



Service Bulletin

no. 76-13

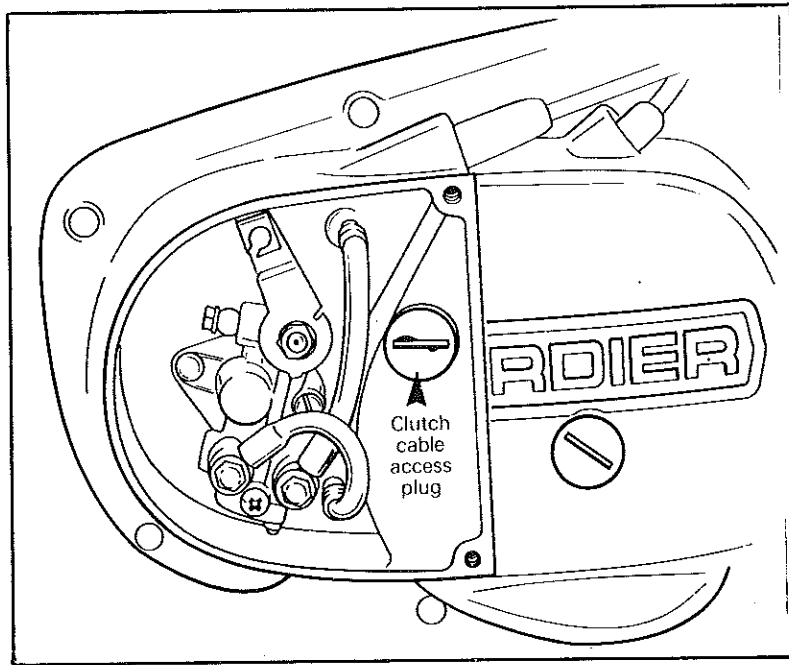
Date: November 3, 1976

Subject: Clutch adjustment

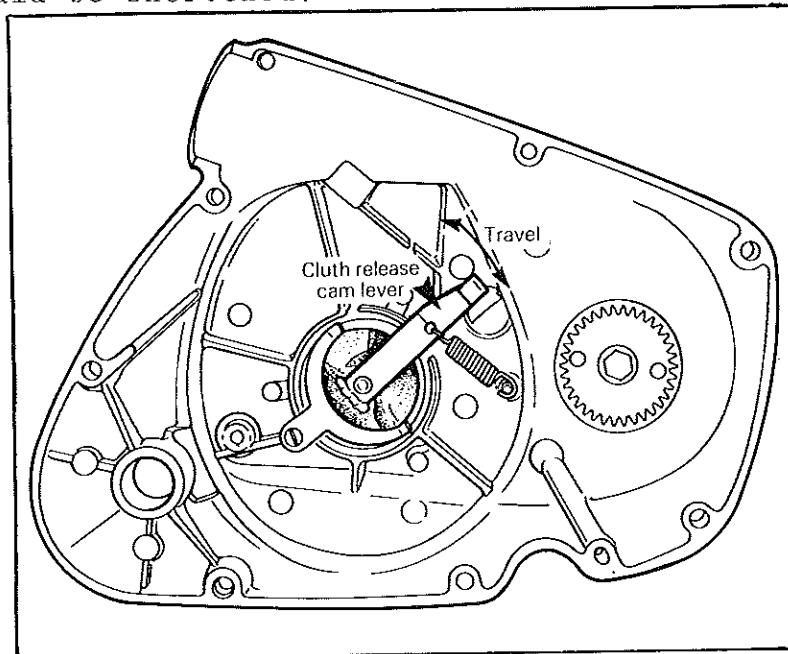
Serial nos: All

Models: All

The clutch adjustment should always be performed with the clutch cable access plug in place.



Although, to further improve the clutch release cam lever travel, the access plug could be shortened.



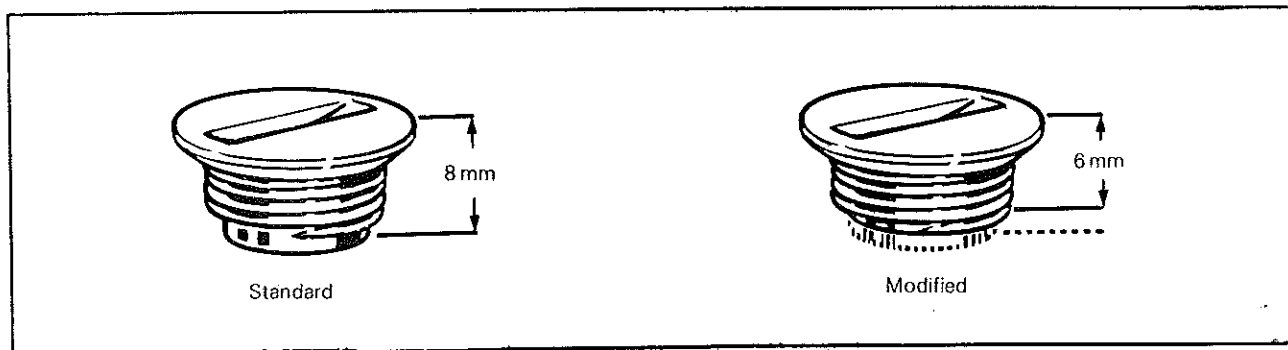
...2

NOTE: The information contained in this bulletin does not constitute a warranty authorization.

Proceed as follows to shorten the access plug:

Remove the clutch cable access plug.

Using a bench grinder, simply grind the access plug shorter by 2 mm (5/64") maximum.



Scrape away any residue of plastic and re-install the access plug.

Re-adjust the clutch.

TECHNICAL INFORMATION CENTER



BOMBARDIER
CORPORATION

Service Bulletin

CAN-AM

SERVICE BULLETIN NO. 13

RE: ANY BIKE AFFECTED

MAY 21, 1976

If, during the pre-delivery of a new bike, you have a problem starting the bike or attaining a proper idle, it could be due to varnish formation in the carburetor. The varnish, left as the more volatile portions of the gasoline evaporate, can be removed with carburetor cleaner.

Remove the carburetor from the bike, remove the float bowl, and drive the pin out that the float pivots on. Since the plastic float could be damaged by some carburetor cleaners, the float should be removed before soaking the carburetor.

Rinse the carburetor per the carb cleaner instructions, reassemble the carb, and install on the motorcycle.



BOMBARDIER

CORPORATION

Service Bulletin

CAN-AM

SERVICE BULLETIN NO. 15

RE: ALL MODELS
CDI REPLACEMENT

SEPTEMBER 21, 1976

Bosch Electronic Box Pt. #420 264 477

The new style electronic box (totally incased in black plastic) requires the use of a 7 mm diameter ignition cable rather than the original 5 mm wire. The following items should be ordered along with the new style box:

420 965 158	ignition cable
420 960 550	protection cap
420 865 205	spark plug protector

The ignition cable can also be replaced with 7 mm hi-performance automotive wire with copper core and silicone insulation.



Service Bulletin

no. 76-14

Date: November 15, 1976

Subject: Electronic box replacement

Serial nos: All

Models: All

It has been found that some black plastic electronic boxes were replaced without being really defective, it should be noted that prior to the replacement of a supposedly defective black plastic electronic box, an additional verification must be made at the stop switch level.

The internal circuit on the black plastic electronic box grounds the magneto charging coil when the stop switch is in function.

○ **NOTE:** The previous electronic box (aluminum) was grounded to the trigger coil.

Due to the higher output of the charging coil, the stop switch must be clean and in good condition, or the system will be grounded.

Therefore, if a black plastic electronic box fails to produce sparks, disconnect the stop switch and try again.

If spark then occurs, inspect the stop switch.

◆ **WARNING:** Always make sure the stop switch is connected, before starting the engine.

TECHNICAL INFORMATION CENTRE

○ **NOTE:** The information contained in this bulletin does not constitute a warranty authorization.



Service Bulletin

no. 76-15

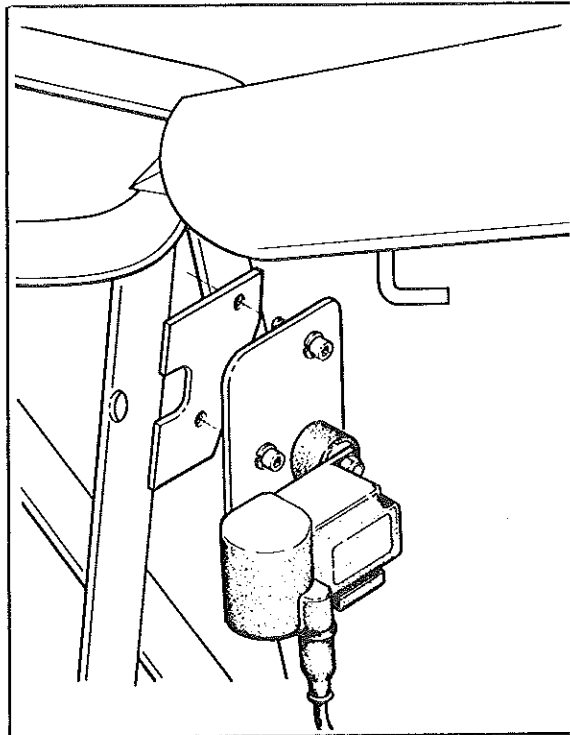
Date: December 6, 1976

Subject: Electronic box mount

Serial nos: All

Models: All

To reduce the level of vibration at the electronic box, we suggest the following mounting procedure.



Parts required

2	rubber mount	748 004 004
4	elastic stop nut M6 X 1.00	228 561 015
2	flat washer 6mm X 20 X 14	224 060 200
*2	open barrel 5mm	409 0018 00
*1	wire 4"(maximum)	409 6015 00
1	fabricated mounting plate cold rolled commercial quality steel 16 ga. (.060")	

* To be used only with the electronic box (P/N 420 264 470 aluminum body) as a ground wire.

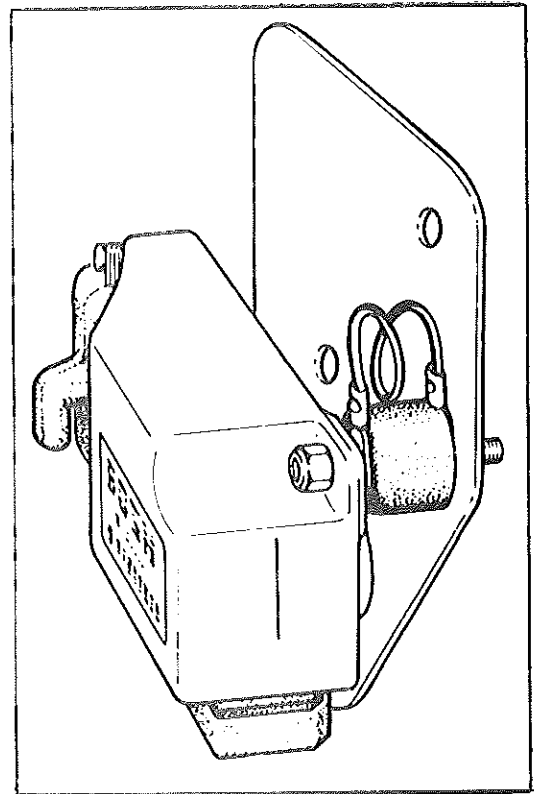
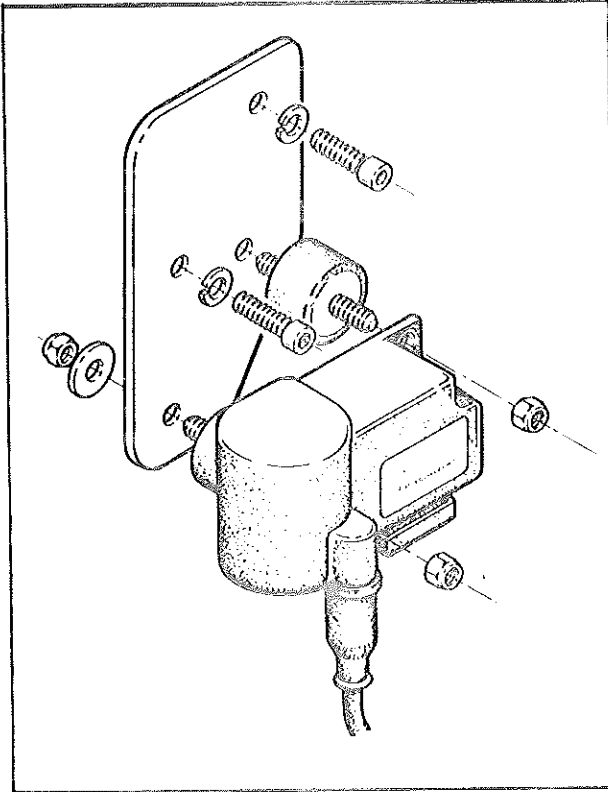
Proceed as follows:

Remove the electronic box. Scrape the paint away from the upper electronic box mounting hole on the frame plate to ensure a good ground.

Fabricate a mounting plate as per the full size template. (Last page of this bulletin).

Mount the electronic box on the fabricated mounting plate as illustrated.

Torque the retaining nuts to 0.4-0.5 kg-m (3-4 ft-lbs).



○ NOTE: When mounting the electronic box (p/n 420 264 470 aluminum body) be sure to use the previously mentioned ground wire.

Mount the electronic box mounting plate onto the frame, making sure to ground the wiring harness ground wires. Torque the retaining screw to 0.7 kg-m (5 ft-lbs). Connect the block connector to the electronic box and the high tension lead to the spark plug.

▼ CAUTION: Make sure the gap between the "E" box and the carburetor is 1/2" minimum.

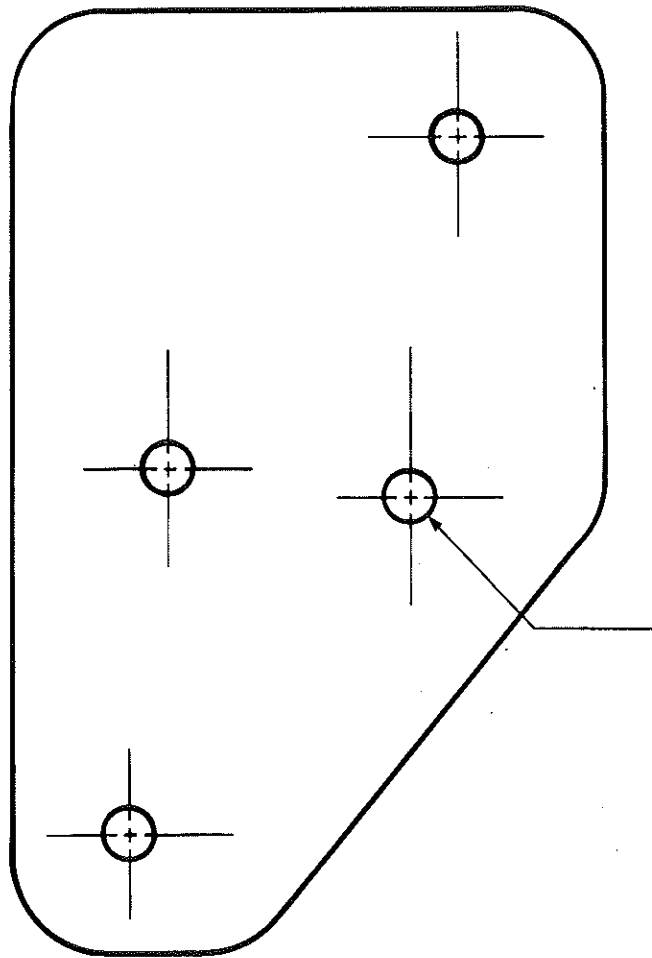
Route all the hoses and wires away from the exhaust pipe.

◆ WARNING: Always make sure the stop switch is connected, before starting the engine.

THIS BULLETIN HAS BEEN PUBLISHED FOR INFORMATION PURPOSES.

TECHNICAL INFORMATION CENTRE

(Can-Am Service 76-15), Page 2



Drill 1/4" diameter
holes

Full size template

C.R.C.Q. steel 16 ga. (.060")



Service Bulletin

no. 76-16

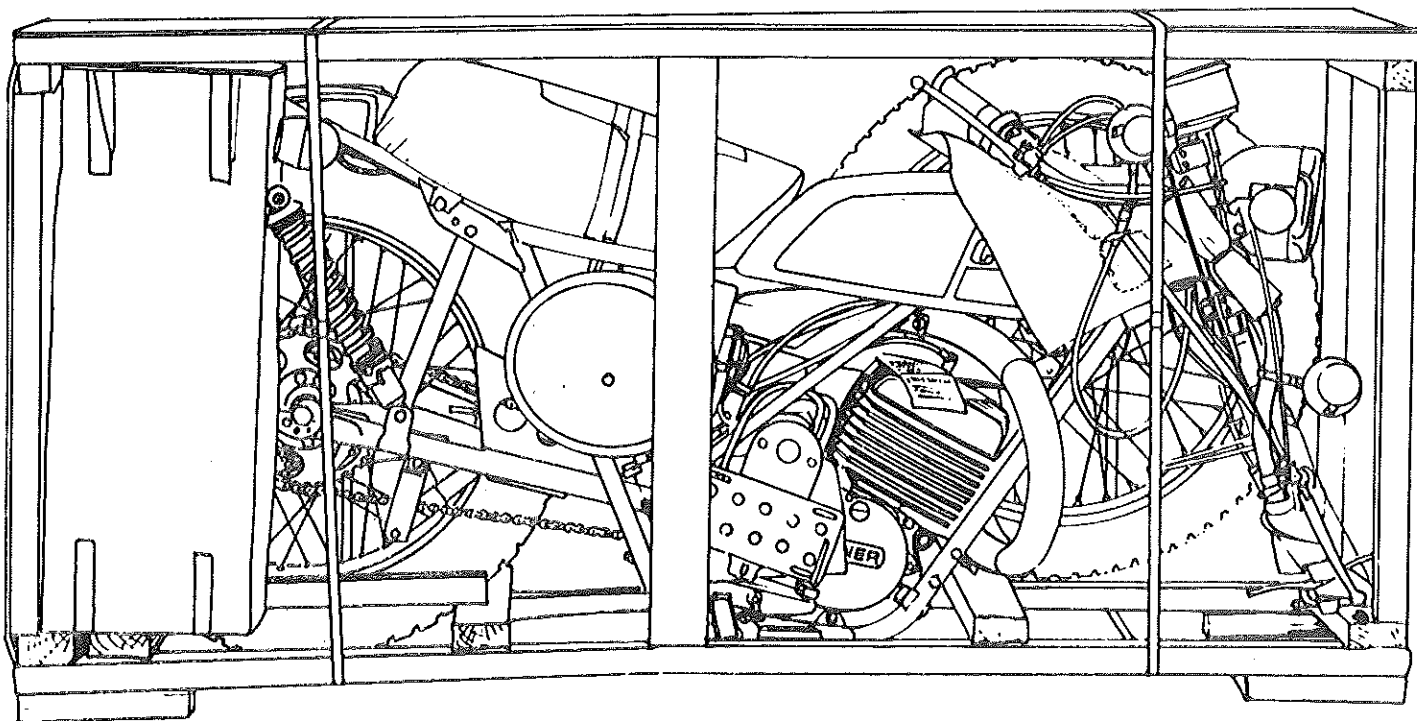
Date: JANUARY 18th, 1977

Subject: PRE-DELIVERY

Serial nos: 7851-7861

Models: T'NT 175-250cc

UNCRATING



◆ **WARNING:** Strapping is under pressure; therefore, care must be taken while cutting.

Remove staples holding top cover and remove cover.

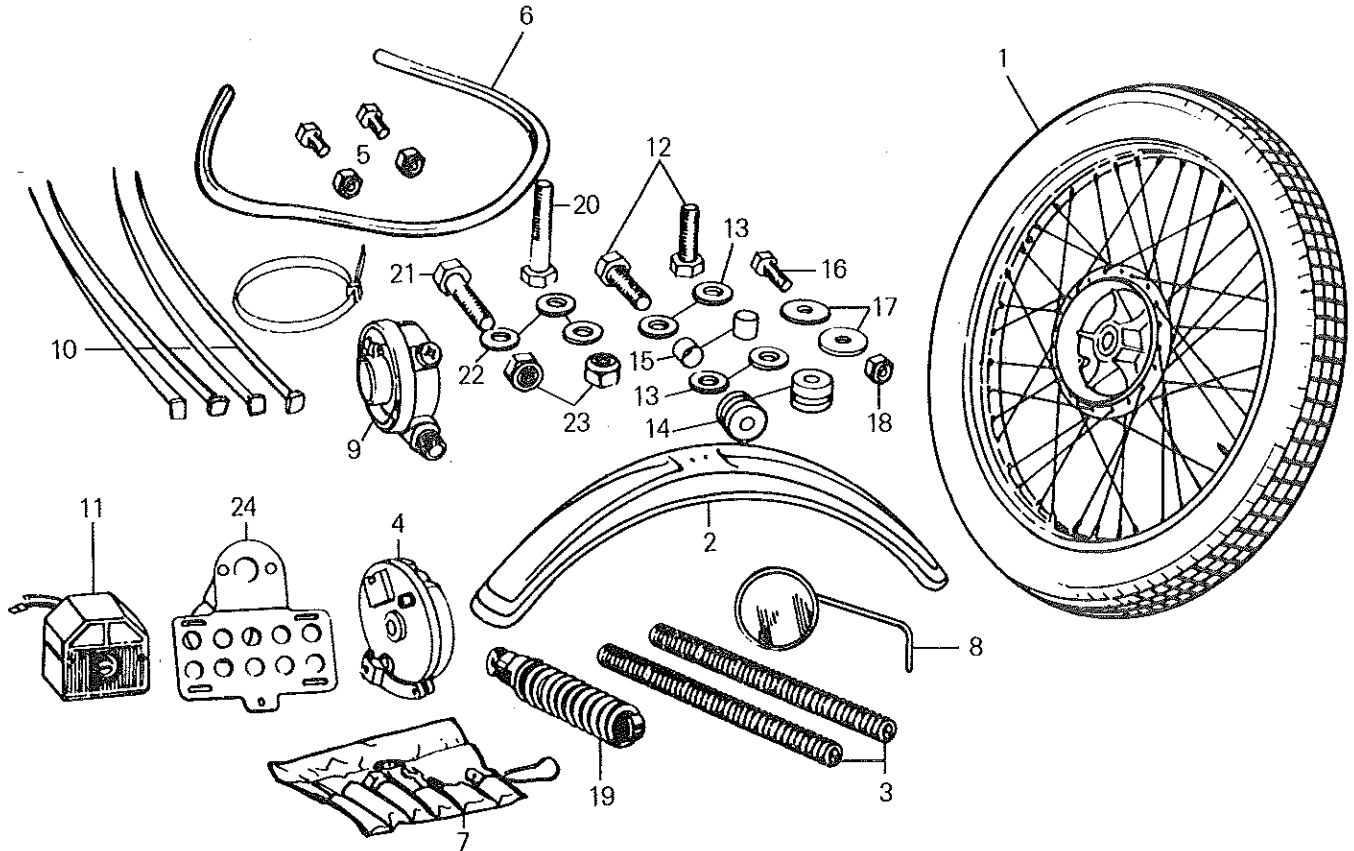
Remove crate ends and crate sides.

▼ **CAUTION:** Care should be taken during panel removal to prevent vehicle from being scratched.

Remove the vehicle from the wooden base, and mount it on a box or a stand.

○ **NOTE:** The information contained in this bulletin does not constitute a warranty authorization.

CRATE KIT



1. Front wheel
2. Front fender ass'y
3. Spring front fork (2)
4. Backing plate front ass'y
5. Battery terminal bolt kit
6. Battery breather tube
7. Tool kit
8. Mirror
9. Speedo drive gear
10. Tie wrap (5)
11. Tail lamp ass'y
12. Tail lamp retaining screw M8 x 1.25 x 25 (2)

13. Flat washer M8 x 17 x 2 (4)
14. Tail lamp rubber grommet (2)
15. Tail lamp spacer (2)
16. Tail lamp bracket to fender screw M8 x 1.00 x 16
17. Flat washer M6 x 20 x 2 (2)
18. Elastic stop nut M6 x 100
19. Shock absorber (1)
20. Shock absorber retaining bolt M8 x 1.25 x 40
21. Shock absorber retaining bolt M8 x 1.25 x 35
22. Flat washer M8 x 17 x 2 (3)
23. Elastic stop nut M8 x 1.25 (2)
24. Tail lamp bracket

ASSEMBLY INSTRUCTION

HANDLEBAR

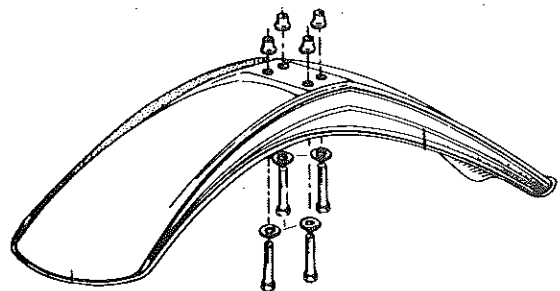
Install the handlebar in the desired position and torque the retaining screws to 1.4-1.6 kg-m (10-12 ft-lbs).

○ **NOTE:** Use tie wraps to fasten all electrical wires to the handlebar.

FRONT FENDER

Install the front fender with the spacers and washers positioned as illustrated.

Torque the retaining bolts to .4-.5 kg-m (3-4 ft-lbs).



FORK SPRINGS

Loosen top crown clamp screws and remove fork spring retaining caps.

Insert the fork springs.

Reinstall the fork spring retaining caps and torque to 4.1-5.5 kg-m (30-40 ft-lbs).

Torque the top crown clamp screws to .8-1.1 kg-m (6-8 ft-lbs).

○ NOTE: The forks are pre-filled with 200 ml (7. fl oz) of SAE 10 W 30 fork oil.

Recommended temperature range for fork oil:

Above 0° C (32° F) – SAE 10 W 30

Below 0° C (32° F) – SAE 5 W 30

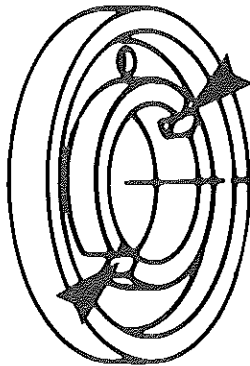
FRONT WHEEL INSTALLATION

Remove the axle nut, loosen the two (2) axle pinch bolts and remove the axle.

◆ WARNING: Make sure there is no fasteners lodged inside the front backing plate assembly, it may cause the front wheel to jam, stop and skid.

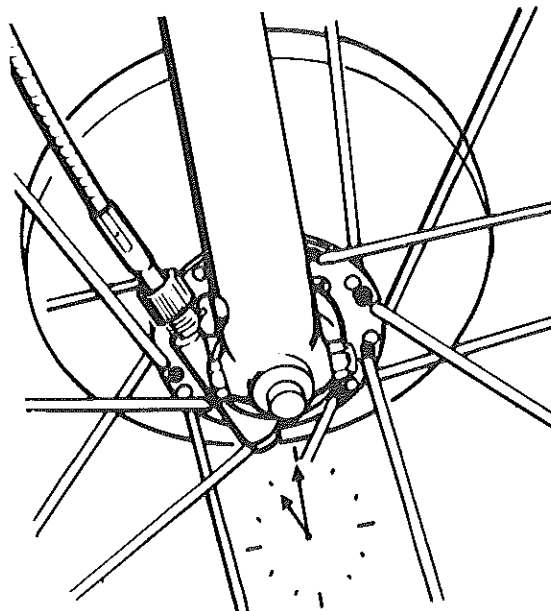
Position the speedometer drive gear, on one side, and the brake plate on the other.

○ NOTE: Make sure the two (2) drive lugs of the speedometer drive gear fits into the channels of the speedometer drive flange.

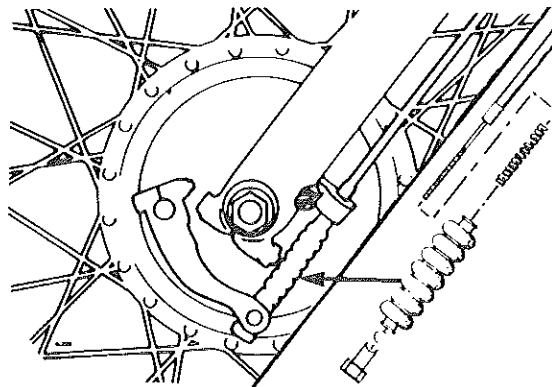


Position the wheel and insert the axle from the magneto side. Make sure the left fork boss is in the backing plate channel.

▼ CAUTION: Speedo drive must be positioned at approximately 11:00 o'clock position.



Install the front brake cable.



Spin front wheel in forward rotation, apply brake and, while holding brake ON tighten axle nut.

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

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

Torque axle nut to 3.4-8 kg-m (25-60 ft-lbs).

Torque axle pinch bolts to 2-2.8 kg-m (15-20 ft-lbs).

Route the speedocable through the lower crown and the cable guide, connect it to the speedometer drive gear.

REAR SHOCKS

Remove the rear brace support (used for transport). Raise the rear end slightly then mount the sprocket side shock on the upper frame. (Forward location) using the same retaining bolts removed from the brace support.

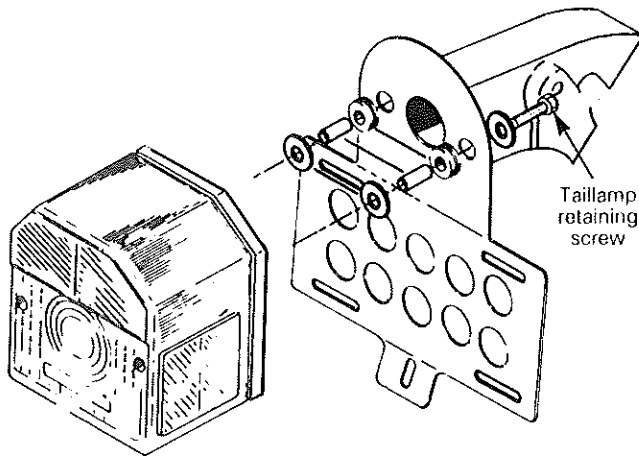
Mount the muffler side shock using the M8 x 1.25 x 40 bolt and two flat washers at the upper frame portion and a M8 x 1.25 x 35 bolt and one washer (positioned outside) at the swing arm.

Torque the shock absorber retaining bolts to 2.-2.8 kg-m (15-20 ft-lbs).

○ **NOTE:** Fit the muffler side upper bolt from the inside.

TAILLAMP

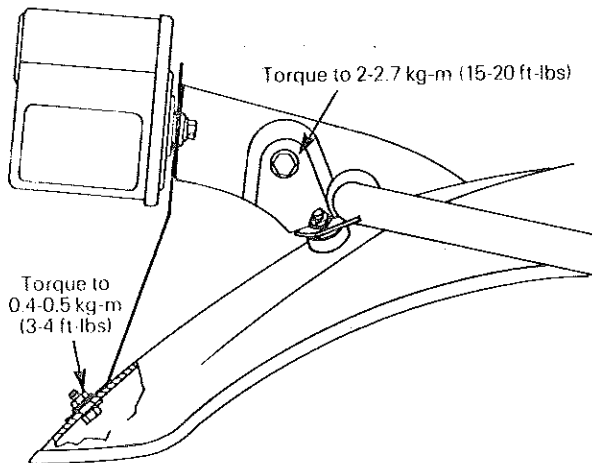
Mount the taillamp to the taillamp mount as illustrated.



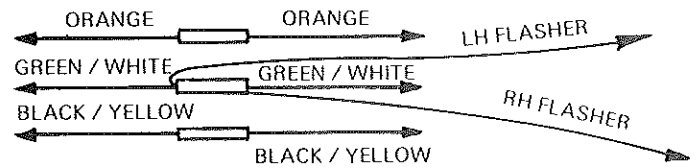
Torque the taillamp retaining screws to 0.3-0.4 kg-m (2-3 ft-lbs).

○ **NOTE:** A solution of soap / water will ease the assembly of the spacer into the bushing.

Mount taillamp and taillamp bracket to the frame as illustrated.



○ **NOTE:** Prior to positioning of the taillamp bracket over the frame connect the wires as illustrated.



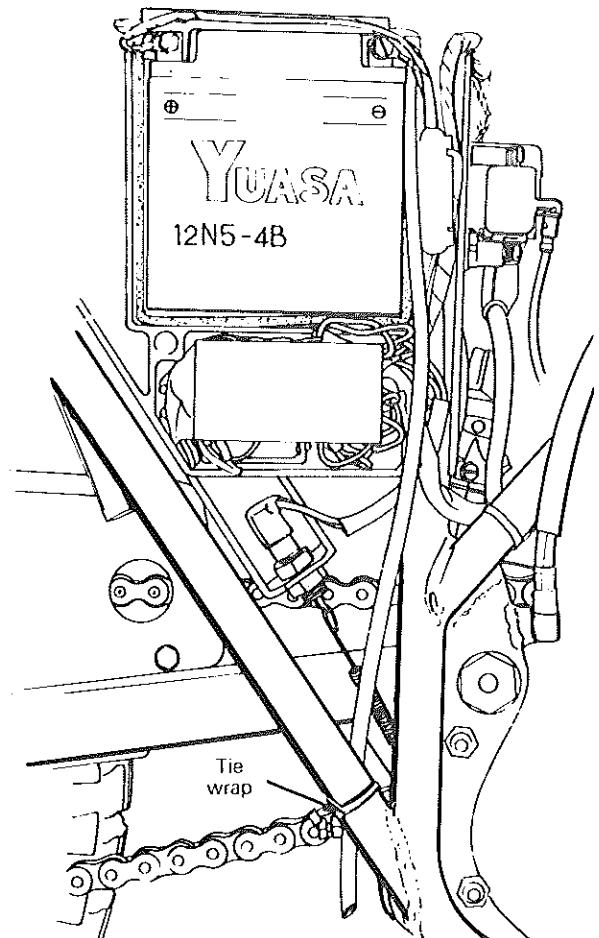
BATTERY

Remove battery from vehicle. Remove small sealing tube and filler caps from battery. Fill with electrolyte to upper level line. Charge battery until specific gravity of 1.280 at 20° C (68° F) is attained.

◆ **WARNING:** If cell temperature exceeds 53° C (127° F) discontinue charging temporarily, or reduce charging rate. Gases given off by a battery being charged are highly explosive. Always charge in a well ventilated area. Keep battery away from cigarettes or open flames.

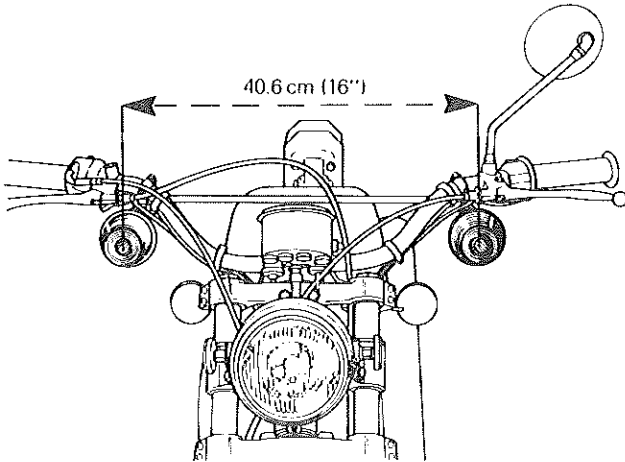
Reinstall caps. Wipe battery clean then install on vehicle. Connect the green / white wire to negative and then the white / black wire to positive. Coat battery terminals with petroleum jelly to prevent corrosion. Install the vent tube as illustrated, the slit portion fits onto the battery spigot.

◆ **WARNING:** Vent tube must be free and open. A kinked or bent tube will restrict ventilation and create gas accumulation that could result in an explosion.



ACCESSORIES

Install the mirror on the clutch lever side, and make sure the front turn signal lamps are positioned 40.6 cm (16") apart. (Center to center).



Ensure that the tool kit is complete prior to placing it into tool box.

CLEANING

Clean the motorcycle thoroughly with a cotton cloth to remove the anti-rust spray.

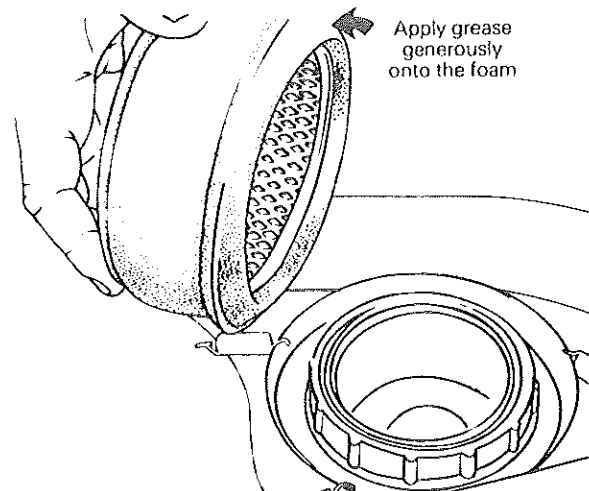
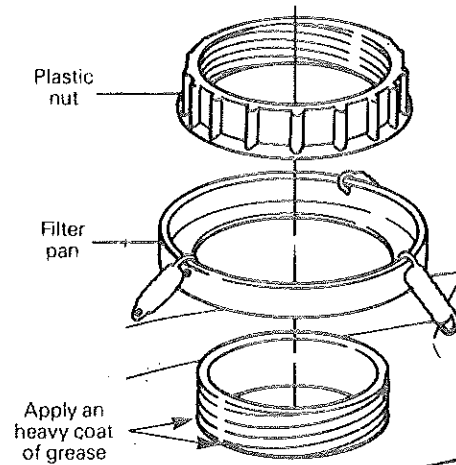
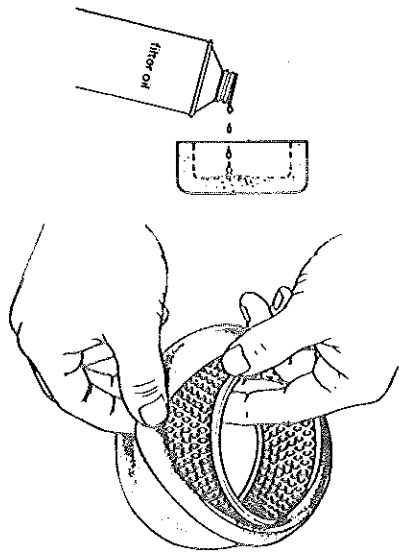
PRE-DELIVERY INSPECTION

AIR FILTER SERVICE

Remove the seat by slackening the two (2) rear retaining screws.

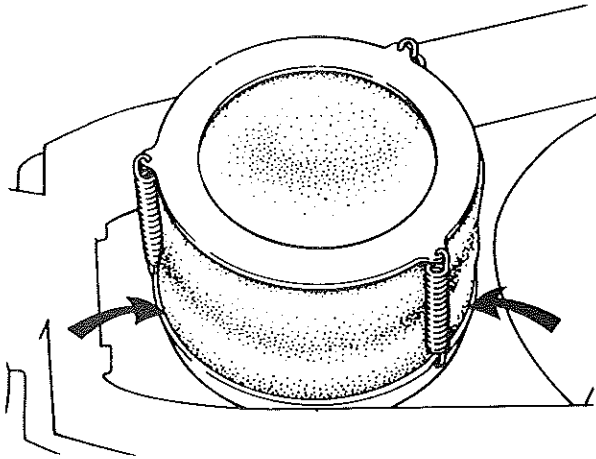
Remove the plastic bag covering the gas tank.

Remove the filter from its plastic bag. Separate the foam from the screen. Pour the specially formulated Can-Am filter compound onto the element and work it well into the foam until the filter is completely saturated. Fit the element onto the screen.



Remove the plastic nut and air filter pan. Apply a heavy coat of grease around the threaded portion of the air box. Re-install the filter pan and firmly tighten the plastic nut. Generously grease the bottom edge of the foam and install the filter.

○ NOTE: Be sure the filter edge is tucked into the metal pan.



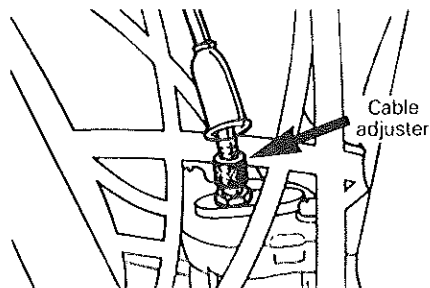
▼ CAUTION: A dry filter will cause extreme piston and cylinder damage that is not covered by warranty.

THROTTLE CABLE SYNCHRONIZATION

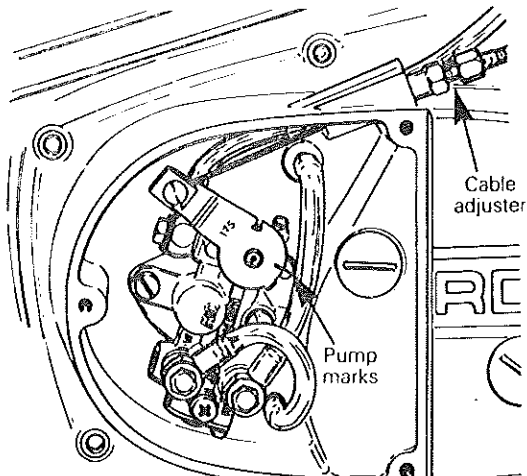
Check the throttle cable adjustment. The cable slack should be 1.6 mm ($\frac{1}{16}$ ").

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

Using the cable adjuster on the throttle slide chamber cover, set cable slack to 1.6 mm ($\frac{1}{16}$ ").



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



Adjust the throttle cable (at twist grip) to provide 1.6 mm ($\frac{1}{16}$ ") slack.

◆ 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.

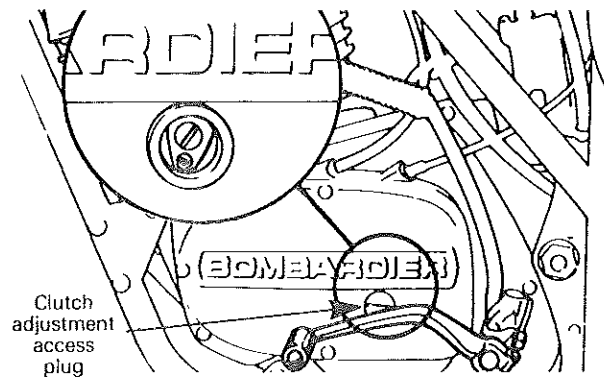
CLUTCH ADJUSTMENT

Prior to the clutch adjustment, the clutch cable access plug must be in place, 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 the release bearing, then turn the screw $\frac{1}{4}$ turn out (counter-clockwise).



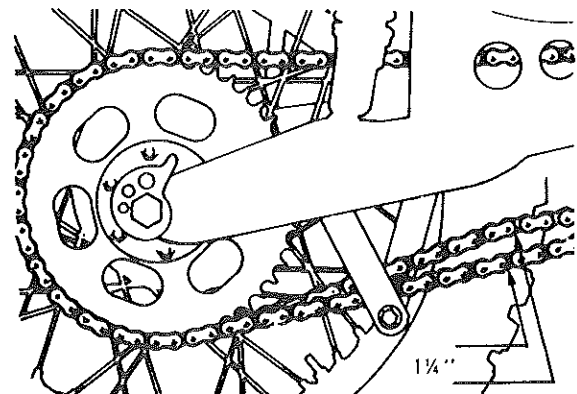
Carefully tighten the 4 mm set screw to lock the adjustment. Replace the access plug.

Adjust the cable adjuster to provide $\frac{1}{16}$ " (1.6 mm) slack, between clutch lever and housing.

DRIVE CHAIN ADJUSTMENT

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

○ NOTE: Alignment marks on adjuster plate must be at the same position on each side of the wheel.



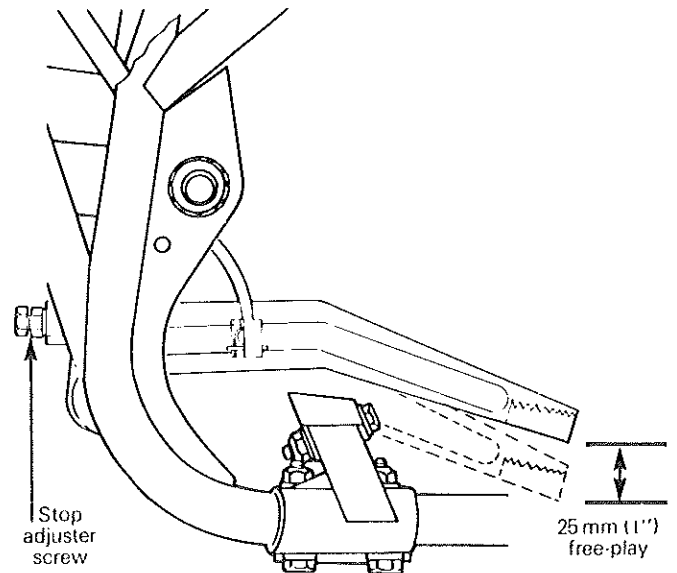
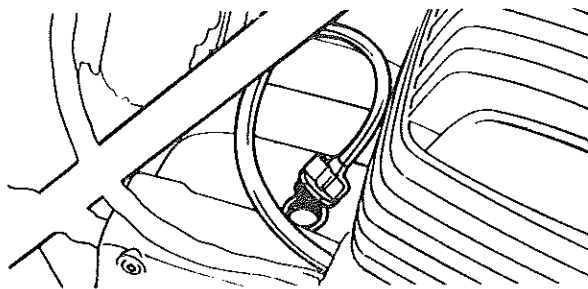
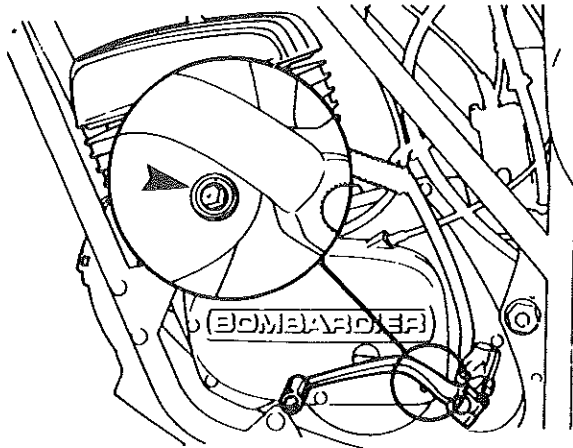
Adjust chain slack to 32 mm (1 1/4").
(Measured at the chain's tightest point).

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

TRANSMISSION OIL LEVEL

With the motorcycle in a vertical position, remove the transmission oil level plug and check the oil level.

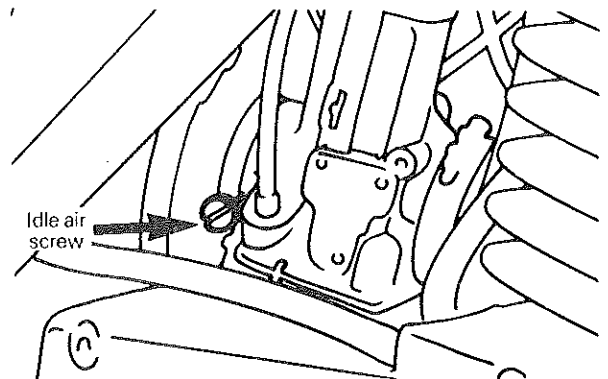
Oil level should be up to the level plug. Add oil through filler / vent plug if necessary. (SAE 80, gear oil).



CARBURETOR ADJUSTMENT

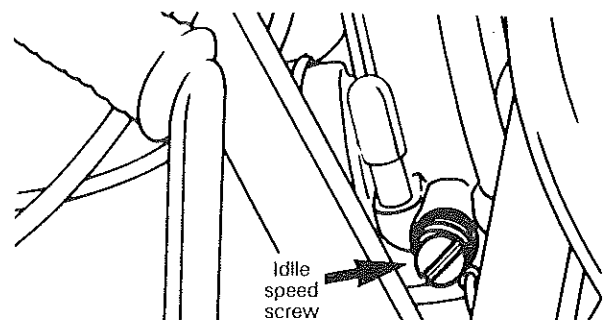
Idle speed and mixture adjustment

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



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.).



BRAKE ADJUSTMENT

Front

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

○ NOTE: Use adjuster at handlebar for final adjustment.

Rear

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

○ NOTE: The brake pedal height can be adjusted as desired by moving the stopper.

○ NOTE: The air mixture 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.

ENGINE TIMING

Timing mark verification

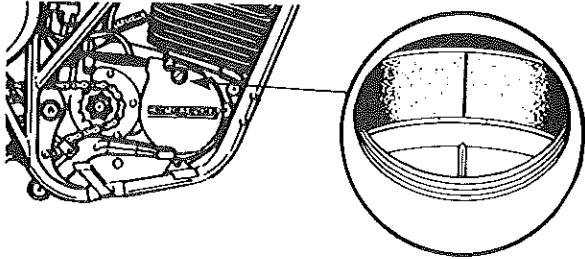
Disconnect the spark plug wire and remove the spark plug.

Remove the inspection plug on the magneto cover.

Install and adjust the top dead center gauge.

Rotate the rear wheel counter-clockwise until the piston is at $1.2 \text{ mm} \pm 0.2$ ($.047'' \pm .007$) before top dead center.

Check through the inspection hole, the flywheel and the magneto cover marks must align perfectly.



If the marks do not align, scribe a new mark on the magneto cover, in line with the flywheel mark at $1.2 \text{ mm} \pm 0.2$ ($.047'' \pm .007$) before top dead center.

CAUTION: The timing mark verification cannot be used as a timing procedure, therefore always check the timing (using a stroboscopic timing light at 9000 R.P.M.) after the marks have been aligned.

Re-install the spark plug and connect the high tension spark plug wire.

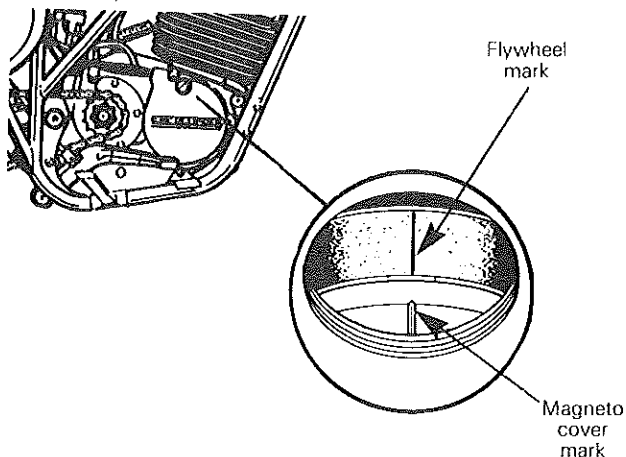
Timing light procedure

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

Start the engine and allow it to warm.

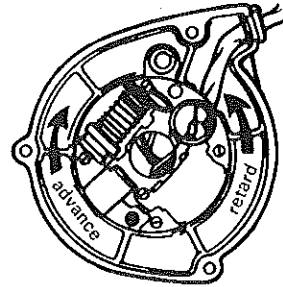
WARNING: To prevent powerful electric shock, do not touch the high tension wire while the engine is running.

Point the timing light beam straight into the inspection hole and rev the engine to 9000 R.P.M. for a brief instant, the timing marks on the magneto cover and on the flywheel should align. Stop the engine.



CAUTION: Timing marks must be checked with a dial indicator for perfect accuracy.

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



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.

Examples of suitable timing lights:

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

TIRE PRESSURE

Check and adjust as required.
The recommended pressure is

Road: Front 182 kPa (26 P.S.I.)
Rear 196 kPa (28 P.S.I.)

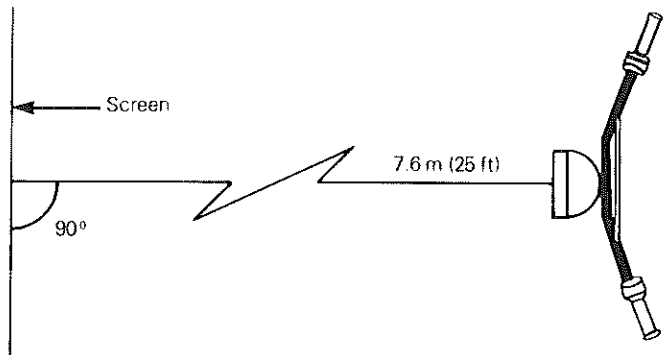
Trail: Front 105 kPa (15 P.S.I.)
Rear 105 kPa (15 P.S.I.)

GENERAL INSTRUCTIONS

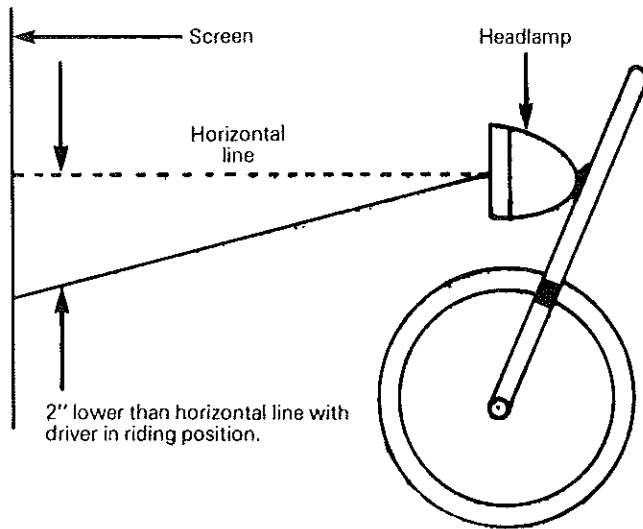
Inspect for good function of tail / brake lights, emergency stop switch, horn, indicator lamps, turn signals, headlamp (Hi & Lo).

Adjust headlamp beam aiming as explained.

Place the vehicle on a flat surface with the front wheel in the vehicle axis at 7.6 m (25 ft) distance from a wall or screen, making sure the vehicle and the wall forms a 90° angle.



With the driver in a riding position and the headlamp ON (hi beam). The beam aiming is correct when beam center (high intensity zone) is 50 mm (2") lower than the horizontal line (on the wall) at a distance of 7.6 m (25 feet).



Slacken both reflector nuts, position the headlamp housing to obtain the desired height and retorque the retaining nuts to .8-1.1 kg-m (6-8 ft-lbs).

- **NOTE:** Make sure the reflectors are properly positioned: locating boss (back of reflectors) must be in a vertical axis.

TEST RIDE MOTORCYCLE

Fill the oil reservoir with injection oil, and the gas tank with premium gasoline only.

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.

Clean the vehicle thoroughly. Explain the operator manual and warranty policy to the customer. **Complete and return the warranty registration.**

- **NOTE:** Make sure the customer is well aware of the engine break-in procedure.

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, overrevving, etc.).

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

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

1977 T'NT PRE-DELIVERY TECHNICAL DATA

Throttle & injector pump synchronization	1.6 mm ($\frac{1}{16}$ ") free-play at carburetor top. Marks must align on injection pump.
Clutch adjustment	At engine: $\frac{1}{4}$ turn counter-clockwise before point of contact. At handlebar: 1.6 mm ($\frac{1}{16}$ ") free-play between clutch lever and housing
Chain adjustment	32 mm ($1\frac{1}{4}$ ") of slack
Brake adjustment	25 mm (1") of free-play at end of lever or pedal
Transmission oil level	up to level plug (SAE 80, gear oil).
Ignition timing at 9000 R.P.M.	Timing marks of magneto cover and flywheel must align
Basic timing	1.2 mm (.047") before top dead center
Tire pressure	Road: Front 182 kPa (26 P.S.I.) Rear 196 kPa (28 P.S.I.) Trail: Front 105 kPa (15 P.S.I.) Rear 105 kPa (15 P.S.I.)

CARBURETOR SPECIFICATIONS

Vehicle model:	T'NT 175	T'NT 250
Carburetor:	"Bing" 32 mm 84-32-3414	84-32-3416
Std. main jet (production):	140	145
Needle jet:	2.68	2.73
Idle jet:	40	40
Needle identification:	4 rings	4 rings
Needle setting:	2nd groove from top	2nd groove from top
Slide:	No 1	No 1
Air screw:	1 turn out	1 turn out
Float level:	25 mm (1")	25 mm (1")
Idle speed:	1000 R.P.M.	1000 R.P.M.



Service Bulletin

no. 76-17

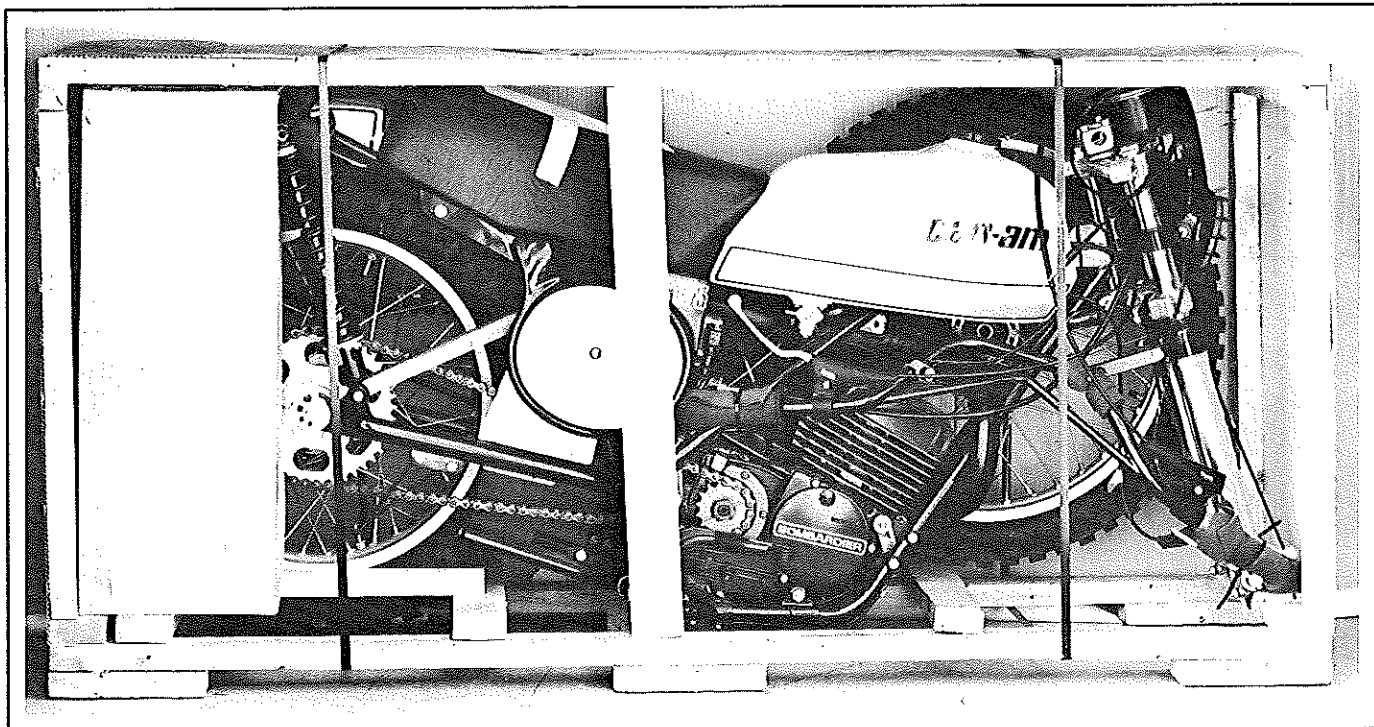
Date: JANUARY 19th, 1977

Subject: PRE-DELIVERY

Serial nos: 7845-7855-7865

Models: QUALIFIER 125-175-250

UNCRATING



◆ **WARNING:** Strapping is under pressure; therefore, care must be taken while cutting.

Remove staples holding top cover and remove cover.

Remove crate ends and crate sides.

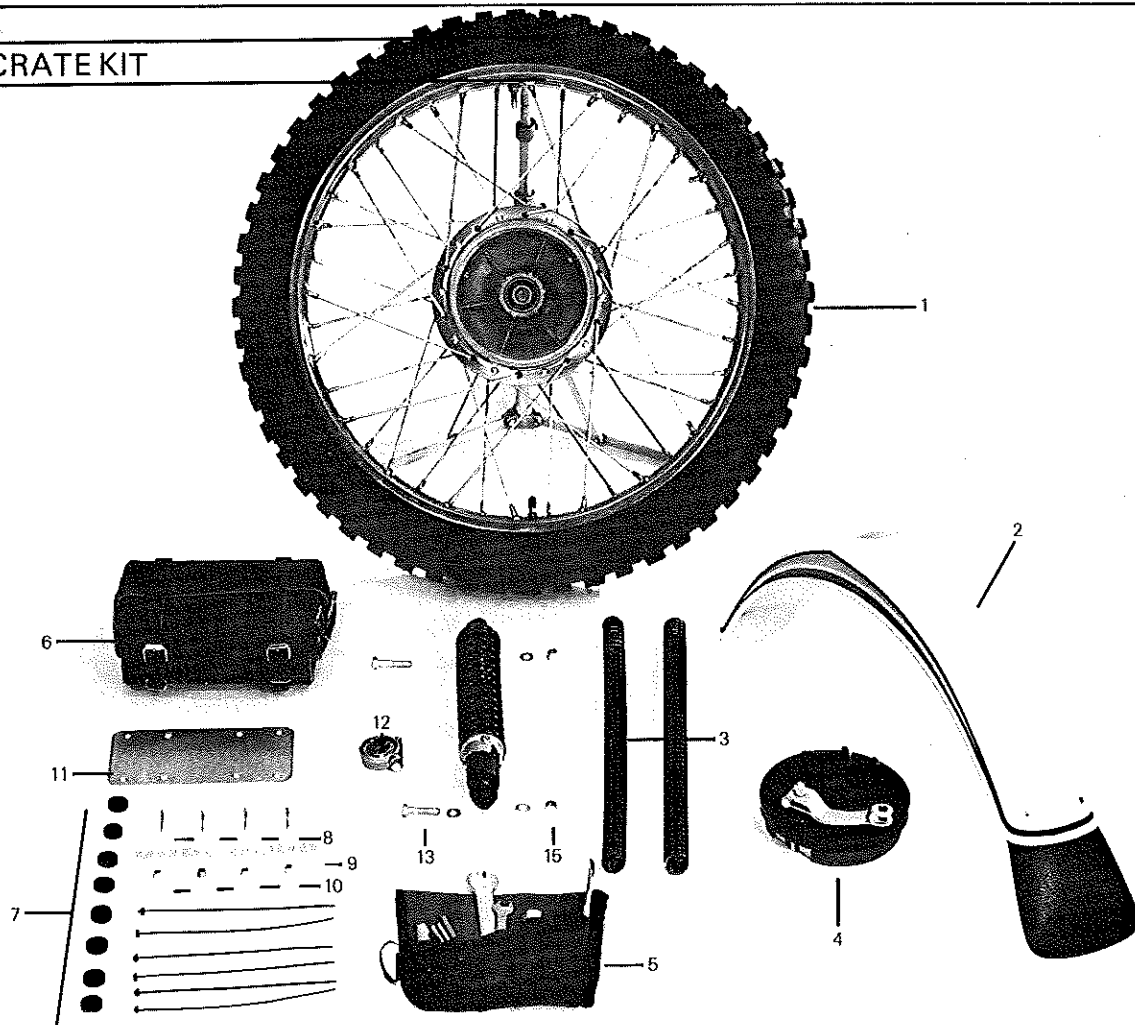
▼ **CAUTION:** Care should be taken during panel removal to prevent vehicle from being scratched.

Remove the vehicle from the wooden base, and mount it on the center stand.



NOTE: The information contained in this bulletin does not constitute a warranty authorization.

CRATE KIT



1. Front wheel
2. Front fender ass'y
3. Spring front fork (2)
4. Backing plate front ass'y
5. Tool kit
6. Tool bag
7. Rubber spacer (8)
8. Bolt M6 x 35 (4)

9. Flat washer 6 mm x 20 x 2 (8)
10. Elastic stop nut M6 x 1.00 (4)
11. Reinforcement plate
12. Speedo drive gear
13. Shock absorber retaining bolt M8 x 1.25 x 40
14. Flat washer 8 mm x 17 x 2 (6)
15. Elastic stop nut M8 x 1.25

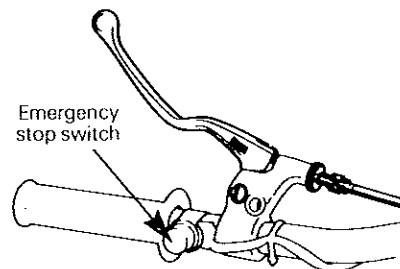
ASSEMBLY INSTRUCTION

HANDLEBAR

Prior to the positioning of the handlebar, disconnect the clutch cable.

Install the handlebar in the desired position and torque the retaining screws to 1.4-1.6 kg-m (10-12 ft-lbs).

Connect the clutch cable, and reposition the emergency stop switch as illustrated.

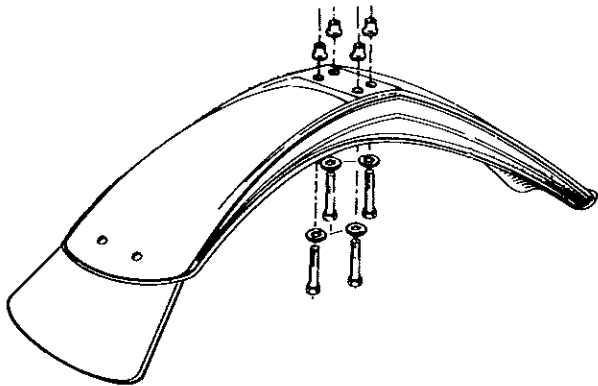


○ NOTE: Use tie wraps to fasten all electrical wires to the handlebar.

FRONT FENDER

Install the front fender with the spacers and washers positioned as illustrated.

Torque the retaining screws to .4-.5 kg-m (3-4 ft-lbs).



FORK SPRINGS

Loosen top crown clamp screws and remove fork spring retaining caps.

Insert the fork springs.

Reinstall the fork spring retaining caps and torque to 4.1-5.5 kg-m (30-40 ft-lbs).

Torque the top crown clamp screws to .8-1.1 kg-m (6-8 ft-lbs).

○ NOTE: The forks are pre-filled with 220 ml (7.7 fl. oz) SAE 10 fork oil.

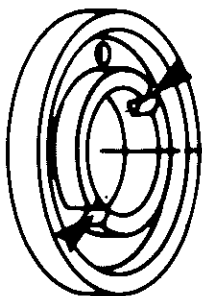
FRONT WHEEL INSTALLATION

Loosen the magneto side axle pinch bolt and remove the axle (turn counter-clockwise).

◆ WARNING: Make sure there is no fasteners lodged inside the front backing plate assembly, it may cause the front wheel to jam, stop and skid.

Position the speedometer drive gear on one side, and the brake plate on the other.

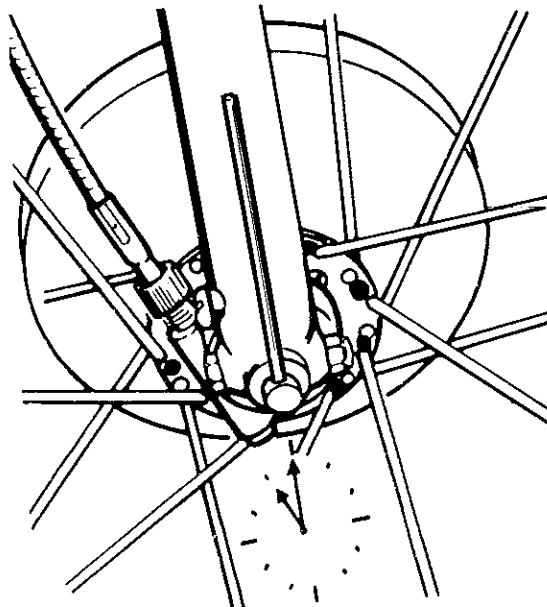
○ NOTE: Make sure the two (2) drive lugs of the speedometer drive gear fits into the channels of the wheel hub.



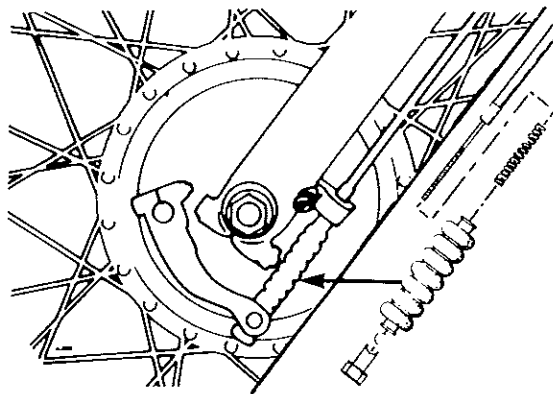
Position the wheel and insert the axle from the magneto side. Screw the axle a few turns.

Make sure the left fork leg boss is in the backing plate channel.

▼ CAUTION: Speedo drive must be positioned at approximately 11:00 o'clock position.



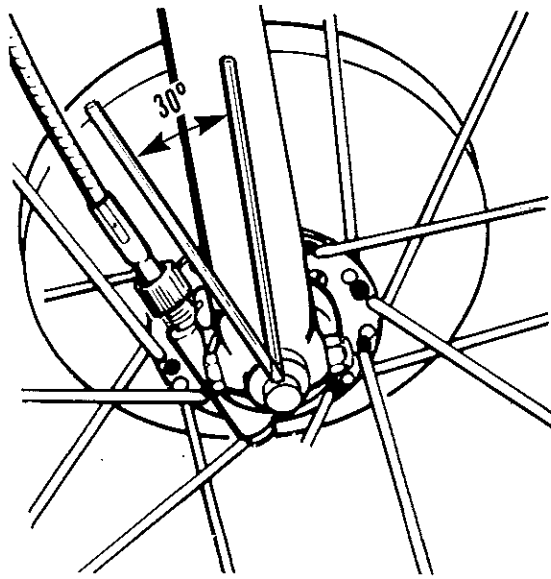
Install the front brake cable.



Spin front wheel in forward rotation, apply brake and, while holding brake on, torque the axle to 3.4-8 kg-m (25-60 ft-lbs).

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

◆ WARNING: The front axle lever must be within a 30° angle with the fork slider when finally tightened.



The front axle lever can be repositioned by slackening the brake side axle pinch bolt and rotating the axle lever clockwise until the desired position is reached. Retorque the axle pinch bolt to 2-2.8 kg-m (15-20 ft-lbs).

▼ **CAUTION:** Speedo drive must be positioned at approximately 11:00 o'clock position.

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

Route the speedocable through the lower crown and the cable guide, connect it to the speedometer drive gear.

REAR SHOCKS

Remove both left and right number plate.

Remove the rear brace support (used for transport).

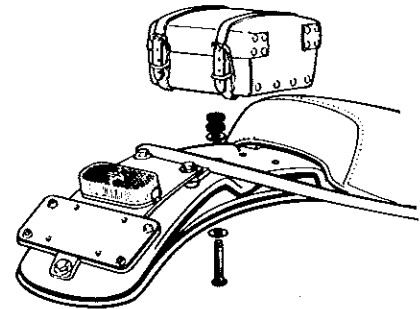
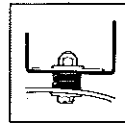
Raise the rear end slightly then mount the sprocket side shock on the upper frame, making sure to install the flat washers 8 mm x 17 x 2 shipped in the box kit with the retainer bolt.

Install the brake side shock to the swing arm in the same manner.

Torque the shock absorber retaining bolts to 2.-2.8 kg-m (15-20 ft-lbs).

TOOL BAG

Install the tool bag with the bolts, washers and spacers as illustrated.



Tighten each nut until at least one thread protrudes past the nylock.

▼ **CAUTION:** Do not overtighten the nuts or the rubber spacers will lose their flexibility.

CLEANING

Clean the motorcycle thoroughly with a cotton cloth to remove the antirust spray.

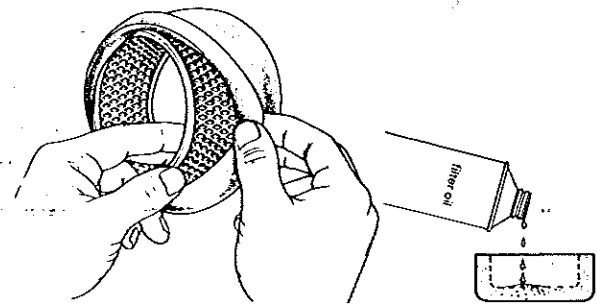
PRE-DELIVERY INSPECTION

AIR FILTER SERVICE

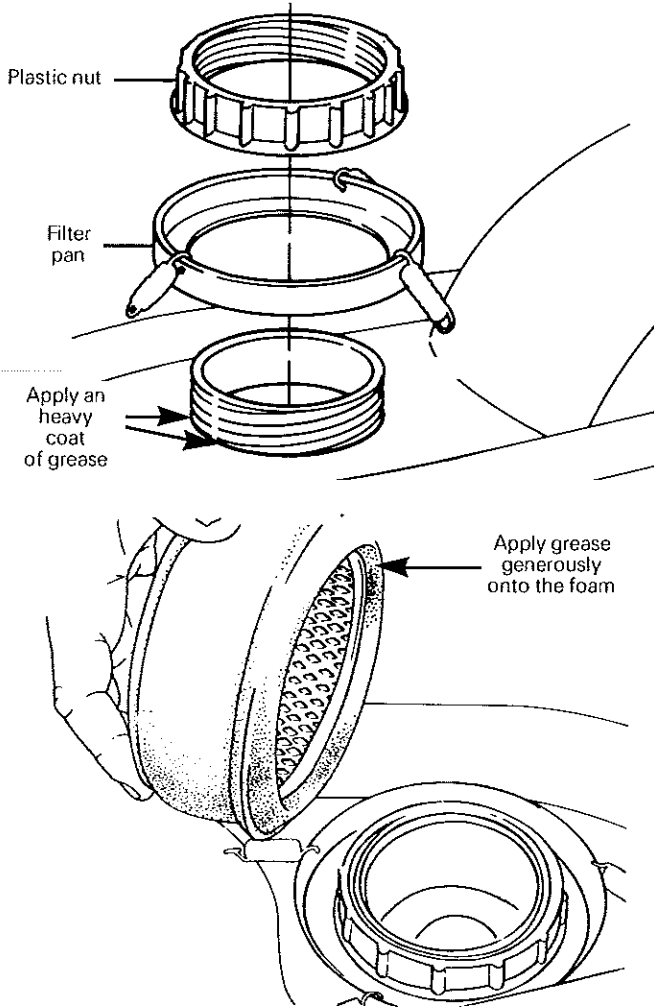
Remove the seat by slackening the two (2) rear retaining screws.

Remove the filter from its plastic bag. Separate the foam from the screen.

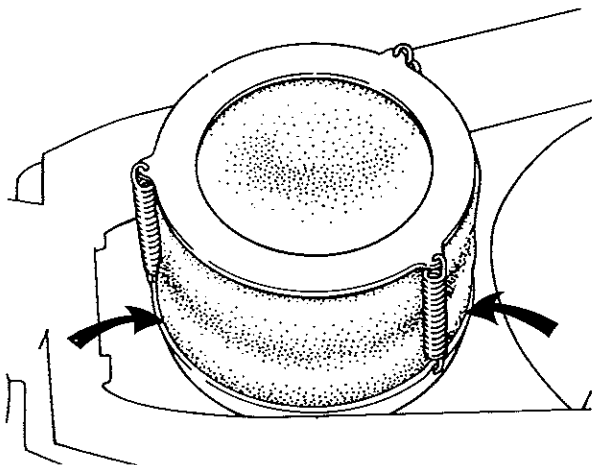
Pour the specially formulated Can-Am filter compound onto the element and work it well into the foam until the filter is completely saturated. Fit the element onto the screen.



Remove the plastic nut and air filter pan. Apply a heavy coat of grease around the threaded portion of the air box. Re-install the filter pan and firmly tighten the plastic nut. Generously grease the bottom edge of the foam and install the filter.



○ NOTE: Be sure the filter edge is tucked into the metal pan.



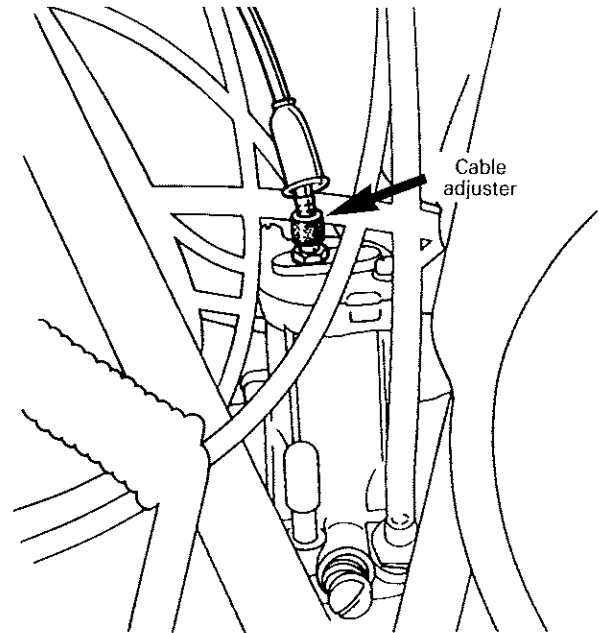
▼ CAUTION: A dry filter will cause extreme piston and cylinder damage that is not covered by warranty.

THROTTLE CABLE SYNCHRONIZATION

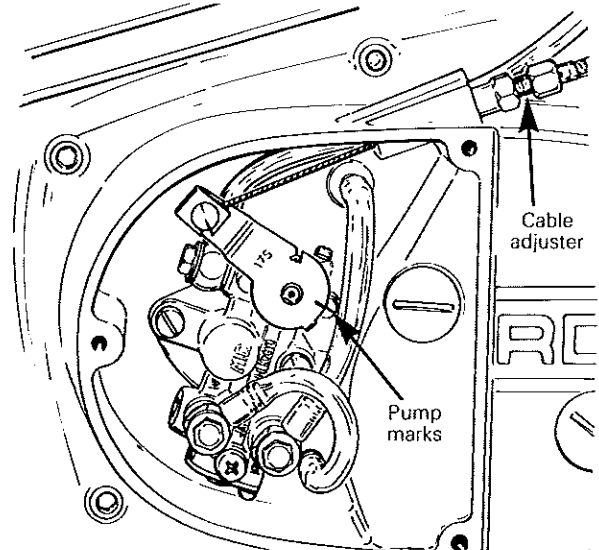
Check the throttle cable adjustment. The cable slack should be 1.6 mm (1/16").

Loosen the twist grip throttle cable adjuster (located on the mid-portion of the cable routed underneath the gas tank) to provide maximum slack.

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



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



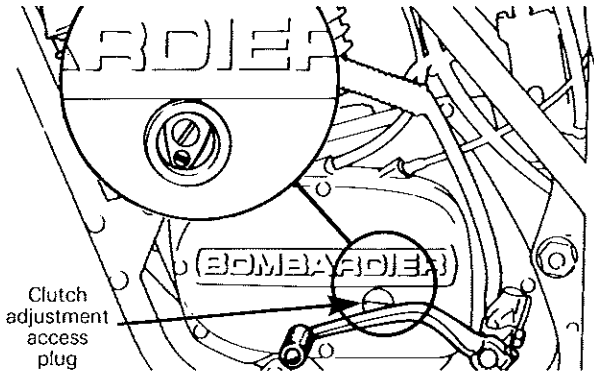
Adjust throttle cable at twist grip (cable adjuster is located on the mid-portion of the cable mounted underneath the gas tank) to provide 1.6 mm (1/16") slack.

◆ 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.

CLUTCH ADJUSTMENT

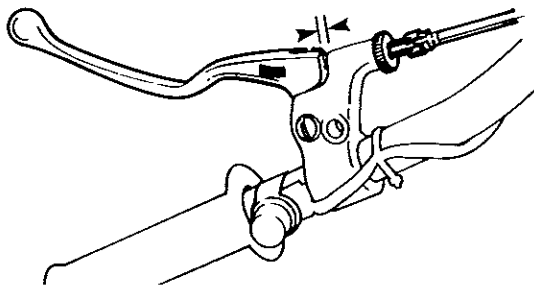
Prior to clutch adjustment, the clutch cable access plug must be in place, and the clutch lever operated a couple of times, to seat the cable in place.

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 the release bearing, then turn the screw ¼ turn out (counter-clockwise).



Carefully tighten the 4 mm set screw to lock the adjustment. Replace the access plug.

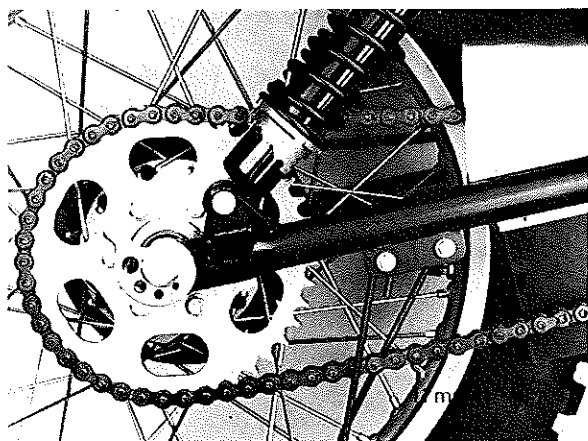
Adjust the cable adjuster to provide 1.6 mm (1/16 ") slack, between clutch lever and housing.



DRIVE CHAIN ADJUSTMENT

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

NOTE: Alignment marks on adjuster plate must be at the same position on each side of the wheel.



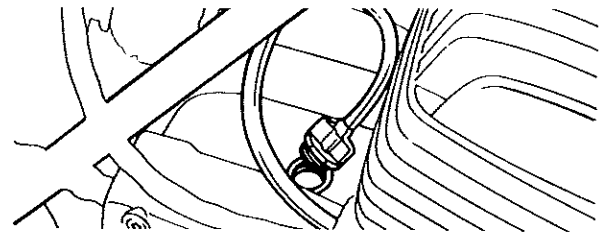
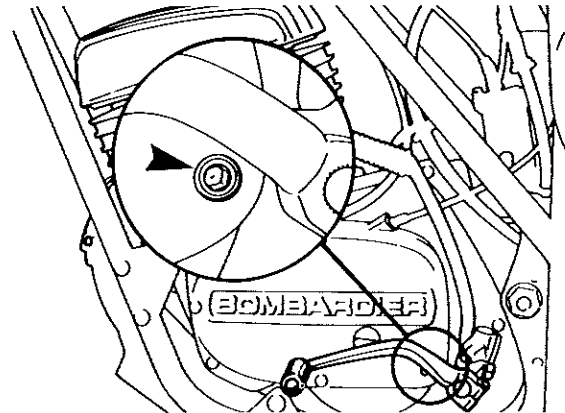
Adjust chain slack to 41 mm (1 5/8 ").

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

TRANSMISSION OIL LEVEL

With the motorcycle in a vertical position, remove the transmission oil level plug and check the oil level.

Oil level should be to the level plug. Add oil through filler / vent plug if necessary. (SAE 80, gear oil).



BRAKE ADJUSTMENT

Front

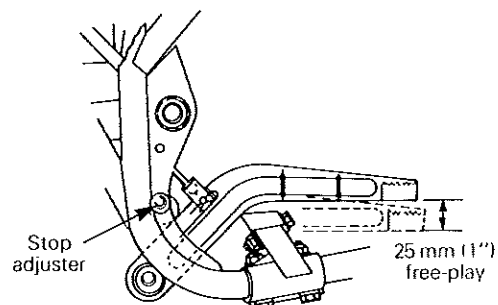
Completely loosen the brake cable adjuster (at handlebar), then using the adjuster located at the brake plate, adjust the cable to provide 25 mm (1") of free lever travel (at handlebar).

NOTE: Use adjuster at handlebar for final adjustment.

Rear

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

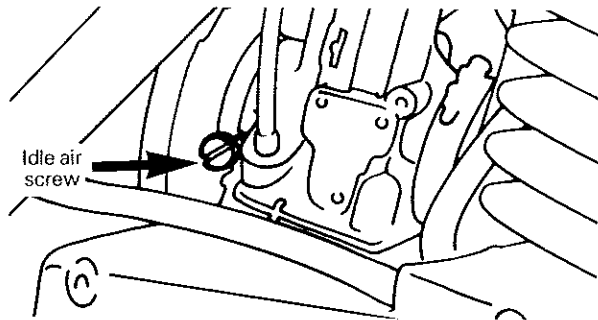
NOTE: The brake pedal height can be adjusted as desired by moving the stopper.



CARBURETOR ADJUSTMENT

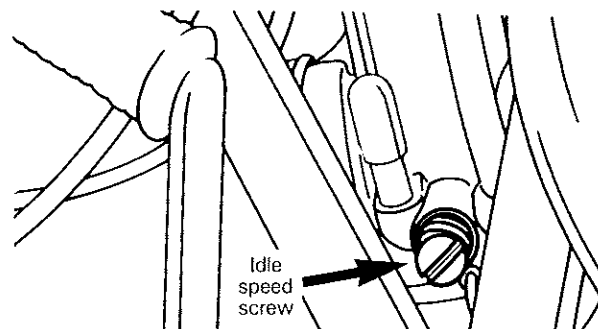
Idle speed and mixture adjustment

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



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 mixture screw can be turned in or out (within $\frac{1}{4}$ turn of basic setting) to achieve smoothest idle possible. Re-adjust idle speed if necessary.

ENGINE TIMING

Timing mark verification

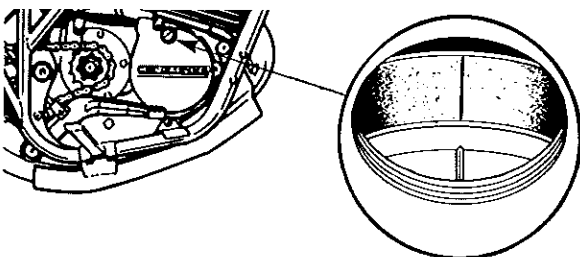
Disconnect the spark plug wire and remove the spark plug.

Remove the inspection plug on the magneto cover.

Install and adjust the top dead center gauge.

Rotate the rear wheel counter-clockwise until the piston is at $1.2 \text{ mm} \pm 0.2$ ($.047'' \pm .007$) before top dead center.

Check through the inspection hole, the flywheel and the magneto cover marks must align perfectly.



If the marks do not align, scribe a new mark on the magneto cover, in line with the flywheel mark at $1.2 \text{ mm} \pm .02$ ($.047'' \pm .007$) before top dead center.

CAUTION: The timing mark verification cannot be used as a timing procedure therefore always check the timing (using a stroboscopic timing light at 9000 R.P.M.) after the marks have been aligned.

Re-install the spark plug and connect the high tension spark plug wire.

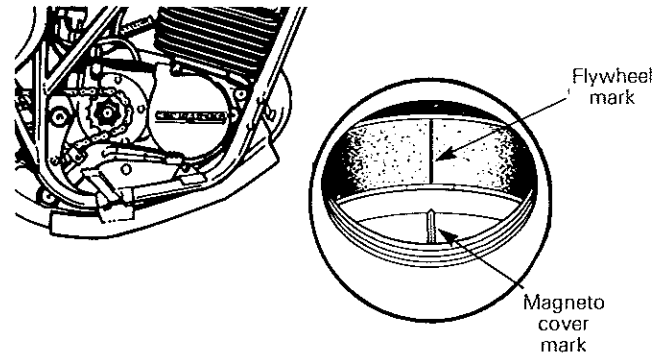
Timing light procedure

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

Start the engine and allow it to warm.

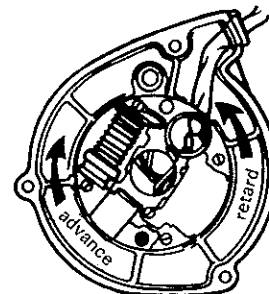
WARNING: To prevent electric shock, do not touch the high tension wire while the engine is running.

Point the timing light beam straight into the inspection hole and rev the engine to 9000 R.P.M. briefly. The timing marks on the magneto cover and on the flywheel should align. Stop the engine.



CAUTION: Timing marks must be checked with a dial indicator for perfect accuracy.

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



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

Examples of suitable timing lights:

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

TIRE PRESSURE

Check and adjust as required.

The recommended pressure is:

Terrain conditions

Dry, rocky terrain Front: 98 kPa (14 P.S.I.)
Rear: 98 kPa (14 P.S.I.)

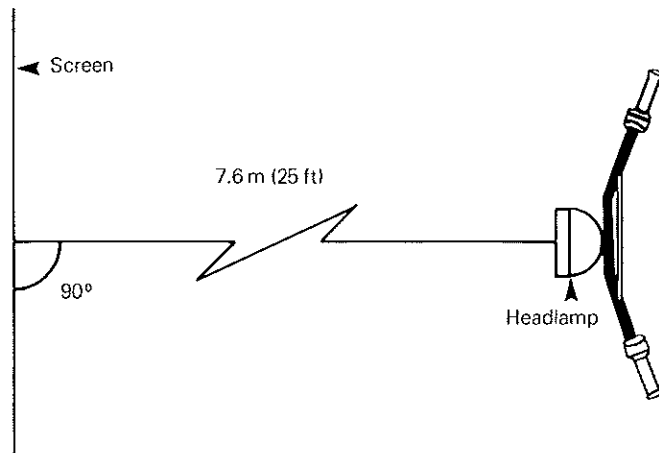
Soft, wet muddy terrain Front: 84 kPa (12 P.S.I.)
Rear: 84 kPa (12 P.S.I.)

GENERAL INSTRUCTIONS

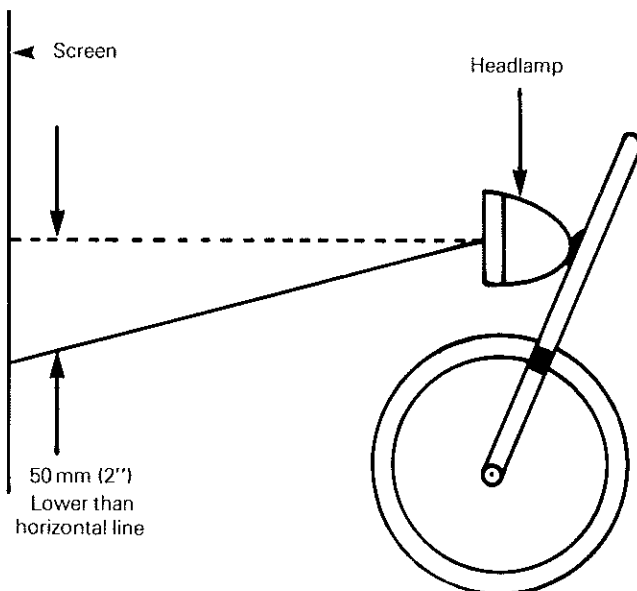
Inspect for good function of tail / brake lights, emergency stop switch, headlamp.

Adjust headlamp beam aiming as explained.

Place the vehicle on a flat surface with the front wheel in the vehicle axis at 25 ft distance from a wall or screen, making sure the vehicle and the wall forms a 90° angle.



With the driver in a riding position and the headlamp on. The beam aiming is correct when beam center (high density zone) is 50 mm (2") lower than the horizontal line (on the wall) at a distance of 7.6 m (25').



Slacken both retaining nuts, position the headlamp housing to obtain the desired height and retorque the nuts to .5-.8 kg-m (4-6 ft-lbs).

TEST RIDE MOTORCYCLE

Fill the oil reservoir with injection oil, and the gas tank with premium gasoline only.

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.

Clean the vehicle thoroughly. Explain the operator manual and warranty policy to the customer. **Complete and return the warranty registration.**

○ **NOTE:** Make sure the customer is well aware of the engine break-in procedure.

FIRST FIVE YOURS:

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, overrevving, etc.).

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

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

1977 QUALIFIER PRE-DELIVERY TECHNICAL DATA

Throttle & injector pump synchronization	1.6 mm ($\frac{1}{16}$ ") free-play at carburetor top. Marks must align on injection pump
Clutch adjustment	At engine: $\frac{1}{4}$ turn counter-clockwise before point of contact At handlebar: 1.6 mm ($\frac{1}{16}$ ") free-play between clutch lever and housing
Chain adjustment	41 mm ($1\frac{5}{8}$ ") of slack
Brake adjustment	25 mm (1") of free-play at end of lever or pedal
Transmission oil level	Up to level plug (SAE 80, gear oil)
Ignition timing at 9000 R.P.M.	Timing marks of magneto cover and flywheel must align
Basic timing	1.2 mm (.047") before top dead center
Tire pressure	Dry, rocky terrain Front: 98 kPa (14 P.S.I.) Rear: 98 kPa (14 P.S.I.) Soft, wet muddy terrain Front: 84 kPa (12 P.S.I.) Rear: 84 kPa (12 P.S.I.)

CARBURETOR SPECIFICATIONS

Vehicle model	QUALIFIER 125	QUALIFIER 175	QUALIFIER 250
Carburetor	84-32-3417	84-32-3418	84-32-3419
Std. main jet (production)	155	150	150
Needle jet	2.73	2.70	2.73
Idle jet	40		
Needle identification	4 rings		
Needle setting	2nd groove from top	3rd groove from top	2nd groove from top
Slide	no. 1		
Air screw	1 turn out		
Float level	25 mm (1")		
Idle speed	1000 R.P.M.		