

Owner's Manual
74 mx-1
125/175cc

can-am*

BOMBARDIER LIMITED

° Trade Mark of Bombardier Limited © Feb. 1974 Printed in Canada

735-002-002





FOREWORD

The CAN-AM motorcycle is a strong, lightweight, competition bred, sportcycle designed specifically for the North American market.

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

Your new CAN-AM is the culmination of a lengthy development and testing 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.

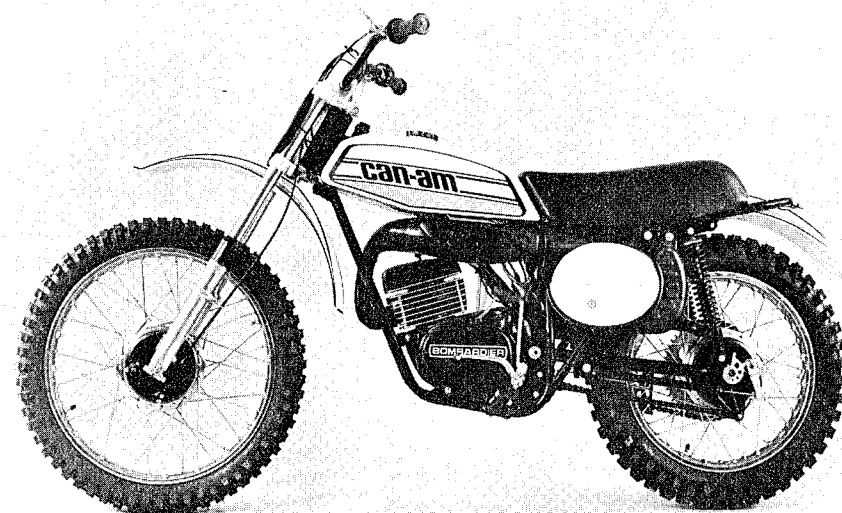
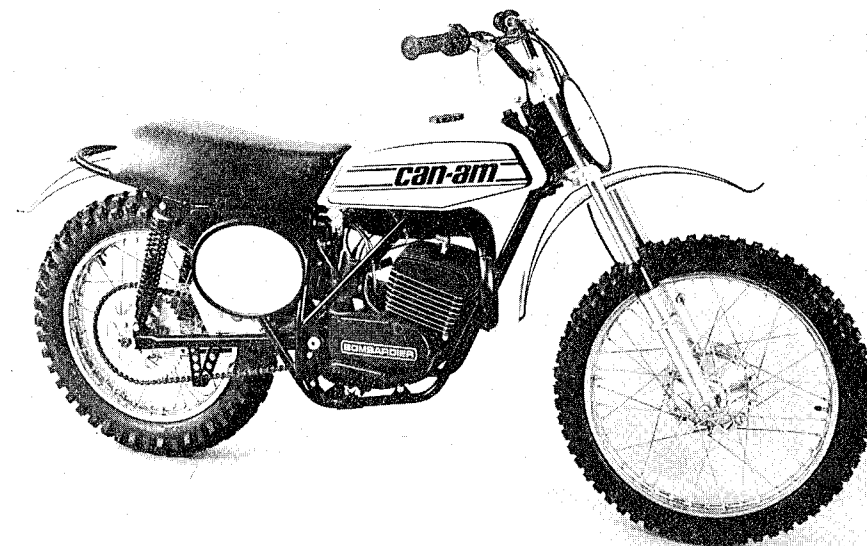
CAN-AM is backed by Bombardier's international dealer network and factory trained, in-field personnel. Our dealer network is geared to provide CAN-AM motorcycles with prompt, efficient service and parts availability.

We congratulate you on your excellent choice, and thank you for the confidence you have placed in our product. We are sure our motorcycle will provide you with top performance and long, troublefree use.

This manual was published by the Technical Information Center of the CAN-AM Division of Bombardier Limited, Valcourt, Quebec, Canada.

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WARRANTY

Bombardier (Limited) Bombardier), as manufacturer, warrants every new CAN-AM motorcycle **sold as a new vehicle, by an authorized dealer**, including all motocross models, to be free from defects in material and workmanship under normal use and service, for a period of ninety (90) days from the date of the original retail purchase, subject to the following exceptions:

Bombardier's obligation under this warranty is strictly limited to the repair or replacement at its option, of any part or parts thereof which shall, within the specified warranty period, be returned to an authorized CAN-AM Dealer at such Dealer's place of business and, which examination shall disclose to the satisfaction of Bombardier to have been thus defective. The repair or replacement of defective parts under this warranty will be made by such Dealer, without charge for parts or labor, under the following conditions only:

1. that proof of ownership and warranty registration be submitted to the Dealer by means of the CAN-AM warranty registration card.
2. that warranty repairs be effected at the dealer's place of business.

EXCLUSIONS

This warranty does not apply to normal maintenance services, (including but not limited to normal wear on tires, tubes, bulbs, nuts, bolts and common fasteners, clutch plates, brake shoes, chain and sprockets, spark plugs, paints, fuel

and oil filters, soft trim, exposed decals, all oils, non genuine parts).

This warranty does not apply to any defect which results from: misuse or accident; installation of repair parts other than genuine Bombardier replacement parts or; repairs by any person other than an authorized CAN-AM motorcycle Dealer; lack of preventive maintenance; alterations or modifications other than those approved in writing by Bombardier.

Operating a CAN-AM motorcycle in competition, or modifying it with high performance parts (whether or not such parts are supplied by Bombardier or are installed by an authorized Dealer) will void any and all warranties implied or written.

LONG DISTANCE WARRANTY REPAIR

If a CAN-AM motorcycle owner moves or is stranded more than 250 miles away from the closest CAN-AM Dealer*, arrangements can be made to use a local retail motorcycle Dealer of the customer's choice, **for a one (1) time only warranty repair** if so authorized in writing by the Distributor Service Manager of that area. Any parts or labor information will be supplied by our Distributor's parts and service department to complete this emergency repair.

A check will be sent to that Dealer, to compensate for labor and parts used, when a copy of his work order and the defective parts are received at the Distributor's office.

All reimbursements will be made using the CAN-AM flat rate manual.

This warranty extension does not apply to said accessories and/or replacement parts which:

- a) have been subjected to any misuse, alteration, modification, or accident;
- b) have been repaired with parts other than genuine Bombardier replacement parts, or;
- c) have been repaired by any person other than an authorized CAN-AM Dealer.

This warranty is expressly in lieu of all other expressed or implied warranties of Bombardier, its Distributors and the selling Dealer, including any implied warranty of merchantability or fitness for any Particular purpose. Neither Bombardier, its Distributors nor the selling Dealer shall be responsible, under any circumstances, for any loss or damage as a result of hidden defects, accidents, misuses or other faults.

Neither the Distributor, the selling Dealer nor any other person has been authorized to make any affirmation, representation or warranty other than those contained in this warranty and if made, such affirmation, representation or warranty shall not be enforceable against Bombardier or any other person.

* The address of the closest CAN-AM Dealer can be obtained from the Distributor of your area.

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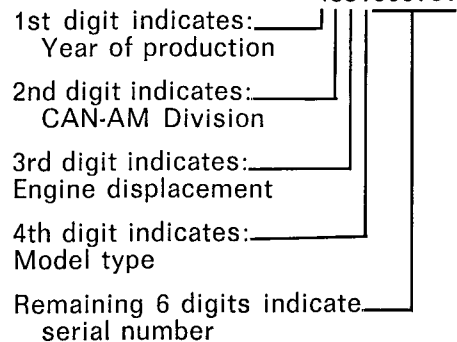
VEHICLE IDENTIFICATION NUMBER AND LOCATION

The Vehicle Identification Number, commonly known as the "VIN", is a 10 digit number that will identify the motorcycle as shown:



Example: In 1974, CAN-AM Division of Bombardier produced a 175cc Enduro model motorcycle that was the 761st unit of that production schedule. The "VIN" would be

4851000761



The "VIN" is required:

- a) When motorcycle is registered.
- b) For warranty claim processing.
- c) For ordering spare parts.

Note: Always quote all 10 digits when referring to "VIN" or serial number.

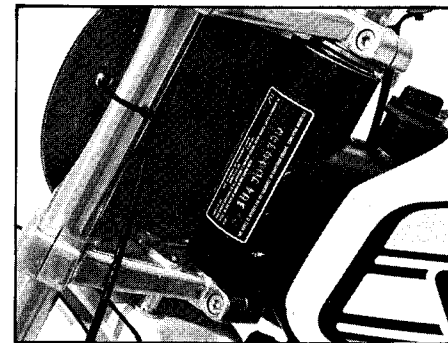
The CAN-AM "VIN" will change according to year, displacement and model as shown.

ENGINE DISPLACEMENT

Up to 50cc	1
51 to 80cc	2
81 to 100cc	3
101 to 125cc	4
126 to 200cc	5
201 to 250cc	6
251 to 350cc	7
351 to 500cc	8
501 to 750cc	9
751 to 1000 open	0

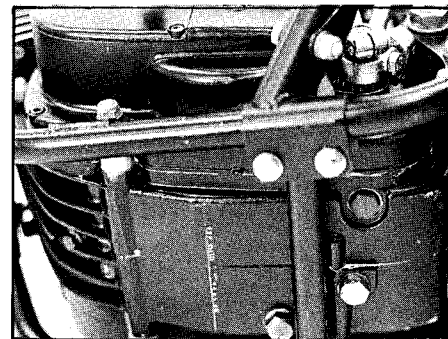
MODEL TYPE

Enduro (T'NT)	1
Touring	2
Motocross (MX-1)	3
Road Race	4
Trials	5
T.T. Short Track	6
Speedway	7
Trail	8
Mini-Midi	9
Open	0



2-1

1. The "VIN" is stamped on the steering head.



2-2

2. The "VIN" is also stamped on the crankcase.



2-3

3. The engine displacement is stamped on the cylinder.

3

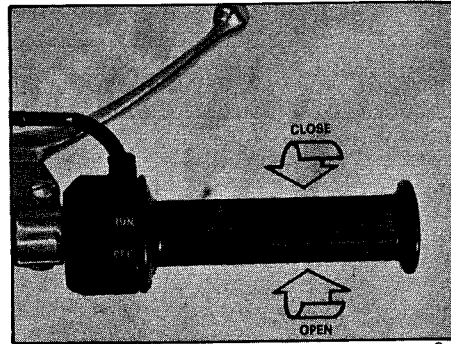
CONTROLS

1. Throttle:

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).

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



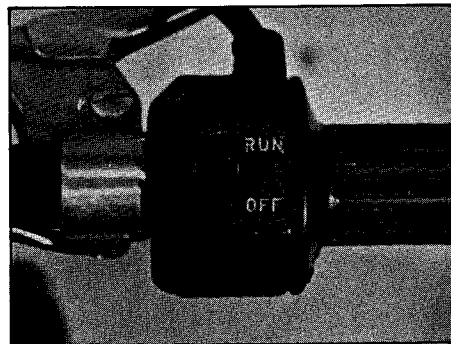
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2. Emergency stop switch:

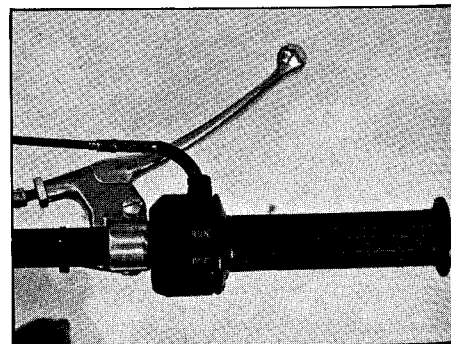
The stop switch is thumb operated and when moved to "OFF" position, will stop the engine.

3. Front brake lever:

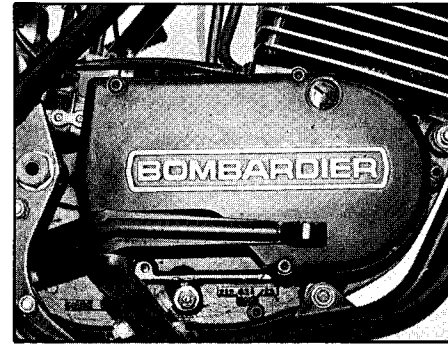
The front brake lever, when pulled towards handlegrip, will apply the front brake.



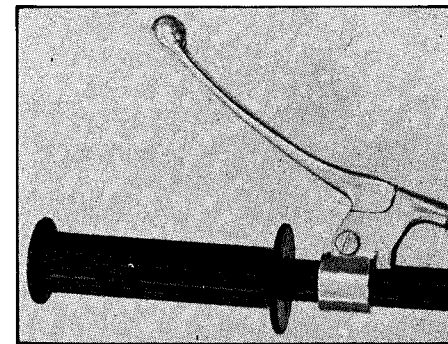
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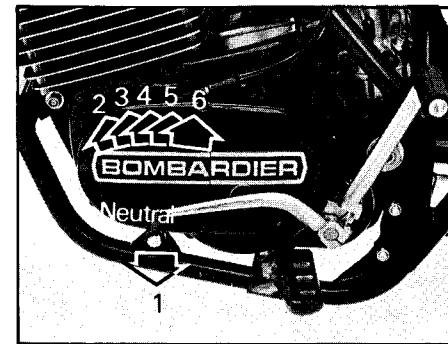
3-3



3-4



3-5



3-6

4. Rear brake pedal:

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

5. Clutch control lever:

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

6. 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 (see picture).



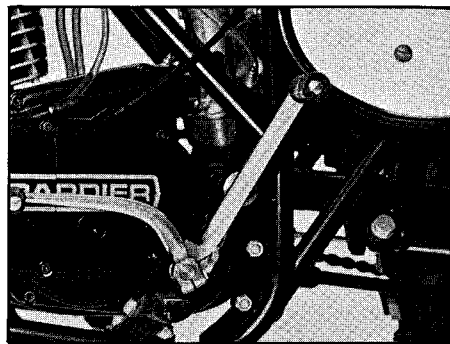
Neutral is located between 1st and 2nd gear.

7. 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.

Note: Do not operate kick start pedal if side-stand is down.



3-7

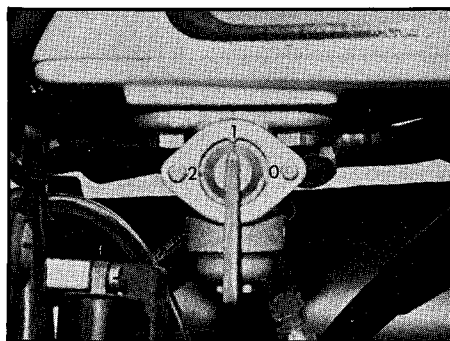
8. Fuel control valve:

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

0 — OFF position

1 — ON position

2 — RESERVE position (reserve fuel should permit 10-15 additional driving miles).



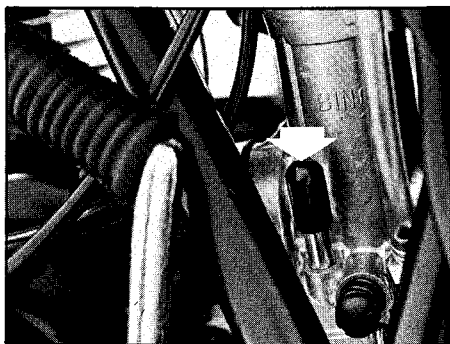
3-8

9. Primer plunger:

To provide a richer mixture for cold starting, depress the primer for 2-3 seconds or until excess gas escapes via the overflow tube.



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

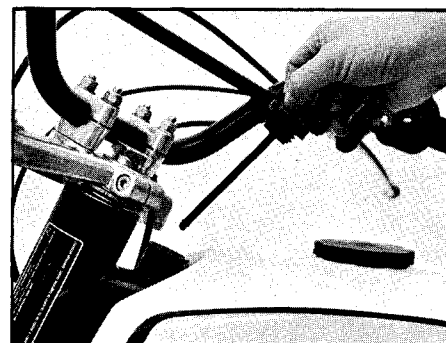


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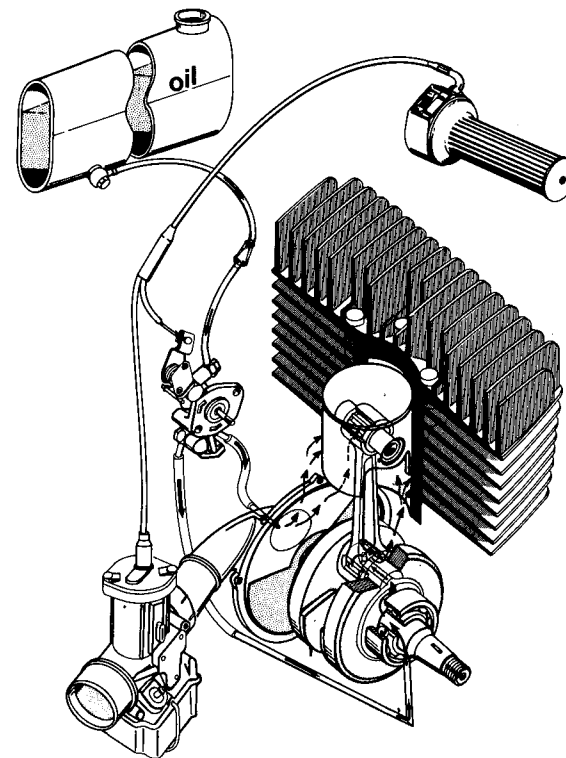
10. Oil reservoir and dip stick:

The oil reservoir filler cap is located immediately in front of the gas tank and incorporates an oil level dipstick.

Note: When oil level is at the lower mark on the dipstick, replenish with 1 can of CAN-AM injector oil. (16 oz).



3-10



4

PRE-RIDE INSPECTION

Prior to starting your motorcycle, CAN-AM advises a general inspection to make sure that the motorcycle is in good, safe riding condition.

1. Oil tank level:

Top up with CAN-AM injection oil.

2. Fuel:

Use premium gasoline only.

3. Throttle action:

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

4. Emergency stop switch:

Be sure switch will stop engine.

5. Front and rear brakes:

Adjust if necessary.

6. Clutch control lever:

Adjust to 1/16" free play if necessary.

7. Drive chain:

Adjust if necessary.

8. Tire pressure:

Check and adjust as required:

	FRONT	REAR
Trail:	10 PSI	20 PSI
Racing:		
Soft and wet surface:	10 PSI	12 PSI
Hard and dry surface:	12 PSI	15 PSI
Rocky and rough surface:		
	15 PSI	18 PSI



Refer to maintenance section for any necessary adjustments.

5

ENGINE BREAK-IN PROCEDURE

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.

First Five Hours

1. Do not run the engine to excessive R.P.M.

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

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

4. Check for loose nuts, bolts and fasteners and tighten if necessary.

6

STARTING THE ENGINE

Cold engine

1. Turn fuel control valve pointer to No. 1 position.

2. Select transmission neutral position.

3. Push emergency stop switch to "RUN" position.

4. Depress primer knob for 2-3 seconds.

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

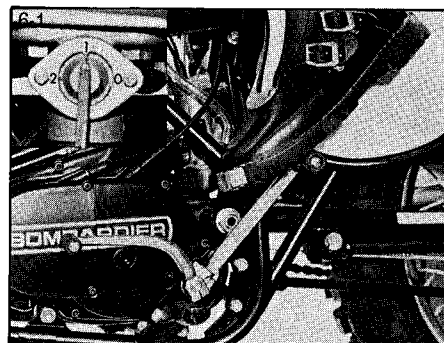
Note: Do not start engine while side stand is in down position.

6. Holding throttle approximately 1/8 open, carefully engage kick starter pedal down with a rapid, follow-through motion.

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

Warm engine

Use the same procedure but do not prime the carburetor.



7

RIDING THE MOTORCYCLE

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

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

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

3. 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.

4. 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.

CLEANING THE MOTORCYCLE

To maintain pride of ownership and to encourage routine inspection and adjustments, keep your new CAN-AM motorcycle clean and carefully detailed.

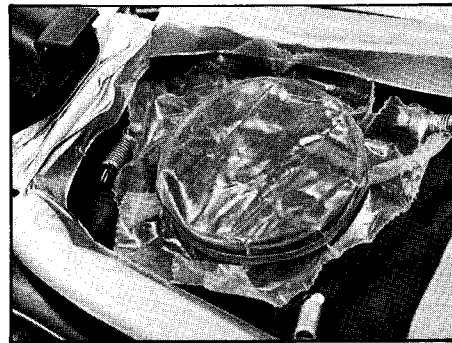
Note: Frequent cleaning will permit visual inspection of frame, swing arm, wheels, and other critical components for wear or damage.

An effective way to clean your CAN-AM is with a degreasing solvent and warm, soapy water, rinsing with a low pressure spray.

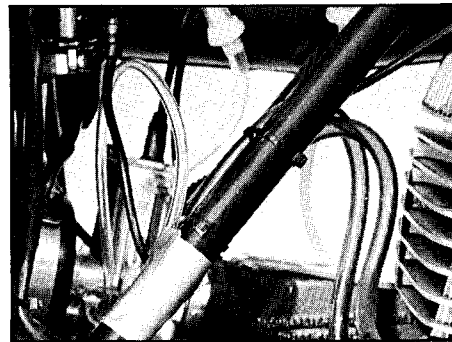
Avoid the use of harsh detergents and high pressure car wash sprays as they may cause damage to paint and metal surfaces and corrosion of electrical connections.

Procedure

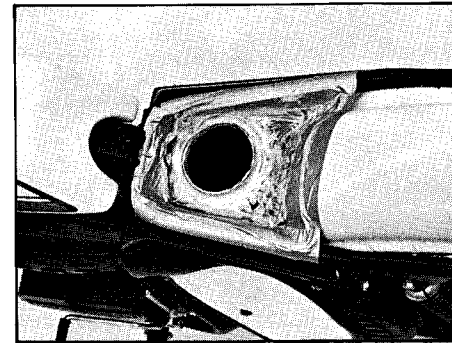
1. Remove seat and air filter.
2. Seal exposed air box opening with plastic and a rubber band.
3. Using tape or bolts of adequate size, plug the vent tubes coming from:
 - a) Gear box filler cap
 - b) Magneto cover
 - c) Carburetor float chamber.
4. Thoroughly degrease any oily areas using solvent and a soft brush.
5. Spray the motorcycle down to remove the degreaser and excessive mud or dirt.



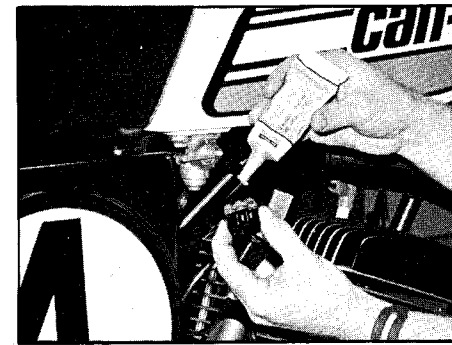
8-2



8-3



8-9



8-10

Note: Avoid spraying directly onto:

- a) Carburetor
- b) The electronic box
- c) The muffler opening
- d) Fuel and oil tank caps.

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

7. Rinse away all traces of soap and dirt with a low pressure water hose.

8. Wipe the motorcycle dry and remove the 3 vent plugs or tape and the plastic on the air box.

9. Apply a liberal ring of grease around the air filter base and install a freshly cleaned and oiled air filter.

10. Check the connector block and boot at the electronic control unit for trapped water. Dry and liberally coat with dielectric silicone compound as necessary (e.g. Dow Corning No 4).

11. Oil all control cables, lever and pedal pivot points, and lubricate the drive chain.

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



Caution: Wet brake linings reduce stopping ability. Ride with care until brakes respond properly.

9

MAINTENANCE SCHEDULE

The service intervals shown in the Maintenance Schedule are intended as a guide to establish a regular servicing routine.

Sustained severe or high speed operation under adverse conditions may necessitate more frequent servicing.

Service Required

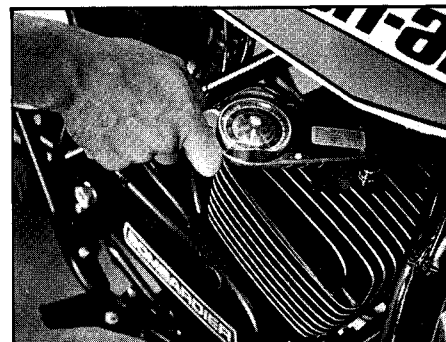
	Daily or as required	After five (5) hours	Every race	Every three (3) races	Once a year	See page
1. Retorque cylinder base nuts and cylinder head nuts.		●		●		17
2. Clean carburetor and fuel sediment bowl.				●	●	17
3. Adjust carburetor.		●	●			18
4. Adjust throttle and injector pump synchronization.		●	●			19
5. Adjust clutch and cable.		●	●			20
6. Change transmission oil.		●		●	●	21
7. Clean air filter.			●			21
8. Clean or change oil filter.				●	●	22
9. Clean or change gas filter.				●	●	22
10. Check steering stem bearing adjustment.		●		●		23
11. Inspect wheel bearings.				●	●	23
12. Change fork oil.		●			●	23
13. Check and tighten spokes and sprocket bolts.		●	●			24
14. Clean and lubricate drive chain.	●	●	●			24
15. Adjust drive chain.	●	●	●			24
16. Adjust front and rear brakes.	●	●	●			25
17. Lube cables.			●			26
18. Check and adjust ignition timing.		●		●		26
19. Check and tighten all nuts and bolts.		●	●			27
20. Replace piston ring(s) (Necessary for optimum performance).				●		27

10

MAINTENANCE OPERATIONS

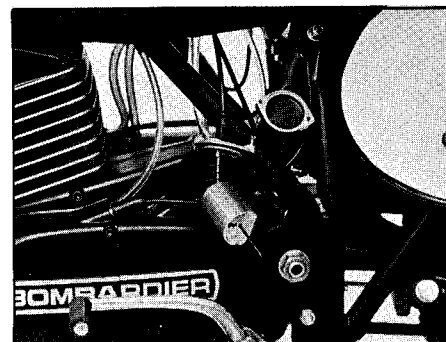
1. Retorque cylinder base nuts and cylinder head nuts

- Loosen cylinder head nuts — (11mm) — gradually, in a criss-cross sequence to prevent head warpage.
- Remove cylinder head. Note the number of head shims (if any).
- Torque cylinder base nuts — (11mm) in a criss-cross sequence to 20 ft./lbs. (2.8 k.p.m.).



1-4

- Install the cylinder head shim/s (if any), replace head and tighten head nuts gradually in a criss-cross pattern. Torque head nuts to 12 ft./lbs. (1.6 k.p.m.).



2-2

2. Clean carburetor bowl

- Completely loosen both carburetor retaining hose clamps. (Slide front clamp forward) and rotate carburetor towards clutch side.
- Remove carburetor top plate and the slide assembly.

Note: Handle slide with care.



2-3

- Disconnect fuel line (at carburetor) and pry carburetor body towards air box, out of front connection hose.
- Twist carburetor body away from engine inlet port and remove carburetor (complete with air box adaptor hose).

Note: Remove carburetor from magneto side.

5. Pry float chamber retaining clip back and remove float chamber.

6. Clean carburetor and float chamber with gasoline or lacquer thinner and blow passages clear with compressed air.

Note: Lacquer thinner will dissolve the float material.



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

7. Replace float chamber and carburetor in reverse order of removal.

Fuel sediment bowl

The fuel control valve incorporates a fuel sediment bowl that will require periodic cleaning.

8. With the fuel valve on "0" (OFF) position, unscrew the sediment bowl and wash it out with gasoline or lacquer thinner.

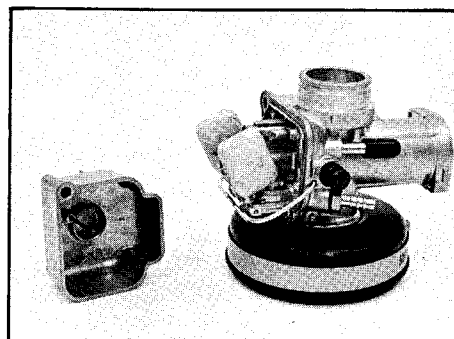
9. Replace bowl.

3. Adjust carburetor

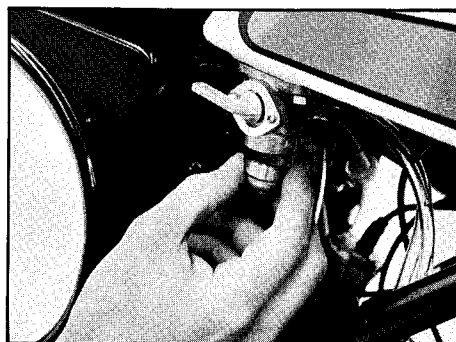
Note: Hold motorcycle vertical for this adjustment.

1. Gently turn air mixture adjusting screw in until it stops, then back it out 1/4 turns. (Basic setting).

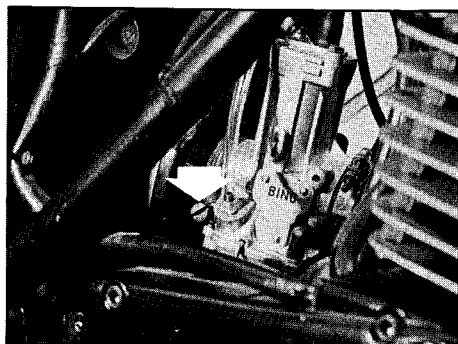
2. Start the engine and allow it to warm up.



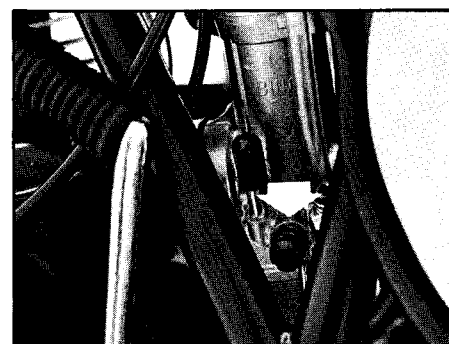
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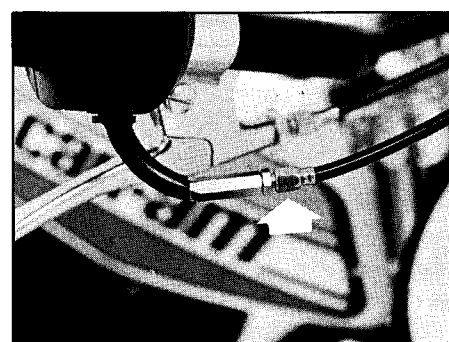
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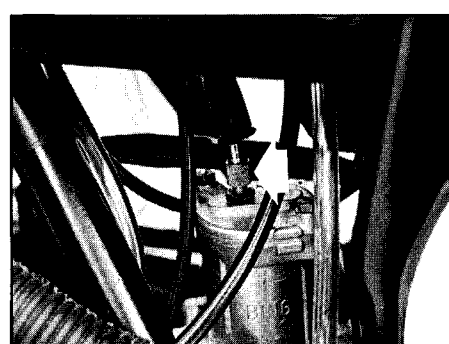
3-1



3-3



4-1



4-2

3. Adjust idle speed screw in or out for desired idle speed. (Approx. 1000 R.P.M.).

4. Turn air mixture screw in and out (within 1/4 turn of basic setting) to achieve smoothest idle possible.

5. Re-adjust idle speed if necessary.

4. Adjust throttle and injector pump synchronization

1. Loosen the throttle cable adjuster (at twist grip) to provide maximum slack.

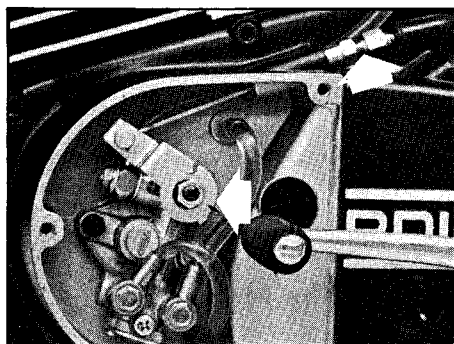
2. Using the cable adjuster on the carburetor top plate, set cable slack to 1/16" (1.6mm).

3. Using pump cable adjuster, adjust cable to align pump marks as shown.

4. Adjust throttle cable (at twist grip) to provide 1/16" slack. (1.6mm).

Note: Throttle action must be free to snap back to closed position.

"Return" action will be impeded if twist grip assembly is pushed too far onto handlebar.



4-3

5. Clutch adjustment

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

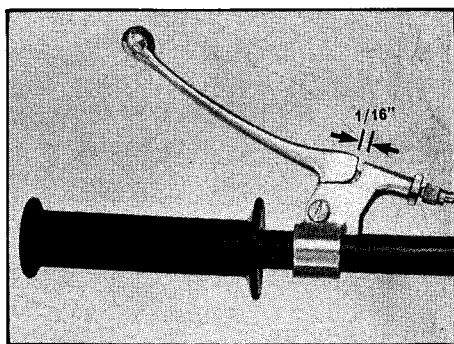
2. Remove the access plug and loosen the 4mm set screw.

3. Turn the 8mm clutch adjusting screw in and out to locate the point of contact with release bearing, then turn screw 1/8 turn out (counterclockwise).

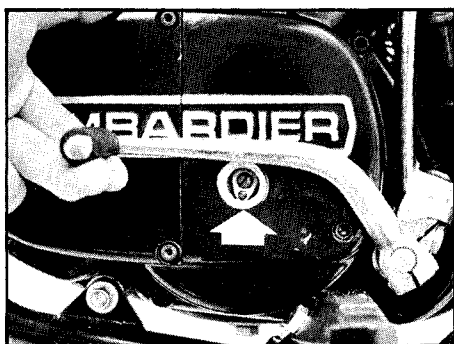
4. Carefully tighten the 4mm set screw to lock the adjustment.

5. Replace the access plug.

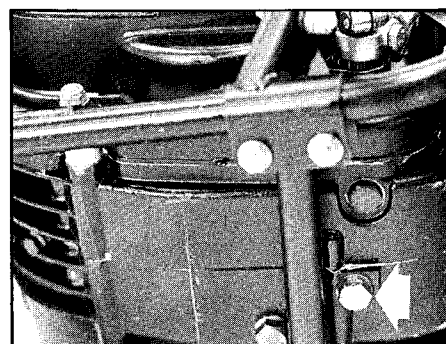
6. Adjust the cable adjuster to provide 1/16" (1.6mm) slack.



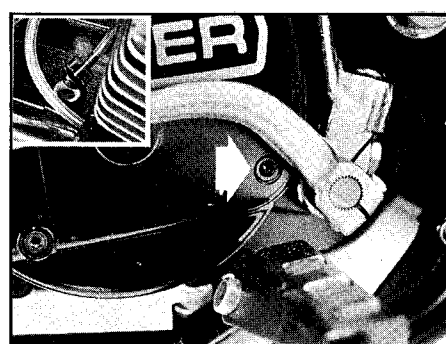
5-1



5-2



6-1



6-4



7-3

6. Transmission oil change

1. Remove the drain plug and completely drain oil.

2. Replace the drain plug.

Note: Do not cross-thread or over-tighten.

3. Remove the filler/vent plug and refill the transmission with approximately 1200cc of SAE 80 gear oil until oil reaches level orifice.

Note: Hold motorcycle upright to check oil level.

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

7. Air filter

The engine performance and reliability depends greatly on the condition of the air filter and the importance of frequent servicing cannot be over-stressed.

1. Remove the seat, the air filter element and the rubber shield taped to the frame.



Note: Do not allow dirt to fall into air box inlet.

2. Remove the filter screen, then wash filter element, the rubber shield and around the air box inlet with solvent.

3. Apply a liberal coat of grease around the neck of the inlet and tape (e.g. "3M" duct. tape) the rubber shield into place.

4. Apply a liberal coat of grease on the shield and around the inlet.

5. Dry the filter element, then apply a liberal quantity of filter oil (SAE 50 engine oil) and gently wring out any excess oil.

6. Fit the screen into the element and install the filter and the seat.

8./9. Fuel and oil filters

Dirty filters may restrict fuel or oil supply thereby causing adverse engine conditions.

1. Carefully remove the filters from the plastic hoses and flush them with solvent in the reverse direction of flow (see arrow on filter). If filters cannot be cleaned, they must be replaced.

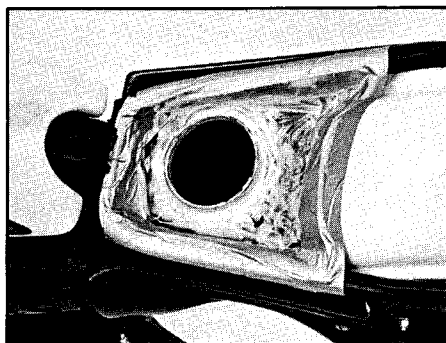
Note: Fuel control valve must be at "O" (OFF) position.

Plug oil supply hose to prevent loss of oil.

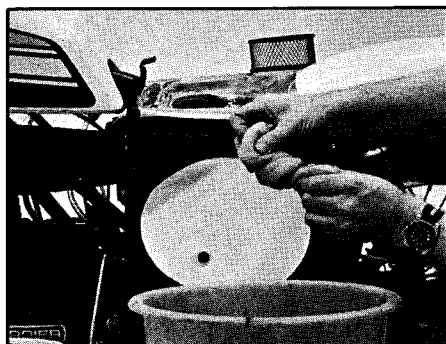
2. Replace the filters in proper flow direction.



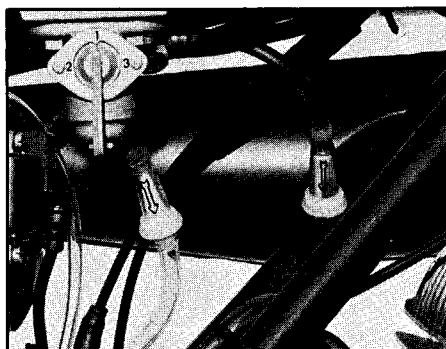
Note: Handle filters with caution to prevent damage.



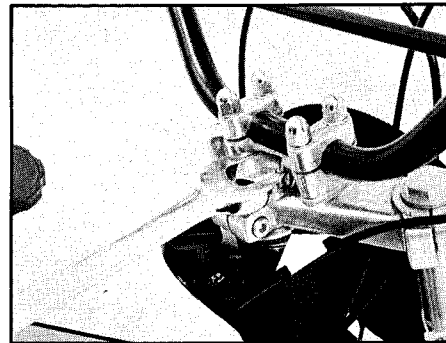
7-4



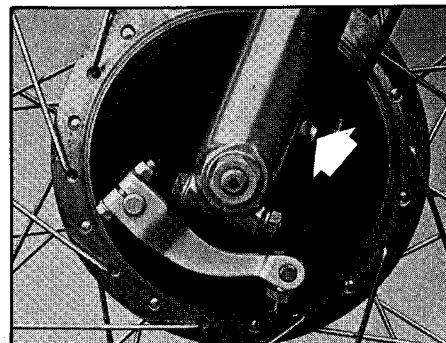
7-5



8-1



10-1



12-1

10. Steering stem adjustment

1. Loosen the stem top nut and the 5 allen head screws retaining the upper crown.

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

3. Tap upper crown down against adjuster nut then tighten top nut and the 5 clamp screws.

11. Wheel bearing inspection

1. 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.

12. Fork oil change

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

1. Remove fork drain plug and top nut.

2. Allow fork to drain completely, then replace drain plug.

3. Replenish fork oil with 185cc of SAE 10W30 motor oil.

Note: If forks are dismantled and completely cleaned, replenish oil with 200cc.

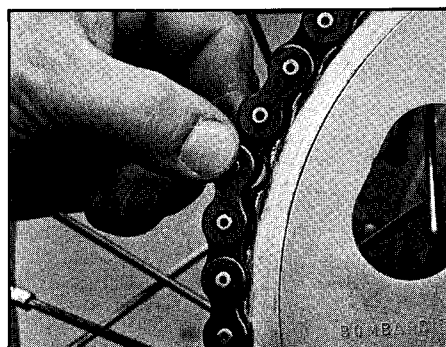
4. Replace fork top nut.

5. Repeat the procedure for the other fork leg.

13. Spokes and sprocket bolts

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

Note: Incorrect spoke tightening can cause rim damage. See your CAN-AM dealer for assistance or refer to the CAN-AM Service Manual.



14-2

14. Clean and lubricate drive chain

1. With the frame supported on a stand or box to hold the rear wheel clear of the ground, rotate the wheel and clean the chain using a stiff brush and solvent.

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

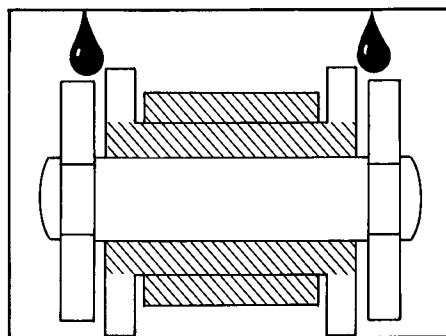
3. Wipe or blow the chain dry, then, while rotating the wheel, apply a good quality chain lubricant to the rollers and side plates.

Note: Ask your CAN-AM dealer for chain lube.

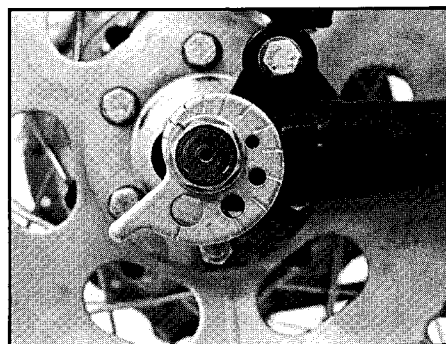
15. Chain adjustment

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

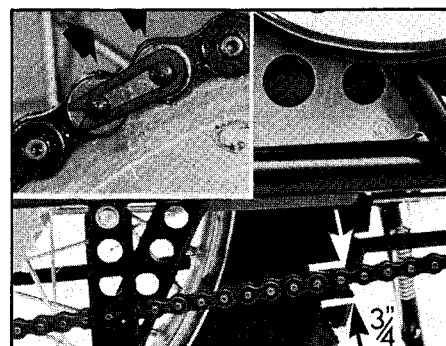
Note: Alignment marks must be the same on each side of wheel.



14-3



15-1



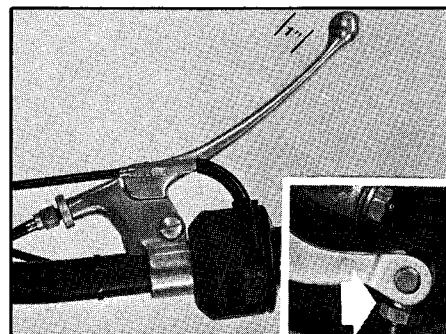
15-2

2. Adjust chain slack to $\frac{3}{4}$ " (1.9mm).

Note: If chain is replaced, connector clip must be installed as shown.

16. Front brake adjustment

1. Completely loosen the brake cable adjuster (at handlebar), then, using the adjuster located at the brake plate, adjust the cable to provide 1" of free lever travel. (25.4mm).



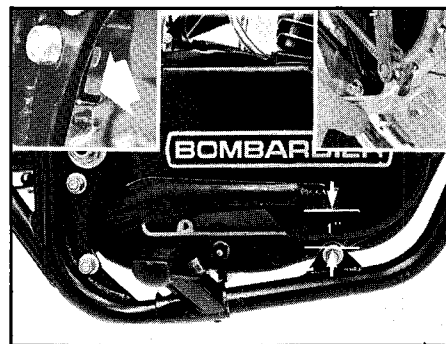
16-1

Note: Use adjuster at handlebar for final adjustment.

Rear brake adjustment

1. Turn the adjusting nut until the brake pedal free travel is 1" (25.4mm).

2. The brake pedal height can be adjusted as desired by moving the stopper. (see arrow).



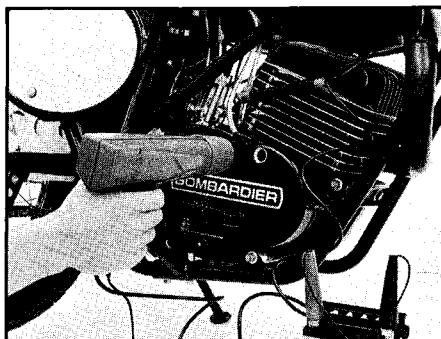
16-1A

17. Lubricate cables and controls

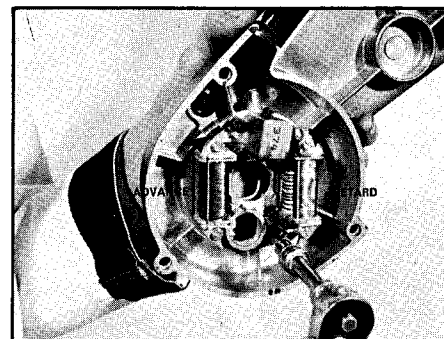
1. Apply a small quantity of oil to all cables, pivot points, etc.

18. Engine timing

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.



18-1



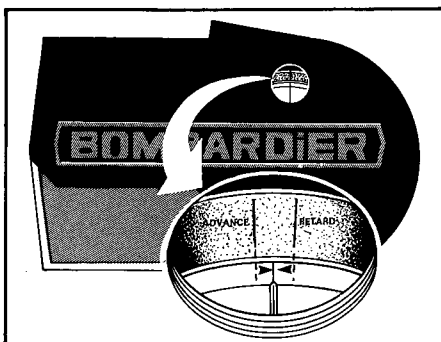
18-4

Examples of suitable timing lights:

- Sun PTL 45
- Snap-on MT 215B
- Bosch EFAW 169A

1. Remove the timing inspection plug, (see arrow) and connect the timing light pick-up to the high tension lead as shown.

2. Start the engine and allow it to warm up.



18-3

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

3. Holding the engine at a steady 6000 R.P.M., point the timing light beam straight into the inspection hole. If the timing is correct, the timing marks will align as shown.

Note: Use a tachometer for accuracy.

4. If the timing is not correct:

- a) Note if advanced or retarded and mark the amount of misalignment. (see dotted line). 18-3

- b) Stop engine.

- c) Remove magneto cover.

Note: Do not lose the 3 locating dowels.

- d) Loosen the 2 allen screws.

- e) Move the stator plate in the advance or retard direction to correct the misalignment.

- f) Tighten the 2 allen screws.

5. Replace the magneto cover, start engine, and at 6000 R.P.M., re-check the timing mark alignment.

6. Repeat this procedure until timing marks are perfectly aligned at 6000 R.P.M.

19. General nut and bolt inspection

Check all nuts, bolts and fasteners and tighten them as required.

20. Piston ring replacement

Although your CAN-AM will run well for many trouble-free miles, it will, if used as a motocross racer, or for similar off-road competition, require new piston ring/s periodically to maintain its high level of performance.

Maintenance is your key to top performance and dependability.

Note: To perform this replacement, you will need:

A medium screwdriver.

A small screwdriver.

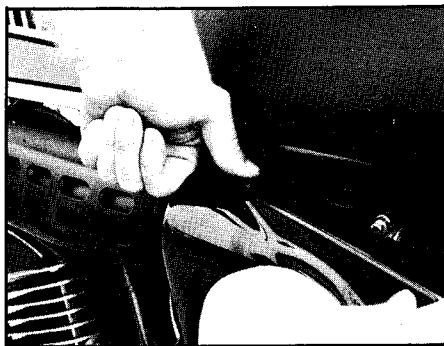
10, 11, 12 and 13mm sockets.
(thinwall — $\frac{3}{8}$ drive).

A small flat file.

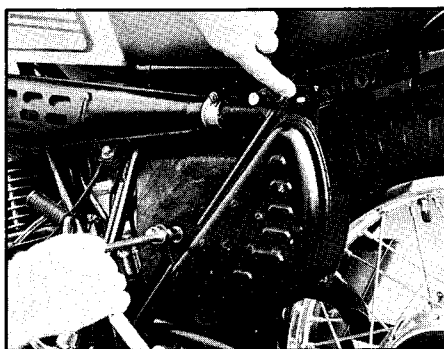
Feeler gauges.

A torque wrench.

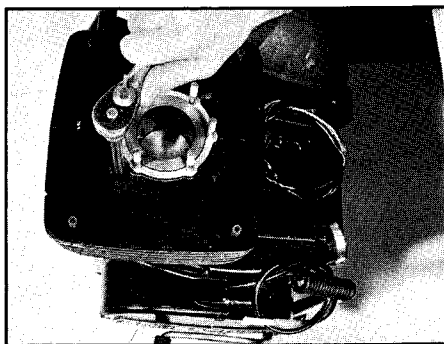
Medium emery paper.



20-2



20-3



20-5

Parts required:

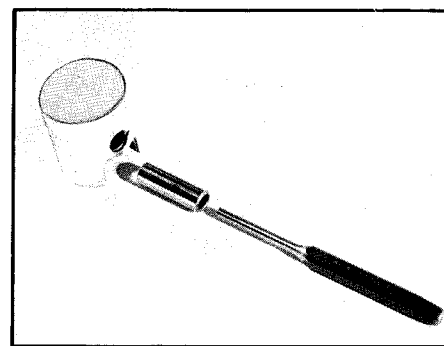
- 1 — ring (or set).
- 1 — cylinder base gasket.
- CAN-AM injector oil.

1. Thoroughly degrease and wash the motorcycle.
2. Remove the left side cover and left shock absorber.
3. Remove the muffler and exhaust pipe.

Note: Do not lose the 2 special fiber washers.

4. Gradually, and in a criss-cross sequence, remove the cylinder head nuts, then remove head. Note the head shim/s used.

5. Gradually, and in a criss-cross sequence, remove the cylinder base nuts, then lift cylinder up and off being careful not to damage piston or permit dirt to enter crankcase.



20-6

6. Place a clean rag in the crankcase cavity and, using a small screwdriver, remove one piston circlip, then remove piston pin, piston and bearing.

Note: Piston pin may be tapped out but connecting rod must not absorb any impact.

7. Remove the piston ring/s, break in half, and, using the machined end of one ring section, carefully scrape any deposits from ring groove/s.

8. Using a hone or medium emery paper, lightly sand the bore to remove any glaze but do not sand with a motion parallel with the bore.

Note: Maximum allowable piston clearance is:

- 125cc — .005" (.13mm)
- 175cc — .0055" (.14mm)

Minimum piston clearance is:
125/175cc — .0025" (.064mm)

9. Scrape any deposit off piston crown and inspect piston for cracks or seizure marks.

Note: Slight seizure marks should be lightly filed away but if seizure has been severe or piston is cracked, piston must be replaced.

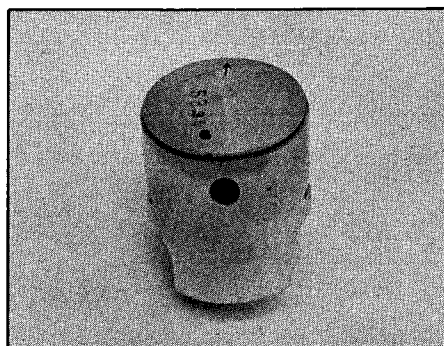
10. Remove all traces of the base gasket and fit a new gasket lightly greased.

11. Lubricate piston pin bearing with injection oil and fit bearing, piston and piston pin to connecting rod. Remove the rag from the crankcase cavity.

Note: Arrow on piston crown must point towards front of motor.

Ring locating pins must point towards rear of motor.

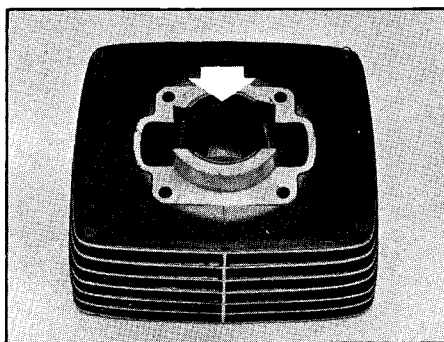
Do not forget to fit new circlips.



20-11

12. After checking piston ring end gap (.006"/.15mm) fit ring/s to piston, liberally apply oil to piston and cylinder bore, then carefully slide cylinder down into place while compressing piston ring/s.

Note: Ensure adequate ring end clearance at locating pin and that ring is properly positioned in ring groove.

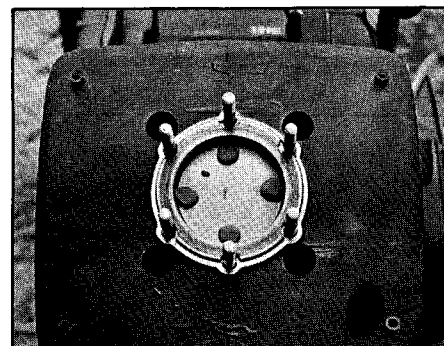


20-12

13. Gradually, and in a criss-cross sequence, torque cylinder base nuts to 20 ft./lbs. (2.8 k.p.m.).



20-13



20-14

14. **Note:** If piston has been replaced, combustion chamber squish area clearance must be checked to prevent possible engine overheating problems.

Bring the piston to $\frac{1}{4}$ " of TDC and place 4 small balls of clay on the piston crown.

15. Install the cylinder head and, using a criss-cross sequence, gradually torque the cylinder nuts to 12 ft./lbs. (1.6 k.p.m.).

16. Using the magneto side crankshaft nut, rotate the engine past TDC.

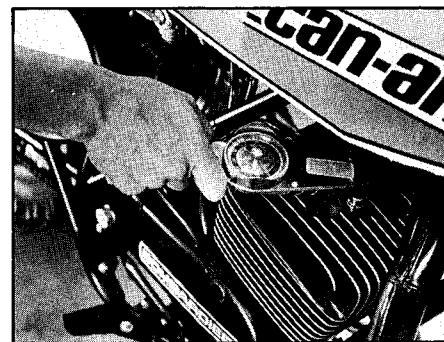
17. Remove the head, cut each flattened clay pad in half and measure the thickness of the pads.

18. Using the aforementioned measurement, calculate the head shim /s required to provide a squish area of $.030" \pm .010"$ (.77mm \pm .26mm).

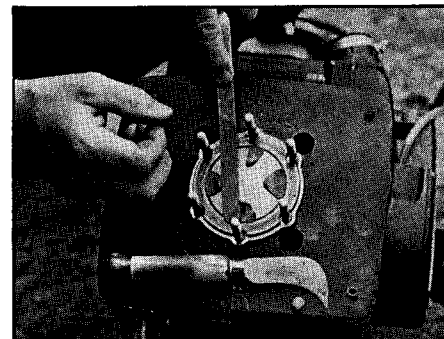
Note: The head shim is not a head gasket and needs not be replaced unless damaged.

19. Fit the necessary shim/s (if required) and, using a criss-cross sequence, gradually torque the head nuts to 12 ft./lbs. (1.6 k.p.m.).

20. Install exhaust pipe, muffler, rear shock absorber and left side cover.



20-15



20-17



Note: Muffler joint packing must fit tightly into exhaust pipe.

SUSPENSION

Although your motorcycle has been designed for an average rider's weight and for average riding conditions, the suspension of your motorcycle can be adjusted to change its characteristics to suit your personal preference; but it should be remembered that generally speaking, the suspension should be the softest possible, with occasional bottoming occurring only in the roughest situation.

1. FRONT SUSPENSION

1. Damping

The fork damping is directly affected by the oil viscosity; the higher the viscosity, the stiffer the damping. Your CAN-AM motorcycle is supplied with a special blend of SAE 10/30 fork oil as it is considered best for normal use.

Recommended temperature range:
above 32°F — SAE 10W30
below 32°F — SAE 5W30

2. Spring rate

To change the spring rate, it is necessary to change the fork springs.

Standard springs: 16 pounds

Optional springs: 18 pounds (progressive)

14/24 pounds (progressive).

3. Steering head height

The height of the steering head can be changed by moving the fork legs to a different position in the fork crowns. Though this will not affect the spring rate or damping, it will

alter the motorcycle center of gravity and ground clearance by lowering the front end.

Caution: Do not lower the front end more than 1" without altering fork travel. (25.4mm).

2. REAR SUSPENSION

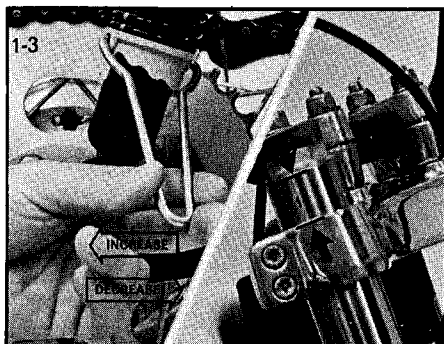
The spring preload of the rear suspension can be adjusted to conform to your personal preference.

1. To adjust the spring preload, the cam collar can be turned right to increase, left to decrease. A high spring preload will increase the machine carrying capacity.

2. If this adjustment is not sufficient, optional springs can be installed.

Standard springs:
55 pounds

Optional springs:
65 pounds
75 pounds
45/70 pounds (progressive)
60/90 pounds (progressive)



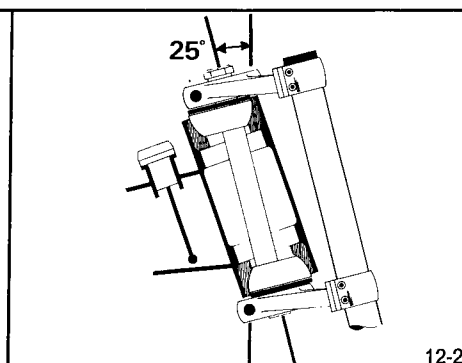
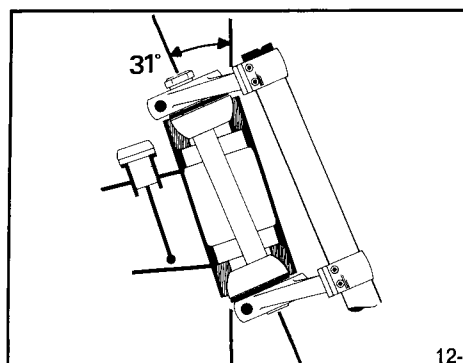
FORK ANGLE ADJUSTMENT

The standard fork angle on your CAN-AM is 30° and provides the optimum steering and handling for most types of riding. However the fork angle is adjustable from 25° to 31° inclusive, to provide fork angles that may be more suitable for specific racing or competition applications.

1. An extended fork angle provides greater stability at high speeds.

2. A retracted fork angle provides more maneuverability in restricted areas or on trials sections.

Note: Incorrect fork angle may cause adverse handling conditions.



The following table gives a list of cones to be used to attain a given fork angle.

Refer to the CAN-AM Service Manual for instructions on fork angle changes.

Upper Bearing

Lower Bearing

FORK ANGLE	CONE KEY POSITION	CAN-AM PART No.	CONE ANGLE	CONE KEY POSITION	CAN-AM PART No.	CONE ANGLE
31°	FORWARD (F)	746 — 010 — 300	+ 1 1/2	REARWARD (R)	746 — 010 — 300	+ 1 1/2
30 1/2°	F	746 — 010 — 300	+ 1 1/2	R	746 — 010 — 200	+ 1
* 30°	F	746 — 010 — 200	+ 1	R	746 — 010 — 200	+ 1
29 1/2°	F	746 — 010 — 200	+ 1	R	746 — 010 — 100	+ 1
29°	F	746 — 010 — 100	+ 1/2	R	746 — 010 — 100	+ 1/2
28 1/2°	F	746 — 010 — 100	+ 1/2	R or F	746 — 010 — 000	0
28°	F or R	746 — 010 — 000	0	R or F	746 — 010 — 000	0
27 1/2°	R	746 — 010 — 100	- 1/2	F	746 — 010 — 000	0
27°	R	746 — 010 — 100	- 1/2	F	746 — 010 — 100	- 1/2
26 1/2°	R	746 — 010 — 200	- 1	F	746 — 010 — 100	- 1/2
26°	R	746 — 010 — 200	- 1	F	746 — 010 — 200	- 1
25 1/2°	R	746 — 010 — 300	- 1 1/2	F	746 — 010 — 200	- 1
25°	R	746 — 010 — 300	- 1 1/2	F	746 — 010 — 300	- 1 1/2

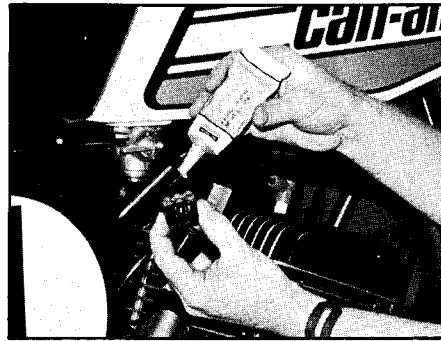
* STANDARD SETTING

IGNITION SYSTEM

Your CAN-AM[®]MX-1 motorcycle is fitted with a Bosch capacitor discharge ignition system which consists of a magneto, an electronic control unit and an emergency stop switch.

Maintenance

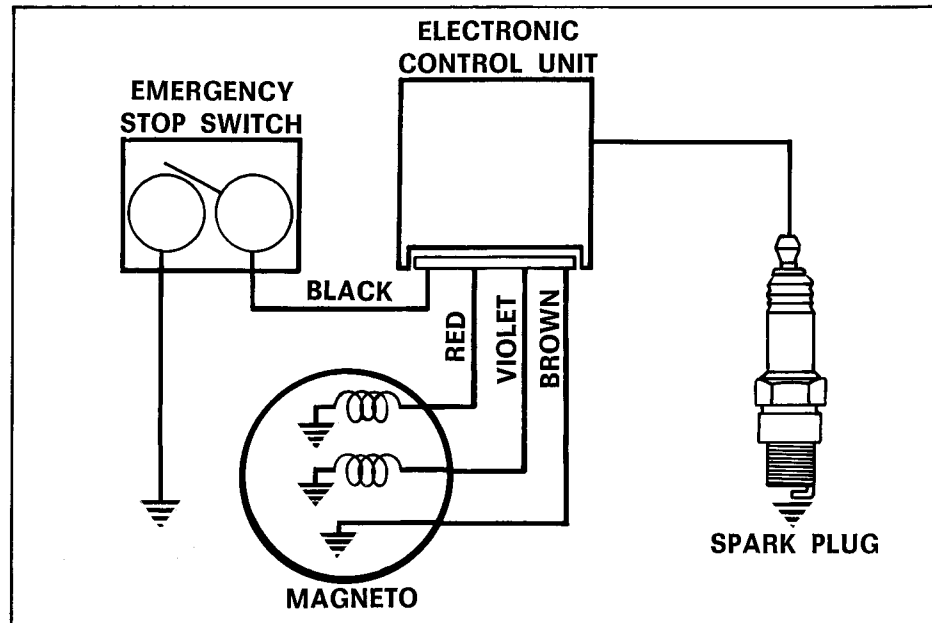
1. Check ignition timing (adjust if necessary).
2. Seal the magneto cover with silicone sealant to ensure proper waterproofing.
3. Regularly check all electrical connections for dirt or corrosion.
4. Pack the electronic control unit connector block terminals with silicone compound to ensure proper waterproofing.



13-4

cone compound to ensure proper waterproofing.

Note: The magneto and electronic control unit require no maintenance.

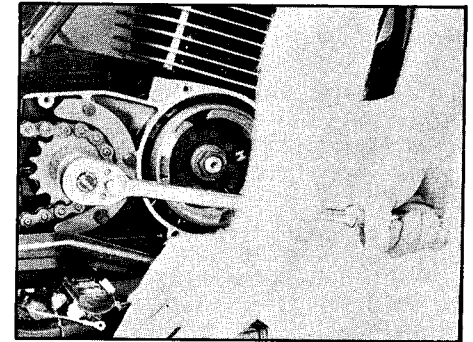


GEARING

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

CAN-AM has made a choice of drive chain sprockets available from your CAN-AM dealer so you can adjust the gearing of your motorcycle to your particular needs.

The table below gives you the combinations and sprockets available, their part numbers and the respective ratios.



14-1

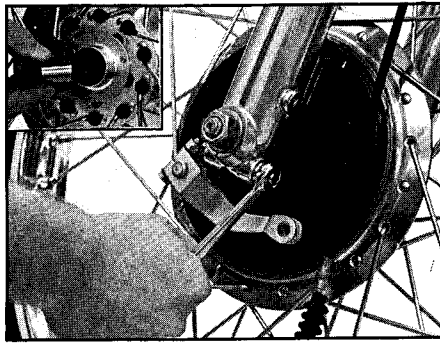
DRIVE SPROCKET RATIOS

Rear Wheel Sprocket (and part number)	Engine Sprocket		
	13T (420-236-950)	14T (420-236-951)	15T (420-236-952)
38 (743-043-021)	2.92	2.71	2.53
40 (743-043-020)	3.08	2.86	2.67
42 (743-043-010)	3.23	3.00	2.80
44 (743-043-011)	3.38	3.14	2.93
46 (743-043-012)	3.54	3.29	3.07
48 (743-043-013)	3.69	3.43	3.20
50 (743-043-014)	3.85	3.57	3.33
52 (743-043-015)	4.00	3.71	3.47
54 (743-043-016)	4.15	3.86	3.60

WHEEL REMOVAL

1. Front

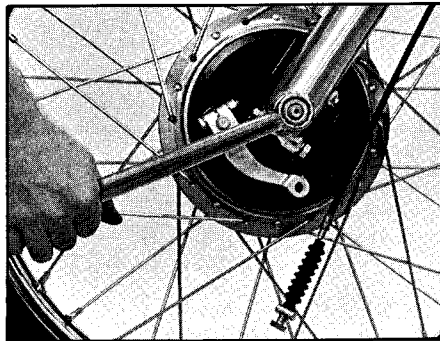
1. Remove the brake cable adjusting nut and free the cable from the back plate. Replace rubber boot, barrel and nut on the cable to prevent loss.
2. Remove the axle nut.
3. Loosen the two (2) axle clamping bolts.
4. Pull the axle out and withdraw the wheel.



1-3

Installation

5. Make sure the spacer on one side and the brake plate on the other are properly installed on the hub.
6. Install the wheel and insert the axle from magneto (right) side.
7. Tighten the axle nut.
8. Tighten the brake side clamping bolt.
9. Depress the forks two or three times to align the legs.
10. Tighten the other clamping bolt.



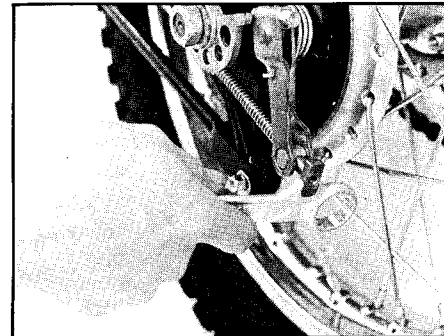
1-7

11. Install the brake cable and adjust. (See Brake Adjustment section).

WHEEL REMOVAL

2. Rear

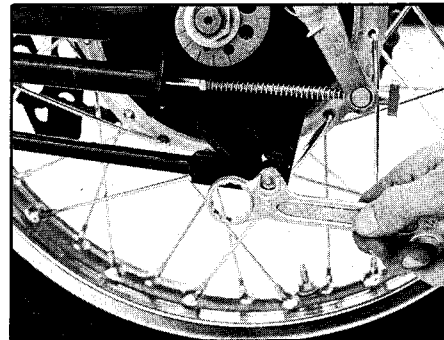
1. Remove the brake actuating rod.
2. Remove the torque arm.
3. Remove the chain master link and the chain from the wheel sprocket.
4. Remove the axle nut, the washer and the cam adjuster; pull the axle out. The wheel will then easily be removed.



2-1

Installation

5. Reverse the above procedures to install the wheel.
6. Make sure the rubber seal is properly inserted between the spacer and the backing plate.
7. After the wheel is installed, adjust the chain tension and the brake pedal free play. (refer to Brake Adjustment Section).



2-2



2-6

16. 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 CAN-AM 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 two (2) ounces 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 or block the spark plug hole with a CAN-AM storage plug No. 748-019-000 to 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 removing the fuel shut-off valve sediment bowl. 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.

OIL TANK

Fill completely to avoid rust formation.

DRIVE CHAIN

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

TIRES

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

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Engine fails to start or does not start easily.	1. No fuel is flowing to carburetor.	
	a) Clogged fuel valve.	Replace.
	b) Defective carburetor float needle. Check for worn tip.	Clean.
	c) 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 "O", turn the engine stop switch to "off" and kick start until excess fuel is expelled.
	4. Insufficient compression.	
	a) Crankcase compression leaks at oil seal.	Replace.

TROUBLE	CAUSE	REMEDY
	<ul style="list-style-type: none"> b) Crankcase compression leaks at crankcase mating surfaces. c) Worn or stuck piston rings. d) Worn cylinder. e) Rotary valve or rotary valve cover leaks. <p>5. No spark at plug.</p> <ul style="list-style-type: none"> a) Fouled plug. b) Wet plug. c) Defective magneto. d) Open or short circuit in ignition. e) Defective electronic control unit. 	<p>Repair.</p> <p>Replace.</p> <p>Rebore oversize.</p> <p>Repair or replace.</p> <p>Check for fouled or defective spark plug; remove plug, ground it to the engine head and turn the engine with the kick starter. If no spark occurs, replace the plug and, if necessary, check the following items:</p> <p>Replace.</p> <p>Dry off and try again or replace.</p> <p>Repair.</p> <p>Check for moisture at the electronic control unit connector boot. Check for corroded, dirty or broken connectors. Repair or replace.</p> <p>Replace.</p>
<p>Engine stalls frequently.</p>	<ol style="list-style-type: none"> 1. Fouled plug. 2. Restriction in the gas cap vent. 3. Clogged fuel lines. 4. Clogged carburetor jets. 5. Crankcase compression leaks. 6. Intake manifold or rotary valve cover leaks. 	<p>Repair or replace.</p> <p>Gently suck on the ventilation hole located on the bottom center of the gas cap. If restriction persists, replace the gas cap.</p> <p>Clean.</p> <p>Clean.</p> <p>Repair.</p> <p>Repair or replace.</p>
<p>Engine does not have sufficient power.</p>	<ol style="list-style-type: none"> 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. Clogged air cleaner. 7. Cracked or crushed expansion chamber. 8. Deteriorated or old fuel. 	<p>Repair or replace.</p> <p>Adjust.</p> <p>Adjust or replace.</p> <p>Clean.</p> <p>Adjust.</p> <p>Clean or replace.</p> <p>Repair or replace.</p> <p>Replace.</p>
<p>Engine overheats.</p>	<ol style="list-style-type: none"> 1. Excessive carbon deposit on cylinder head. 2. Lean fuel mixture. 3. Incorrect ignition timing. 	<p>Clean.</p> <p>Replace jet.</p> <p>Adjust.</p>
<p>Engine operation is erratic at high speed.</p>	<ol style="list-style-type: none"> 1. Excessive plug gap. 2. Defective 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, broken stinger. 	<p>Adjust or replace.</p> <p>Replace.</p> <p>Replace.</p> <p>Clean or replace.</p> <p>Adjust.</p> <p>Repair.</p> <p>Repair or replace.</p>

TROUBLE	CAUSE	REMEDY
Ignition fails to spark.	1. Fouled spark plug.	Replace.
	2. Defective electronic control unit.	Replace.
	3. Short circuit in magneto.	Replace.
	4. Defective emergency stop switch.	Replace.
Spark plug electrodes are fouled.	1. Rich mixture (rich carburation or clogged air filter).	Adjust or clean.
	2. Incorrect oil pump setting.	Adjust.
	3. Incorrect spark plug heat range.	Replace.
Spark plug electrodes are burned.	1. Incorrect heat range.	Use specified plug.
	2. Overheating engine.	See "engine overheats".
	3. Incorrect ignition timing.	Adjust.
	4. Loose spark plug.	Tighten.
	5. Lean mixture.	Replace jet.
Engine operation is erratic at low speed.	1. Carburetor air screw is improperly adjusted.	Adjust.
	2. Incorrect float level.	Adjust.
	3. Excessive spark plug gap or dirty electrodes.	Adjust or replace.
	4. Incorrect ignition timing.	Adjust.
Transmission fails to shift smoothly.	5. Defective electronic control unit.	Replace.
	6. Short circuit in magneto.	Replace.
	1. Improper gearbox oil or oil level.	Replace.
	2. Shift drum index plunger is jammed.	Repair or replace.
	3. Bent shift shaft.	Repair or replace.
	4. Bent shift forks.	Replace.
Change pedal fails to return.	5. Loose pawl positioning cam.	Repair.
	1. Broken gearshift return spring.	Replace.
Steering is hard.	2. Bent shift shaft.	Replace.
	1. Overtightened steering stem.	Adjust.
Clutch drags.	2. Broken steering stem bearings.	Replace.
	1. Improperly adjusted clutch.	Adjust.
	2. Weak clutch springs.	Replace.
Clutch slips.	3. Worn or difformed friction plates.	Replace.
	1. Improperly adjusted clutch.	Adjust.
	2. Unequal clutch spring tension.	Replace.
	3. Deformed clutch plates.	Replace.

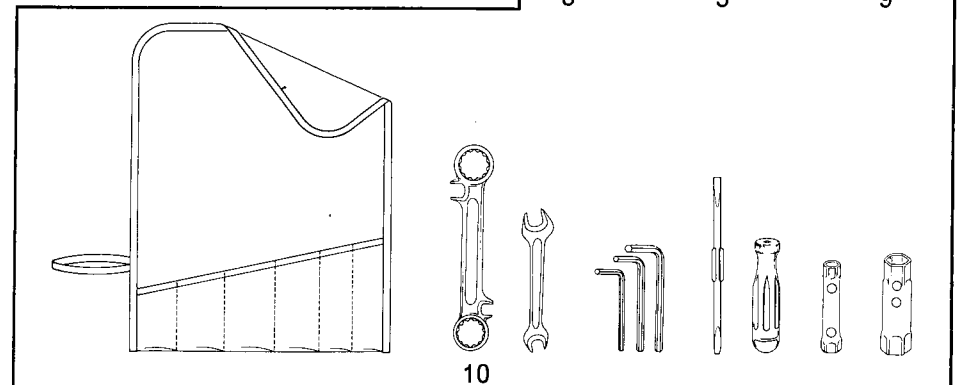
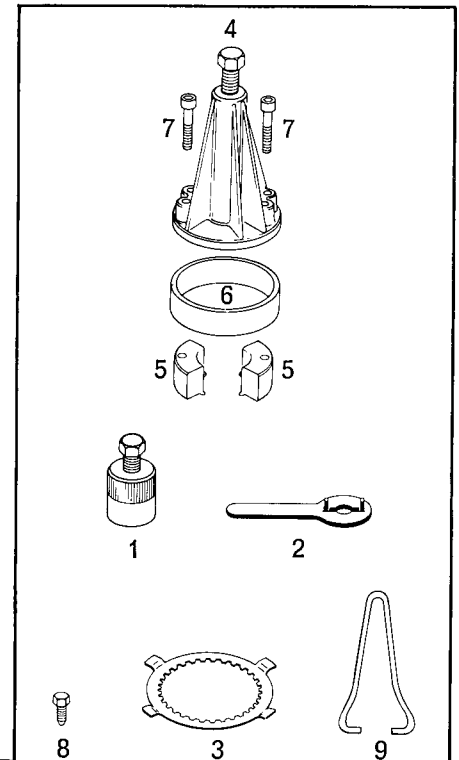
TROUBLE	CAUSE	REMEDY
Front wheel shimmy.	<ol style="list-style-type: none"> 1. Deformed rim. 2. Loose or damaged front wheel bearings. 3. Loose spokes. 4. Loose axle and related parts. 5. Unbalanced wheel. 6. Tire badly seated. 	<p>Replace or straighten.</p> <p>Replace.</p> <p>Tighten.</p> <p>Tighten.</p> <p>Repair.</p> <p>Repair.</p>
Front suspension is hard	<ol style="list-style-type: none"> 1. Collapsed springs. 2. Insufficient fork oil. 	<p>Replace.</p> <p>Drain and replenish.</p>
Rear wheel shimmy.	<ol style="list-style-type: none"> 1. Incorrect fork oil: viscosity too high. 2. Excessive fork oil. 	<p>Replace.</p> <p>Drain and replenish.</p>
Rear suspension is soft.	<ol style="list-style-type: none"> 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. 	<p>Replace or straighten.</p> <p>Replace.</p> <p>Tighten.</p> <p>Tighten.</p> <p>Repair.</p> <p>Repair.</p>
Rear suspension is hard.	<ol style="list-style-type: none"> 1. Weak springs. 2. Improper rear suspension adjustment. 	<p>Replace.</p> <p>Adjust.</p>
Braking is poor.	<ol style="list-style-type: none"> 1. Improper rear suspension adjustment. 2. Bent shock absorber rods. 3. Springs too stiff. 	<p>Adjust.</p> <p>Replace.</p> <p>Replace.</p>
Brake free play is excessive.	<ol style="list-style-type: none"> 1. Improper brake shoe contact. 2. Brake linings fouled with oil, grease or dirt. 	<p>Repair or replace.</p> <p>Replace.</p>
Brake free play is excessive.	<ol style="list-style-type: none"> 1. Worn brake shoes. 2. Worn brake cam. 3. Improper brake arm position. 	<p>Replace.</p> <p>Replace.</p> <p>Repair.</p>

TORQUE SPECIFICATIONS

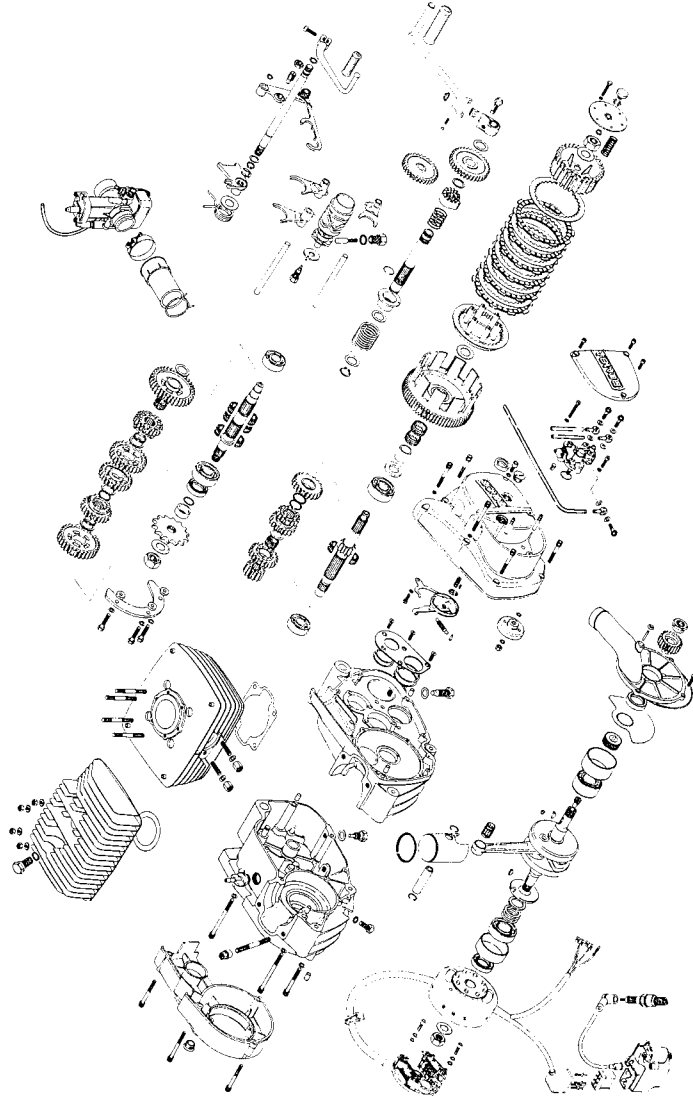
Description	Size	Used at	Tightening Torque	
			kpm	ft. lb.
Screw hex. head	M6x25	Chain guard	0,8 — 1,1	6 — 8
Screw, slot head	M5x12	Cam retaining spring	0,5 — 0,6	3,5 — 4,5
Screw	M5x16	Oil pump	0,2 — 0,4	1,5 — 3
Screw	M5x28	Oil	0,2 — 0,4	1,5 — 3
Screw, allen head	M6x11,5	Plug, oil level	0,5 — 0,6	3,5 — 4,5
Screw	M5x16	Armature plate	0,5 — 0,6	3,5 — 4,5
Screw	M8x20	Exhaust	1,8 — 2,2	13 — 16
Screw, count. slot head	M5x12	Retaining plate	0,5 — 0,6	3,5 — 4,5
Screw	M5x16	Disk valve cover	0,5 — 0,6	3,5 — 4,5
Screw, hex. head	M8x16	Drain plug, crankcase	1,8 — 2,2	13 — 16
Screw, allen head	M6x50	Clutch cover, mag. cover	0,8 — 1,1	6 — 8
Screw, hex. head	M5x25	Plate, clutch spring ret.	0,5 — 0,6	3,5 — 4,5
Screw, kickstarter stop	M12	Kick start	3,5 — 4	25 — 30
Plug, magnetic drain	M12	—	0,8 — 1,1	6 — 8
Plug, transmission index	M14	—	3,5 — 4	25 — 30
Screw, allen head	M6x35	Clutch cover	0,8 — 1,1	6 — 8
Screw	M6x40	Clutch cover	0,8 — 1,1	6 — 8
Screw	M6x45	Crankcase	1 — 1,1	7 — 8
Screw	M6x45	Magneto cover	0,8 — 1,1	6 — 8
Bolt, banjo	M6x16	Banjo	0,5 — 0,6	3,5 — 4,5
Screw, allen head	M5x12	Oil pump cover	0,5 — 0,6	3,5 — 4,5
Contact screw assy	M12	Neutral indicator	0,5 — 0,6	3,5 — 4,5
Screw, allen head	M6x70	Crankcase	1 — 1,1	7 — 8
Plug	M14	Cylinder head	3,5 — 4	25 — 30
Screw, allen head	M6x20	Shift lever	0,8 — 1,1	6 — 8
Screw, hex. head	M8x28	Kickstart hub	1,8 — 2,2	13 — 16
Nut	M12x1	Pawl positioning locking	2,8 — 3	20 — 22
Hex. nut	M16x1,5	Crankshaft M.S.	7,5 — 8	55 — 60
Nut	M8	Cylinder base	2,8 — 3	20 — 22
Hex. nut	M7	Cylinder head	1,5 — 1,6	11 — 12
Nut	M18x1,5	Crankshaft C.S.	11 — 12	80 — 90
Nut	M16x1,5	Clutch hub and engine sprocket	9 — 10	65 — 75
Lock nut	M6	Oil pump gear	0,5 — 0,6	3,5 — 4,5

SPECIAL TOOLS

1. Puller ass'y for flywheel
CAN-AM part no. 420-277-805
2. Oil pump gear wrench
CAN-AM part no. 420-277-900
3. Clutch hub locking tool
CAN-AM part no. 420-277-880
4. Puller body for crankshaft bearings
CAN-AM part no. 420-876-296
5. Ring segment for puller
(2 needed)
CAN-AM part no. 420-277-890
6. Ring for puller
CAN-AM part no. 420-977-480
7. Bolt for ring puller
CAN-AM part no. 420-840-680
8. Crankshaft locating bolt
CAN-AM part no. 420-241-960
9. Rear shock adjuster tool (S&W)
CAN-AM part no. 748-033-000
10. Owner's tool kit
CAN-AM part no. 420-277-780



ENGINE DRAWING



SPECIFICATIONS	125 MX-1	175 MX-1
CHASSIS:		
Type		Tubular double loop spaceframe with tapered back bone
Front suspension		"Betor" telescopic, 6" travel (152.4mm)
Rear suspension		Swinging arm; adjustable "S & W" hydraulically dampened
Fork angle (30° standard)		Adjustable fork angle — 25° to 31° in 1/2° increments
Brakes/front & rear		Drum, single leading shoe 6" x 1", 18.85 sq. in. (121.6 sq. cm)
Rims/front		WM1 x 21"
rear		WM2 x 18"
Tires/front		Knobby 3.00 x 21
rear		Knobby 4.00 x 18
brand		Yokohama
Overall length (standard fork angle)	84" — (213.4cm)	
Overall width	34" — (86.4cm)	
Overall height	45" — (114.3cm)	
Ground clearance	9" — (22.9cm)	
Seat height (measured at lowest point)	30" — (76.2cm)	
Wheelbase (standard fork angle)	54" — (137.2cm)	
Weight (dry)	216 lbs. (97.9kg)	
Gross weight (starting line weight)	233 lbs. (105.7 kg)	
LIQUID CAPACITIES		
Gas tank		1.9 U.S. gallons — 1.6 Imperial gallons — (7.27 litres)
Oil tank		2.3 U.S. quarts — 1.9 Imperial quarts — (2.16 litres)
Transmission		1 1/4 U.S. quarts — 1 Imperial quart — (1200cc)

SPECIFICATIONS	125 MX-1	175 MX-1
Fork (each leg)	6.8 fl. oz. (200cc) dry 6.3 fl. oz. (185cc) refill	
ENGINE		
Engine type	2 cycle, single cylinder, air cooled, with rotary valve and 5 transfer ports	
Bore	2.126" (54mm)	2.441" (62mm)
Stroke	2.126" (54mm)	2.264" (57.5mm)
Displacement	7.54 cu. in. (123.7cc)	10.60 cu. in. (173.6cc)
Compression ratio (uncorrected)	13 to 1	
(corrected)	5 to 1	
Horsepower at rear wheel	20 h.p. (S.A.E.)	25 h.p. (S.A.E.)
Lubrication	Mikuni twin port injection pump	
Starter	Primary drive, kick, "in gear" starting	
POWER TRAIN		
Primary drive	Straight cut gears	
Primary drive ratio	3.286/1 (21/69T)	
Clutch	Multi plate — oil bath	
Transmission	Constant mesh — 6 speed — rotary cam — sliding fork	
Gear ratios:		
1st	3.40 (10/34T)	
2nd	2.31 (13/30T)	
3rd	1.68 (16/27T)	
4th	1.31 (19/25T)	
5th	1.09 (21/23T)	
6th	0.96 (22/21T)	

Chain	5/8" pitch, 1/4" roller width (No. 520)
Engine sprocket	14T std.
Rear wheel sprocket	46T std.
Ratio	3.28
Overall ratio (6th gear)	10.35
CARBURETION	
Carburetor type	Bing 32mm (type V-84) concentric bowl
Carburetor number	1/32/102
Main jet	150
Needle jet	2.70
Idle jet	40
Needle setting	3rd ring position (from top)
Slide cutaway	No. 1
Idle jet screw adjust.	1 1/4 turn out
Float level	1-1/32 inch (27mm)
Air filter	Foam (oil impregnated)
ELECTRICAL	
Ignition system	Bosch electronic C.D. ignition
Maximum ignition output	30,000 volts
Ignition timing at 6000 RPM	1.3mm BTCD ± 0.2mm
	16° BTCD ± 1°
	14mm — 3/4" reach
Spark plug type	Champion N59G
Spark plug number	0.020" (0.5mm)
Spark plug gap	Bosch alternator
Lighting	55 watts
Alternator output at 6000 RPM	1.4mm BTCD ± 0.2mm
	16° BTCD ± 1°

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