BOMBARDIER

can-am* motorcycles

OPERATOR MANUAL

MX-5*
370
250

735 002 022

Litho'd in Canada

IMPORTANT

All warranties on MX-5 models either expressed or implied including any implied warranty of merchantability and any implied warranty of fitness for a particular purpose are hereby excluded and disclaimed.

October, 1978

Bombardier Limited
Valcourt, Québec, Canada

Text by:

TECHNICAL INFORMATION CENTRE
AFTER-SALES SERVICE DEPARTMENT
BOMBARDIER LIMITED
VALCOURT, QUÉBEC, CANADA, J0E 2L0

FOREWORD

This motorcycle is a strong, lightweight, sportcycle designed specifically for the competition market.

Our goal was to produce a sophisticated, durable, high performance motorcycle, designed by motorcyclists for the discerning motorcycle enthusiast.

Your new motorcycle is the culmination of lengthly development and racing program which, we feel, reflects the state of the art in motorcycle engineering and construction. Bombardier Limited, inventor of the Ski-Doo snowmobile and builders of advanced recreational vehicles, has applied its background and experience to make this outstanding machine possible.

This motorcycle is backed by Bombardier's international dealer network and factory trained, in-field personnel. Our dealer network is geared to provide prompt, efficient service and parts availability.
We congratulate you on your excellent choice, and thank you for the confidence you have placed in our product.

This manual emphasizes particular information denoted by the wording and symbols;

◆ **WARNING: Identifies an instruction which, if not followed could cause personal injury.**

▼ **CAUTION: Denotes an instruction which, if not followed, could severely damage vehicle components.**

○ **NOTE:** Indicates supplementary information needed to fully complete an instruction.

Although the mere reading of such information does not eliminate the hazard, your understanding of the information will promote its correct use.

Ride safe and have fun.

Always think safety, respect the rights of other to peace and privacy. Protect your reputation and image, as being an ecological and environmentally conscientious sportsman.

"This vehicle is designed for competition use only. Operation on public streets, roads and / or off-road conditions, or highways, may be illegal.

It is recommended that you become informed of the particular laws governing particular use of this motorcycle in your region".

SAFETY IN MAINTENANCE

Observe the following precautions:

- Throttle mechanism should be checked for free movement before starting engine.
- Never run the engine at high R.P.M. when in neutral. Running an unloaded engine can prove to be dangerous.
- Gasoline is flammable and explosive under certain conditions. Always perform procedures in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. If gasoline fumes are noticed while driving, the cause should be determined and corrected without delay.
- Maintain your vehicle in top mechanical condition at all times.
- Only perform procedures as detailed in this manual. Unless otherwise specified, engine should be cold and turned OFF for all lubrication and maintenance procedures.
- Installation of other than "stock" equipment, could severely affect the stability and safety of your vehicle. Avoid adding on" accessories that alter the basic vehicle configuration.
- The MX-5 engine can be stopped by activating the emergency cut-out switch.
- Since the engine cooling is in effect only when the vehicle is in motion, it is recommended that you do not allow the engine to idle for more than brief periods. Prolonged idling and low speed operation may cause engine damage.
- The MX-5 is designed for the driver only. No provision has been made for a passenger.

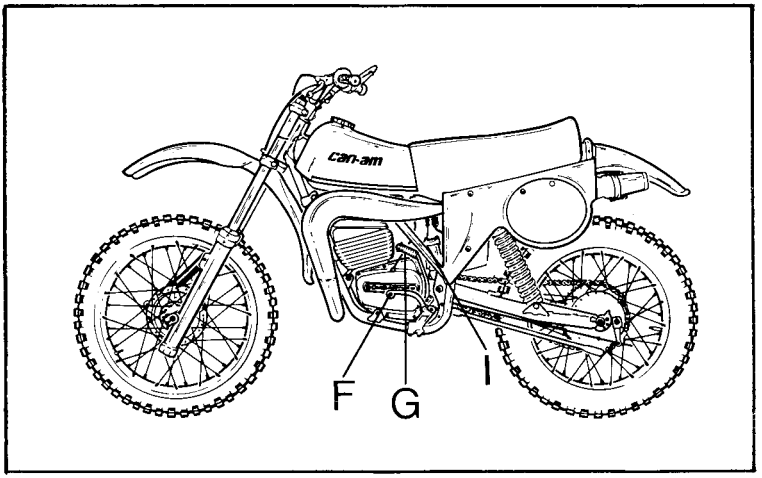
Please read and understand all other warnings contained elsewhere.

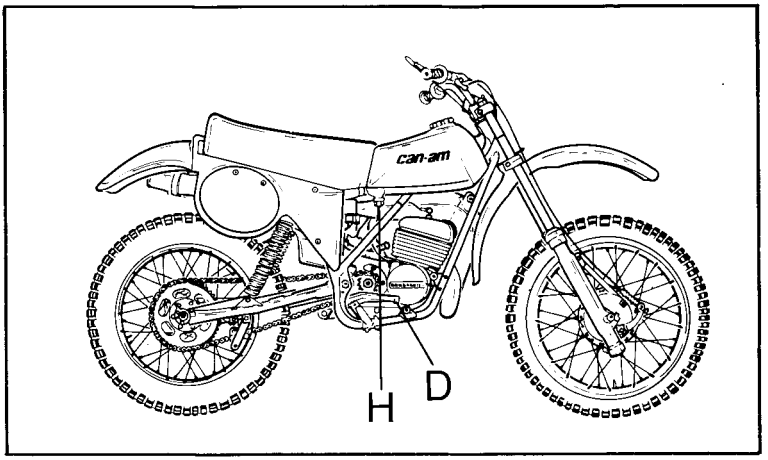
IMPORTANT: For procedures not covered in this manual which may be required less frequently than those mentioned, please contact your dealer or refer to the shop manual.

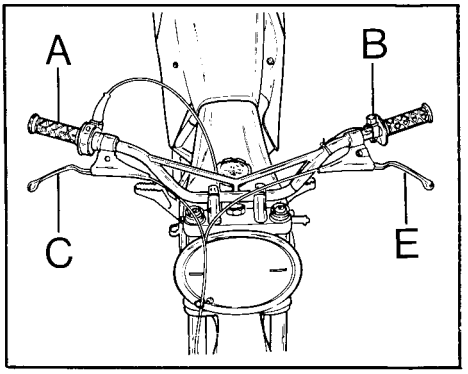
THIS MANUAL SHOULD REMAIN WITH THE VEHICLE AT THE TIME OF RESALE.

INDEX

CONTROLS / INSTRUMENTS





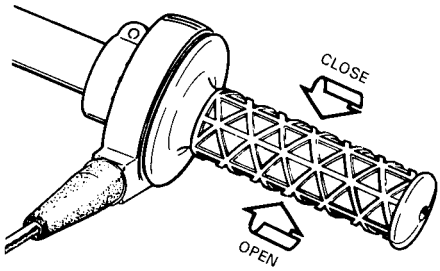


A) Throttle control
B) Emergency cut-out switch
C) Front brake lever
D) Rear brake pedal
E) Clutch control lever
F) Gear change lever
G) Kick start pedal
H) Fuel control valve
I) Choke lever

A) Throttle control

To open the throttle, turn the twist-grip towards you as shown. (See arrow).

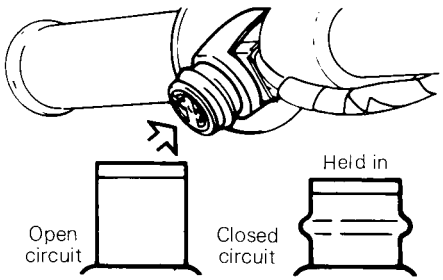
To close the throttle, turn twist-grip as shown. (See arrow).



◆ WARNING: If throttle does not snap back to "OFF" position when released, do not start motorcycle until the situation is corrected. (See your dealer if necessary).

B) Emergency cut-out switch

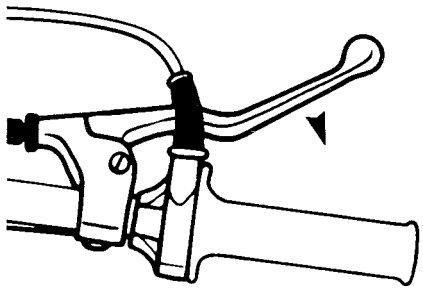
The cut-out switch is thumb operated and must be **held depressed** until the engine stops.



◆ WARNING: If the button has been used in an emergency situation the source of malfunction should be determined and corrected before restarting engine.

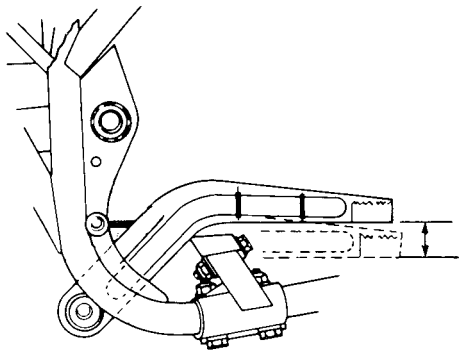
C) Front brake lever

The front brake lever, when pulled towards handlegrip, will apply the front brake.



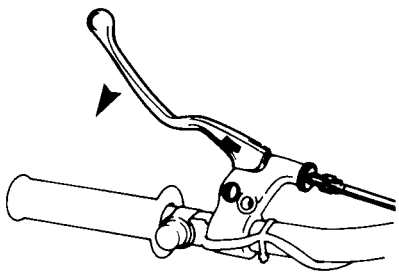
D) Rear brake pedal

The rear brake pedal, when depressed, will apply the rear brake.



E) Clutch control lever

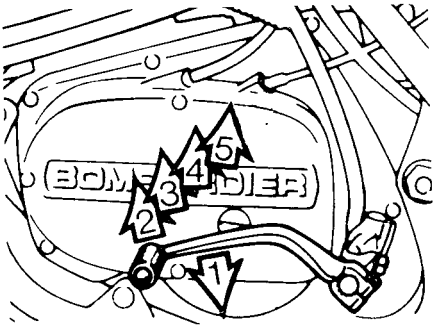
The clutch control lever, when pulled towards handlegrip, will disengage the clutch.



F) Gear change lever

The gear change lever operates a progressive shift, positive stop mechanism. One full stroke of the lever will shift only one gear position. The lever is spring loaded to return to its static position. Lifting lever up will progressively engage higher gears and pressing lever down will engage lower gears

Neutral is located between 1st and 2nd gear.



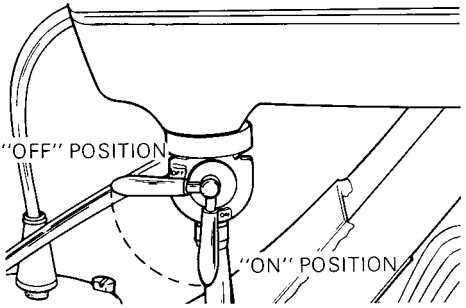
G) Kick start pedal

To start engine, gently press pedal down until engagement is felt, then kick down with a rapid, follow through motion.

To start engine in other than neutral, disengage clutch.

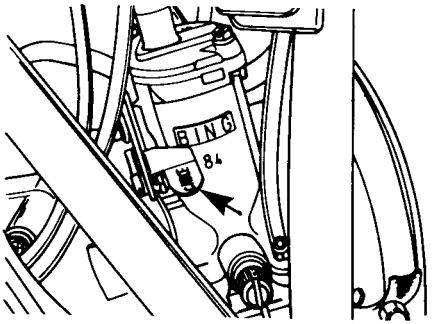
H) Fuel control valve

Located on right underside of gas tank, the fuel valve will control fuel flow as indicated by the lever pointer.



I) Choke lever

The choke lever is located on the left side of the carburetor. To engage choke **depress** the lever. To disengage, **lift** the choke lever. The choke should always be used for easier cold engine starts. After engine is warm however, it is not necessary to use choke when starting. **Do not operate vehicle with choke on.**



Prior to starting your motorcycle, we recommend a visual inspection to make sure that the motorcycle is in good, safe riding condition.

Fuel

Use leaded premium gasoline (mixed at a ratio of 32:1).

Throttle action

Be sure throttle is free and will snap back to "OFF" position.

Emergency cut-out switch

Be sure switch will stop engine.

Front and rear brakes

Adjust if necessary.

Clutch control lever

Adjust to 8-9 mm (5/16" - 3/8") free-play if necessary.

Drive chain

Adjust and lubricate if necessary.

Tire pressure

	Front	Rear
Dry and rocky terrain	84kPa (12 P.S.I.)	84kPA (12 P.S.I.)
Soft, wet, muddy terrain	76kPa (11 P.S.I.)	76kPA (11 P.S.I.)

NOTE: Refer to maintenance section for any necessary adjustments.

WARNING: Never use a lighted match or open flame to check fuel level.

Oil must be added to the gasoline in pre-measured amounts then both oil and gasoline should be thoroughly mixed together before fueling the tank.

Recommended gasoline

The correct gasoline is leaded premium gasoline.

CAUTION: Never experiment with different fuel or fuel ratios. Never use low lead non leaded gasoline, naphtha, methanol or similar products.

Recommended oil

Use concentrated Bombardier 50 / 1 oil available from your dealer. This type of oil has specially formulated oil bases to meet the lubrication requirements of the Bombardier-Rotax engine.

If Bombardier 50 / 1 oil is unavailable substitute with a high-quality 2 cycle oil, ex: Castrol Super TT, Belray MC3. The oil gas mix must meet the vehicle requirements. See oil manufacturer recommendations on container.

CAUTION: Never use outboard oils, straight mineral oils or injector oils.

Fuel mixture ratio

The importance of using the correct fuel mixture cannot be overstressed. An incorrect fuel ratio results in serious engine damage. Recommended fuel ratio is 32 / 1.

EX: 5 Imp. oz to 1 Imp. gallon
4 U.S. oz to 1 U.S. gallon
160 ml to 5 liters

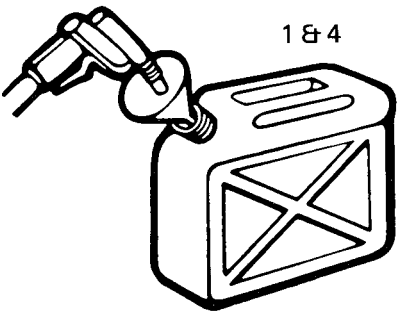
Refer to "Fuel mixing chart".

Fuel mixing procedure

To mix the gasoline and oil always use a separate clean container. Never mix directly in your motorcycle tank. For best results, acquire two containers, either plastic or metal. Draw from one until empty then use the second one.

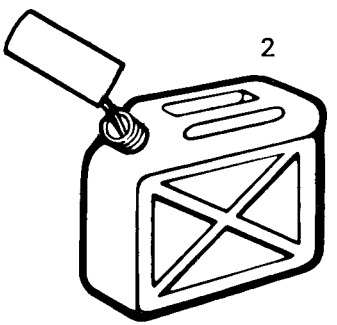
◆ **WARNING: Gasoline is flammable and explosive under certain conditions. Always perform procedures in a well ventilated area. Do not smoke or allow open flames or sparks in the vicinity. If gasoline fumes are noticed while driving, the cause should be determined and corrected without delay. Never add fuel while engine is running.**

1. Pour approximately one gallon of gasoline into a clean container.

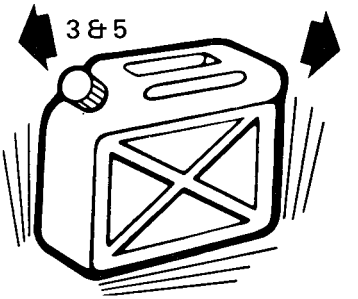


2. Add full amount of oil.

EX: 25 Imp. oz to 5 Imp. gallons
20 U.S. oz to 5 U.S. gallons
625 ml to 20 liters



3. Replace container cap and shake the container thoroughly.



4. Add the remainder of the gasoline.
5. Once again thoroughly agitate the container. Then using a funnel with a fine mesh screen to prevent the entry of foreign particles, transfer mixture from container into the motorcycle tank.

○ NOTE: When using pre-mixed fuel, always shake the container thoroughly as the oil has a tendency to settle.

◆ **WARNING: Never 'top up' gas tank before placing the vehicle in a warm area. At certain temperatures, gasoline will expand and overflow.**

○ NOTE: Avoid mixing oil and gas directly in your motorcycle tank. However if this has to be done, be sure to close the fuel control valve during this procedure.

STARTING PROCEDURE BREAK-IN PERIOD

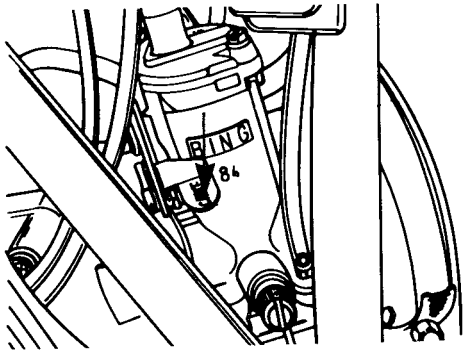
Check free movement of throttle twist grip **prior** to starting.

Cold engine

Turn fuel control valve pointer to "ON" position.

Select transmission neutral position.

Engage choke by **depressing** the lever.



Fold kick start pedal out and press down until engagement is felt.

Kick pedal down with a rapid, follow through motion.

Run engine at moderate R.P.M. until warm.

Return choke to the "OFF" position, by **lifting** the lever.

Warm engine

Use the same procedure but do not use choke.

Hold throttle approximately ⅛ open while using the kick starter.

Continued excellence of performance and reliability depend, to a great degree, upon the care and treatment of the entire motorcycle during the initial period of operation.

When first riding a new or reconditioned motorcycle, or after replacing the piston, or rings, operate the motorcycle for the first hour using not more than half throttle and shifting gears so that the engine does not lug.

CAUTION: Excessive high R.P.M. may cause engine damage.

First half hour

Make any necessary corrections or adjustments of controls, spokes, drive chain, etc...

Check for loose nuts, bolts and fasteners. Tighten them if necessary.

First hour (370 model only)

Remove the engine flywheel nut. Clean threads properly, then, apply Loctite adhesive sealant 242 Blue (medium strenght) on threads and retorque to 100 N.m (75 ft-lbs), repeat after 5 hours.

First five hours

Do not run the engine at excessive R.P.M.

Shift gears frequently to keep the engine running freely at a moderate R.P.M. range without subjecting it to extreme loads (lugging, overreving, etc.).

Always allow engine to warm before riding.

CAUTION: Due to its larger bore, special attention must be brought to the 370 engine break-in period.

INSPECTION

As with any precision piece of mechanical equipment, we strongly suggest that after the first few hours of operation specific items be checked by your dealer (see check list). This inspection will give you the opportunity to discuss the unanswered questions you may have encountered during the first hours of operation.

Inspections are at the expense of the vehicle owner.

1st INSPECTION CHECK LIST	MX-5
1. Cleaning of the motorcycle	
2. Transmission oil change	
3. Fork oil change	
4. Drive chain and cable lubrication	
5. Cylinder head nuts retorque	
6. Check and adjust ignition timing	
7. Air filter servicing	
8. Carburetor adjustment	
9. Throttle verification and adjustment	
10. Clutch adjustment	
11. Steering stem adjustment	
12. Check and tighten spokes and sprocket bolts	
13. Front and rear brake adjustment	
14. Drive chain servicing	
15. Retorque engine flywheel nut (370 model)	
16. Muffler servicing	
17. Adjust front fork air pressure	

We recommend that you have your dealer sign this inspection certification.

Date of inspection

Dealer signature

After the engine has warmed up and is running smoothly, the motorcycle is ready to ride.

Pull in clutch lever and engage 1st gear pressing down on gear changer lever.

Simultaneously release clutch and gradually open throttle to assure a smooth positive start.

When the motorcycle has reached sufficient speed, disengage the clutch, lift the gear lever to shift into 2nd gear while simultaneously closing the throttle. Release the clutch and open the throttle to further accelerate.

NOTE: With adequate coordination and practice, shifting will become smooth and precise.

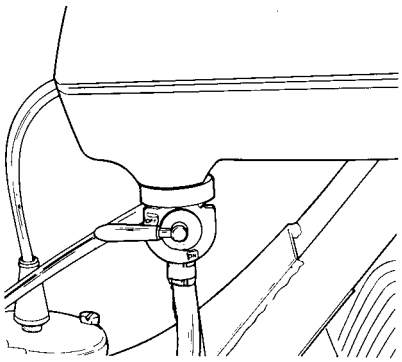
Use this same procedure to shift progressively up to 3rd, 4th, 5th (and 6th) gear.

When slowing or stopping, use front and rear brakes simultaneously and coordinate down shifting with the rate of deceleration so as to stop in 1st gear.

Stopping the engine

Hold the emergency cut-out switch depressed until the engine stops.

Turn the fuel control valve to "OFF"



CAUTION: Failure to close fuel valve may cause connecting rod damage due to crankcase flooding.

The service intervals shown in the Maintenance Schedule are intended as a guide to establish a regular servicing routine. However, due to the added stress of riding under severe conditions of dust, mud, water, etc..., more frequent servicing will be necessary.

CAUTION: Air filter system maintenance is of utmost importance, and must be performed before every ride or enduro event.

WARNING: To prevent powerful electric shocks, make sure to stop the engine prior to performing any adjustment or repairs on or near the CD ignition system (i.e., ignition timing, ignition tester, replacement of spark plug, coil or ignition armature, high tension lead wire, cut-out switch).

If any adjustment has to be performed with the engine running do not touch components related to the CD ignition system (i.e. ignition coil, high tension lead wire, wiring harness, etc...)

Start the motorcycle and test ride briefly for abnormal noises or faulty operation. Run through all the gears, checking for performance, braking and handling, etc... Note the suspension action and throttle response.

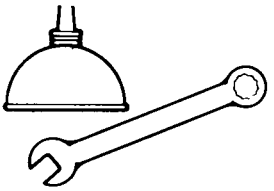
Then proceed with the maintenance.

WARNING: Only perform such procedures as detailed in this manual. It is recommended that dealer assistance be periodically obtained on other components / systems not covered in this manual. Unless otherwise specified, engine should be cold and turned OFF for all lubrication and maintenance procedures.

MAINTENANCE SCHEDULE

	Daily or as required	After 5 hours	Every race	Every 3 races	Every year	See page
1. Transmission oil change.		●		●		13
2. Fork oil change.		●		●		13
3. Drive chain lubrication.	●	●	●			14
4. Cleaning the motorcycle.	●					15
5. Retorque cylinder head nuts.		●			●	16
6. Check and adjust ignition timing.		●			●	16
7. Air filter servicing.	●		●			17
8. Clean carburetor and fuel sediment bowl.		●		●		19
9. Carburetor adjustment.		●		●		20
10. Throttle verification and adjustment.		●		●		20
11. Clutch adjustment.		●	●			21
12. Steering stem adjustment.		●	●			21
13. Wheel bearing inspection.		●		●		26
14. Check and tighten spokes and sprocket bolts.	●	●	●			27
15. Front & rear brake adjustment.	●					27
16. Drive chain servicing.	●	●	●			28
17. Spark plug.			●			30
18. Muffler servicing.	●		●			30
19. Front fork air pressure adjustment.	●	●	●			23

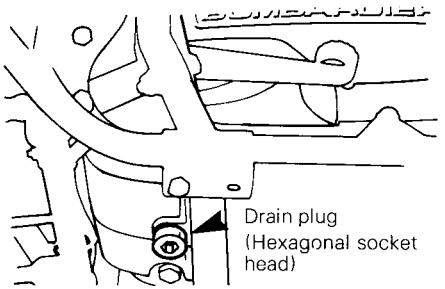
Frequency



Routine maintenance is necessary for all mechanized products, and the motorcycle is no exception. A weekly vehicle inspection contributes to the life span of the motorcycle as well as maintain safe and reliable operation.

Transmission oil change

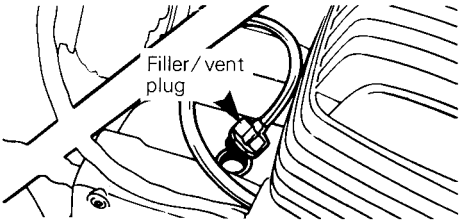
Remove the drain plug and completely drain oil.

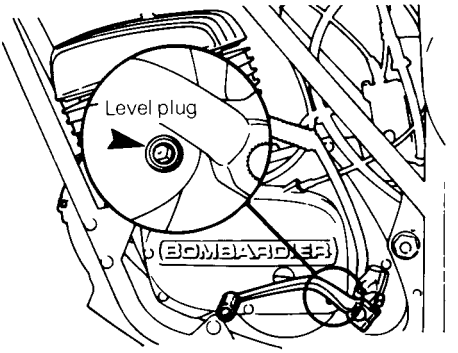


Replace the drain plug.

CAUTION: Do not cross-thread or overtighten.

Remove the filler / vent plug and refill the transmission with approximately 1200 ml (40 fl. oz.) of SAE 30 motor oil until oil reaches the level orifice.





NOTE: Hold motorcycle upright to check oil level.

Replace the level plug, the filler / vent plug and the vent tube.

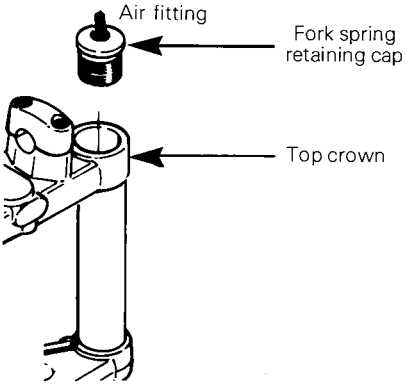
Fork oil change

NOTE: This operation should be performed on one fork leg at a time.

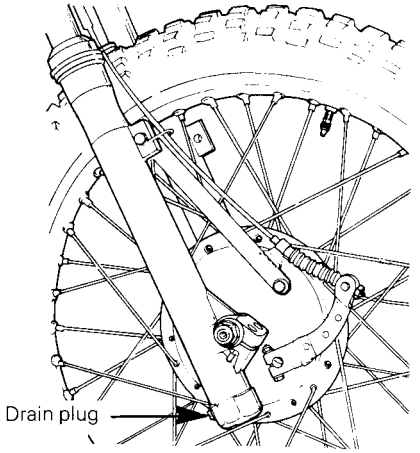
CAUTION: A fork oil change implies that the fork will have to be refilled with air and the pressure be readjusted. Unless the proper tools are available to perform this procedure, dealer assistance is needed to properly set the front fork.

Remove the valve cap on the fork spring retaining cap and release the pressure inside the fork tube.

Slacken the fork tube clamp screw (top crown).



Remove fork spring retaining cap and the drain plug, pump the fork up and down to allow the fork oil to drain completely.



Replace the drain plug.

Replenish fork with SAE 10W fork oil.

Quantity: 350 mL (11.8 fl. oz.).

Replace the fork spring retaining cap torque to 40-54 N•m (30-40 ft-lbs).

Retorque the fork tube clamp screw to 47-54 N•m (35-40 ft-lbs).

Refill the fork with air and set the pressure to 82.7 kPa (12 P.S.I.) (Refer to "Front suspension").

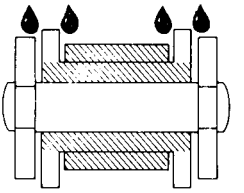
Repeat the procedure for the other fork leg.

Drive chain lubrication

Clean the chain with a stiff bristle brush and chain oil.

Using a chain spray lubricant direct spray as shown for maximum penetration to the chain inner surfaces.

NOTE: Allow sufficient time for lubricant to thicken before riding.



Lubricate controls

Apply a small quantity of oil to all pivot points, cables and occasionally grease the brake pedal pivot.

CLEANING THE MOTORCYCLE

To maintain pride in ownership and to encourage routine inspection and adjustments, keep your new motorcycle clean and carefully maintained.

NOTE: Frequent cleaning will facilitate visual inspection of frame, swing arm, wheels, and other critical components for wear or damage.

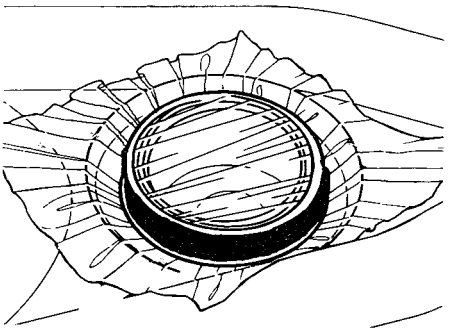
An effective way to clean your motorcycle is with a degreasing solvent and warm, soapy water, rinse using **low** pressure spray.

Avoid the use of harsh detergents and high pressure car wash sprays as they may cause damage to paint and metal surfaces and corrode electrical connections.

Procedure

Remove seat and air filter.

To seal the exposed air box opening, place a sheet of thin polyurethane over the hole, then secure with a rubber band.



Thoroughly degrease any oily areas using solvent and a soft brush.

Spray the motorcycle with water to remove the degreaser and excessive mud or dirt.

NOTE: Avoid spraying directly onto the carburetor, the electronic box, the muffler opening, the fuel cap and the wheel bearings.

Using a sponge, cloth or brush, apply a liberal quantity of soapy water to thoroughly remove any remaining dirt.

Rinse away all traces of soap and dirt with a **low** pressure water spray.

Wipe the motorcycle dry and remove the plastic from the air box.

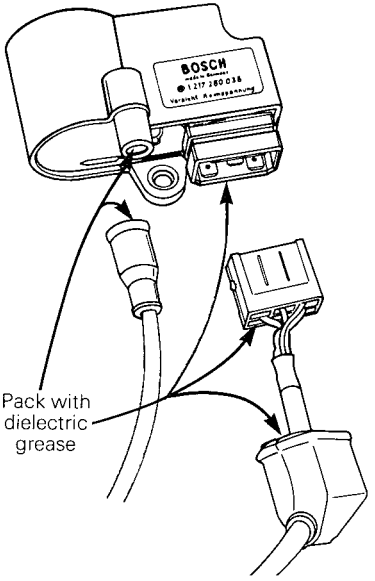
Check the float bowl for water. Refer to the Carburetor Servicing Section.

Install a freshly cleaned and **oiled** air filter.

Install the seat.

Check the C.D.I. plug for trapped water.

Fully pack the electronic control, the connector block, the rubber boot, the high tension connection and the protector boot with dielectric grease Dow Corning DC4 or equivalent.



Lubricate the drive chain, the pivot points of all levers & cables and grease the brake pedal pivot.

Start the motorcycle, allow it to warm then test-ride for several minutes.

◆ WARNING: Wet brake linings reduce braking ability. Ride with care until brakes respond properly.

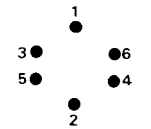
Cylinder head nuts retorque

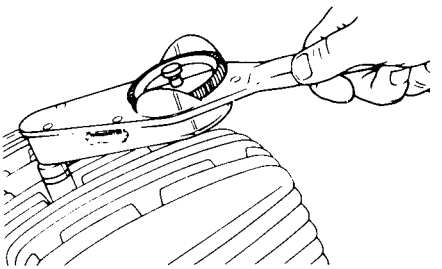
250 engine

Torque head nuts gradually in a criss-cross pattern to 19 N•m (14 ft-lbs).

370 engine

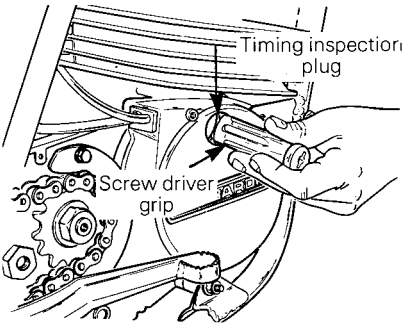
Torque head nuts gradually in a criss-cross pattern to 25-27 N•m (18-20 ft-lbs)





Engine timing

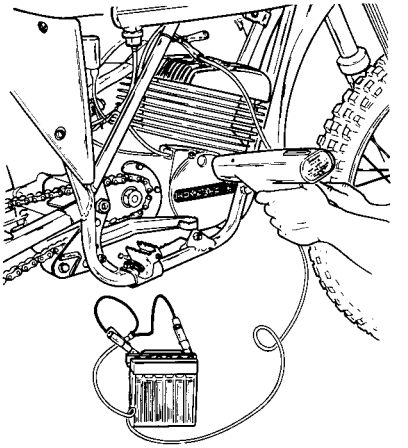
Remove the timing inspection plug, and connect the timing light pick-up to the high tension lead.



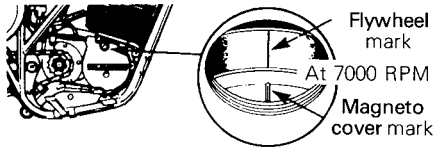
Start the engine and allow it to warm.

◆ WARNING: To prevent powerful electric shock, do not touch the high tension wire while engine is running.

Point the timing light beam straight into the inspection hole, and rev. the engine to 7000 rpm for a brief instant.



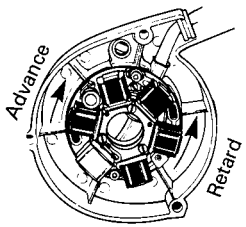
If the timing is correct, the timing marks will align as shown. Stop the engine.



NOTE: Use a tachometer for accuracy.

CAUTION: Never crank engine with spark plug wire detached from spark plug or damage to CDI box will occur.

If the timing marks do not align, remove the magneto cover, slacken the stator plate retaining screws and move the stator plate in the advance or retard position to correct the misalignment.



Repeat this procedure until timing marks are perfectly aligned at 7000 R.P.M.

NOTE: Only stroboscopic timing lights utilizing a capacitor or inductive pick-up can be used to indicate correct spark setting without disturbing the electronic equilibrium of the ignition circuit. Use a separate battery to supply the timing light.

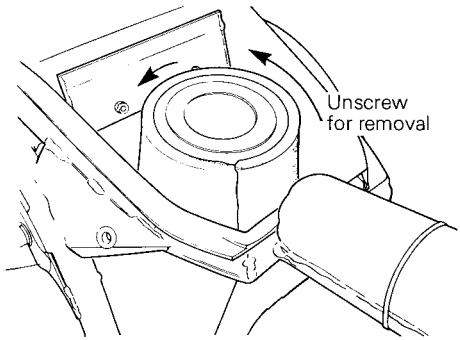
Examples of suitable timing lights:

Sun PTL 45
Snap-on MT215B
Bosch EFAW 169A
Marquette 41-220

Air filter servicing

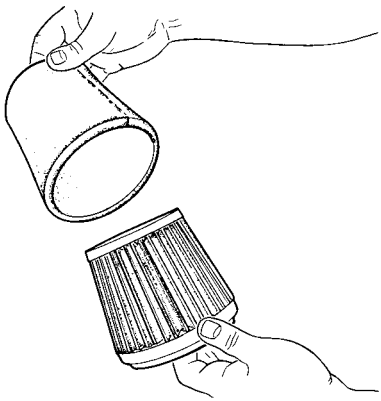
Remove the seat. Clean the area around the filter.

Remove the air filter.

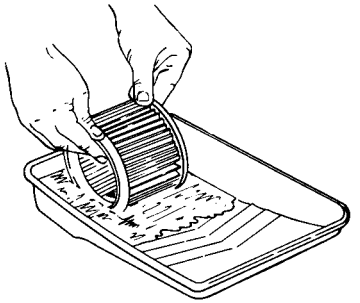


Do not allow dirt or dust to fall into the air box opening.

Remove the air filter sock from the air filter.

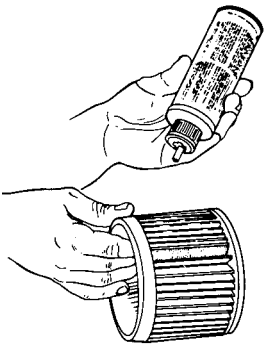


Clean the air filter and the air filter sock with air filter cleaner and degreaser or by rinsing thoroughly in cleaning solvent. Allow to air dry.



CAUTION: Do not dry filter and filter sock with a high pressure air flow as they will loose their efficiency.

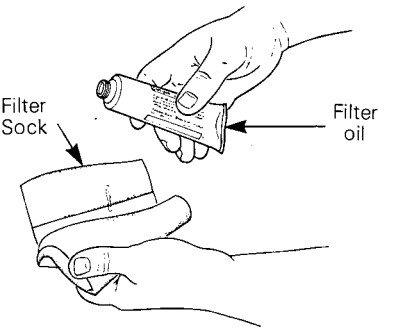
Generously apply "K & N" air filter oil into each pleat of the air filter.



NOTE: The "K & N" air filter oil is available from your dealer and is specially formulated for these filters. However, it is possible to use SAE 30 motor oil.

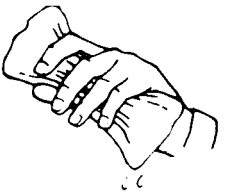
CAUTION: White patches in the element indicate under oiling. Retouch if necessary.

Pour filter compound onto the air filter sock and work it well into the foam until it is completely saturated.

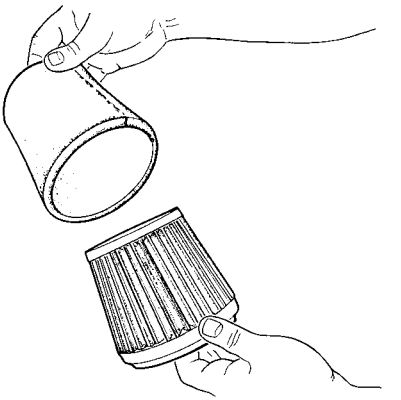


NOTE: "K & N" air filter oil can also be used.

Gently squeeze out excess oil.



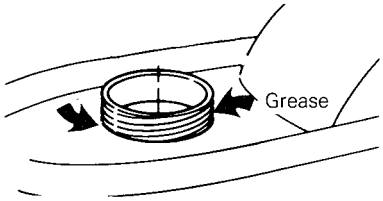
Fit the sock over the filter.



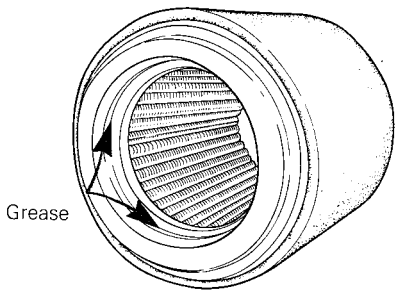
Clean the air filter pan thoroughly.

Inspect the interior of the air box. If dirt has entered, remedy the cause before re-assembly.

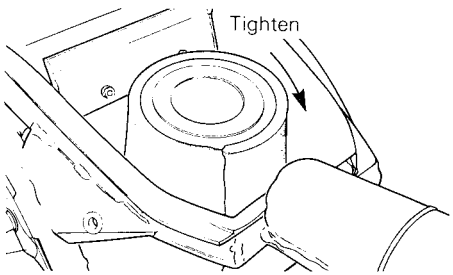
Grease the top of the pan around the air box opening.



Generously grease the bottom edge of the air filter and install it.

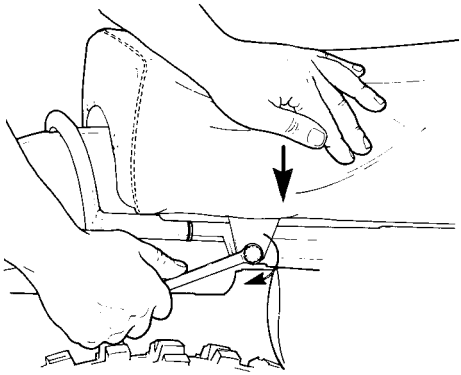


CAUTION: Ensure that the filter is well secured in place.



CAUTION: A dry or dirty filter cause extreme piston and cylinder damage. Service filter monthly, weekly, daily, or hourly, as conditions dictate.

At installation, apply pressure to the seat while tightening it in place. This will slightly compress the rubber strip into positions.



Carburetor bowl cleaning

With the fuel valve on "OFF" position, disconnect the fuel line.

Completely loosen both carburetor retaining hose clamps, and rotate carburetor towards clutch side.

Remove carburetor top plate and the slide assembly.

CAUTION: Handle slide with care.

Pry carburetor body towards air box, out of front connection hose.

Twist carburetor body away from engine inlet port and remove carburetor.

Pry float chamber retaining clip back and remove float chamber.

WARNING: Gasoline is flammable and explosive under certain conditions. Always use caution and work in a well ventilated area.

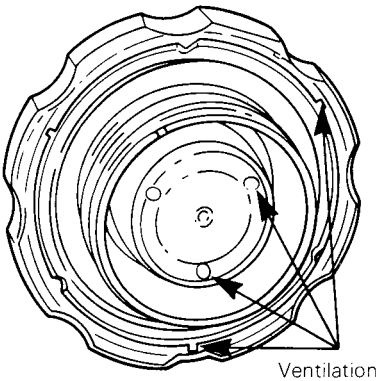
Clean the carburetor and carburetor bowl with carburetor cleaner following manufacturer's instructions.

WARNING: Solvent with a low flash point such as gasoline, naphtha, benzol, etc., should not be used as they are flammable and explosive.

To install the carburetor on the engine, inverse the removal procedure.

Fuel cap

▼ CAUTION: Under severe riding conditions, the ventilation holes of the fuel cap may become obstructed by hardened mud, ice, frost, etc... Periodic inspection is strongly recommended and if necessary, clearance of the ventilation holes.



CARBURETOR ADJUSTMENT

Mixture adjustment

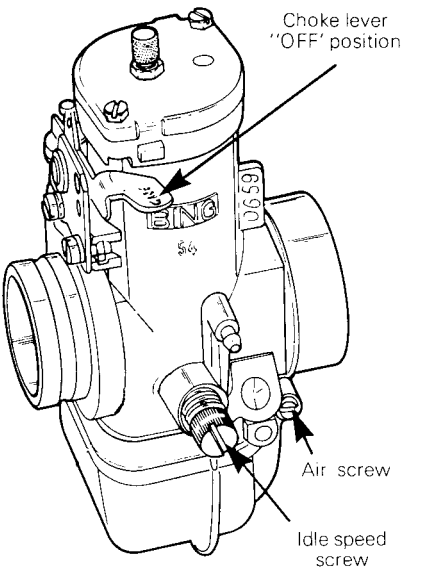
With the motorcycle held in a vertical position, gently turn air adjusting screw in until it stops, then back it out 1 turn.

Idle speed

Start the engine and allow it to warm.

Adjust idle speed screw in or out for desired idle speed (approximately 1,000 R.P.M.)

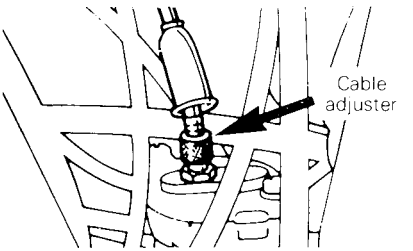
○ NOTE: The air screw can be turned in or out (within 1/4 turn of basic setting) to achieve smoothest idle possible. Re-adjust idle speed if necessary.



▼ CAUTION: Do not attempt to set the idle speed by using the air screw. Severe engine damage can occur.

Throttle adjustment

Using the cable adjuster located on the throttle slide chamber cover, set cable slack to 1.6 mm (1/16").



◆ WARNING: Before starting engine, carburetor slide must be free to snap back to idle position. Make sure the rubber grip does not rub on the throttle body or the handlebar end.

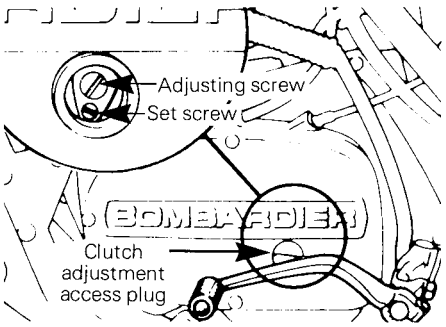
Clutch adjustment

Prior to the clutch adjustment, the clutch cable access plug must be screwed in, and the clutch lever operated a couple of times to seat the cable in place.

Loosen the clutch cable adjuster (at handlebar) to provide **maximum slack.**

Remove the clutch adjustment access plug and loosen the 4 mm set screw.

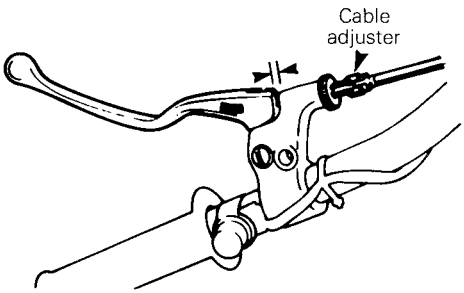
Turn the 8 mm clutch adjusting screw in and out to locate the point of contact with release bearing, then turn screw 1/2 turn out (**counter-clockwise**).



Carefully tighten the 4 mm set screw to lock the adjustment.

Replace the access plug.

Adjust the cable adjuster to provide 8-9 mm (5/16"-3/8") slack, between clutch lever and housing.

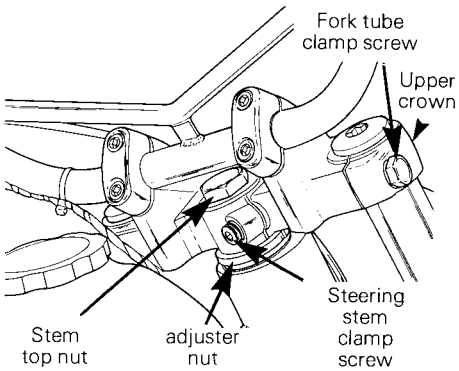


Steering stem adjustment

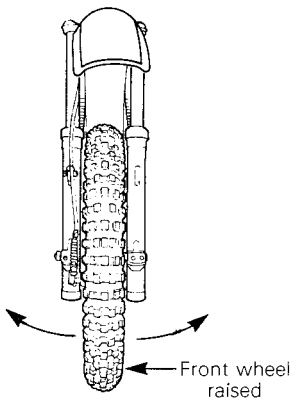
Lift the front wheel off the ground using a stand or a box under the motorcycle.

Loosen the stem top nut and the screws retaining the upper crown.

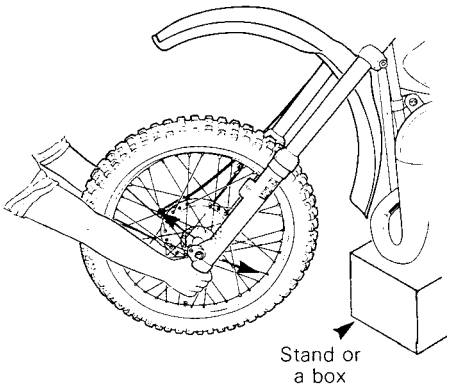
Tighten the adjuster nut until steering becomes snug, but not tight.



Check by turning steering from one side to the other for any flat spot or uneven tension. If any is noticed the steering head must be taken apart and checked.



Also the steering head must be checked if any radial play is noticed. To check, proceed as illustrated:



Tap upper crown down against adjuster nut then apply "Loctite 242" blue (medium strength) adhesive sealant on the cap nut threads and torque to 120-135 N•m (90-100 ft-lbs).

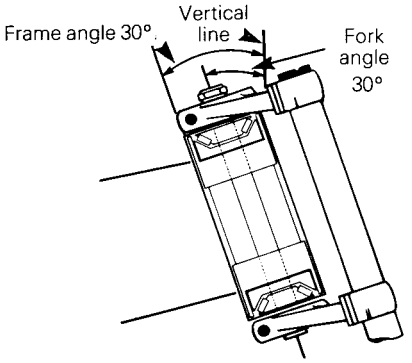
Torque the steering stem clamp screw to 34 N•m (25 ft-lbs).

Torque the fork tube clamp screws to: 54 N•m (40 ft-lbs).

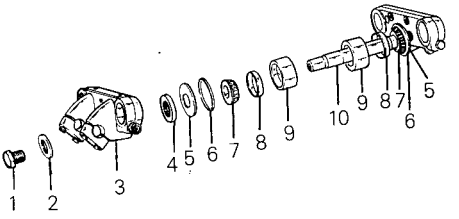
FORK ANGLE

The standard frame angle is 30°.

The standard fork angle on your motorcycle is 30° and provides the optimum steering and handling for most types of riding.



NOTE: The steering head uses new conical bearings set up which does not allow fork angle adjustment. It is suggested to grease the bearings once a year.



1. Stem top nut
2. Washer
3. Upper triple clamp
4. Adjuster nut
5. Cover (2)
6. "O" ring (2)
7. Conical bearing (2) (slide fit onto the steering stem)
8. Bearing cup (2) (pressed into the steering cup)
9. Steering cup (2) (pressed into the frame)
10. Lower triple clamp (with steering stem)

SUSPENSION

Although your motorcycle has been designed for an average rider's weight and for average racing conditions, the suspension of your motorcycle can by adjusted to suit your personal preference.

FRONT SUSPENSION

Resistance

The fork resistance is directly affected by the oil viscosity; the higher the viscosity, the stiffer the resistance. Your motorcycle is supplied with "Bel-Ray" SAE 10W fork oil as it is considered best for normal use.

Fork liquid capacity: 250 ml (11.8 fl. oz.).

NOTE: If the resistance is too soft it is recommended to add oil in 20 mL (0.7 fl. oz.) increments up to a maximum of 390 mL (13.2 fl. oz.) without changing the air pressure. Test ride the motorcycle between each oil addition.

Spring rate

Standard spring: 2 kN/m (11 lbF/in) there is no optional spring.

Air pressure

CAUTION: Unless the proper tools are available, dealer assistance is needed to properly set the air pressure in the front fork.

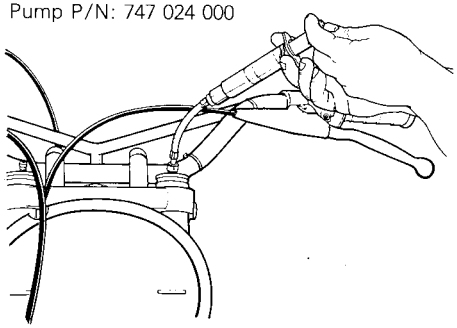
Lift the front wheel off the ground using a stand or a box under the motorcycle.

NOTE: The front suspension must be fully extended in order to obtain an accurate pressure reading. The volume being very small only a slight compression of the fork would alter the pressure reading.

Remove one valve cap and release the air.

Pump air into the fork using a small hand pump.

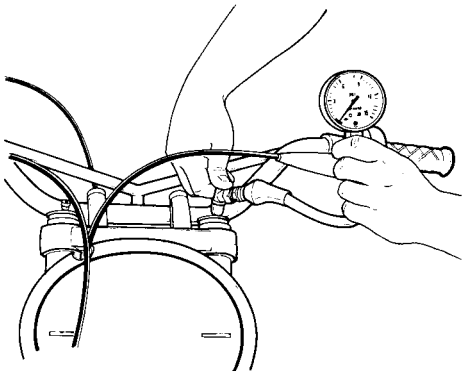
Pump P/N: 747 024 000



CAUTION: It is strictly recommended to use a hand pump as high pressures produced by compressors are harmful to the seals.

Remove the small pump hose from the valve being careful to minimize the loss of pressure.

Check the pressure using a **low** pressure gauge.



CAUTION: When taking the readings with a gauge, try to avoid any loss of pressure since only a minor air loss will create a great drop in pressure.

The suggested pressure is: 82.7 kPa ± 7 (12 PSI ± 1). It is not recommended to go over or below the suggested pressure.

If the pressure is to high, release the air in small amounts and recheck.

If the pressure is too low, refill the fork to go **over** 82.7 kPa (12 PSI) then release the air in small amounts until the pressure is 82.7 kPa ± 7 (12 PSI ± 1).

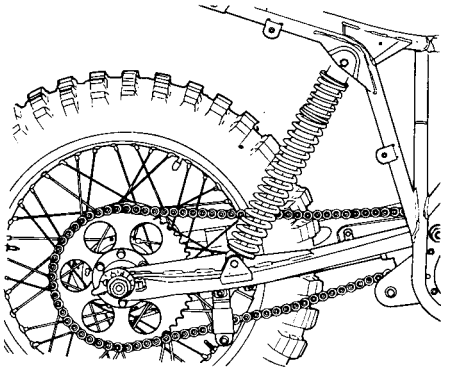
Repeat for the other fork leg.

Adjust the front fork air pressure prior to every race, or as required.

REAR SUSPENSION

If for some reasons the shocks have to be removed, make sure at re-assembly to position the shocks as illustrated.

NOTE: The shock length fully extended is 38 cm (15").



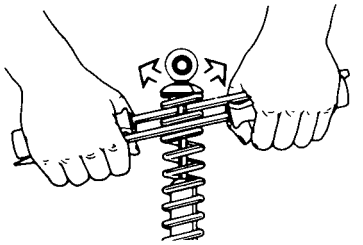
CAUTION: The minimum length of shock fully collapsed must be 24.43 cm (9 5/8").

Spring rate

Standard spring: 25 kN/m (145 lbF/in) (code: purple/orange)

Optional spring: 22 kN/m (128 lbF/in) (code: purple/green)

To remove the spring put the shock in a vise and use two (2) screwdriver as illustrated.

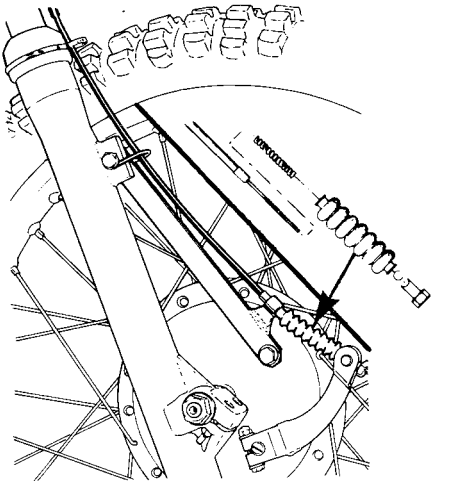


CAUTION: The small auxiliary spring is not interchangeable and must not be removed.

FRONT WHEEL REMOVAL

Mount the motorcycle on the center stand with the front wheel raised.

Unscrew the brake cable adjuster nut (at brake plate) and pull the cable housing away from the backing plate.



NOTE: Place the spring, rubber boot, rod barrel and adjuster nut back on the cable to prevent loss.

Unscrew the torque arm to backing plate retaining screw. Remove the axle nut.

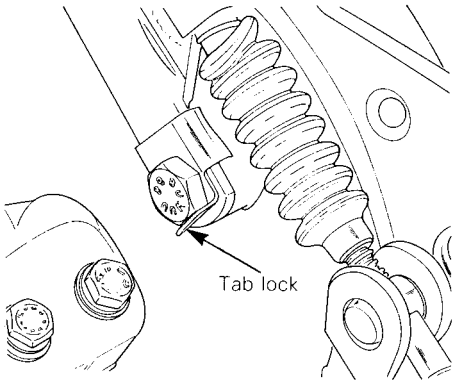
Loosen the four axle pinch bolts and pull the axle out and withdraw the wheel.

FRONT WHEEL INSTALLATION

Position the brake plate on the R.H. side. Position the wheel and insert the axle from the clutch side: Slightly tighten the axle nut.

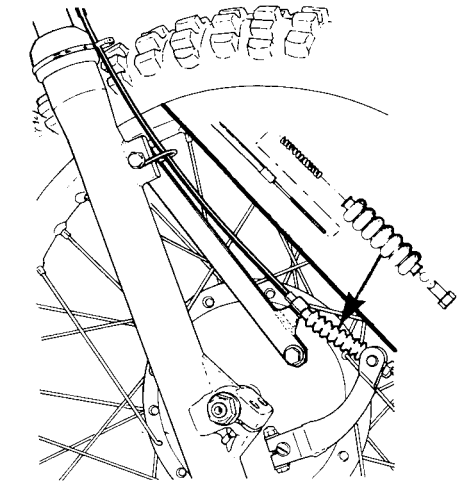
The torque arm is secured to the backing plate using a retaining bolt. It is of the utmost importance that the tab lock be correctly placed and secured.

Torque to 20-27 N.m (15-20 ft-lbs).



WARNING: Bend tab lock against flat face of retaining bolt and always replace by a new one each time parts are disassembled.

Install and route the front brake cable. As illustrated.



Spin front wheel in forward rotation, apply brake and while holding brake on, torque the axle nut to 34-80 N•m (25-60 ft-lbs).

NOTE: This is important, it centers the brake shoes.

CAUTION: To ensure correct fork action, briskly compress forks (with brake applied) to align fork legs before tightening axle pinch bolts.

Torque axle pinch bolts to 8-10 N•m (6-8 ft-lbs).

REAR WHEEL REMOVAL

Mount the motorcycle on a stand or a box with the rear wheel raised.

Remove the brake adjuster nut.

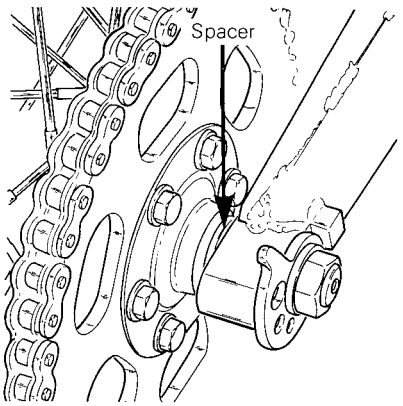
Remove the chain master link and the chain from the wheel sprocket.

Remove the axle nut, the washer and the cam adjuster; pull the axle out. The wheel can then easily be removed.

REAR WHEEL INSTALLATION

Inverse the removal procedures to reinstall the wheel.

Make sure the spacer is properly inserted between the frame and the sprocket.



Install brake adjuster nut and adjust chain tension.

Spin the wheel in forward rotation, apply brake, and while holding brake on tighten axle nut.

NOTE: This is important, it centers the shoes. Torque the axle nut to 34-100 N.m (65-75 ft-lbs).

Wheel bearing inspection

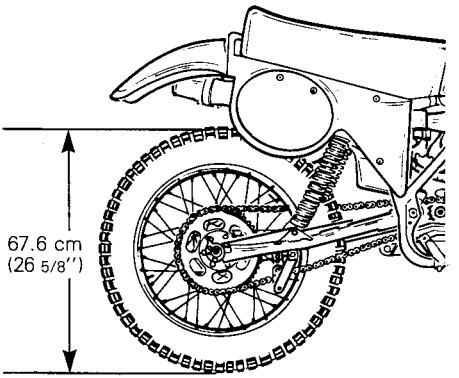
With the motorcycle mounted on a stand or box to hold the wheels clear of the ground, rotate the wheels slowly and check for loose or noisy bearings.

NOTE: If wear or damage is suspected, bearings must be replaced.

Tires

Check the tire pressure and adjust as required.

CAUTION: To prevent the tire from rubbing on the interior portion of the fender, the rear tire maximum diameter must never exceed 67.6 cm (26 5/8")

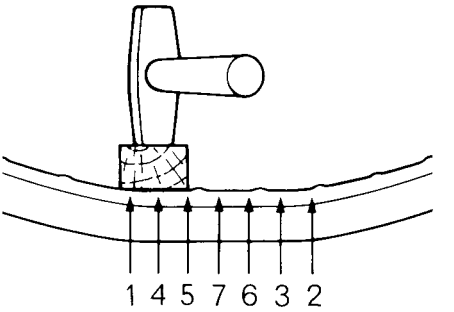


Rims

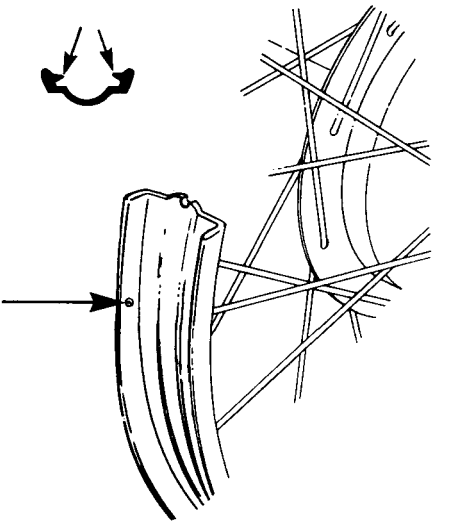
Check the rims for dents or damage.

Small dents may be knocked out using a block of hard wood and a mallet, following the numbered impact sequence.

NOTE: Wheel rims should be true to within 1.6 mm (1/16") maximum radial and axial run-out.



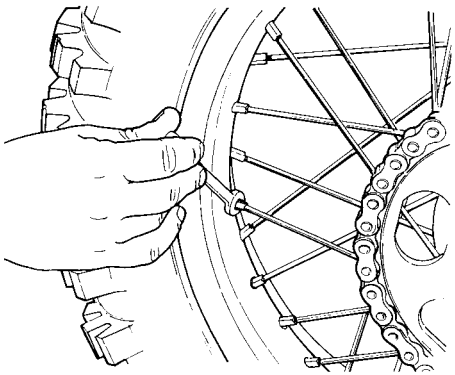
NOTE: To prevent the tire from creeping on the rim, special pins have been added to the inside of the rim. Therefore the use of the rim locks is not necessary.



Spokes and sprocket bolts

As spokes and sprocket bolts are subject to extreme forces and may become loose they must be frequently inspected and tightened as necessary.

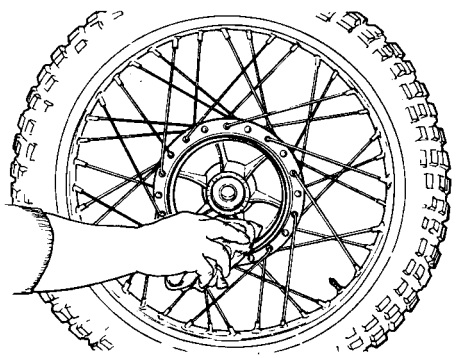
▼ CAUTION: Loosened or overtightened spokes will cause rim out of true and/or rim damage.



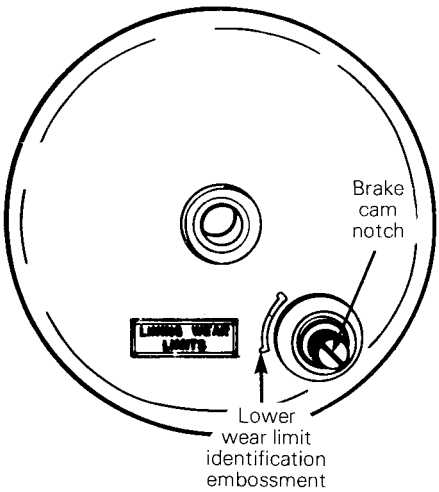
Brakes

The brake shoes should be in good, safe working order. Therefore, we recommend that you frequently service and clean the brake. If necessary clean the brake shoes with a solution of soapy water.

Clean and dry thoroughly.



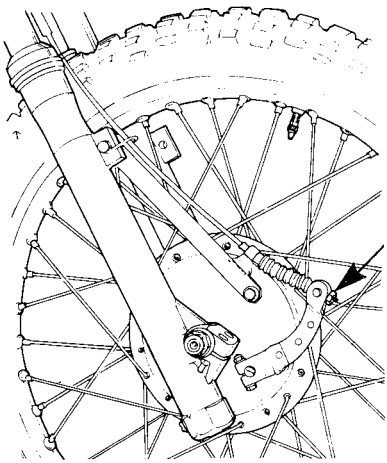
◆ WARNING: When the front brake cam notch comes in line with the lower wear limit identification embossment, the brake linings must be replaced or impaired braking may occur.



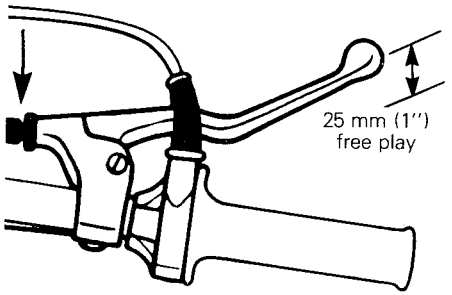
Brake adjustment

Front

Completely loosen the brake cable adjuster (at handlebar) then using the adjuster located at the brake plate, adjust cable to provide 25 mm (1") of free lever travel (at handlebar).



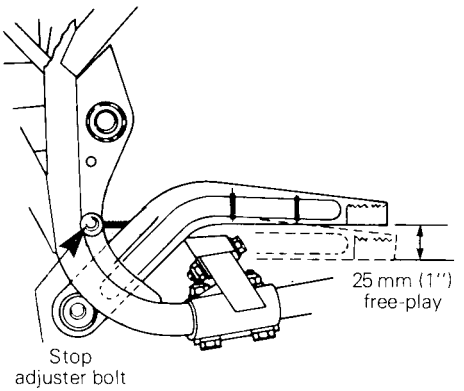
NOTE: Use adjuster at handlebar for final adjustment.



Rear

Turn the rod adjusting nut until the brake pedal free travel is 25 mm (1").

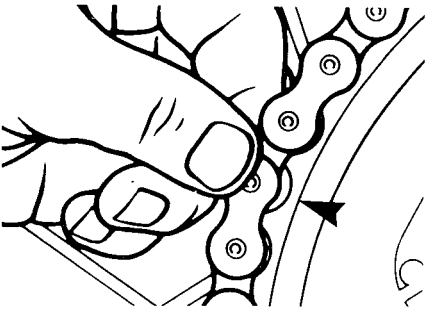
The brake height can be adjusted as desired by moving the stopper.



WARNING: When the rear brake rod adjusting nut has reached its maximum adjustment, the brake linings must be replaced.

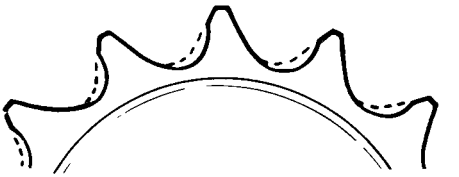
Drive chain servicing

Check for chain wear and replace the chain if link can be pulled away from sprocket any more than shown.



CAUTION: A worn chain will cause severe sprocket damage.

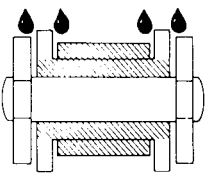
NOTE: Worn sprockets assume a "hooked" appearance. As soon as this condition is noticed, the sprocket should be replaced to prevent rapid chain wear.



With the frame supported on the center stand to hold the rear wheel clear of the ground, rotate the wheel and apply a liberal quantity of chain oil to each roller and link.

Using a chain spray lubricant, direct spray as shown for maximum penetration to the chain inner surfaces.

NOTE: Allow sufficient time for lubricant to thicken before riding



NOTE: Chain lube is available from your dealer.

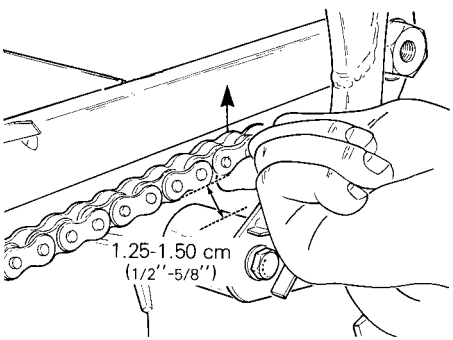
Drive chain adjustment

Loosen the rear axle nut and move each adjuster plate equally to tighten or loosen chain as required.

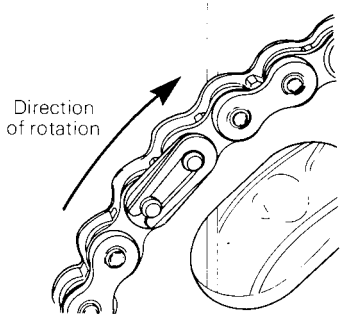
CAUTION: Alignment marks must be at the same position on each side of wheel.

Adjust the drive chain in order to obtain 1.25-1.5 cm (1/2''-5/8'') between the **bottom** run of the chain and the **top** of the roller while **lifting** the chain with the finger.

(Measured at the chains tightest point and with **wheel off the ground).**



Master link clip must be installed with its closed end facing the direction of chain travel.



Ignition system

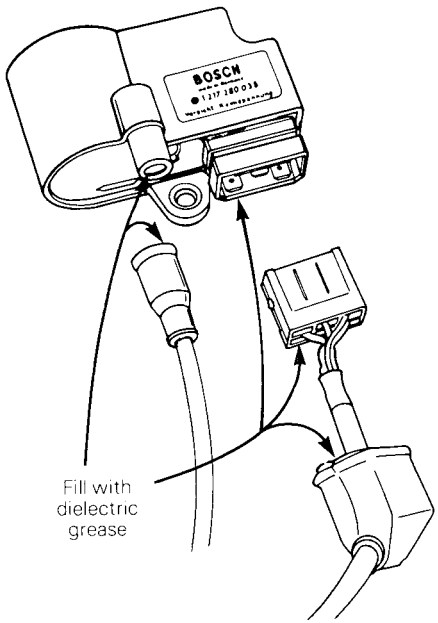
Your motorcycle is fitted with a capacitor discharge ignition system (C.D.I.) wich consists of a magneto, an electronic control unit and an emergency cut-out switch.

Check the ignition timing and adjust if necessary.

Seal the magneto cover with silicone sealant to ensure proper waterproofing.

Regularly check all electrical connections for dirt or corrosion.

Fully pack the electronic control, the connector block, the rubber boot, the high tension connection and the protector boot with dielectric grease Dow Corning DC4, or equivalent.

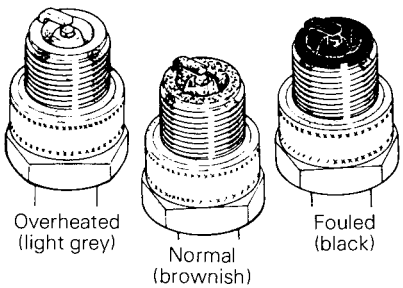


CAUTION: To prevent moisture, make sure no air is trapped in. Do not use silicone sealant as contacts will corrode.

Spark plug

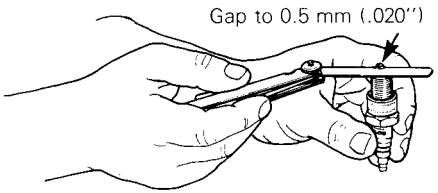
Disconnect spark plug wire and remove spark plug. Check condition of plug.

- A brownish tip reflects ideal conditions. (Correct carburetor, spark plug heat range; etc.).
- A black insulator tip indicates fouling caused by: wrong type of spark plug (heat range), fuel mixture too rich, air filter dirty.
- A light grey insulator tip indicates a lean mixture caused by: advanced ignition timing, insufficient lubrication, fuel mixture too lean, clogged carburetor jet; wrong spark plug heat range, or a leaking seal or gasket.



CAUTION: If spark plug condition is not ideal, contact your authorized dealer.

Always gap the plug with a wire gauge or a feeler gauge. Gap must be 0.5 mm (.020"). Make sure there is only one gasket when installing the plug. Tighten the plug to the specified torque 27 N•m (20 ft-lbs).

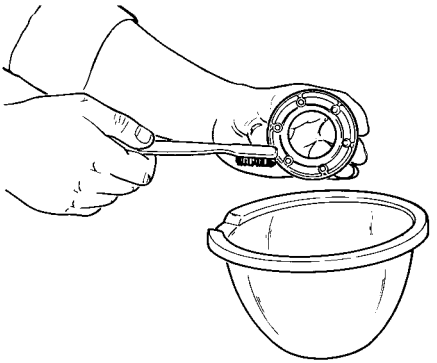


NOTE: Always carry a spare spark plug when riding.

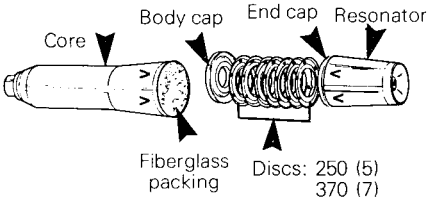
MUFFLER

The MX-5 are equipped with "multi-disc/resonator" muffler.

The resonator and the discs must be cleaned **regularly** to prevent carbon build up. To clean the discs use a brush or a cloth.



CAUTION: Any carbon build up, will greatly affect engine performance.



The fiberglass packing inside the core must be checked once a year by removing the body cap.

CAUTION: Engine performance is directly related with the number of discs on the muffler, therefore addition or substraction of discs must not be made.

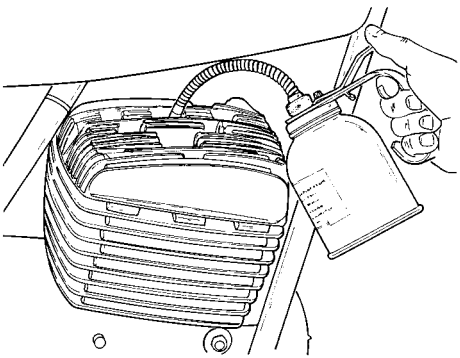
STORAGE

During winter, or other times when your motorcycle is not in use for a long period of time, proper preparation is a necessity.

Storage preparation of your motorcycle consists of checking and replacing missing or worn parts; properly lubricating and treating parts to insure that they do not become rusted; cleaning items such as the carburetor to prevent gum varnish formation; and, in general, preparing the vehicle so that when the time comes to use your motorcycle again, it will be in top condition.

Engine

With piston at bottom dead center remove the spark plug and pour approximately 50 ml (2 fl. oz.) of motor oil in the cylinder through the spark plug hole.



Rotate the engine slowly a few turns to insure good oil coating on the cylinder wall and related parts. Replace the spark plug. The oil coating will prevent moisture from damaging the engine.

NOTE: When the engine is started, it may smoke slightly until the storage oil is burned away.

Fuel system

Empty the fuel tank by disconnecting fuel line. The carburetor can be emptied by removing the float bowl. (See maintenance section).

WARNING: Gasoline is flammable and explosive under certain conditions. Always use caution and keep away from open flame or spark.

Gearbox

Drain the transmission oil. Refill with fresh oil.

Drive chain

Clean and soak in chain oil overnight. Drain and wipe off excess oil. Install and adjust.

Tires

Support the motorcycle so that suspension is released and the tires are not in contact with the ground. This will prevent flat spots due to cord deformation.

NOTE: Protect the motorcycle with a cover to prevent dust accumulation during storage.

TROUBLE SHOOTING GUIDE

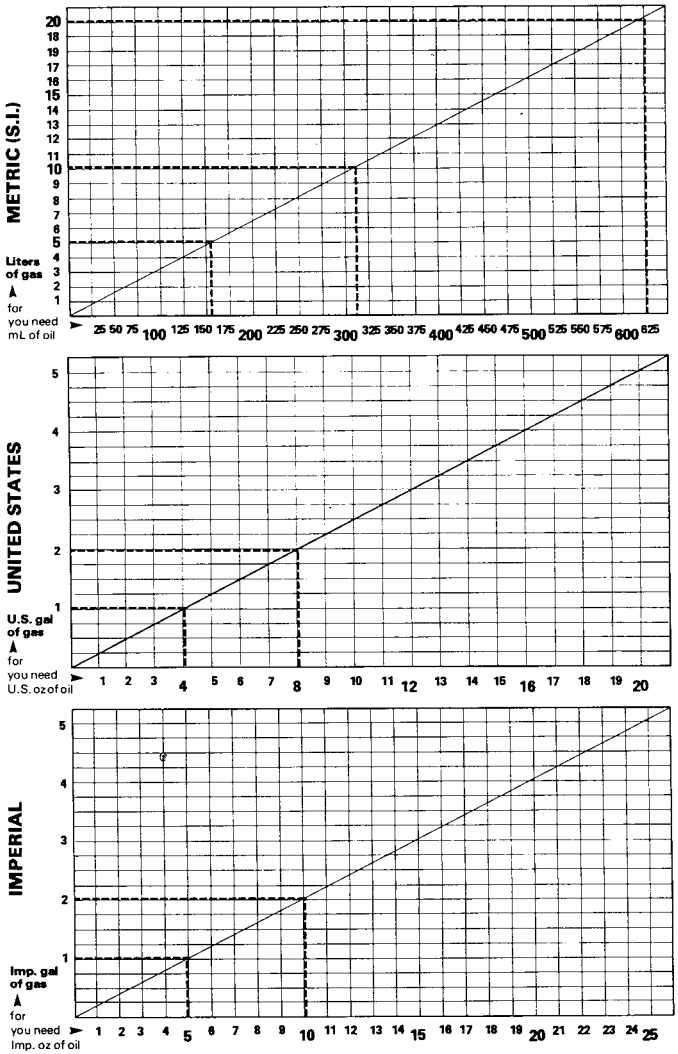
TROUBLE	CAUSE	REMEDY
Engine fails to start or does not start easily	1. No fuel is flowing to carburetor.	
	a) Faulty carburetor float needle. Check for worn tip.	Replace.
	b) Clogged fuel line.	Clean.
	2. Deteriorated or old fuel.	Replace.
	3. Raw gas in crankcase.	Start the engine with the throttle fully opened. In extreme cases, remove the engine crankcase drain plug, turn the shut-off valve to "OFF" hold the engine stop switch depressed and kick start until excess fuel is expelled.
	4. Insufficient compression	
	a) Crankcase compression leaks at oil seal.	Repair
	b) Crankcase compression leaks at crankcase mating surfaces.	Repair.
	c) Worn or stuck piston rings.	Replace.
	d) Worn cylinder.	Rebore oversize.
	e) Rotary valve or rotary valve cover leaks.	Repair or replace.
	5. Reed valve leak (370).	Repair or replace.
	6. No spark at plug.	Check for fouled or defective spark plug. Disconnect spark plug wire, unscrew plug and remove from cylinder head. Reconnect wire and ground exposed plug on engine fins **being careful to hold away from spark plug hole.** Follow engine starting procedure and check for spark. If no sparks appear, replace spark plug and if necessary, check the following items.
	a) Fouled plug.	Replace.
	b) Wet plug.	Dry off and try again or replace.
	c) Faulty magneto.	Repair.
	d) Open or short circuit in ignition.	Check for moisture at the electronic control unit connector boot. Check for corroded, dirty or broken connectors. Check emergency cut-out switch. Clean or replace.
	e) Faulty electronic control unit.	Replace.
Engine stalls frequently.	1. Fouled plug.	Repair or replace.
	2. Restriction in the gas cap vent.	Gently suck on the ventilation hole located on the bottom center of the gas cap. If restriction persists, replace the gas cap.
	3. Clogged fuel lines.	Clean.
	4. Clogged carburetor jets.	Clean.
	5. Crankcase compression leaks.	Repair.

TROUBLE	CAUSE	REMEDY
	6. Intake manifold, or rotary valve cover leaks.	Repair.
Engine does not have sufficient power.	1. Worn cylinder and worn or stuck piston rings. 2. Incorrect ignition timing. 3. Incorrect plug gap. 4. Clogged carburetor jets. 5. Incorrect float height. 6. Carbon build up on muffler discs. 7. Clogged air cleaner. 8. Cracked or crushed expansion chamber. 9. Deteriorated or old fuel.	Repair or replace. Adjust. Adjust or replace. Clean. Adjust. Clean. Clean or replace. Repair or replace. Replace.
Engine overheats.	1. Excessive carbon deposit on cylinder head. 2. Lean fuel mixture. 3. Incorrect ignition timing.	Clean. Replace jet. Adjust.
Engine operation is erratic at high speed.	1. Excessive plug gap. 2. Faulty electronic control unit. 3. Short circuit in magneto. 4. Clogged air cleaner element. 5. Incorrect float level. 6. Crankcase compression leaks. 7. Broken or cracked expansion chamber.	Adjust or replace. Replace. Replace. Clean or replace. Adjust. Repair. Repair or replace.
Ignition fails to spark.	1. Fouled spark plug. 2. Faulty electronic control unit. 3. Short circuit in magneto. 4. Faulty emergency cut-out switch.	Replace. Replace. Replace. Replace.
Spark plug electrodes are fouled.	1. Rich mixture (rich carburation or clogged air filter). 2. Incorrect fuel / oil mixture. 3. Incorrect spark plug heat range.	Adjust or clean. Drain fuel and renew. Replace, perform a plug test.
Spark plug electrodes are burned.	1. Incorrect heat range. 2. Overheating engine. 3. Incorrect ignition timing.	Use specified plug, perform a plug test. See "engine overheats". Adjust.

TROUBLE	CAUSE	REMEDY
	4. Loose spark plug. 5. Lean mixture.	Tighten. Replace jet.
Engine operation is erratic at low speed.	1. Carburetor air screw is improperly adjusted. 2. Incorrect float level. 3. Excessive spark plug gap or dirty electrodes. 4. Incorrect ignition timing. 5. Faulty electronic control unit. 6. Short circuit in magneto.	Adjust. Adjust. Adjust or replace. Adjust. Replace. Replace.
Transmission fails to shift smoothly.	1. Improper gearbox oil or oil level. 2. Shift drum index lever is jammed/broken. 3. Bent shift shaft. 4. Bent shift forks. 5. Loose pawl positioning cam.	Replace. Repair or replace. Repair or replace. Replace. Repair.
Change pedal fails to return.	1. Broken gearshift return spring. 2. Bent shift shaft.	Replace. Replace.
Steering is hard.	1. Overtightened steering stem. 2. Broken steering stem bearings.	Adjust. Replace.
Clutch slips	1. Improperly adjusted clutch. 2. Weak clutch springs. 3. Worn or deformed friction plates.	Adjust. Replace. Replace.
Clutch drags.	1. Improperly adjusted clutch. 2. Unequal clutch spring tension. 3. Deformed clutch plates.	Adjust. Replace. Replace.
Front wheel shimmies.	1. Deformed rim. 2. Loose or damaged front wheel bearings. 3. Loose spokes. 4. Loose axle and related parts. 5. Unbalanced wheel. 6. Tire badly seated.	Replace or straighten. Replace. Tighten, true the wheel Tighten. Repair. Repair.

TROUBLE	CAUSE	REMEDY
Front suspension is soft.	1. Collapsed springs. 2. Insufficient fork oil. 3. Insufficient air pressure.	Replace. Drain or replenish. Correct.
Front suspension is hard	1. Incorrect fork oil: viscosity too high. 2. Excessive fork oil. 3. Excessive air pressure.	Replace. Drain or replenish. Correct
Rear wheel shimmies.	1. Deformed rim. 2. Loose or damaged rear wheel bearings. 3. Loose spokes. 4. Loose axle and related parts. 5. Unbalanced wheel. 6. Tire badly seated.	Replace or straighten. Replace. Tighten, true the wheel Tighten. Repair. Repair.
Rear suspension is soft.	1. Weak springs. 2. Faulty shock.	Replace. Replace
Rear suspension is hard.	1. Bent shock absorber rods. 2. Springs too stiff.	Replace. Replace.
Braking is poor.	1. Improper brake shoe contact. 2. Brake lining fouled with oil, grease or dirt.	Repair or replace. Replace.
Brake free-play is excessive.	1. Worn brake shoes. 2. Worn brake cam. 3. Improper arm position. 4. Worn wheel bearings.	Replace. Replace. Repair. Replace.

FUEL MIXING RECOMMENDATIONS (32 to 1 ratio)

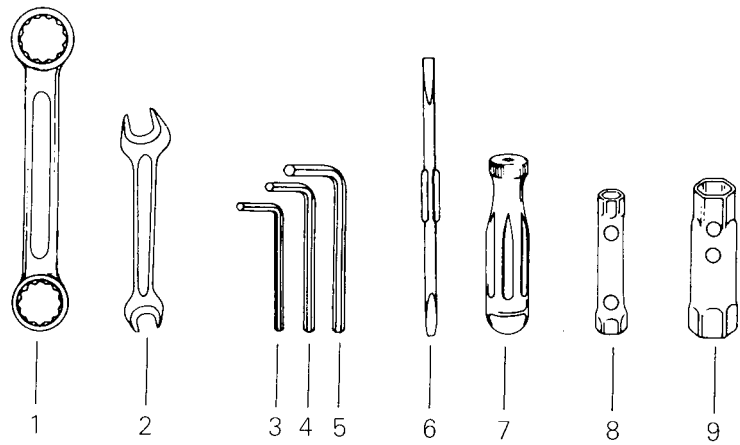


Use concentrated Bombardier 50/1 oil or any equivalent, high quality 2 cycle oil mixed with premium gasoline.

CAUTION: Never use outboard oils, straight mineral oils or injector oils.

BASIC MOTORCYCLE TOOL KIT

As standard equipment each new motorcycle is supplied with a basic tool kit such as screwdriver, wrenches, etc.

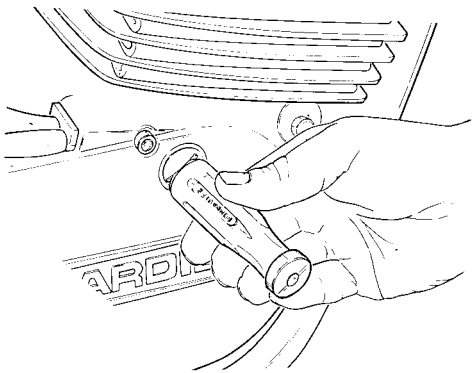


1.	Combined wrench 22/24 mm	420 277 825
2.	Open end wrench 10/13 mm	420 276 065
3.	Hexagonal wrench no. 4	420 277 790
4.	Hexagonal wrench no. 5	420 876 360
5.	Hexagonal wrench no. 6	420 277 810
6.	Insert for screwdriver	420 277 830
*7.	Grip for screwdriver	420 277 840
8.	Socket wrench 11/13 mm	420 876 220
9.	Socket wrench 17/21 mm	420 277 411

***Specific application:**

Item 7 (grip for screwdriver):

The screwdriver grip can also be used for installation and removal of the plugs.



PRE-RACE PREPARATION

Total enjoyment of the pleasures of motocross riding and success in competition is the result of many factors These can be broken down into those relating to the rider, and those relating to the machine.

The rider must possess some measure of skill, conditioning and determination.

At the same time, the machine has to perform and be reliable. Machine preparation is an element that is often overlooked. Reliability and strength has been engineered into your motorcycle, and proper maintenance and preparation is necessary to take advantage of it.

If you don't finish an event because avoided with proper machine preparation, you have no one to blame but yourself.

Your Operator Manual contains many fine recommendations and instructions to help you avoid the disappointment of mechanical failure on race track.

Follow the guidelines of the maintenance checklist regularly and particularly before any major race.

Start the motorcycle and test ride briefly for abnormal noises or faulty operation. Run through all the gears, checking for performance, braking and handling, etc... Note the suspension action and throttle response. Then proceed with the maintenance.

IMPORTANT: Observe all Warnings and Cautions mentioned throughout this manual which are pertinent to the item being checked. When component conditions seem less than satisfactory, replace with genuine Can-Am parts.

MAINTENANCE CHECK LIST

☑	DATE PERFORMED					
– Clean motorcycle						
– Inspect for damage						
– Change transmission oil						
– Check magneto						
– Check E-Box plug						
– Check H.T. lead						
– Clean and seal carburetor						
– Clean air box						
– Clean throttle twist-grip ass'y						
– Service air filter						
– Seal cable grommets						
– Check ignition timing						
– Inspect front wheel & spokes						
– Inspect front brake						
– Check steering bearings						
– Service front forks						
– Inspect and adjust front brake cable						
– Inspect rear wheel & spokes						
– Inspect rear brakes						
– Clean and grease brake pedal pivot						
– Inspect sprockets						
– Clean and lubricate drive chain						
– Inspect swing arm pivot						
– Check shock damping and keepers						
– Adjust drive chain						
– Inspect and adjust rear brake rod						
– Service muffler						
– Tighten kick start and gear change clamp screws						
– Check front fork air pressure						
– Check all nuts and bolts						
– Check tire pressure						
– Check clutch adjustment						
– Test ride motorcycle						
Check:						
1) Brakes						
2) Gear shifting						
3) Clutch operation						
4) Acceleration						
5) Cruising						
6) Handling						
7) Spark plug condition						
8) Idling						
9) Overall performance						

GEARING and RATIOS

The standard gearing of your motorcycle was chosen for optimum performance under average conditions.

Bombardier Limited made a choice of drive chain sprockets available from your dealer so you can adjust the gearing of your motorcycle to your particular needs.

STANDARD RATIOS	250	370
primary drive gears	23 / 67	25 / 65
Primary ratio	2.91	2.60
Engine sprocket	14 T	14 T
Rear wheel sprocket	47 T	47 T
Final ratio	3.36	3.36
Fixed ratio	9.77	8.73
Top gear ratio	0.913	0.913
Overall ratio	8.92	7.97
Max. engine RPM	9,500	8,500

GEARING FORMULAE

For more in-depth calculations of your gearing, the following formulae may prove useful.

Information provided in the preceding chart was calculated with the following formulae:

Primary ratio

$\frac{\text{clutch sprocket}}{\text{drive pinion}}$ Ex.: $\frac{67}{23} = 2.91$

Final ratio

$\frac{\text{rear sprocket}}{\text{gear box sprocket}}$ Ex.: $\frac{47}{14} = 3.36$

Fixed ratio

Primary ratio x final ratio:

Example: 2.91 x 3.36 = 9.77

Overall ratio

Fixed ratio x top gear (internal) ratio

Example: 9.77 x 0.913 = 8.92

Effective rear wheel circumference

Radius x 6.28 = circumference of the wheel.

Radius = distance from axle center to ground with correct tire pressure and rider seated.

6.28 = a constant number (2 x 3.1416) derived from the formulae 2π used to find the circumference.

Miles per hour

M.P.H. = Eng. max. R.P.M. x effective $\frac{\text{rear wheel circumference x 60}}{\text{overall ratio x 12 x 5280}} =$

Example: MX-4 250 at 9500 RPM using a 500 x 18" tire 13" effective radius (approximately only check your tire).

M.P.H. $= \frac{9500 \times 81.64 \times 60}{8.92 \times 12 \times 5280} = \frac{82.33}{\text{mi / h}}$

A) RPM ÷ overall ratio RPM of rear wheel
9500 ÷ 8.92 = 1,065.02 RPM

B) Rear wheel RPM x rear wheel circumference
1,065.02 x 81.64 = 86,948.2 in.-min.

C) Inches ÷ 12 = feet
86,948.2 ÷ 12 = 7,245.68 ft-min.

D) Feet x 60 minutes = feet per hour
7,245.68 x 60 = 434,740.8 = feet per hour.

E) Feet per hour ÷ 5280 ft / mile = M.P.H.
434,740.8 ÷ 5280 = 82.33 M.P.H.

NOTE: Kilometers per hour (km / h) =

$$\frac{\text{Eng. Max. R.P.M. x (effective rear wheel circumference (meter)) x 60}}{\text{Overall ratio x 1000}}$$

SPECIFICATIONS

MODEL	250	370
DIMENSIONS		
Overall height	120.6 cm (47.5")	120.6 cm (47.5")
Overall width	85.7 cm (33.75")	85.7 cm (33.75")
Seat height	95.2 cm (37.5")	95.2 cm (37.5")
Ground clearance	29.2 cm (11.5")	29.2 cm (11.5")
Wheelbase	149.2 cm (58.75")	149.2 cm (58.75")
Overall length	217.1 cm (85.5")	217.1 cm (85.5")
CHASSIS		
Type	Tubular double loop space frame with tapered backbone	
Front suspension	Marzocchi air fork, 38 mm	Marzocchi air fork, 38 mm
travel	270 mm (10.6")	270 mm (10.6")
air pressure	82.7 kPa (12 P.S.I.)	82.7 kPa (12 P.S.I.)
Rear suspension	Trailing arm, Girling gas shock absorber	
wheel travel	254 mm (10.0")	254 mm (10.0")
shocks length extended	38.1 cm (15")	38.1 cm (15")
Fork angle	30° not adjustable	30° not adjustable
Brakes (front and rear)	Drum, single leading shoe 152 mm ⅞ x 25 mm (6" ⅞ x 1")	
Rim front	Sun, alloy low profile 1.60 x 21	
rear	Sun, alloy low profile 2.75 x 18	
Tire front	3.00 x 21 knobby	3.00 x 21 knobby
rear	5.00 x 18 knobby	5.00 x 18 knobby
Spokes front	3.5 mm	3.5 mm
rear	R.H. butted 4mm/L.H. 3.5mm	R.H. butted 4mm/L.H. 3.5mm
Levers clutch/brake	"Magura" power/forged	"Magura" power/forged
Throttle	"Magura" 1/4 turn	"Magura" 1/4 turn
Handlebar	Chrome moly, V-brace	Chrome moly, V-brace
Weight (dry)	98.6 Kg (217 lbs)	102.2 Kg (225 lbs)
ENGINE		
Type	Rotary valve, 2 stroke single cylinder, air cooled	Reed valve, 2 stroke, single cylinder,air cooled
Bore	72 mm (2.834")	84 mm (3.307")
Stroke	61 mm (2.402")	66 mm (2.598")
Displacement	248 cm^3 (15.13 cu.in.)	366 cm^3 (22.33 cu.in.)
Compression ratio (uncorrected)	13.5:1	12.5:1
Power at R.P.M.	28.1 Kw (37.5 HP)	31.6 Kw (42 HP)
at rear wheel	at 8000 RPM	at 7000 RPM
Lubrication	Pre-mix (32 to 1 ratio)	Pre-mix (32 to 1 ratio)
Starter	Foot operated, L.H. in gear starting	
LIQUID CAPACITIES		
Gas tank	7.7 liters 2.0 U.S. gal. 1.7 Imp. gal.	
Transmission	1.1 liters 1.2 U.S. quart 1.0 Imp. quart	
Fork (each leg)	350 mL (11.8 fl. oz.)	
POWER TRAIN		
Primary drive	Straight cut & ground gears	
Primary drive ratio	2.91 (23/67)	2.60 (25/65)
Clutch	6 discs	7 discs
Transmission (constant mesh)	5 speed	5 speed

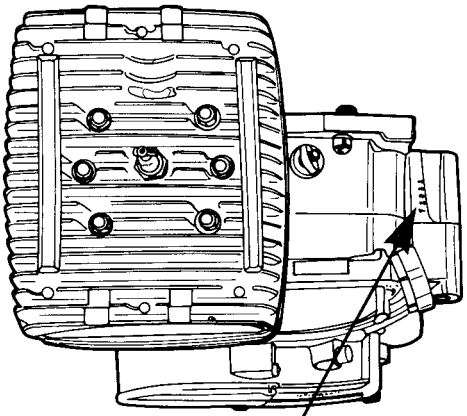
MODEL	250	370
Gear ratio		
1st	2.38 (13/31)	2.38 (13/31)
2nd	1.75 (16/28)	1.75 (16/28)
3rd	1.39 (18/25)	1.39 (18/25)
4th	1.095 (21/23)	1.095 (21/23)
5th	0.913 (23/21)	0.913 (23/21)
Chain	No 520	No 520
Number of links	112 links	112 links
Engine sprocket	14T	14T
Rear wheel sprocket	47T	47T
Ratio	3.36	3.36
Overall ratio (high gear)	8.92	7.97
CARBURETION		
Carburetor type	Bing 32 mm (V-84)	Bing 36 mm (V-54)
Carburetor number	84/32/3417	54/36/120
Main jet	155	165
Needle jet	2.73	2.82
Idle jet	40	60
Needle identification	4 rings	8G2
Needle setting	2nd groove from top	2nd from top
Slide	No 1	230
Idle jet screw adjustment	1 turn out ± 1/4	
Float level	22.5 mm (.885")	
Air filter	K & N oil wetted filter, with oil impregnated air filter sock	
EXHAUST SYSTEM		
Muffler type	"multidisc resonator" muffler	
Number of discs	5	7
ELECTRICAL		
Ignition system	Bosh electronic C.D.I. 6 poles	
Nominal ignition output	30,000 volts	30,000 volts
Basic timing	1.3 mm ± .2 (.051" ± .007")	2.5 mm ± .2 (.098" ± .007")
Ignition timing at 7000 RPM	Align flywheel and cover marks	Align flywheel and cover marks
Spark plug type	14 mm (3/4") reach	14 mm (3/4") reach
Spark plug number	Bosch W280 MZ2-W3CO or W275 T2-W3C	
Spark plug optional*	NGK B8ES - Champion N2G	NGK B8ES - Champion N2G
Spark plug gap	0.5 mm (.020")	0.5 mm (.020")

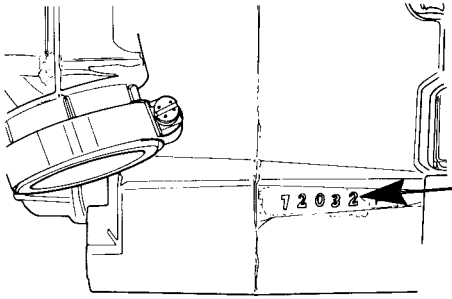
* CAUTION: Use as a guideline only, check spark plug heat range.

All information, illustrations and component/system descriptions contained in this manual are correct at the time of publication. However, Bombardier Limited reserves the right to make changes in design and specifications and/or to make additions to, or improvements in its product without imposing any obligation upon itself to install them on its products previously manufactured.

HOW TO IDENTIFY YOUR VEHICLE

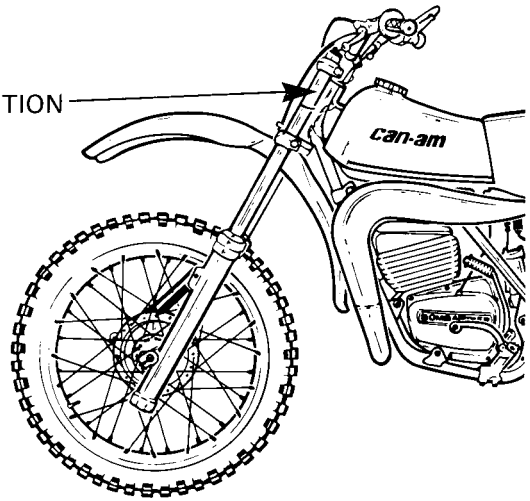
The main components of your vehicle (engine and frame) are identified by different serial numbers. It may sometimes become necessary to locate these numbers for warranty purposes or to trace your motorcycle in the event of theft.

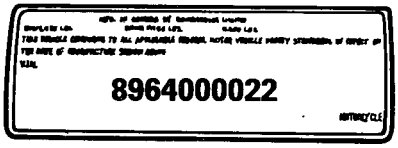




ENGINE SERIAL NUMBER

VEHICLE IDENTIFICATION NUMBER (V.I.N.)





Model number:
8964: MX-5 250
8984: MX-5 370

NOTE: We strongly recommend that you take note of all the serial numbers on your vehicle and supply them to your insurance company. It will surely help in the event a motorcycle is stolen.

WHEN YOU BUY...

our product you will receive:

SERVICE — from the product itself

SERVICE — from the dealer who sells the product

If, however, the service or product is unsatisfactory,

1st Return to your dealer's service department and discuss the details of the problem with the manager. He is in a position to help you with all maintenance and service needs. If the matter cannot be resolved, he may want to bring the sales manager or the general manager into discussion.

If the dealer cannot solve the situation.

2nd Write to your nearest area distributor.

TELL HIM THE FACTS

- Vehicle identification number (10 digits).
- Date of purchase.
- Name and address of your selling dealer.
- Your name, address and phone number.
- The specific problem.

The matter will receive immediate attention from the distributor's service department.

If at this point your grievance still remains unresolved,

3rd Contact Bombardier Limited,
Valcourt, P.Q. J0E 2L0
Att'n Customer relations

Provide all necessary details (including names of persons previously contacted). Your problem will be reviewed and instructions will be provided to the persons responsible for product service in your area or we will contact you directly.

REMEMBER The faster we are informed of unresolved grievances, the faster we can investigate them.

LISTING OF AREA DISTRIBUTORS

CANADIAN DISTRIBUTORS

ALPINE DISTRIBUTORS LTD
3206 – 28th Street,
P.O. Box 159
Vernon, British Columbia V1T 6M2
(604) 545-1314
Telex: 048-85211
British Columbia

BOMBARDIER LIMITED,
Eastern Canada Distribution Division,
Atlantic Branch
P.O. Box 670
Shediac, New Brunswick E0A 3G0
(506) 532-4454
Telex: 014-2146
New Brunswick, Nova Scotia, Prince Edward Island

BOMBARDIER LIMITED
Eastern Canada Distribution Division
Québec Branch
Valcourt, Qué., J0E 2L0
(514) 532-2211
Telex: 05-832575
Québec, Eastern Ontario

BOMBARDIER LIMITED
Eastern Canada Distribution Division
Ontario Branch
230 Bayview Drive
Barrie, Ontario, L4N 4Y8
(705) 728-8600
Telex: 068-75510
Ontario, less Eastern part of Ontario

BROOKS EQUIPMENT
1616 King Edward Street
P.O. Box 985
Winnipeg, Manitoba R3C 2V8
(204) 633-7247
Telex: 075-7678
Manitoba, Saskatchewan

TRACT EQUIPMENT LIMITED
14325, 114th Avenue,
Edmonton, Alberta T5M 2Y8
(403) 452-9910
Telex: 037-2706
Alberta, Dist. McKenzie, Yukon, N.W.T.

J.W. RANDALL LTD
P.O. Box 757
West Street,
Corner Brook, Newfoundland A2H 6G7
(709) 634-3533
Telex: 016-44115
Newfoundland, Labrador

AMERICAN DISTRIBUTORS

BOMBARDIER CORPORATION
4505 West Superior Street
P.O. Box 6106
Duluth, Minnesota 55806
(218) 628-2881
Telex: 294-422
Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississipi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, Wyoming

MILLER EQUIPMENT & RECREATIONAL CENTER,
1049 Whitney Road,
Anchorage, Alaska,
99501 U.S.A.
Telex: 035-25464
Tel.: 907/274-9513
Alaska

ELLIOTT & HUTCHINS, INC.,
East Main Street Road,
Malone, New York, 12953
(518) 483-4411
No telex
Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, District of Columbia

TIMBERLAND MACHINES, Inc.
10 North Main Street,
Lancaster, New Hampshire 03584
(603) 788-4738
Telex: 009-54626
Maine, New Hampshire, Vermont

NOTES

CHANGE OF ADDRESS AND OWNERSHIP

Any change in address or ownership should be brought to the attention of the manufacturer by completing and sending out the card supplied below. This will help us to maintain our files up-to-date.

CHANGE OF ADDRESS

VEHICLE IDENTIFICATION NUMBER

OLD ADDRESS:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

NEW ADDRESS:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

CHANGE OF OWNERSHIP

VEHICLE IDENTIFICATION NUMBER

The ownership of this vehicle is transferred

FROM:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

TO:

NAME

NO STREET APT.

CITY STATE ZIP / POSTAL CODE

BOMBARDIER LIMITED
ATT.: WARRANTY DEPARTMENT
VALCOURT, QUEBEC
CANADA, J0E 2L0

BOMBARDIER LIMITED
ATT.: WARRANTY DEPARTMENT
VALCOURT, QUEBEC
CANADA, J0E 2L0

BOMBARDIER

can-am* motorcycles

OPERATOR MANUAL

MX-5*
370
250

735 002 022

Litho'd in Canada