle slightly open.

### **Electric Start**

Skip steps three and four above and push the starter button.

### **Downhill Start**

Shift the engine into neutral, then push the compression release lever on and coast the bike up to speed. Once up to speed, shift the engine into second gear *without the clutch*. Let the engine turn over a few times, then release the compression lever. The engine should start right up.

## Bleeding the Brakes

If air is sucked into the hydraulic system, it is necessary to bleed the system to purge out the air. Check the fluid level in the reservoir and "top up" if required. Remove the dust cap from the bleed screw. Attach a rubber hose with an internal diameter of 1/4" (6mm) and approximately 24" in length to the bleed screw. Place the end of the hose in a glass jar filled with approximately 1" of clean hydraulic fluid. Make sure the end of the hose stays submerged in the hydraulic fluid throughout the entire bleed process. Actuate the brake lever several times and hold in the braked position. Open the bleed screw 1/2 turn and depress the brake lever. Close the bleed screw after the brake lever has reached its maximum position. Continue this operation until no air bubbles can be seen coming from the hose immersed in the hydraulic fluid. At intervals, make certain the reservoir is kept topped up, otherwise air will again enter the system.

## Front Brakes

The front brake pads should be checked before every race or ride. To check the pad thickness, remove the plastic cover on the back of the front brake caliper to expose the pads and pin (see Fig. 8). Pad thickness should be no less than 1/16". To replace, remove the circlip from the end of the retaining pin and pull the pin out. The pads slide out the back of the caliper.

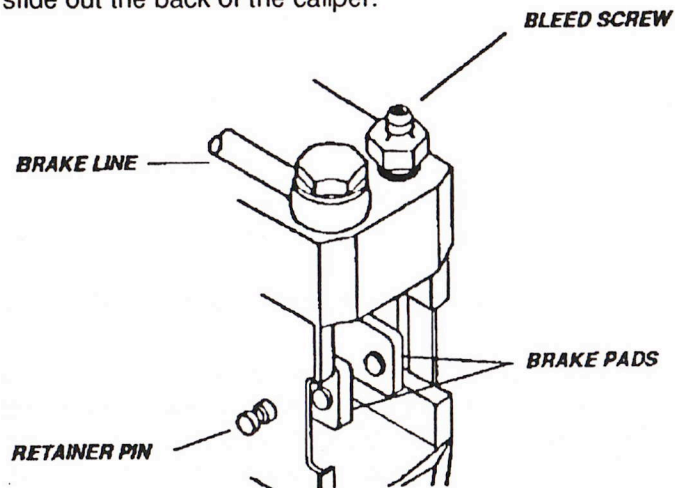


Figure 8.  
front caliper

When changing the oil level (see page 8), be sure that the oil level between the inner and outer leg is up to the four holes on the top of the inner leg.

The oil level should not be less than 120 mm, or greater than 160 mm with the fork fully compressed. Having the level less than 120 mm will cause too high pressures in the fork. If the level is more than 160 mm, there will be a loss of damping control near full extension.

If, after reducing the oil level to its minimum of 120 mm, the fork still bottoms, then the spring rate needs to be increased by one step.

If there is a feeling of harshness and a general stiffness and the fork rarely bottoms, which cannot be corrected by decreasing the compression damping, then the oil level should be increased to a maximum of 160 mm. If the forks are still too hard, then the next softer fork spring should be installed.

When changing springs, they should be installed at the identical preload as the standard spring specification, the oil level should be reset to its original value and the compression and rebound damping adjuster should be reset to position no. 3.

## Dismantling the Front Fork

- Clamp the outer fork tube in a bench vice which is fitted with aluminium jaws or shop towel in order to protect the fork.
- Set the adjustment of the red rebound adjustment knob to position 1. (Turn counter-clockwise towards position marked FAST).
- Remove the rebound adjustment knob with a small screwdriver. (see Fig. 2)
- Unscrew the screw cover cap with a 22 mm box end wrench.
- Remove the fork leg from the vice and push the outer fork tube fully downwards.
- Remove the two steel spring retainers and plastic preload spacers, if fitted.
- Remove the spring.

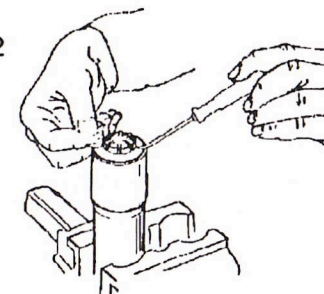


Figure 2.  
removing knob



### Chain Torque Eliminator Sprocket Maintenance

The Chain Torque Eliminator (CTE) Sprockets should be inspected every 15 hours of operation (sooner if a pressure washer is used or if the motorcycle has been operated in severe muddy conditions). To inspect, remove the sprockets from the swingarm and check to see that the bearings spin freely and smoothly. While you have them off, use a small penknife and pry out the seals of the bearing(s), rinse out with clean gasoline or contact cleaner, and repack with quality grease. Be sure to assemble with the wave washers on both sides of the sprocket (upper) to ensure proper clearance with the CTE plates.

### Air Filter

To ensure optimum performance from your engine, the air filter should be cleaned once every eight hours of non-competitive riding. To clean the air filter, remove the seat and loosen the hose clamp which attaches the air filter to the carburetor (or throttlebody-EFI!). Pull the air filter out of the air box. Spray on K & N's filter cleaner and degreaser to dissolve the dirt and oil. Rinse with warm water in reverse flow. Let the air filter dry out completely and spray with K & N Filter Oil. Do **NOT** blow dry with an air compressor! This will ruin the filter.

### Rear Brakes

The countershaft rear disc brake is the most effective stopping system ever designed. Applying the rear brakes has no effect on the suspension. Therefore, those riders who steer with the rear brake or drag the rear brake will cause the brake fluid to heat up and the pads to wear excessively.

NOTE: Don't drag the brake - Use it for S-L-O-W-I-N-G!

### Pedal Adjustment

Pedal height is important. Adjust the pedal tip low enough below the operator's boot so it will not be applied unknowingly. Free play

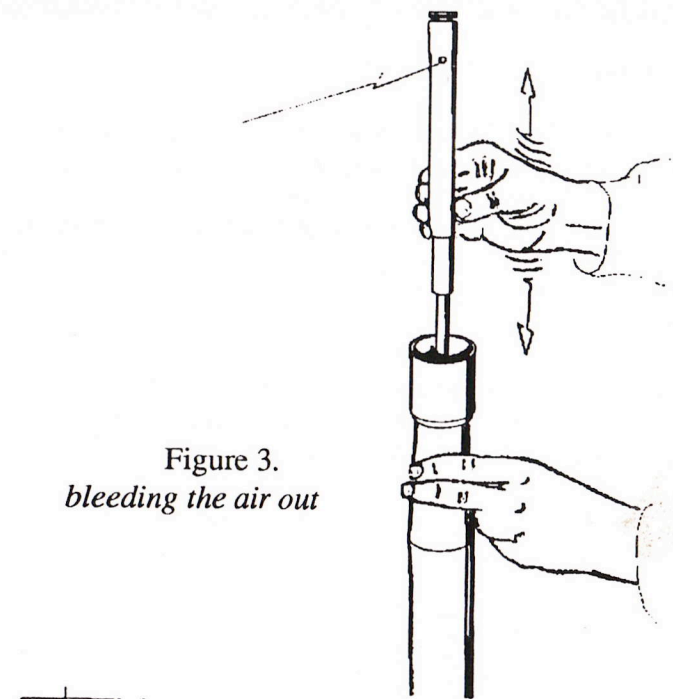


Figure 3.  
*bleeding the air out*

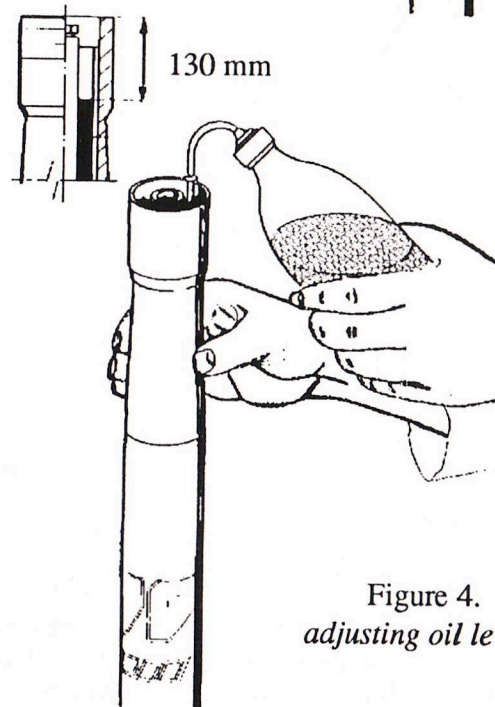


Figure 4.  
*adjusting oil level*

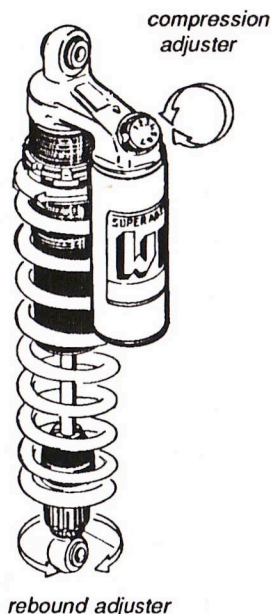
The preload on the shock spring should be adjusted between 0" and 1/2". If the preload falls out of the 0-1/2" range while obtaining the 2" - 3" of suspension sag, a heavier or lighter spring is necessary. If the preload required to give the correct sag height is greater than 1/2", a heavier spring is necessary. If the preload required to give the correct sag height is 0" or less, a lighter spring is necessary.

### **Compression Damping Adjustment**

The standard setting for the compression damping is 3 (out of 7). The following is a basic guide for adjusting the compression damping:

**Too Little:** Soft/mushy feeling; Hard bottoming; Slow forward progress when landing from a large jump.

**Too Much:** Stiff/harsh feeling, with suspension rarely bottoming; Rider tends to want to shift his weight backwards to help absorb the bumps and landings; Shock remains too rigid to absorb bumps and uses too little travel.



### **Rebound Damping Adjustment**

The standard setting for the rebound damping is 4 (out of 11). The following is a basic guide for adjusting the rebound damping:

**Too Little:** Gives the machine a springy feel; Kicking up when hitting bumps, rocks, and braking bumps; Tendency for the rear of the machine to ride high, pushing the rider forwards; Machine bounces upwards after landing from a large bump.

**Too Much:** Harsh feeling when hitting a quick succession of bumps; Tendency for the rear of the machine to ride low; Packing down; Poor traction; Machine may tend to side hop.

- Continue to screw the spring downwards.
- Fit the two half spring retainers, with the outer edge facing downwards, into the groove in the cartridge piston rod.
- Remove the steel pin from the hole in the sleeve.
- Pull the outer fork tube upwards until the spring retainers are in their seatings.
- Clamp the outer fork tube in the bench vice.
- Check that the rubber ring on the inside of the screw cover is correctly positioned in its groove and is not damaged.
- Fit the screw cover cap using a 22 mm box end wrench (30-35 Nm torque).
- Remove excess oil from the hole in the screw cover with compressed air or contact cleaner.
- Clean the red rebound adjustment knob and the O-ring and press the adjustment knob into the screw cover cap.
- Check the position of the rebound adjustment knob and the compression set screw and adjust to the correct setting (standard position for both adjustment knob and set screw is position 3).
- Degrease the outer fork leg before mounting in the triple clamps.

### **IMPORTANT**

Tighten the 8 mm upper bolts of the triple clamps to a maximum torque of 25 Nm (18 ft-lbs) and the lower bolts to a maximum torque of 15 Nm (11 ft-lbs). If the lower triple clamps are overtightened, the fork will bind, stick, or feel harsh.