

MAICO

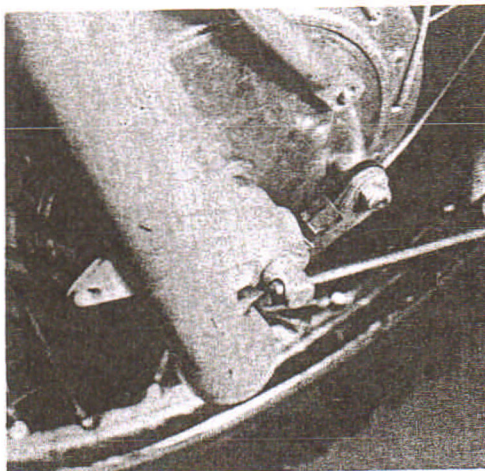
Service Manual



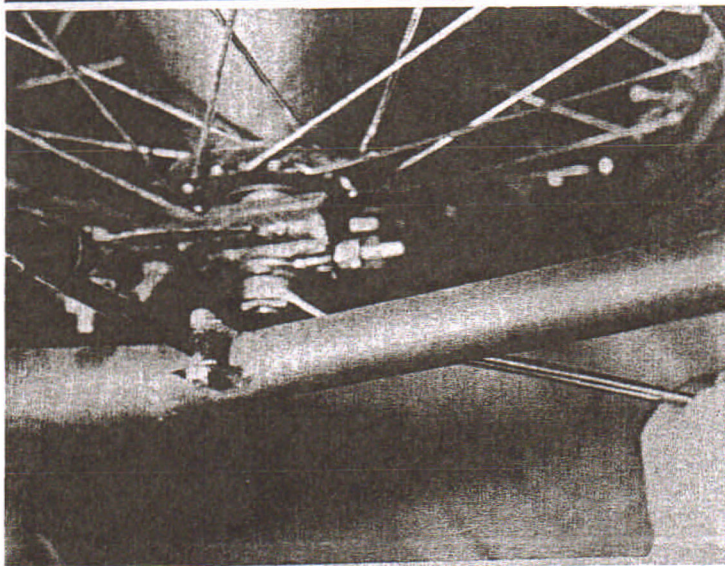
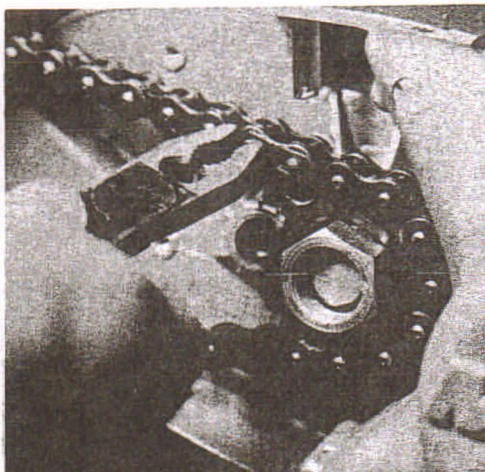
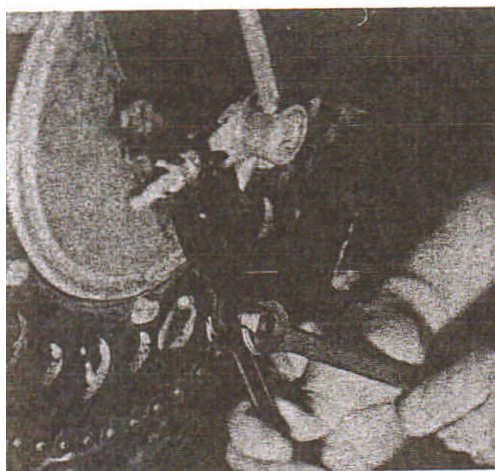
Square Barrel

Chassis

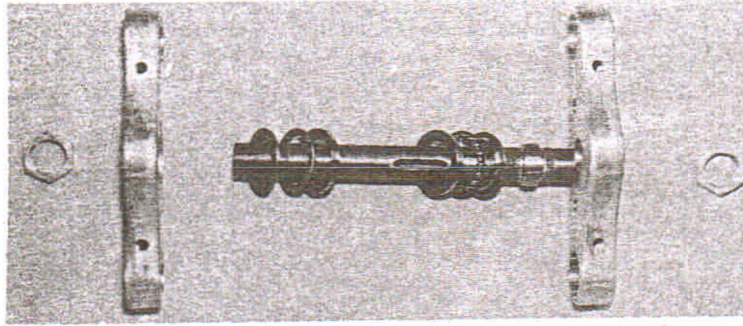
71. When removing the front wheel do not loosen the pinch bolt on the nut side. Loosen the pinch bolt on the axle side and turn the axle out.



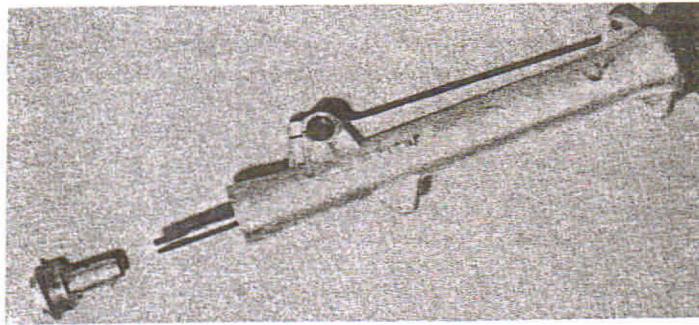
72. Removing the rear wheel
1. Remove the brake anchor nut
 2. Remove the master link and drop the chain from the rear sprocket.
 3. Remove the rear axle nut and pull the axle.



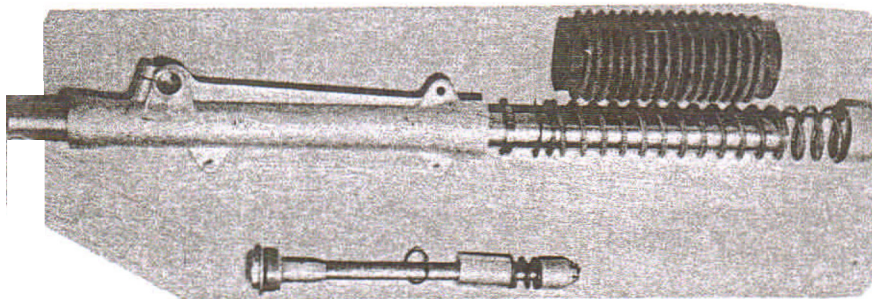
73. The fork pivot assembly. Note the different bearing races and the directions in which they are fitted.



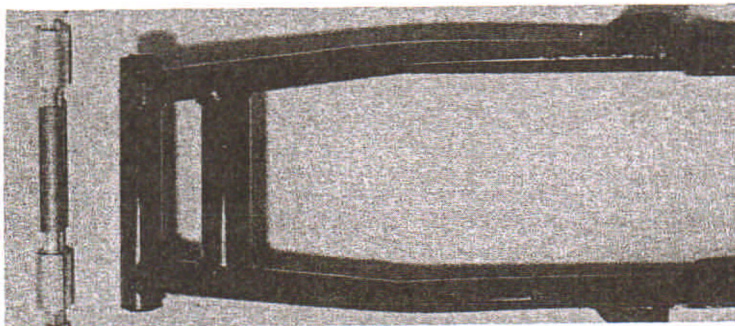
74. Unscrew the lower nut from the damper rod in order to remove the bottom slides. The removal of the bottom slides only is necessary for changing of seals, springs, rubber gaitors or damper units. In general do not remove the stancheon tubes unless absolutely necessary.



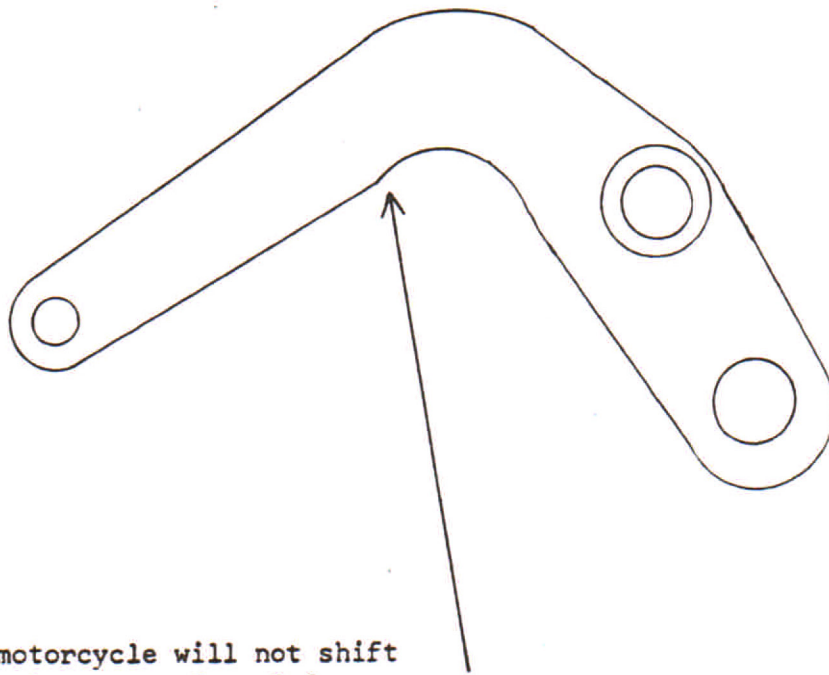
75. Fork Assembly



76. Swing arm assembly. When removing the silent bloc bushings it is suggested that the swing arm be heated and the bushing be driven out using a long drift pin and hammer.

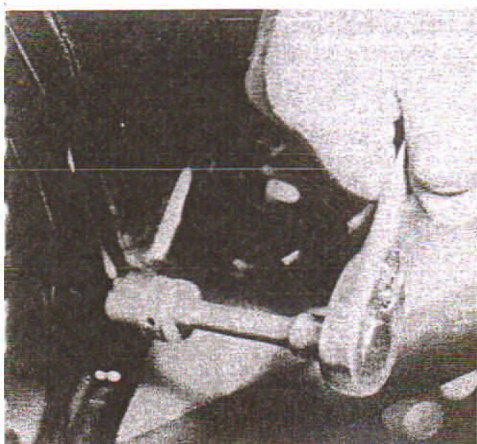


77. Shift shaft at full size showing proper bend.



Note: If motorcycle will not shift into 1st. gear from 2nd. gear increase this radius .030. This will not help getting into 1st gear for hand on helmet starts.

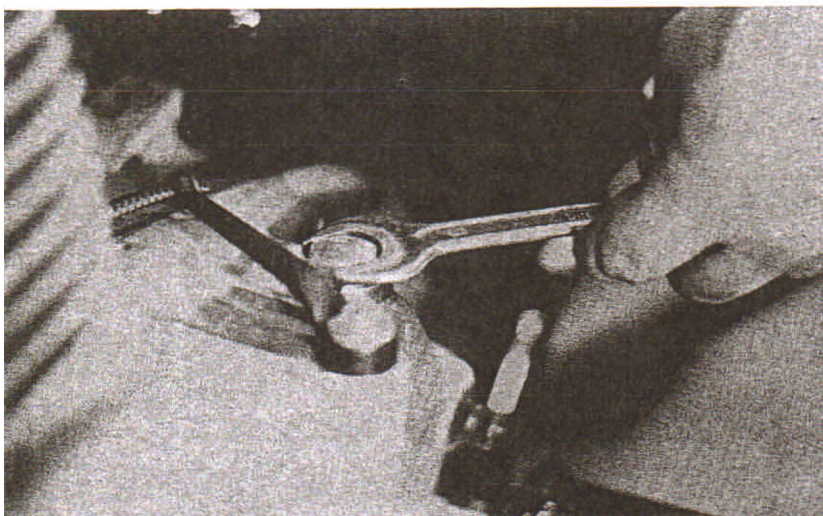
78. Tighten the swinging arm pivot bolt.
50 - 60 foot pounds torque



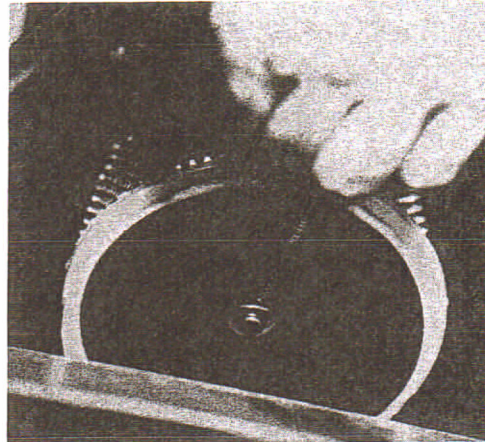
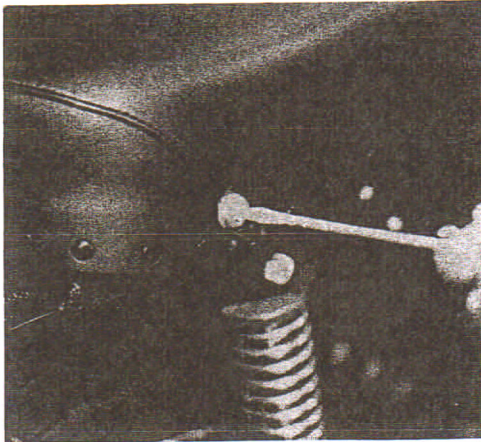
79. Check the oil level of the transmission.



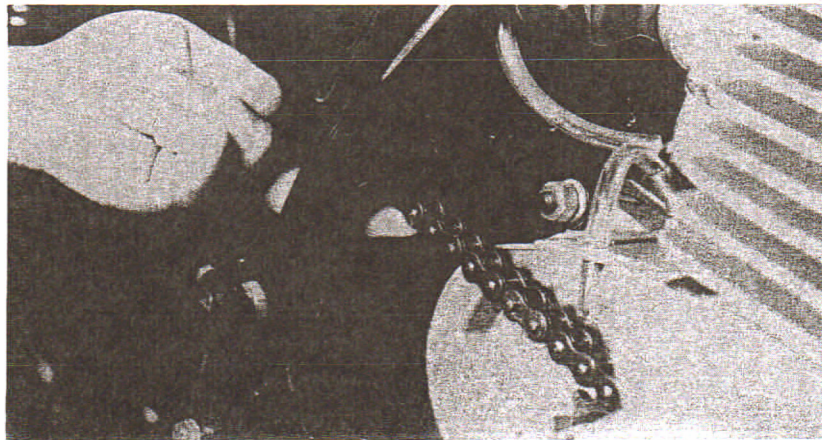
80. Fill if necessary until oil runs out of oil level hole. Use 30-40 wt detergent oil. For the 501 use only 90 wt gear lube.

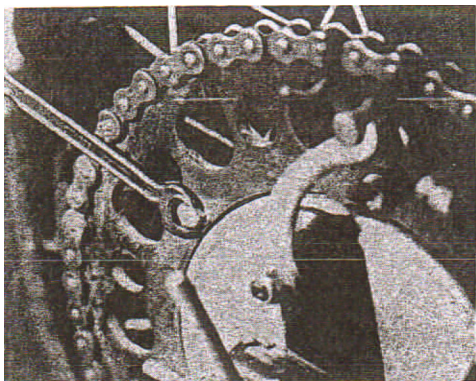


81. Check the aircleaner
 - A. Remove the seat
 - B. Wash the element in gasoline and hot soapy water and allow to dry. This is acceptable practice for both foam and gauze type.
 - C. Paper elements should be blown clean, then washed in gasoline and allowed to dry.

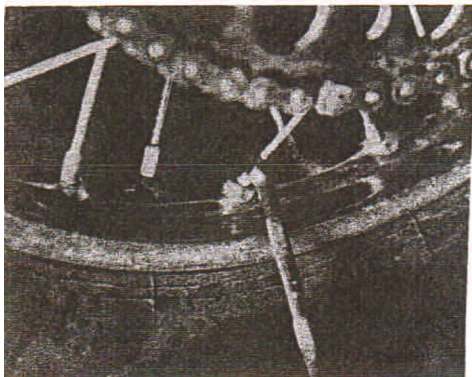


82. Check the chain for proper tightness and adjust if necessary. The chain should just about touch the cross member, as shown, to be in proper adjustment. Lubricate chain with a good quality chain lubricant.
Caution: Check to see if the rear wheel is in alignment by measuring from the center of the axle to the center of the pivot bolt on each side. The wheel is in alignment when both measurements are the same. Check the chain tightness again to be sure it is in proper adjustment.

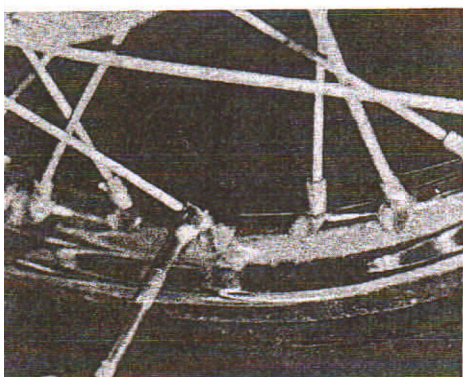




83. Tighten the rear sprocket bolts after each Moto

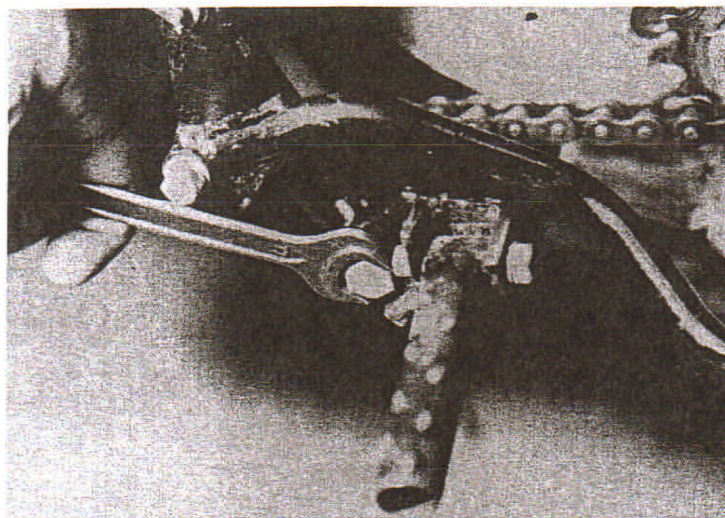


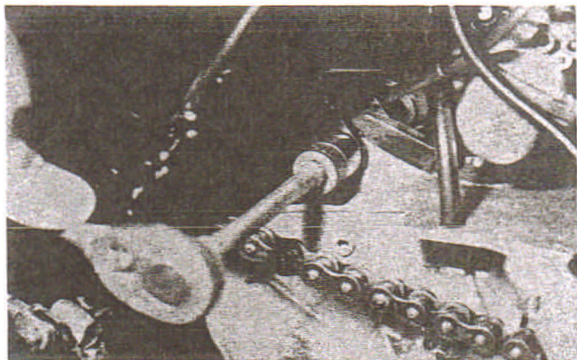
84. Tighten the rear spokes after each Moto



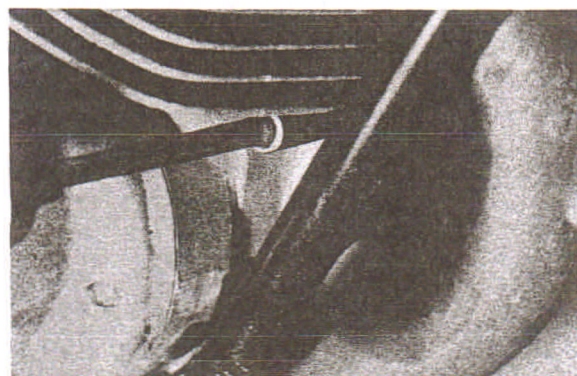
85. Tighten the front spokes after each Moto

86. Tighten the foot rest bolts.

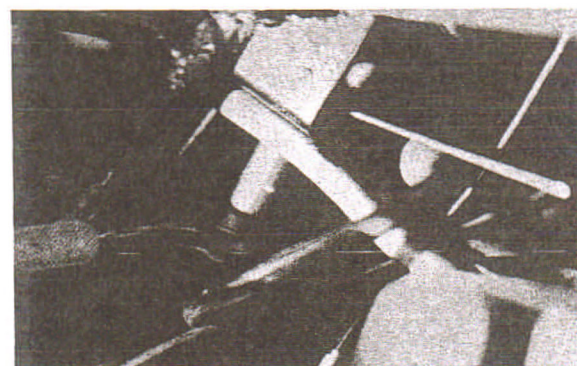




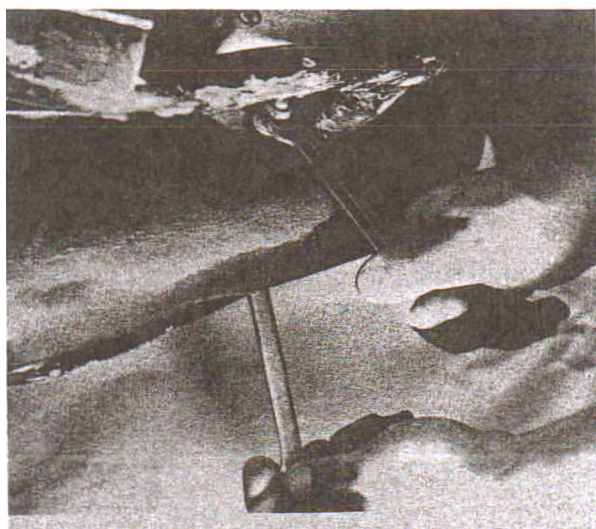
87. Tighten rear motor mount bolts after each Moto-Cross.



88. Tighten front motor mount bolt after each Moto-Cross.

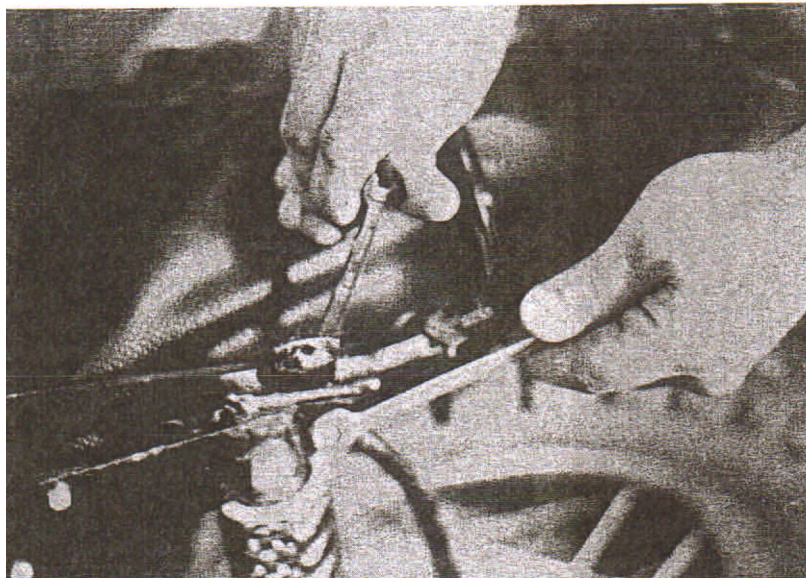
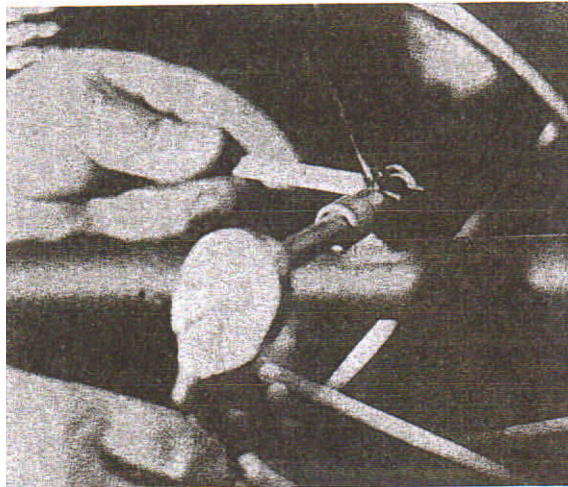
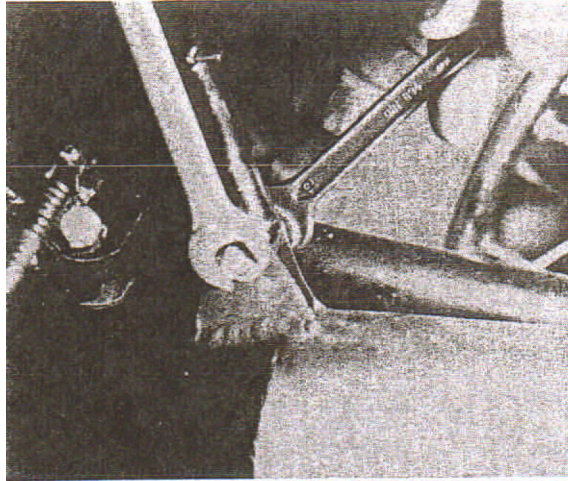


89. Tighten upper motor mount bolts after each Moto-Cross.

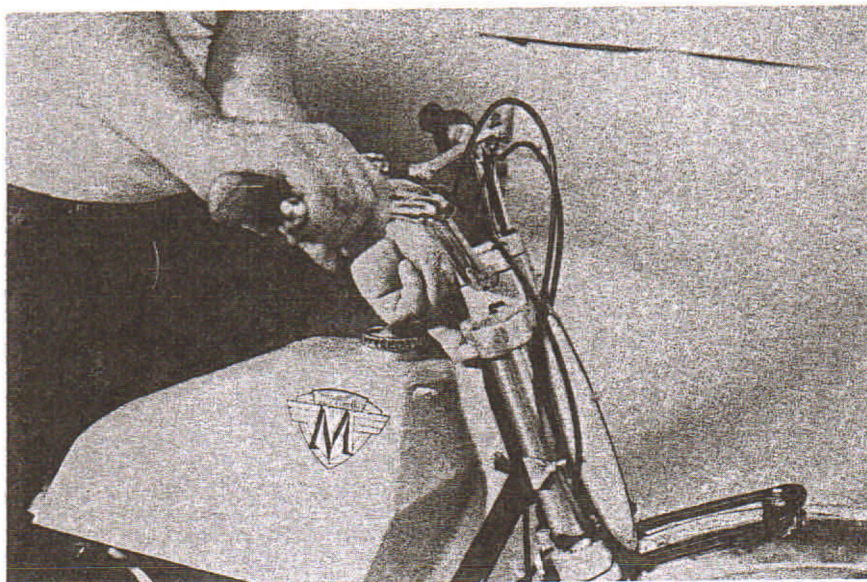
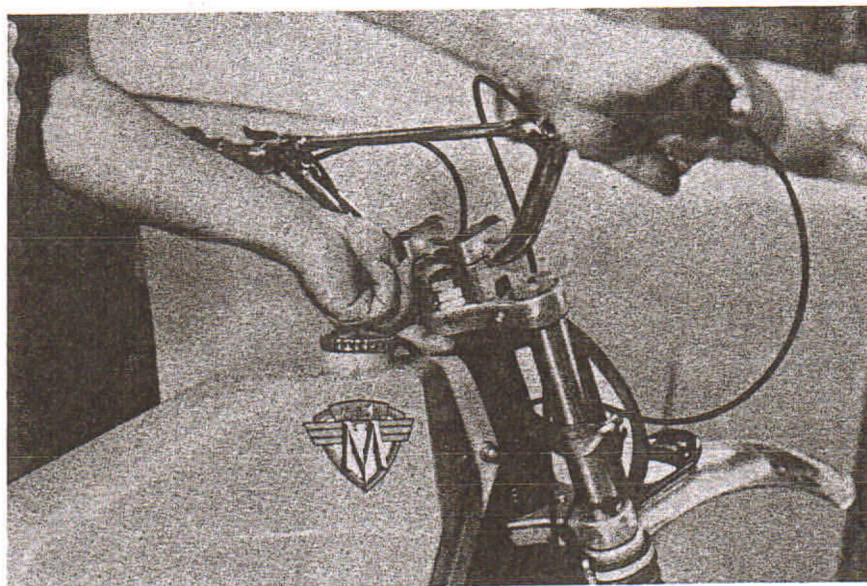


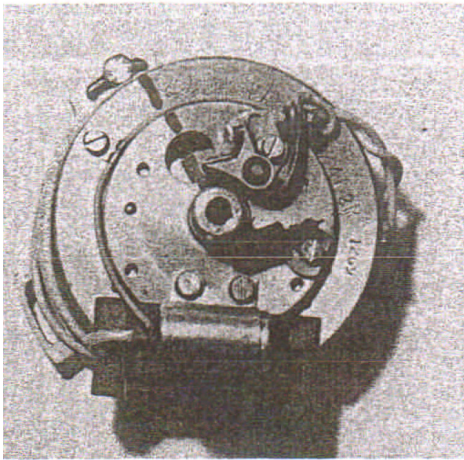
90. Tighten lower motor mount bolt after each Moto-Cross.

91. Tighten exhaust pipe bolts.



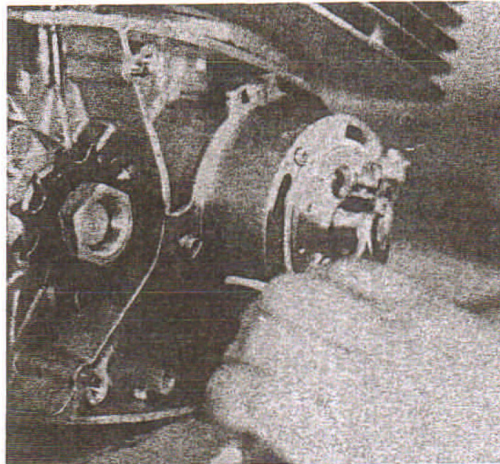
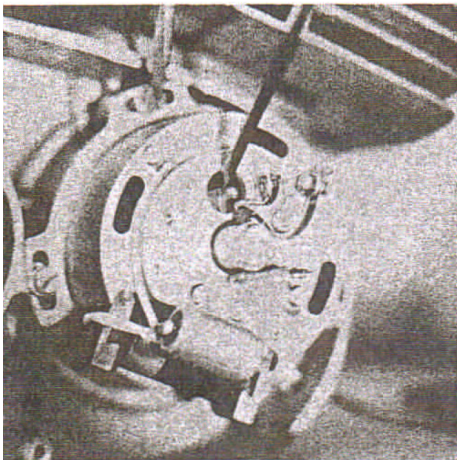
92. Check steering head bearing tightness as shown. Grasp the front brake and place fingers under the upper crown. Rock the machine up and down on the forks. Any fore and aft movement will require that the pinch bolts be loosened and the stem nuts be tightened until no fore and aft movements is evident. Do not tighten too tight. The forks shall pivot free. Retighten the pinch bolts.





93. Adjust the timing.
Set the Magneto "E" gap as shown. The brass rotor has a faint scribe line on it. The scribe line on the rotor shall be in direct line with the colored screw. The 3/4 inch hole in the magneto housing shall be centered on the scribe line. When these two items are in line the maximum flux field is developed. Now adjust the ignition points so that they open as shown below:

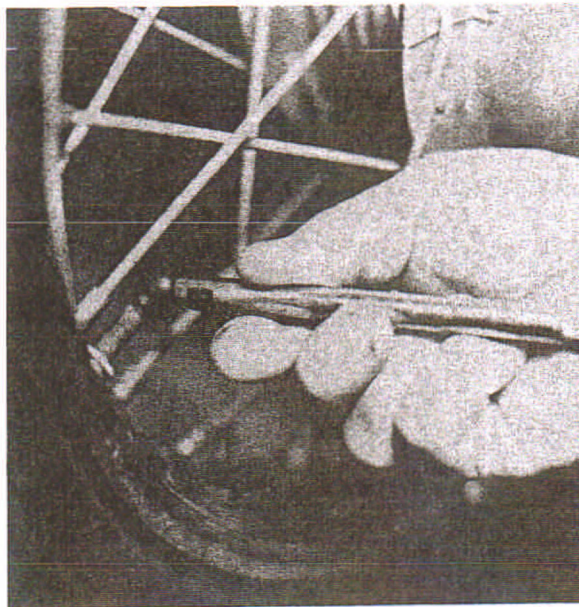
250	2.75-3.0 millimeter	BTDC
360	3.5-3.8	" "
400	3.5-3.8	" "
501	3.5-3.8	" "



Check all electrical connections especially the following:

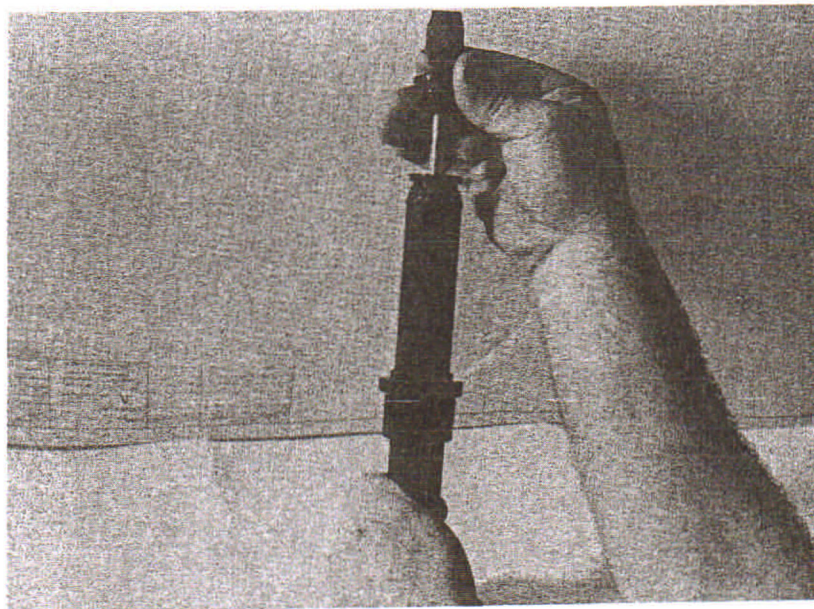
1. High tension lead at coil and at spark plug terminal.
2. If the coil is external check the connection from the points and check the ground connection both at the coil and at the frame.
3. External Coil
Terminal No. 15 is ground.
Terminal No. 4 is high tension.
Terminal No. 1 is from the points.
4. Clean the ground contact at the coil and the frame.

The point gap shall be ignored as it will automatically be .012-.016. The engine turns clockwise when viewed from the ignition side. Clean the ignition points with #400 wet or dry emery paper. Wipe the abrasive residue away and clean the points with a good contact cleaner. Finally clean the points with clean white paper until no dark residue is evident on the paper.

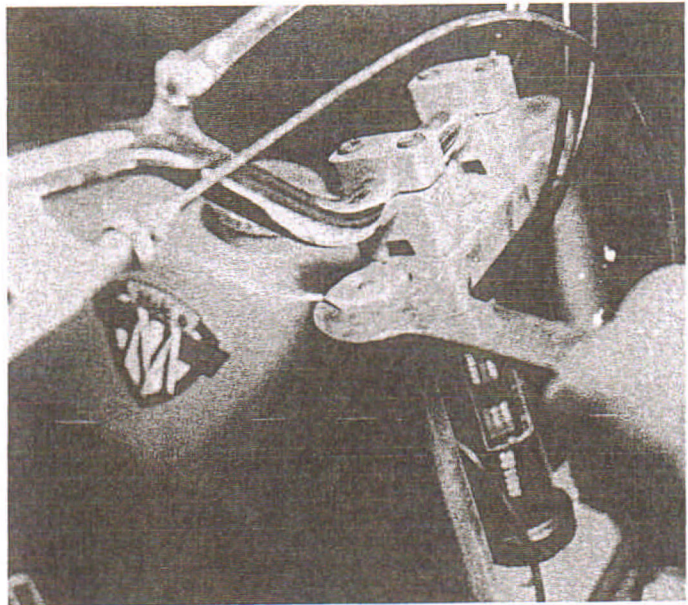
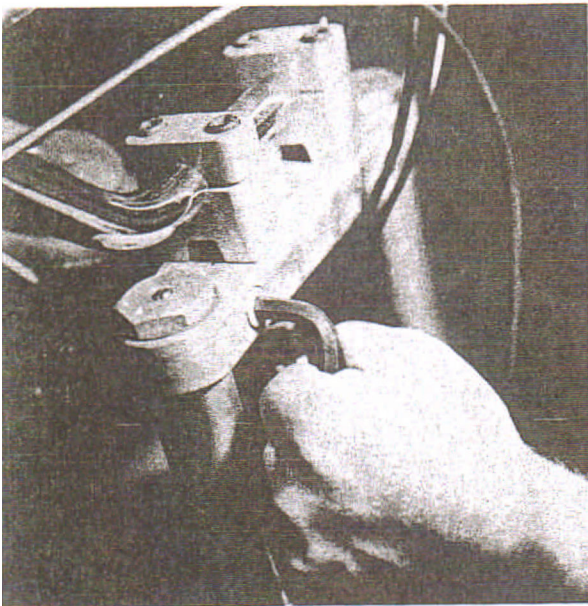
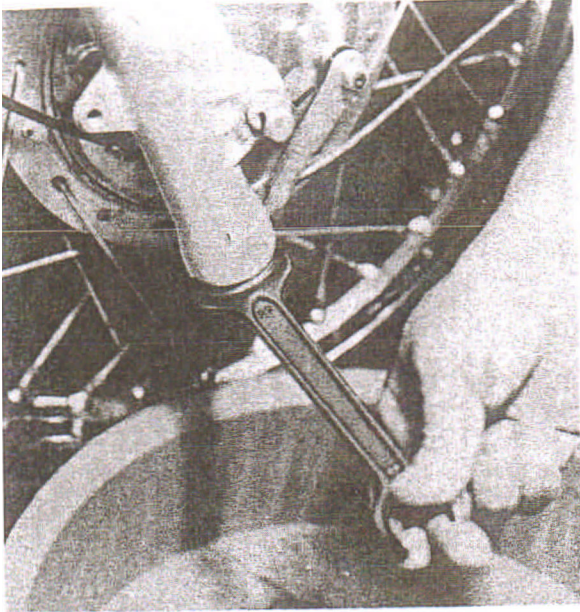


94. Check the air pressure in the tires. In general 15 psig in the front and 13 psig in the rear for dry moto cross courses; 10 psig in the front and 8 psig in the rear for mud races; and 18 psig in the front and 15 in the rear for high speed rough races such as the California desert or Enduros.

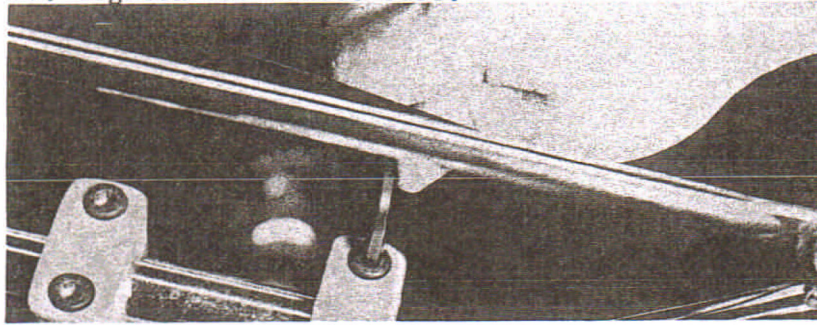
95. Check to see if the damping of the rear shock absorbers has not weakened. Weakened shock absorber action will result in loss of control



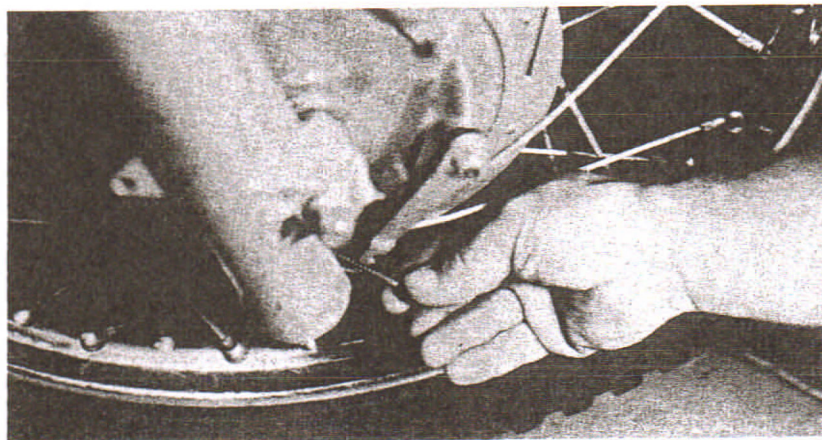
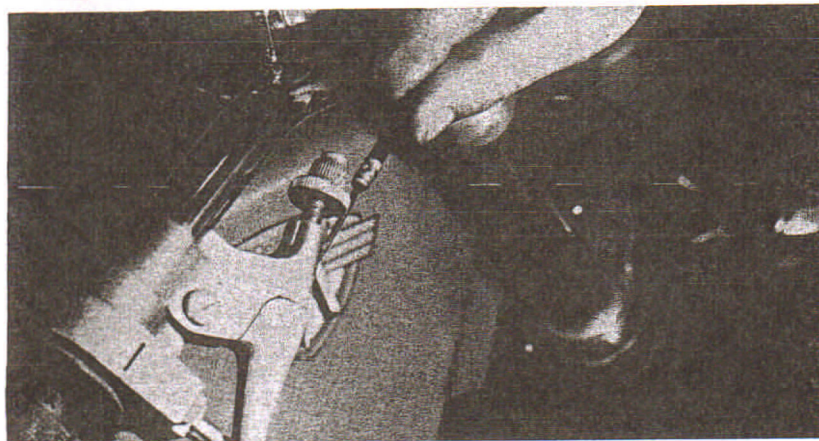
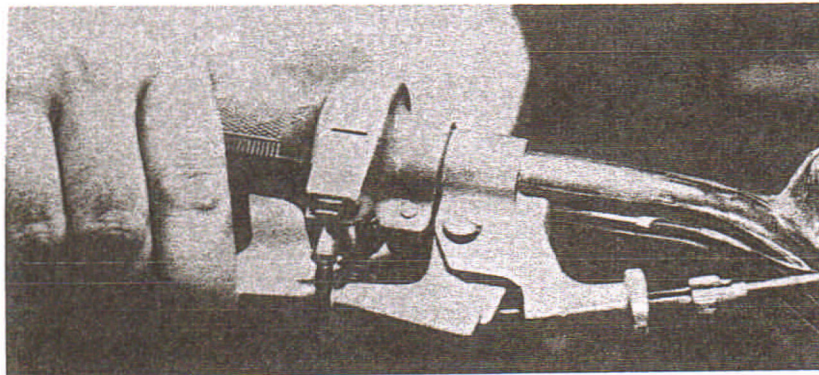
96. The oil in the front forks must be drained every 4 races. The tubes must be flushed out with solvent, allowed to drain at least 5 minutes, and then refilled with 200-250cc of 10, 20, 30 or 40 wt. detergent motor oil. A baby bottle, available at the local drug store, makes a good measuring device. For internal springs use 160-180cc. Internal springs are an accessory item.



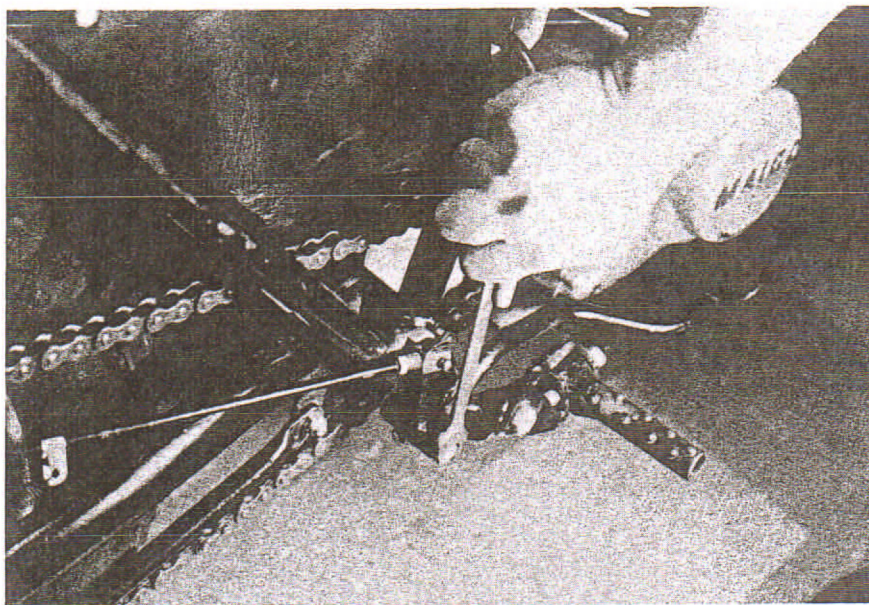
97. Tighten the handle bars.



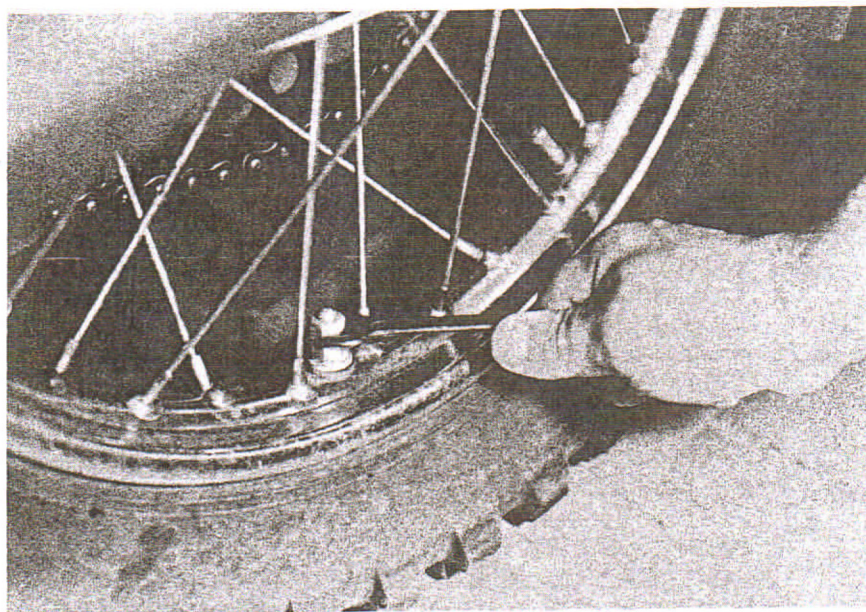
98. Check the controls for smooth operation and proper adjustment. Oil all cables.



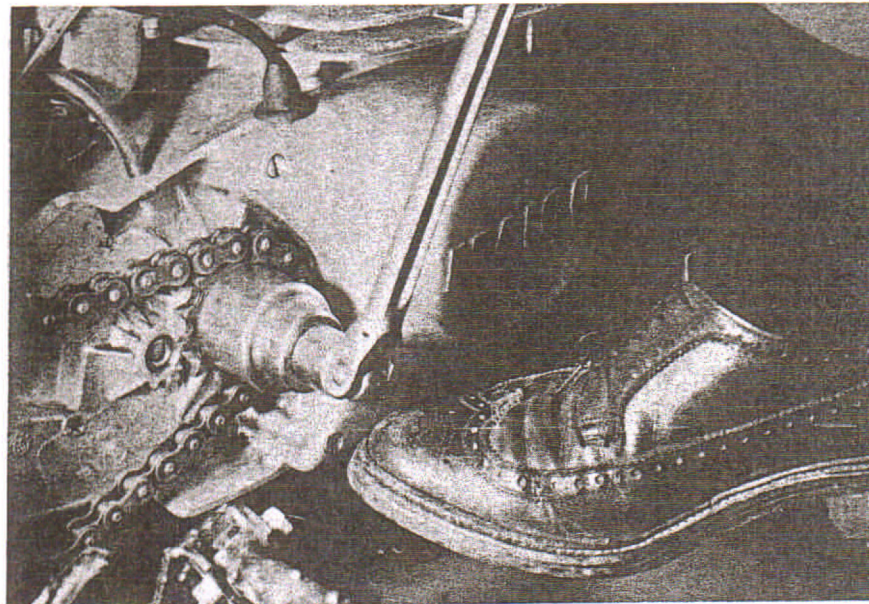
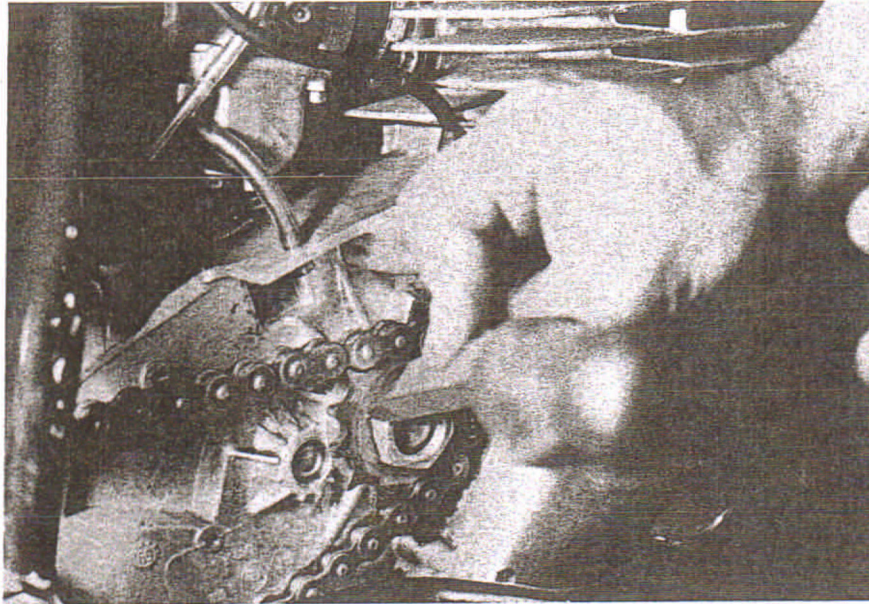
99. Check the rear brake pivot bolt.



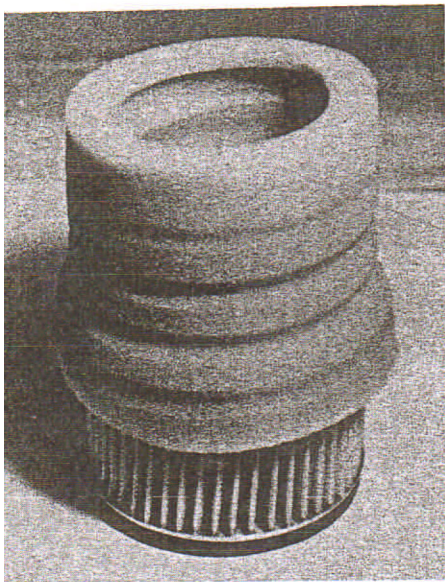
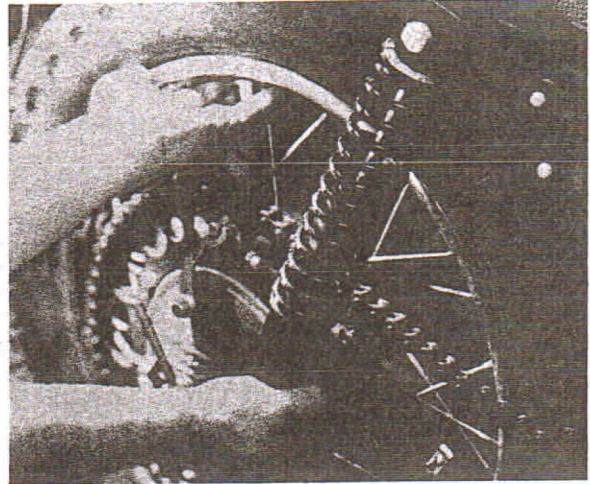
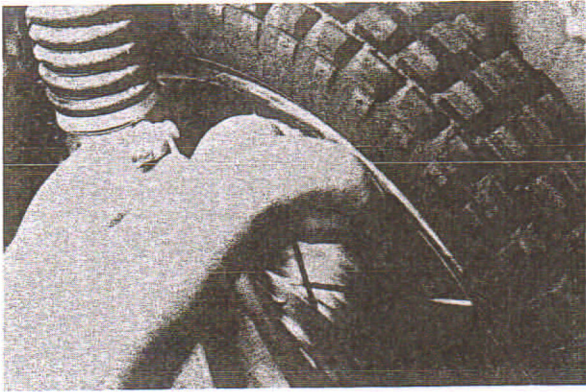
100. Check the rim locks.



101. Check the counter shaft nut and lock.

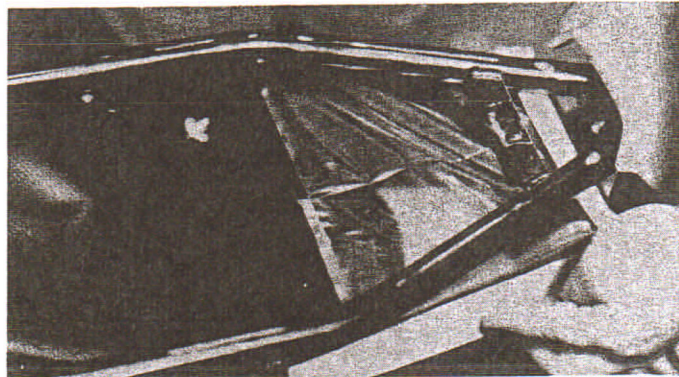


102. Check the wheel bearings. Any appreciable amount of side movement is cause for replacement.

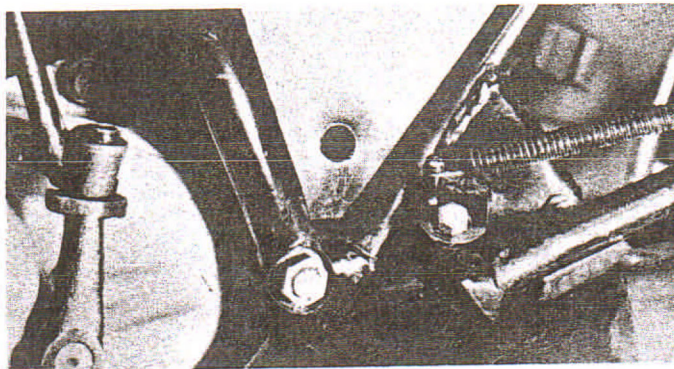


103. Special Desert Aircleaners using K&N and Filtron units for races like the MINT "400".
Wash the Filtron aircleaner in gasoline and in hot soapy water.
Wash the K&N aircleaner in gasoline.
Oil the filtron with 40 wt motor oil.
Oil the K&N with 5 to 10 wt motor oil.
Stretch the filtron over the K&N filter and install
We recommend the K&N filter for all normal desert or Moto-Cross races under 150 miles long.
Use 20 to 30 wt oil when using the K&N without the Filtron.

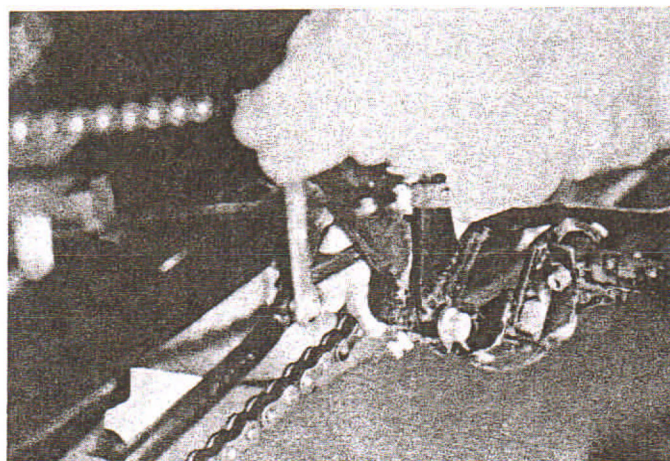
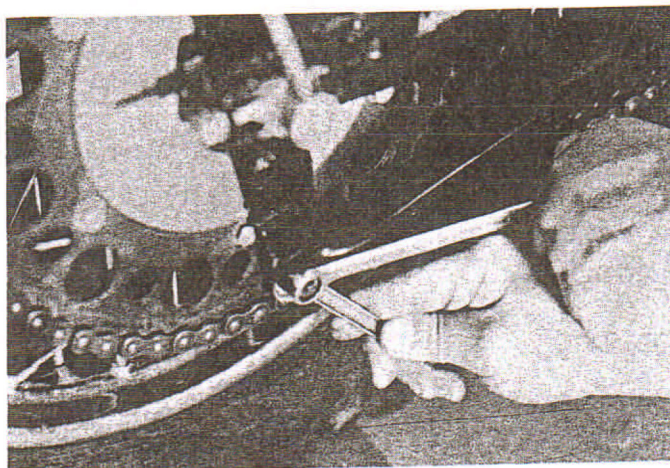
104. Waterproof the airbox. Do not completely cover the chamber. Use plastic sheeting or sports car top material and tape tight all overlapping seams front and sides to hold it in place.



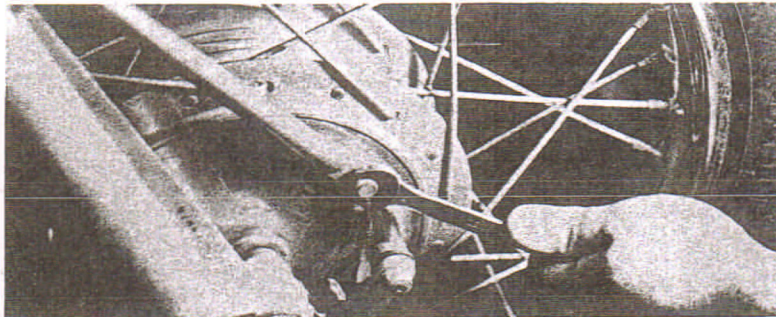
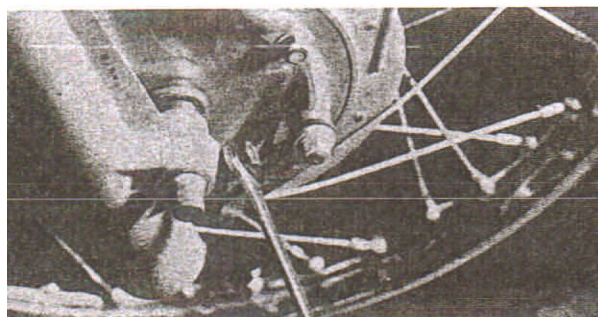
105. Make a drain hole in the left side of the airbox at the bottom.



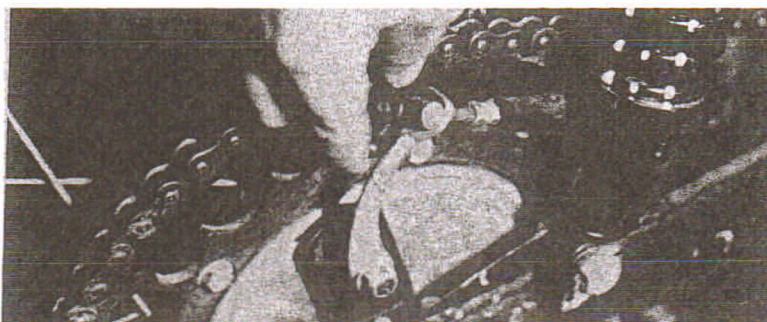
106. Tighten the brake anchors.
Tighten the rear brake arm retaining nut.



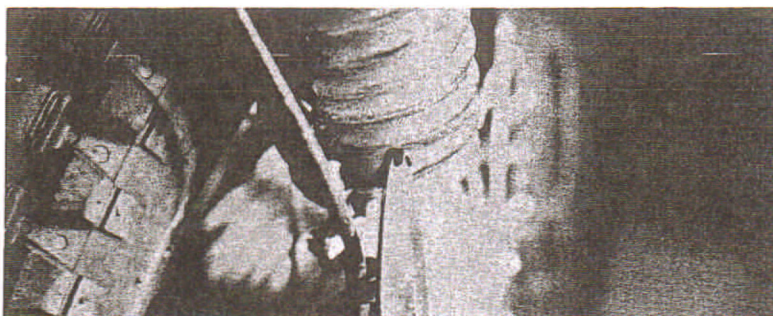
107. Tighten the front axel pinch bolts.
Tighten the front brake arm retaining nut.



108. Adjust the rear brake. This must be done after the chain has been adjusted.



109. Vent the bottom of the fork gaitors to prevent a vacuum build up during running and fo drain off any oil or water that has accumulated.



110. Check to see that the brake clevis retainer (or Kotter pin) is in position. If your machine is equipped with a clevis retaining clip it is advisable to tape it so that your riding boot will not unlock it.



Periodic Checks

Change the piston pin needle bearing every 8-10 races.

Change front fork springs whenever 1/2" "sag" is noticed.
Pull up on the handle bars while standing alongside the machine.
If the bottom fork clamp rises away from the top spring cup
replace the fork springs.

Every 3-4 races disassemble the brake backing plates and lubricate
the actuation cam with brake grease available at automotive part
stores. Sand the brake shoes and the drums to remove any "glazing".

RACE PREPARATION SECTION

The preparation procedure detailed in this section is absolutely necessary for proper performance of the motorcycle under racing conditions.

The factory riders such as Ake Jonsson and Adolf Weil follow this preparation procedure prior to every race they enter. Their motorcycles have no exotic hand made parts to insure reliability rather they insure the machines built in reliability through careful and through maintenance.

It is highly recommended that the motorcycle is cleaned and run for 3-4 minutes prior to starting the race preparation. If maintenance cannot be started immediately, remove the ignition cover to allow the condensation to evaporate.

It is also suggested to remove the ignition cover after the completion of racing in order to keep condensation from forming.

New engine oil shall be mixed 1 part oil to 20 parts gasoline; ie, one quart of two cycle oil to 5 gallons of gasoline for each race day. The gasoline must be above 95 octane. The engine will not get adequate lubrication with the "super" motorcycle two cycle oils that the makers recommend at 25:1, 32:1 or even 40:1. There is not enough oil in these lean mixtures to properly lubricate the engine. Always put the oil in the can first and then add the gasoline. Shake the oil and gasoline mixture for 1-2 minutes prior to using.