HONDA MODEL MT250

OWNER'S MANUAL

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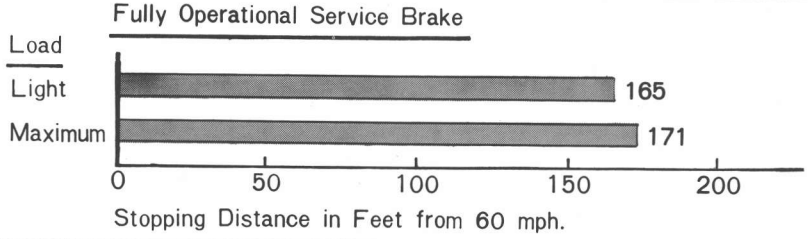
CONSUMER INFORMATION

VEHICLE STOPPING DISTANCE

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels under different conditions of loading.

The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: HONDA MT-250



ACCELERATION AND PASSING ABILITY

This figure indicates passing times and distances that can be met or exceeded by the vehicles to which it applies, in the situations diagrammed on the next page.

The low-speed pass assumes an initial speed of 20 MPH and a limiting speed of 35 MPH. The high-speed pass assumes an initial speed of 50 MPH and a limiting speed of 80 MPH.

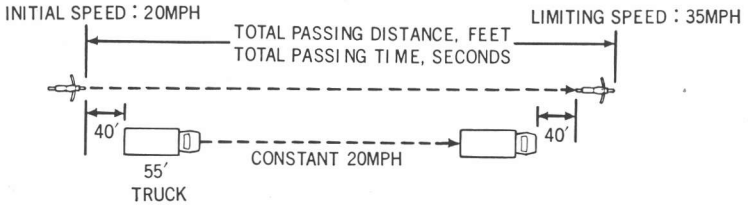
NOTICE: The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: HONDA MT-250

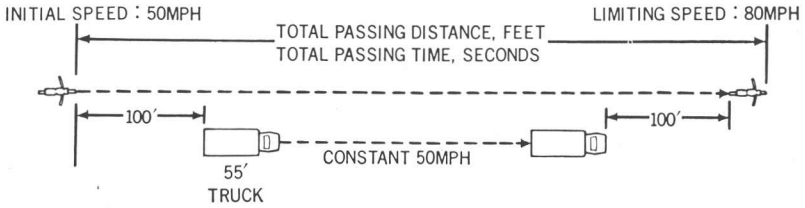
SUMMARY TABLE:

Low-speed pass	360	Feet;	7.5	Seconds
High-speed pass	1,312	Feet;	14.5	Seconds

LOW-SPEED



HIGH-SPEED



PREFACE

This booklet is your guide to the basic operation and maintenance of your new Honda MT-250. Please take the time to read it carefully. As with any fine machine, proper care and maintenance are essential for trouble free operation and optimum performance.

Your authorized Honda dealer will be glad to provide further information or assistance and is fully equipped to handle your future service needs.

Thank you for selecting a Honda. We wish you many miles of continued riding pleasure in the years ahead.

Keep this Owner's Manual in the tool compartment under the seat.

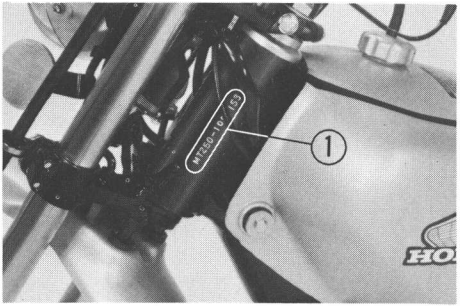
This motorcycle is an "operator-only" model.

CONTENTS

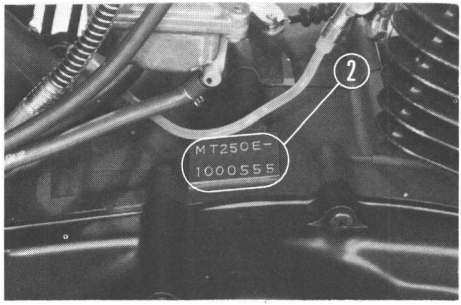
SERIAL NUMBER LOCATION

The frame serial number ① is stamped on the left side of the steering head. The engine serial number ② is stamped on top of the crankcase at the right rear of the cylinder.
These serial numbers are required when registering the motorcycle.

Refer to frame and engine serial numbers when ordering replacement parts to ensure that you will obtain the correct parts for your model series.

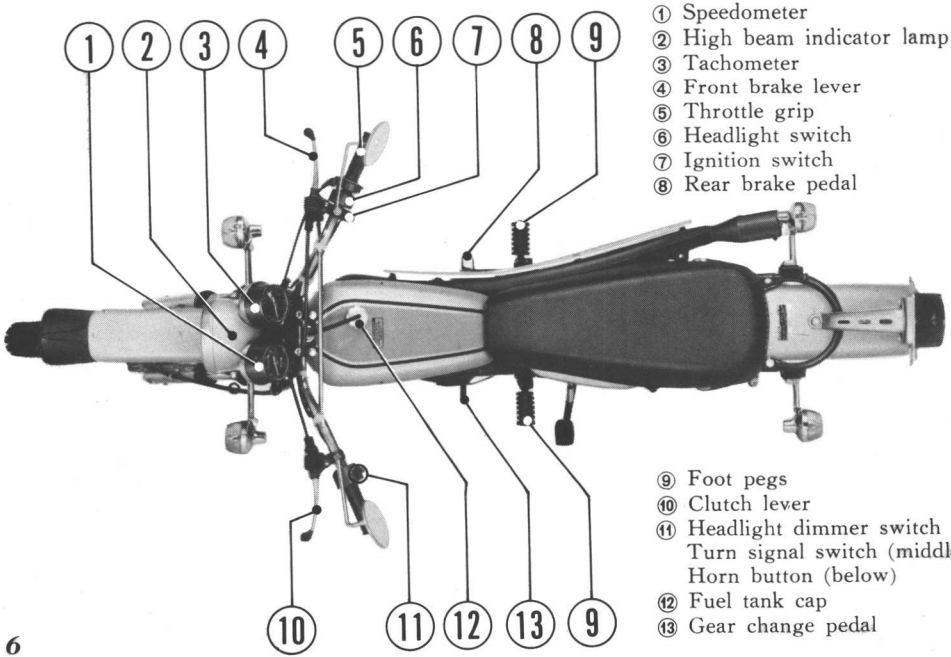


① Frame serial number



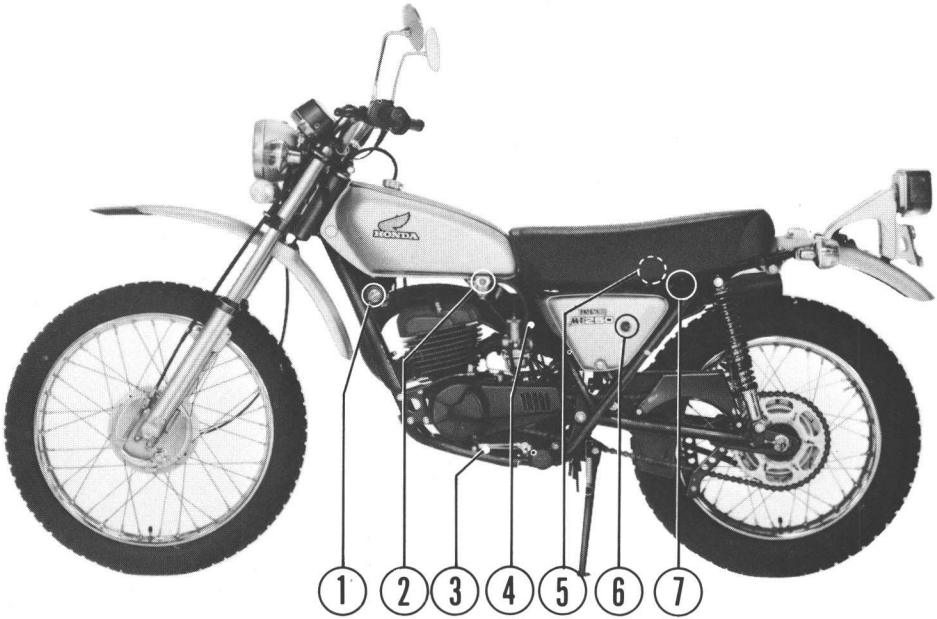
② Engine serial number

CONTROL LOCATION



① Speedometer
② High beam indicator lamp
③ Tachometer
④ Front brake lever
⑤ Throttle grip
⑥ Headlight switch
⑦ Ignition switch
⑧ Rear brake pedal

⑨ Foot pegs
⑩ Clutch lever
⑪ Headlight dimmer switch
Turn signal switch (middle)
Horn button (below)
⑫ Fuel tank cap
⑬ Gear change pedal



① Main switch ② Fuel valve ③ Gear change pedal
④ Fuel mixture enrichment lever ⑤ Engine oil tank cap (under seat)
⑥ Engine oil level inspection window ⑦ Seat lock

① Kick starter pedal
② Rear brake pedal
③ Transmission oil filler cap

GASOLINE AND OIL

DO NOT PRE-MIX GASOLINE AND OIL.
FILL THE FUEL TANK WITH GASOLINE ONLY.
FILL THE OIL TANK WITH TWO-CYCLE MOTOR OIL.

The proper amount of oil is supplied to the sliding surfaces of crankshaft, right crankshaft bearing, connecting rod, piston and cylinder wall by an oil pump.

Engine Oil

Recommended oil

Use two-cycle motor oil.

Temperature	Viscosity
Above 68°F (20°C)	SAE 30, 10W30, 20W
14°F (−10°C) to 68°F (20°C)	SAE 10W30
Below 14°F (−10°C)	SAE 5W, 10W

NOTE:
If two-cycle motor oil is not available, use other premium quality motor oil of the recommended viscosity.

Filling the oil tank

The oil tank is located at the left center of an motorcycle. Place the motorcycle in the upright position, and check oil level at the inspection window ①.

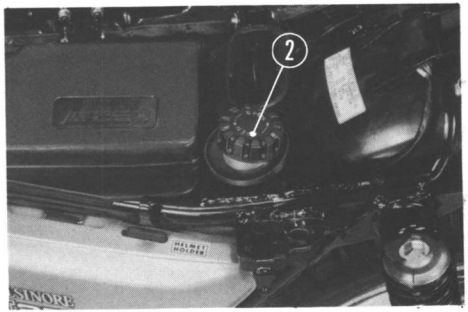
If it is below the top of the inspection window, remove the oil tank cap ② and fill the tank with oil.

When the oil level is at the top of the inspection window, there is approximately **0.25 U.S. qt.** (**0.24** ℓ) of oil in the tank.

NOTE:

When filling, take care not to allow foreign materials to enter the tank.

① Inspection window

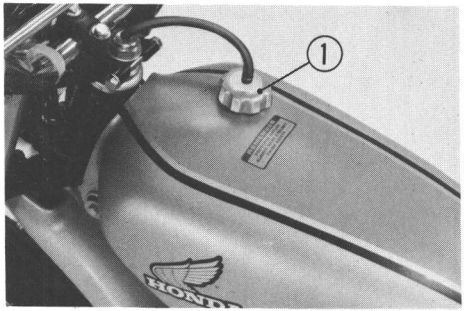


② Oil tank cap

Gasoline

Fuel tank capacity is **2.2 U.S. gal.** (**8.5 ℓ**) including **0.4 U.S. gal.** (**1.5 ℓ**) in reserve. Use of low-lead gasoline with a 91 octane rating or higher is recommended. If low-lead gasoline is not available, you may use a leaded regular grade gasoline. When refueling take care to exclude dirt, water, or other contaminants from the fuel tank.

WARNING :
Gasoline is flammable, and explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the motorcycle when refueling.



① Fuel tank cap

Transmission Oil Recommendation

Use only high detergent, premium quality motor oil.
The regular use of special oil additives is unnecessary and will only increase operating expenses.
Transmission oil should be changed at the intervals prescribed in the maintenance schedule on page 31.

NOTE :
Non-detergent and low quality oils are specifically not recommended.

Viscosity

Viscosity selection should be based on the average atmospheric temperature in your riding area. Change to the proper viscosity oil whenever the changes in average atmospheric temperature require it.

Recommended oil viscosity :

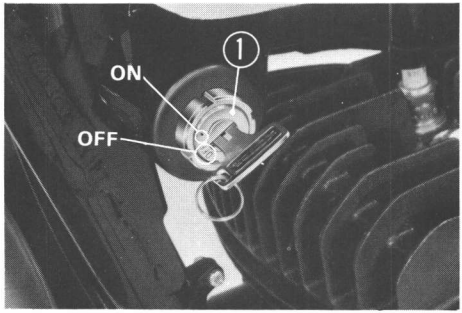
General, all temperatures
SAE 10W-30 or **SAE 10W-40**

Alternate :

Above 59°F (15°C)	**SAE 30**
32° (0°) to 59°F (15°C)	**SAE 20** or **20W**
Below 32°F (0°C)	**SAE 10W**

Main Switch

The main switch ① is located on the left side under the forward end of the fuel tank.



① Main switch

Key position	Function	Key Removal
OFF	All electric circuits are open: engine cannot be started.	Key can be removed.
ON (red dot)	Electric circuits are completed, lights will operate and engine can be started.	Key cannot be removed.

Ignition Switch

The ignition switch ① is located on the brake lever mount, next to the headlight switch.

With the main switch in the "ON" position and the ignition switch in the center "RUN" position, the ignition circuit is complete, and the engine will operate. The ignition switch may be turned in either direction to "OFF" position which opens the ignition circuit and stops the engine.

This switch is provided as an emergency safety device, and as a convenience, to stop the engine before reaching for the main switch key.

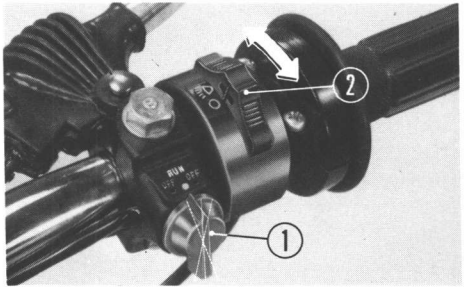
The ignition switch is normally left in the "RUN" position and should be reset to the "RUN" position after use. When the motorcycle is parked, turn the main switch to the "OFF" position.

Headlight Switch

The headlight switch ② is located at the right handlebar grip.

Move the switch up to turn the headlight and taillight on, and down to turn lights off.

The headlight switch will close the light circuit only when the main switch is in the "ON" position, and the headlight will be lit only when the engine is running.



① Ignition switch
② Headlight switch

Headlight Dimmer Switch

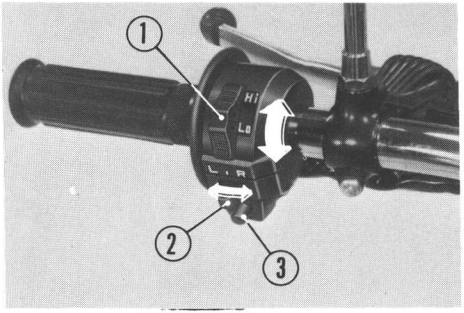
The headlight dimmer switch ① is located on the left handlebar grip switch housing. Move the headlight switch ② to the "ON" position (see page 14), then move the dimmer switch up to select high beam or down to select low beam.

Turn Signal Switch

The turn signal switch ② is located on the left handlebar grip switch housing. It can be operated without taking the hand off the handle grip. To signal a left turn move the switch to the "L" position. To signal a right turn move the switch to the "R" position. When the turn has been completed the switch must be returned to the center "OFF" position.

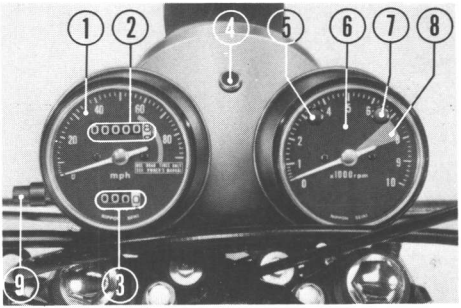
Horn Button

The horn button ③ is located on the left handlebar grip switch housing. When the horn button is depressed the horn will operate.

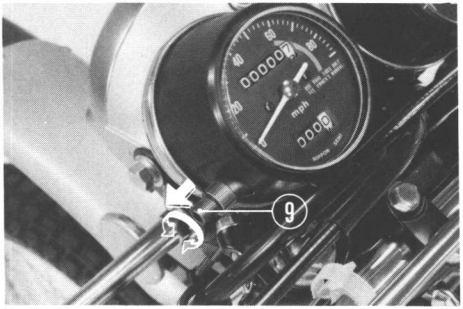


① Headlight dimmer switch
② Turn signal switch
③ Horn button

Instruments and Indicator Lights



① Speedometer
② Odometer
③ Tripmeter
④ High beam indicator light
⑤ Neutral indicator light

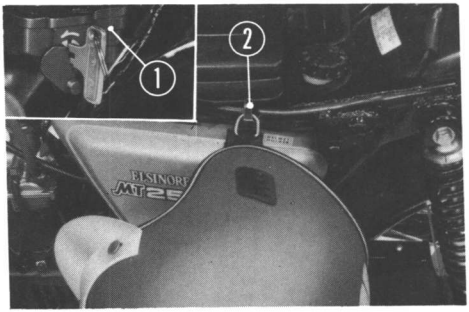


⑥ Tachometer
⑦ Turn signal indicator light
⑧ Tachometer red zone
⑨ Tripmeter reset knob

Ref. No.	Description	Function
1	Speedometer	Indicates driving speed.
2	Odometer	Indicates total accumulated distance traveled.
3	Tripmeter	Indicates distance traveled per trip. (meter can be reset for each trip)
4	High beam indicator light (blue)	Light will be on when headlight is on high beam.
5	Neutral indicator light (green)	Light will be on when the transmission is in neutral.
6	Tachometer	Indicates engine rpm.
7	Turn signal indicator light (amber)	Light will flash when either turn signal light is operating.
8	Tachometer red zone	During acceleration, engine RPM indicator needle may be allowed to briefly enter the red zone. However, the motorcycle must not be operated in the red zone for any length of time and must NEVER be operated beyond it.

Seat Lock and Helmet Holder

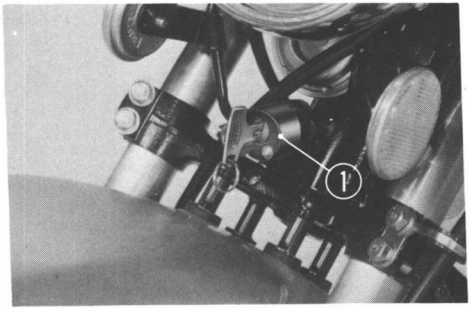
The seat lock ① is located on the lower left side of the seat. Insert the main switch key, and turn it counterclockwise 90° to unlock and open the seat.
The helmet holder ② is located under the seat. Open the seat, hang the "D" ring of the helmet on the hook, and lock the seat.



① Seat lock ② Helmet holder

Steering Lock

The steering lock ① is located on the steering stem directly below the headlight case. Turn the handlebar all the way to the steering stop, either to the left or right, insert the key into the lock, turn the key 60° to the left and press in, turn the key back to the original position and remove the key. This locks the steering to help prevent theft.



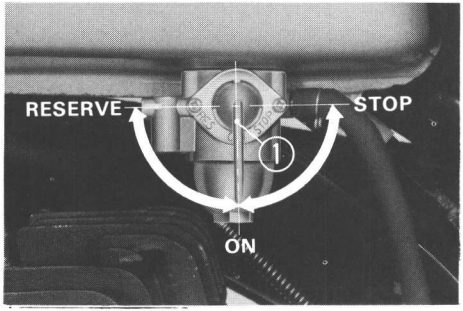
① Steering lock

Fuel Valve

The fuel valve ① is mounted under the left side of the fuel tank.

"STOP" position

When the fuel valve is turned to the "STOP" position, fuel cannot flow from the fuel tank to the carburetor. Set the valve in this position whenever the motorcycle is not in use.



① Fuel valve

"ON" position

When the fuel valve is turned to the "ON" position, fuel will flow from the main fuel supply to the carburetor.
Set the valve in this position when the engine is to be operated from the main fuel supply.

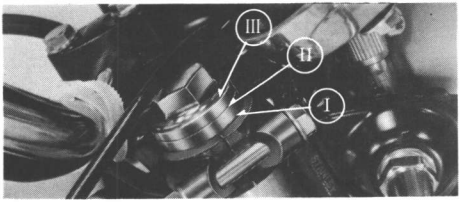
"RES" position

When the fuel valve is turned to the "RES" position, fuel will flow from the reserve fuel supply to the carburetor.
The fuel valve should be set in this position only after the main fuel supply has been consumed. The reserve fuel supply is **0.4 U.S. gal.** (**1.5** ℓ).
When it becomes necessary to switch to the reserve fuel supply, this serves as a warning to the rider that it is time to refill the fuel tank.
After refueling return the valve to the "ON" position.

Front Forks

Front fork height can be adjusted to change the handling characteristics of the motorcycle. The upper part of each fork tube is marked in **0.197 in.** (**5 mm**) graduations that are referenced to the surface of the upper fork bridge to indicate fork height settings.

To adjust front fork height, loosen the clamp bolts on the upper and lower fork bridges, and raise or lower the forks to the desired setting. Be certain that both fork tubes are set at equal height. Retighten the clamp bolts after fork height adjustment.

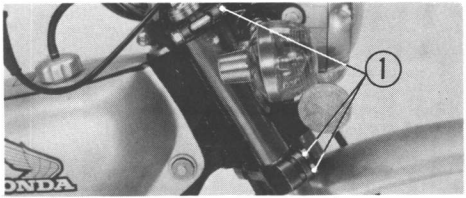


For low speed riding, where quick steering response is needed, move the forks upward through the fork bridge, toward setting I.

To increase stability for high speed riding, move the forks downward through the fork bridge, toward setting III.

Front fork height will also be determined by the rider's ability and personal preference.

CAUTION: Five groove marks are provided on the upper part of each front fork pipe. Never use the lower two grooves for setting.

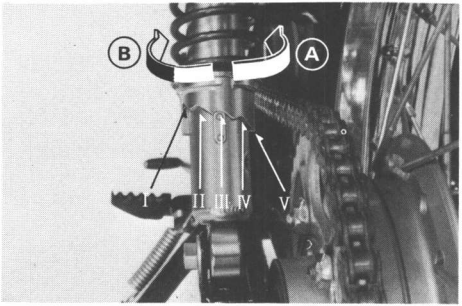


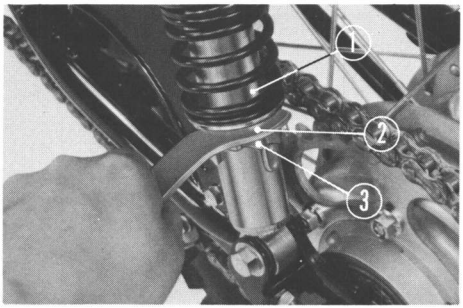
① Clamp bolts

Rear Shock Absorber

The rear shock absorbers ① have five settings to compensate for differences in rider weight and riding conditions. Position (III) is the standard setting.

Adjustment is performed by using the pin wrench ② contained in the tool kit. Turning the adjuster ③ in direction Ⓐ softens the rear suspension, turning it in direction Ⓑ stiffens the rear suspension. Be certain to adjust both right and left shock absorbers to identical positions.





① Rear shock absorber
② Pin wrench ③ Adjuster

PRE-RIDING INSPECTION

At the start of each riding day, perform a general inspection to be certain the motorcycle is in good, safe operating condition.

This inspection will require only a few minutes and can save you much time and expense in the long run. Check the following items and adjust or service if necessary. Refer to the appropriate section of this manual for detailed maintenance instructions.

1. ENGINE OIL LEVEL—Check oil level and add oil if necessary (page 33).
2. FUEL—Check fuel level and fill tank if low (page 11).
3. TRANSMISSION OIL LEVEL — Check oil level and add oil if necessary (pages 34~36).
4. BRAKES—Check operation of front and rear brakes. Adjust free play if necessary (pages 51~53).
5. TIRE PRESSURE—Check with a tire pressure gauge, and inflate to recommended pressure.
6. DRIVE CHAIN—Check condition of chain and measure chain slack. Adjust if drive chain slack is incorrect. Lubricate if drive chain appears dry. Replace if drive chain is badly worn or damaged (pages 47~51).
7. THROTTLE—Check throttle operation in all steering positions. Adjust if free play is incorrect. Replace or correct cable routing if throttle does not operate freely in all steering positions (pages 42~44).
8. LIGHTING EQUIPMENT — Check headlight, turn signals and tail/stoplight. Replace any bulb which fails to operate (pages 62~63).
9. FRONT AND REAR SUSPENSION —Check operation (pages 54~55).

TIRE RECOMMENDATION

- Off/on-the-road tires are standard on this model. Select the proper tires in accordance with the following specifications:

Tire Brand	Bridge-stone	Front: TRAIL WING 5A Rear: TRAIL WING 5A
	Nitto	Front: NT-102B Rear: NT-102B
Tire size		Front: 3.00-21 Rear: 4.00-18
Tire inflation pressure (cold)		Front: 21 psi (1.5 kg/cm²) Rear: 21 psi (1.5 kg/cm²)
Vehicle load limit		220 lbs (100 kg) operator only

When riding at any speed higher than **60 mph,** use the tires specified below:

Tire Brand	Bridge-stone	Front: TRAIL WING Rear: TRAIL WING
	Nitto	Front: NT-116 Rear: NT-116

- Overinflation or underinflation of the tires causes abnormal tread wear or other defects which may result in serious accidents. Riding with underinflated tires will cause the tires to slip on the rims, damaging the innertube.
- From time to time check tire pressures and correct, if necessary. Adjust tire pressures when tires are cold.
- Replace the tires when the center block height of the tread is less than 0.15 in. (4 mm).

PRECAUTIONS BEFORE RIDING

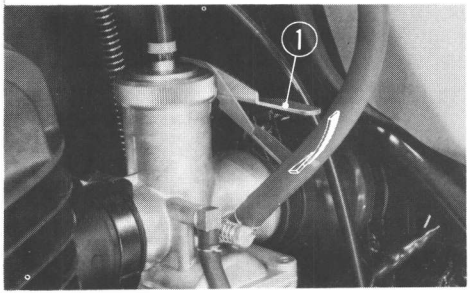
- **Do not wear loose clothing which can catch in the drive chain or in the wheels and tires.**
- **During on-the-road operation ensure that all required equipment specified by the local laws and regulations is installed on the motorcycle.**

STARTING THE ENGINE

Starting a Cold Engine

1. Place the fuel valve lever in "ON" position.
2. Shift the transmission into neutral (the engine can be started in gear with the clutch disengaged, but it is recommended that starting be performed in neutral).
3. Insert the key into the main switch and turn it to the "ON" position.
4. Make sure the ignition switch is in "RUN" position.
5. Lower the fuel mixture enrichment lever ① (see page 25).
6. With throttle closed, operate the kick starter pedal with rapid, full strokes until the engine starts. Open the throttle when the engine fires.

7. Run the engine for a few minutes, blipping the throttle, until it warms up enough to idle with the fuel mixture enrichment lever raised.



① Fuel mixture enrichment lever

If the engine fails to start after several attempts, it may have become flooded with excess fuel.

To clear the engine of excess fuel, turn the main switch OFF, raise the fuel mixture enrichment lever, and operate the kick starter pedal two or three times with the throttle fully open. Then turn the main switch on, close the throttle, and kick start the engine.

If the engine still fails to start, remove the spark pulg and dry the electrodes with a clean cloth.

Starting a Warm Engine

Start a warm engine in the same manner as a cold engine, but do not use the fuel mixture enrichment lever (keep the lever raised).

WARNING :

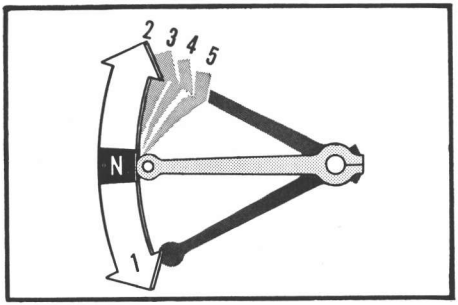
- **Exhaust contains poisonous carbon monoxide. Never run the engine in a closed garage or confined area.**

BREAK-IN PROCEDURE

During the first 600 miles (1,000 km), operate your new MT-250 so the engine neither pulls laboriously nor exceeds 80% of the maximum rpm in any gear. Avoid full throttle operation, and select your gear changes to spare the engine undue stress. Careful break-in operating during the initial mileage will measurably extend the service life of the engine.

RIDING THE MOTORCYCLE

1. With the engine idling, pull back the clutch lever, and depress the gear change pedal to shift into 1st (low) gear.
2. Increase engine speed by opening the throttle, and slowly release the clutch lever. Throttle and clutch operation must be properly coordinated for a smooth start.
3. When the motorcycle attains a speed of about 15 mph, close the throttle, pull back the clutch lever, and raise the gear change pedal one full stroke to shift into 2nd gear.
4. Repeat the gear shifting procedure, shifting to 3rd, 4th, and 5th gear as road speed is increased. Always close the throttle and disengage the clutch when shifting gears.



Shifting pattern

5. To slow or stop the motorcycle, close the throttle, and apply both front and rear brakes equally. Disengage the clutch as the motorcycle comes to a stop.

   Front and rear brakes may be applied independently, but maximum deceleration requires the simultaneous use of both brakes. Avoid locking the wheels, as this would cause the motor-

cycle to skid.

Downshift progressively as speed is reduced. The transmission must be in the gear appropriate for the speed of the motorcycle for effective engine braking, and to ensure good acceleration when speed is resumed.

WARNING:

- **The exhaust pipe and muffler become very hot during operation. Wear clothing which will completely cover the legs while riding, and avoid any contact with unshielded portions of the exhaust system.**
- **A rider should be dressed so as not to touch the drive chain or the wheels.**

PARKING

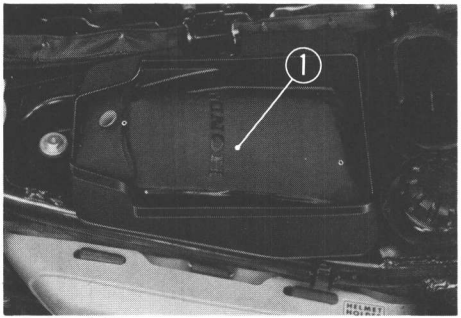
When parking the motorcycle, turn the main switch to the "OFF" position and remove the key. The steering should also be locked. Turn the fuel valve to the "STOP" position.

CAUTION:

When washing the vehicle, do not allow water to enter the muffler.

TOOL KIT

The tool kit ① is contained in the tool kit case located under the seat.
Minor adjustments and parts replacement can be performed with the tools contained in the kit. Adjustments or repairs which cannot be performed with these tools should be referred to your Honda dealer.



① Tool kit

Listed below are the items included in the tool kit.

- 26 mm wrench
- Wrench handle
- 14×17 mm open end wrench
- 10×12 mm open end wrench
- Spark plug wrench
- Wrench handle
- 10 mm wrench
- Pliers
- No. 2 screw driver
- No. 2 cross point screwdriver
- No. 3 cross point screwdriver
- Lever
- Screwdriver grip
- Tool bag

MAINTENANCE SCHEDULE

The mileage intervals shown in the maintenance schedule are intended as a guide for establishing regular maintenance and lubrication periods for your Honda motorcycle. Sustained severe or high speed operation under adverse conditions may necessitate more frequent servicing. To determine specific recommendations for conditions under which you use your motorcycle, consult your authorized Honda dealer. If your Honda MT-250 is ever overturned or involved in a collision, have your Honda dealer carefully inspect the major components, eg. frame, suspension and steering parts, for misalignment or damage before further operation.

MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.		**INITIAL SERVICE PERIOD**	**REGULAR SERVICE PERIOD** Perform at every indicated month or mileage interval, whichever occurs first.	
	Month	—	6	12
	Mile	500	3,000	6,000
	Km	1,000	5,000	10,000
TRANSMISSION OIL—Change		●		○
SPARK PLUG—Clean and adjust gap or replace if necessary.			○	
*CONTACT POINT AND IGNITION TIMING—Clean, check, and adjust or replace if necessary.		●	○	
POLYURETHANE FOAM AIR FILTER ELEMENT—Clean and oil		(Service more frequently if operated in dusty area)	○	
*CARBURETOR—Check, and adjust if necessary.			○	
*OIL PUMP OPERATION—Check		●	○	
*CYLINDER HEAD, CYLINDER PISTON, PISTON RINGS AND MUFFLER—Decarbonize				○
THROTTLE OPERATION—Inspect cable. Check, and adjust free play.		●	○	
*OIL TANK FILTER—Clean				○
FUEL FILTER SCREEN—Clean			○	
*CLUTCH—Check operation, and adjust if necessary.		●	○	

Items marked * should be serviced by an authorized Honda dealer, unless the owner has proper tools and is mechanically proficient. Other maintenance items are simple to perform and may be serviced by the owner.

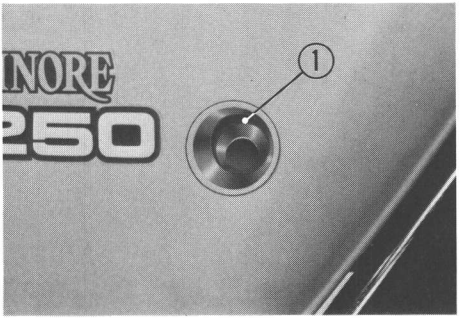
MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.		INITIAL SERVICE PERIOD	REGULAR SERVICE PERIOD Perform at every indicated month or mileage interval, whichever occurs first.	
	Month	—	6	12
	Mile	500	3,000	6,000
	Km	1,000	5,000	10,000
DRIVE CHAIN—Check, lubricate, and adjust if necessary.		**●	○	
*BRAKE SHOES—Inspect, and replace if worn.				○
BRAKE CONTROL LINKAGE—Check linkage, and adjust free play if necessary.		●	○	
*WHEEL RIMS AND SPOKES—Check. Tighten spokes and true wheels, if necessary.		●	○	
TIRES—Inspect.				○
FRONT FORK OIL—Drain and refill.		●		○
REAR FORK BUSHING—Grease. Check for excessive looseness.			○	
*STEERING HEAD BEARINGS—Adjust.				○
BATTERY—Check electrolyte level, and add water if necessary.		●	○	
ALL NUTS, BOLTS, AND OTHER FASTENERS—Check security and tighten if necessary.		●	○	

** Initial service period 200 miles.

MAINTENANCE OPERATIONS

Engine Oil Level

The oil tank is located to the left center of the motorcycle. Place the motorcycle in an upright position, and check the oil level through the inspection window ①. When it is below the top of the inspection window, fill the tank with oil (see engine oil recommendations, page 9).

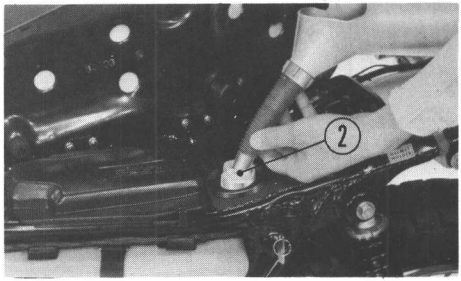


① Inspection window

When the oil level is at the top of the inspection window, there is approximately **0.25 U.S. qt.** (**0.24 ℓ**) of oil remaining in the tank. The total capacity of the oil tank is **1.4 U.S. qt.** (**1.3 ℓ**).

NOTE:

- **When filling the oil tank take care not to allow foreign materials to enter the tank.**
- **If any sign of air bubbles is noted in the oil pipes, immediately contact the nearest Honda Dealer.**

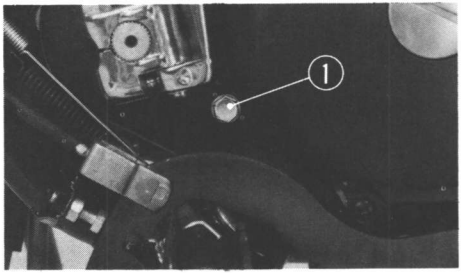


② Oil filler hole

Transmission Oil Level

To check the oil level and add oil, proceed as follows:

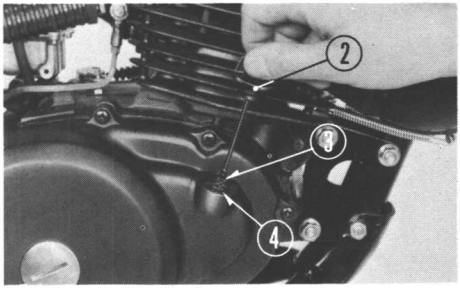
1. Start the engine and warm it up for about three minutes.
2. Stop the engine. Place the motorcycle in an upright level position and remove the oil check bolt ①. The oil should flow out of the oil check bolt hole.
   After checking, tighten the oil check bolt securely.



① Oil check bolt

3. Remove the oil filler cap ②, and check the oil level with the oil level gauge.
   If it is below the lower mark on the gauge, add oil up to the upper mark through the the oil filler hole.

NOTE:
When checking the oil level, insert the level gauge into the oil filler hole, but do not screw it in.

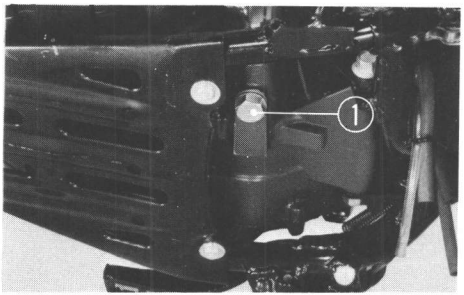


② Oil filler cap ③ Lower mark
④ Upper mark

Transmission Oil Change

Transmission oil should be changed in accordance with the maintenance schedule on page 31. Use only motor oil of the grade and viscosity recommended on page 12. When changing oil, drain the used oil from the crankcase while the engine is warm. This will ensure complete and rapid draining.

1. Remove the oil filler cap ② (see page 34) from the right crankcase cover.
2. Place a drip pan under the engine to catch the oil, and then remove the drain plug ① with a 17 mm wrench.
3. After the oil stops draining from the crankcase, operate the kick starter several times to drain any oil which may be left in the engine.
4. When the oil has been completely drained, ensure that the drain plug sealing washer is in good condition and reinstall drain plug securely.
5. Add the recommended oil (approx. **0.9 U.S. qt.** or **0.85** ℓ) slowly through the oil filler hole. Place the motorcycle in an upright position and check that the oil level is up to the upper mark on the level gauge.



① Drain plug

NOTE:

When operating the motorcycle under unusually dusty conditions, it is recommended that the oil changes be performed at more frequent intervals than that specified in the maintenance schedule.

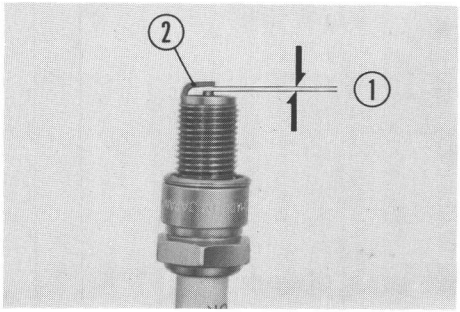
Spark Plug Replacement and Adjustment

The standard spark plug for this model is the **NGK B8ES**.

Be sure to clean mud and sand from around the spark plug before removing it. The use of the optional plug cap is recommended if the motorcycle is subject to frequent off-the-road riding.

1. Disconnect the plug lead and remove the spark plug with the spark plug wrench provided in the tool kit.
2. Inspect the electrodes and center porcelain of the spark plug for deposits, eroded electrodes, or carbon fouling. If the spark plug deposits are heavy, or if the electrodes appear to be eroded excessively, replace the spark plug with a new one. If the spark plug is carbon or wet fouled, the plug can sometimes be cleaned with a stiff wire such as a pin.

3. Adjust the spark plug gap ① to **0.024–0.028 in.** (**0.6–0.7 mm**). The gap can be measured with a feeler gauge. The adjustment is made by bending the side (ground) electrode ②.



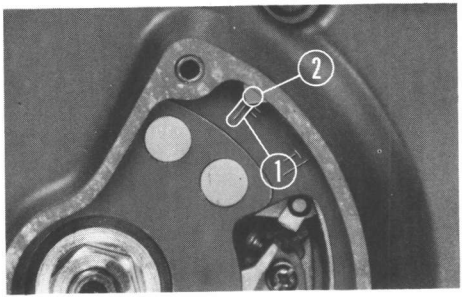
① Spark plug gap ② Side electrode

Before installing the spark plug, clean any oil or dirt from the spark plug seat in the cylinder head.

Install the spark plug by hand until finger tight. Then use the spark plug wrench to tighten the plug an additional 1/2 to 3/4 turn or until the sealing gasket is compressed.

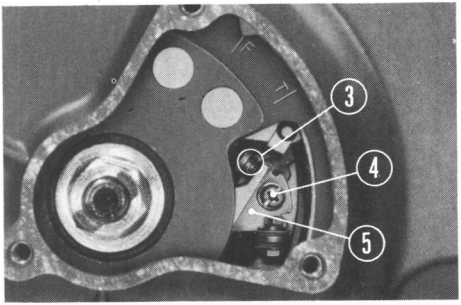
Ignition Timing Adjustment

1. Remove the generator cover.
2. Clean and inspect the contact breaker points ③. Replace if worn or badly pitted. Light pitting may be removed with an ignition point file.
3. Rotate the generator rotor counterclockwise until the "F" mark ① aligns with the index mark ②. When these marks align, the contact breaker points should just begin to open.



① "F" mark ② Index mark

4. If ignition timing requires adjustment, loosen the point base locking screw ④, and move the point base ⑤, to increase or decrease the contact breaker point gap.
   Widening the gap will advance ignition timing, and narrowing the gap will retard timing.



③ Contact breaker points
④ Point base locking screw
⑤ Point base

After adjusting the contact breaker point gap, tighten the point base locking screw, and recheck ignition timing.

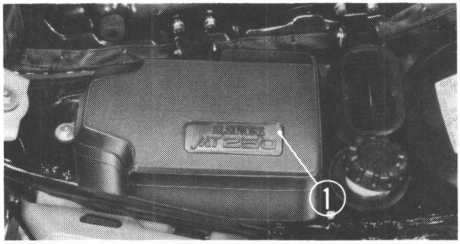
5. When ignition timing is properly adjusted, rotate the generator rotor counterclockwise until the breaker points fully open, and check the gap with a clearance gauge. The gap should be **0.008–0.024 in. (0.2–0.6 mm).**

   If the maximum gap is not within these limits after ignition timing has been correctly adjusted, the contact breaker points should be replaced and ignition timing reset.

Air Cleaner Maintenance

The air cleaner element must be cleaned and oiled at least once every 3,000 miles. If your motorcycle is operated in dusty areas, more frequent servicing will be required. Your Honda dealer can help you to determine the correct service interval for your particular riding conditions.

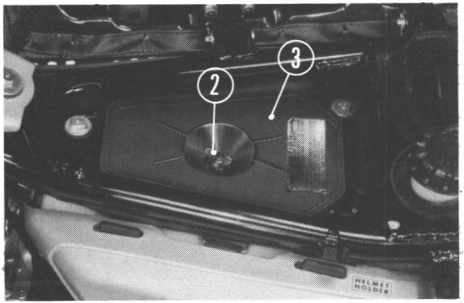
1. Raise the seat.
2. Remove the tool kit case ①.
3. Remove the wing nut ②, and remove the air cleaner case cover ③.



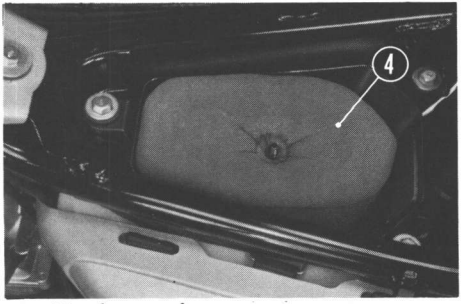
① Tool kit case

4. Remove the air cleaner element ④.
5. Wash the element in clean stoddard solvent and dry it thoroughly.
6. Soak the element in clean gear oil (**SAE 80~SAE 90**) until it is saturated. Then squeeze it to remove excess oil.
7. Install the element.
8. Install the cleaner case cover and tighten the wing nut. Install the tool kit case and lower the seat.

WARNING:
Gasoline or low flash point solvents are highly flammable and must not be used to clean the air cleaner elements.



② Wing nut ③ Air cleaner case cover

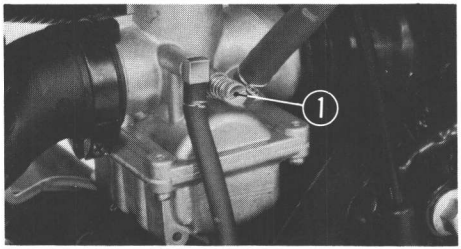


④ Air cleaner element

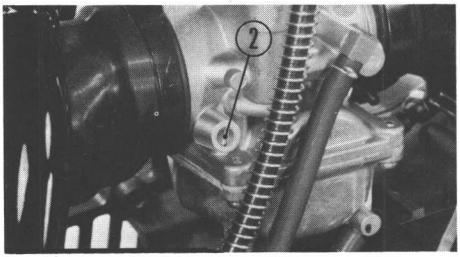
Carburetor Adjustment

The carburetor should be adjusted only after the engine has attained operating temperature.

1. Adjust the idle speed screw ① until the engine idles at approximately 1,500 rpm. Turn the idle speed screw clockwise to increase idle speed or counterclockwise to decrease idle speed.
2. Turn the air screw ② clockwise until you hear the engine begin to miss or decrease in speed, then counterclockwise until the engine again misses or decreases in speed. Set the air screw exactly between these two extreme positions. Usually the correct setting (between extremes of rich and lean) will be found to be 1.0~1½ turns open from a fully closed position.
3. If idle speed changes after adjusting fuel mixture, readjust the idle speed screw.



① Idle speed screw



② Air screw

NOTE:

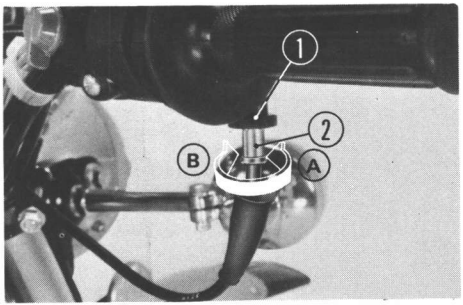
Before making adjustments to the carburetor, be sure the ignition system is functioning properly, and the engine has good compression. Do not attempt to compensate for other faults by carburetor adjustment.

Throttle Grip Adjustment

The throttle grip free play should be 5~10° of the grip rotation. To adjust, proceed as follows:

1. Remove the rubber cap from the throttle cable upper adjuster ②. Loosen the lock nut ① and turn the adjuster. Turning the adjuster in direction Ⓐ will increase the free play, and turning it in direction Ⓑ will decrease the play.
2. To make a fine adjustment, first remove the rubber cap from the throttle cable lower adjuster ④ (see page 43). Loosen the lock nut ③, and turn the adjuster. Turning the adjuster in direction Ⓐ will increase the free play, and turning it in direction Ⓑ will decrease the free play.

After adjusting, tighten the lock nut securely. Open and close the throttle to check for smooth operation and proper closing.



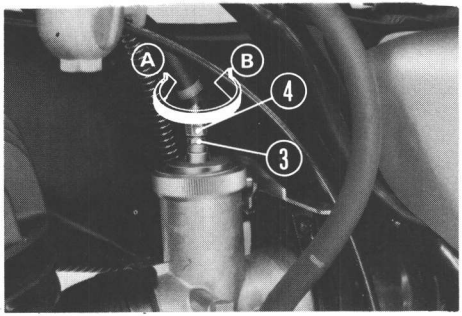
① Lock nut
② Throttle cable upper adjuster

NOTE:
The oil pump control cable must be adjusted whenever throttle grip adjustment is made by the throttle cable upper adjuster. **(see page 42).**

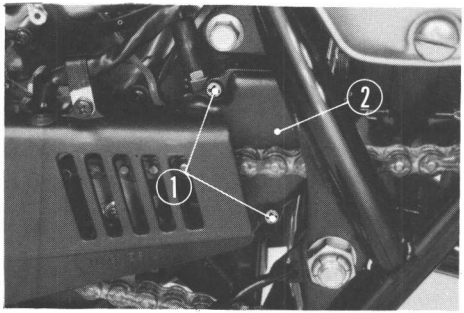
Oil Pump Cable Adjustment

Adjust the throttle grip free play before adjusting the oil pump cable.

1. Remove the oil pump cover ②.
2. Close the throttle fully.



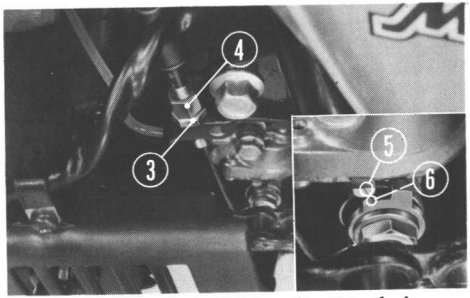
③ Lock nut
④ Throttle cable lower adjuster



① Oil pump cover attaching screws
② Oil pump cover

Then loosen the lock nut ③ and turn the cable adjusting bolt ④ until the mark ⑤ on the pump body aligns with the matching mark ⑥ on the lever.

Excessive free play may result in a jammed pump, and insufficient free play may result in excessive oil consumption and spark plug fouling.

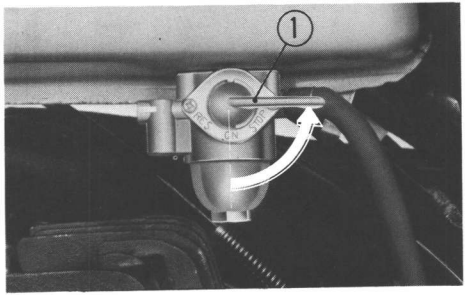


③ Lock nut ④ Cable adjusting bolt
⑤ Mark ⑥ Matching mark

Fuel Filter Maintenance

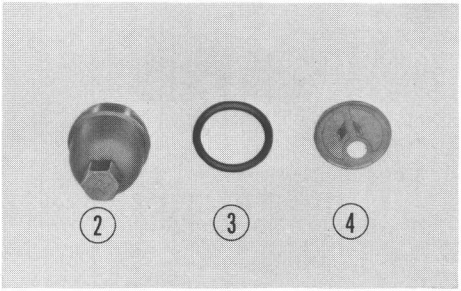
The fuel filter is incorporated in the fuel valve ① which is mounted on the bottom of the fuel tank at the left side. Accumulation of dirt in the filter will restrict the flow of the fuel and cause the carburetor to malfunction, therefore, the fuel filter should be serviced periodically.

1. Turn the fuel valve ① to the "STOP" position.



① Fuel valve

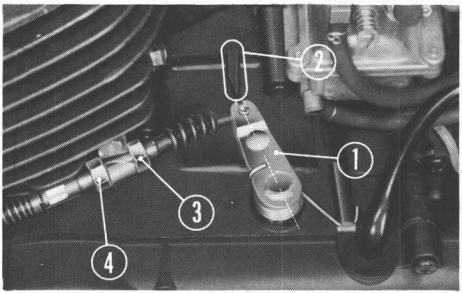
2. Unscrew the fuel filter cap ②. Wipe all sediment from the inside of the cap.
3. Remove the "O" ring seal ③ and the filter screen ④. Clean the filter screen.
4. Reinstall the filter screen, "O" ring, and cap.
5. Turn the fuel valve to the "ON" position and check for leakage at the filter cap.



② Fuel filter cap ③ "O" ring seal
④ Filter screen

Clutch Adjustment

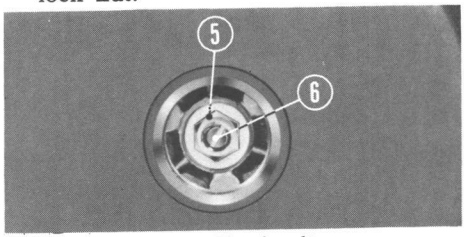
The clutch should be adjusted so that pulling back the clutch lever will completely disengage the transmission. Too much free play will prevent full clutch disengagement, causing difficult shifting, and creeping or stalling when stopped. Too little free play will cause the clutch to slip during acceleration and may cause rapid clutch wear.



① Clutch lifter lever ② Index mark
③ Lock nut ④ Clutch cable lower adjuster

Adjustment of clutch:

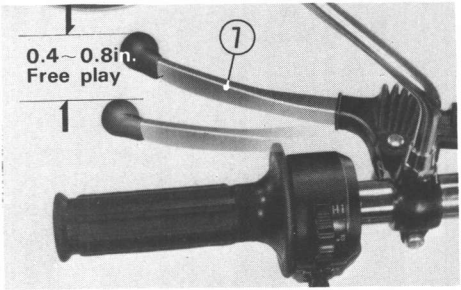
1. Align the clutch lifter lever ① with the index mark ② on the crankcase. To adjust, loosen the lock nut ③, and turn the clutch cable lower adjuster ④. (page 45).
2. Remove the clutch adjuster cap from the right crankcase cover.
3. Loosen the adjuster lock nut ⑤ and turn the clutch adjuster ⑥ clockwise until it no longer turns. From that position, turn the adjuster counterclockwise 1/2 turn and tighten the lock nut.



⑤ Lock nut ⑥ Clutch adjuster

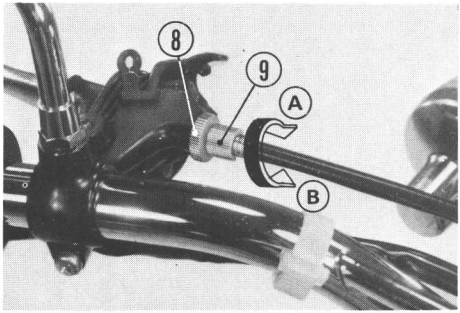
Check the clutch lever free play:

4. The normal clutch lever free play is **0.4~0.8 in.** (**10~20 mm**) at the tip of the lever ⑦. To adjust, remove the dust cover, loosen the lock nut ⑧ and turn the upper adjuster ⑨. Turning the adjuster in direction Ⓐ will increase the play and turning it in direction Ⓑ will decrease the play. After adjusting, tighten the lock nut and install the dust cover.



⑦ Clutch lever

5. Test ride to be sure the clutch operates properly, without slip or drag. If clutch operation is not satisfactory after adjustment, check the condition of the clutch plates and friction discs.



⑧ Lock nut ⑨ Upper adjuster

Drive Chain Maintenance

Proper tensioning and lubrication will help to extend the service life of the drive chain and ensure smooth power transmission to the rear wheel. Under severe usage, or when the motorcycle is ridden in unusually dusty areas, more frequent maintenance is necessary.

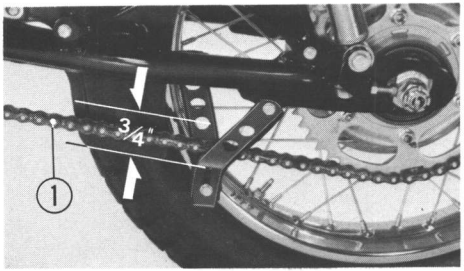
Tension Adjustment :

1. Place the motorcycle on a support block to raise the rear wheel off the ground. Shift the transmission into neutral.
2. Check vertical movement of the lower length of the drive chain at a point midway between the sprockets. Move the chain up and down with your fingers and observe the amount of slack. Drive chain tension should be adjusted to allow approximately ¾″ vertical movement at this point. Rotate the rear wheel and check drive

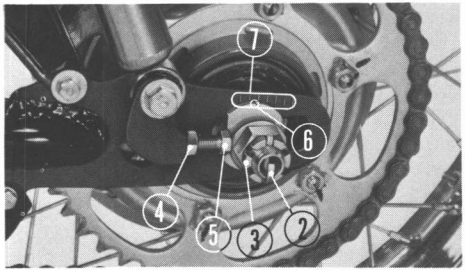
chain tension throughout its length. Drive chain tension should remain constant as the wheel is rotated.

If the chain is found to be slack in one segment of its length and taut in another, this indicates that some of the links are either worn or kinked and binding. Kinking and binding can frequently be eliminated by lubrication.

3. If the drive chain is found to require adjustment, the procedure is as follows:
   a. Remove the rear axle nut cotter pin ② and loosen the rear axle nut ③.
   b. Loosen the lock nuts ④ and turn the adjusting bolts ⑤ to increase or decrease chain tension. Align the chain adjuster index marks ⑥



① Drive chain

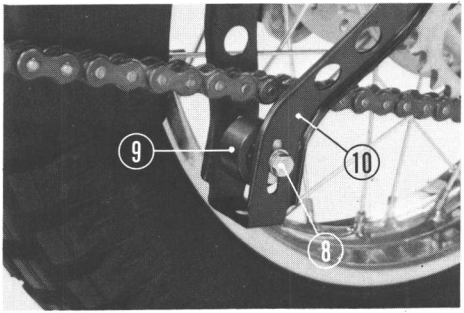


② Cotter pin
③ Rear axle nut
④ Lock nut
⑤ Adjusting bolt
⑥ Index mark
⑦ Reference marks

to the reference marks ⑦ on both sides of the rear fork.

c. Tighten the rear axle nut and secure the nut with a new cotter pin.
   And then tighten the lock nuts ④.
d. Recheck drive chain tension.
e. After adjusting the drive chain, adjust the drive chain roller. To adjust, loosen the locking bolt ⑧ until there is **0.4 in. (10 mm)** clearance between the lower surface of the chain and the roller ⑨. Then retighten the locking bolt.

CAUTION:
Check alignment of the chain protector ⑩. If the chain protector should become bent, it may rub against the drive chain and cause rapid wear.



⑧ Locking bolt ⑨ Roller
⑩ Chain protector

Lubrication :

Lubricate the drive chain every 500 miles. Commercially prepared drive chain lubricants may be purchased at most motorcycle shops and should be used in preference to motor oil or other lubricants. Saturate each chain joint so that the lubricant will penetrate the space between adjacent surfaces of link plates and rollers.

Removal and Cleaning :

When the drive chain becomes extremely dirty, it should be removed and cleaned prior to lubrication.

1. Carefully remove the master link retaining clip with pliers. Do not bend or twist the clip. Remove the master link. Remove the drive chain from the motorcycle.
2. Clean the drive chain in solvent and allow to dry. Inspect the drive chain for possible wear or damage. Replace any chain that has damaged rollers, loose fitting links, or otherwise appears unserviceable.
3. Inspect the sprocket teeth for possible wear or damage. Replace if necessary. Never use a new drive chain on badly worn sprockets. Both chain and sprockets must be in good condition, or the new replacement chain or sprocket will wear rapidly.
4. Lubricate the drive chain.
5. Pass the chain over the sprockets and join the ends of the chain with the master link. For ease of assembly, hold the chain ends against adjacent rear sprocket teeth while inserting the master link. Install the master link retaining clip ⑪ (page 51) so that the closed end of the clip will face the direction of forward wheel rotation. The master link is the most critical part affecting the security of the drive chain. It is recommended

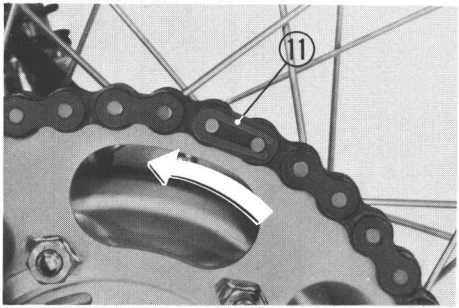
that a new master link retaining clip be installed whenever the drive chain is reassembled.

6. Adjust the drive chain to the proper tension, following the instructions on pages 47~49.

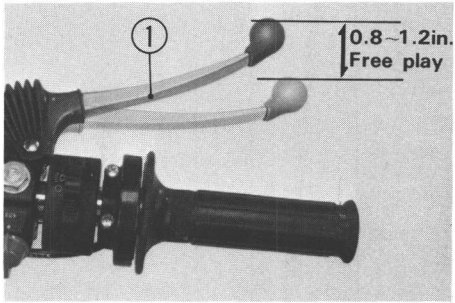
Front Brake Adjustment

Free play, measured at the tip of the front brake lever ①, should be maintained at **0.8–1.2 in. (20–30 mm).** Free play is the distance the brake lever moves before the brake starts to engage.

Major adjustments should be made using the adjuster located at the front wheel.

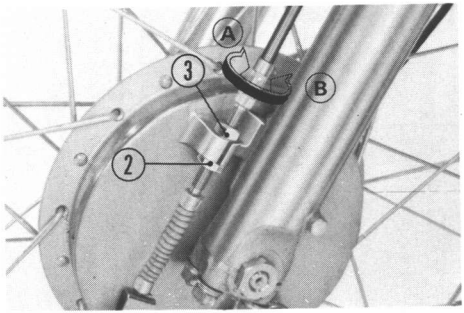


⑪ Retaining clip



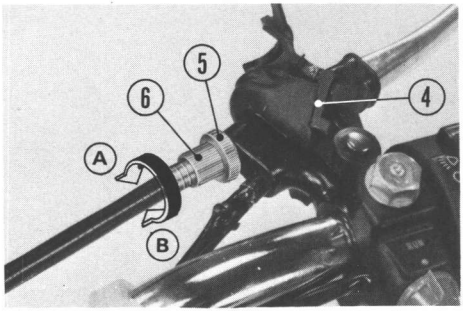
① Front brake lever

1. Loosen the lock nut ② and then turn the front brake adjusting nut ③. Turning the nut in direction Ⓐ will decrease the brake lever free play and turning the nut in direction Ⓑ will increase the play.



② Lock nut
③ Front brake adjusting nut

2. Minor adjustments can be made with the front brake cable adjuster on the front brake lever.
Remove the dust cover ④, loosen the lock nut ⑤ and turn the front brake cable adjuster ⑥. Turning the adjuster in direction Ⓐ will decrease the brake lever free play and turning the adjuster in direction Ⓑ will increase the play.



④ Dust cover ⑤ Lock nut
⑥ Front brake cable adjuster

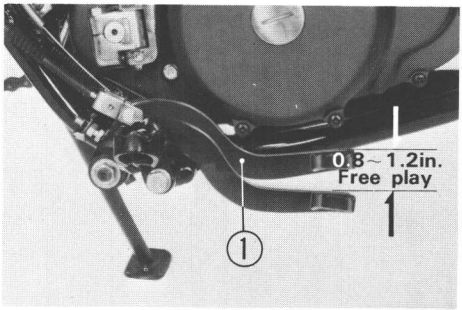
Rear Brake Adjustment

Rear brake pedal free play, measured at the tip of the rear brake pedal ①, should be maintained at **0.8–1.2 in. (20–30 mm)**. Free play is the distance the brake pedal moves before the brake starts to engage.

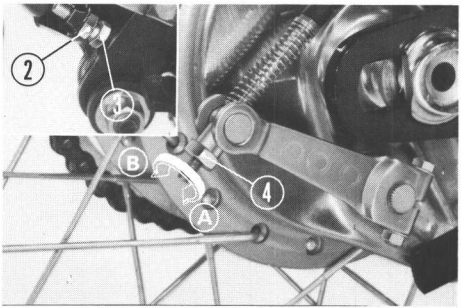
1. Adjust brake pedal height to suit the rider by adjusting the pedal stopper bolt ③.
2. Adjust the pedal free play by turning the rear brake adjusting nut ④. Turning the adjusting nut in direction Ⓐ will decrease the brake pedal free play and turning the nut in direction Ⓑ will increase the free play.

NOTE :

Brake pedal height adjustment will affect free play. Always check free play after adjusting brake pedal height.



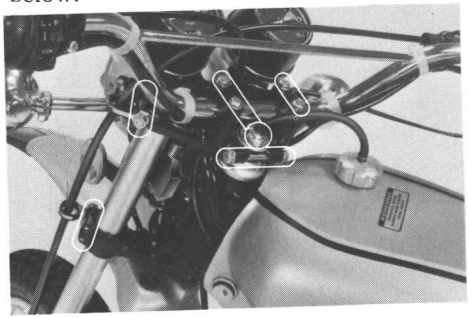
① Rear brake pedal



② Lock nut ③ Pedal stopper bolt
④ Rear brake adjusting nut

Front Suspension Inspection

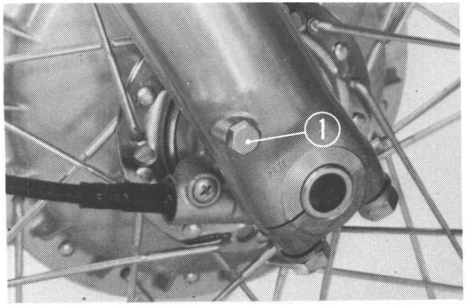
Check front fork action by locking the front brake and pumping the forks up and down several times. The suspension should function smoothly, with no oil leakage from the fork legs. Damaged, binding, or leaking front forks should be repaired before the motorcycle is operated. Check security of all front forks and handlebar mounting bolts illustrated below.



Front Fork Oil Change

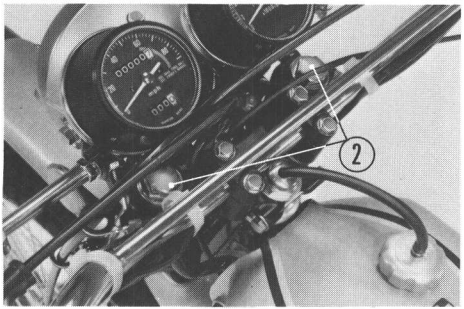
Oil in both front fork legs should be changed at least once a year.

1. Remove drain plugs ① from each fork leg and pump the forks several times to ensure complete draining.
2. Reinstall drain plugs and block up the front of the motorcycle.
3. Remove the oil filler plugs ②.



① Drain plug

4. Refill each fork leg with **4.9 oz. (145 cc)** of premium quality automatic transmission fluid (ATF).
5. Install filler plugs, and remove block from under motorcycle.



② Oil filler plugs

Rear Suspension Inspection

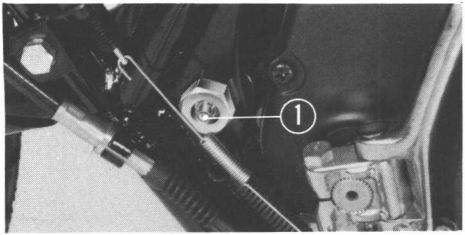
Check the rear suspension periodically by careful visual examination. Note the following items.

1. Rear fork bushing—this can be checked by pushing hard against the side of the rear wheel while the motorcycle is on a support block and feeling for looseness of the fork bushings.
2. Check side stand spring for damage.
3. Check all suspension component attachment points for security of their respective fasteners.
4. Check for oil leaks in rear damper units.

NOTE:
If any of the above components appear damaged or worn, consult your Honda dealer for further inspection.

Rear Suspension Lubrication

There is a grease fitting at end of the rear fork pivot. The rear fork pivot should be lubricated every 3,000 miles with multipurpose grease, type NLGI No. 2.

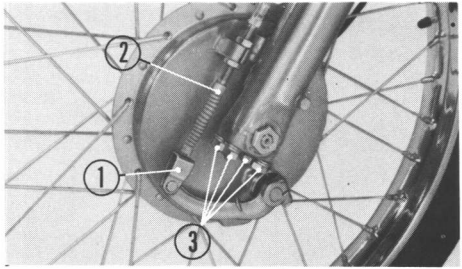


① Grease nipple

Front Wheel Removal

To remove the front wheel, proceed as follows:

1. Place a wood block under the engine and raise the front wheel off the ground.
2. Remove the cotter pin ①, and disconnect the front brake cable ② from the brake arm.
3. Remove the speedometer cable set screw ④, and disconnect the speedometer cable ⑤ (page 57).
4. Remove the front axle holder nuts ③ (four on each side), remove the front axle holders (one on each side),

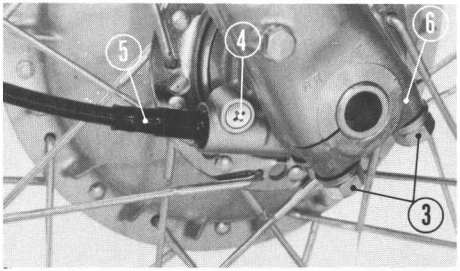


① Cotter pin ② Front brake cable
③ Front axle holder nuts

and then the front wheel can be removed.

5. To install the front wheel, follow the reverse of removal procedure outlined in steps 1 through 4.

NOTE :
When installing the front axle holders, make sure the "F" mark is forward, and tighten front bolts first.

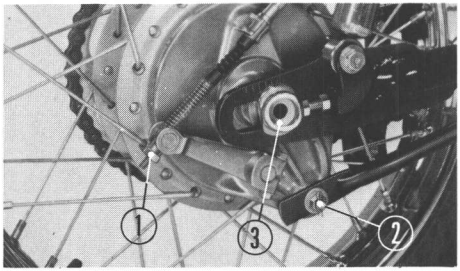


④ Speedometer cable set screw
⑤ Speedometer cable
⑥ Front axle holder

Rear Wheel Removal

To remove the rear wheel, proceed as follows :

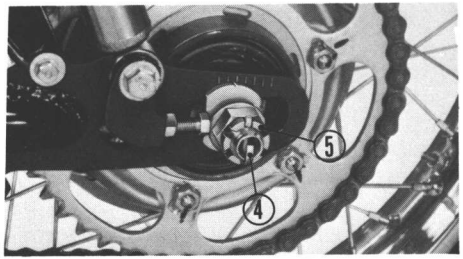
1. Place a wood block under the engine and raise the rear wheel off the ground.
2. Remove the rear brake adjusting nut ①.
3. Remove the brake panel stopper arm attaching bolt ②.



① Rear brake adjusting nut
② Brake panel stopper arm attaching bolt
③ Rear axle

4. Remove the cotter pin ④ from rear axle nut.
5. Remove the rear axle nut ⑤, and pull out the rear axle ③ (see page 57), and then the rear wheel can be removed.
6. To install the rear wheel, follow the reverse of removal procedure outlined in steps 1 through 5.

NOTE:
Always use a new cotter pin to retain the rear axle nut.



④ Cotter pin ⑤ Rear axle nut

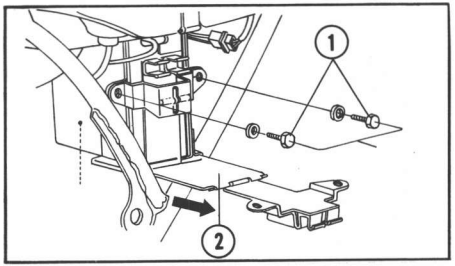
Battery Maintenance

Battery Electrolyte Replenishment:

The battery is located inside the left side cover.

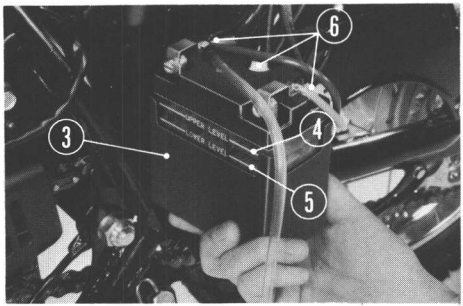
Remove the left side cover. Remove the two battery stay bolts ①, with the furnished wrench in the tool kit, and loosen the stay ②, and pull the battery stay to the out side of the frame. Remove the battery, and check the electrolyte level.

The electrolyte level must be maintained between the upper ④ and lower level ⑤



① Stay bolts ② Battery stay

marks on the side of the battery.
If the electrolyte level is found to be low, remove the battery filler caps ⑥ and carefully add distilled water until the electrolyte level in each cell is between the upper and lower level marks. Use a small syringe or plastic funnel to add water. Use distilled water to avoid contaminating the electrolyte.

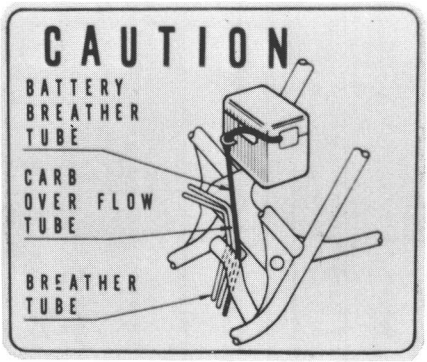


③ Battery ④ Upper level mark
⑤Lower level mark ⑥ Filler caps

Battery Removal and Installation :

The battery should be removed for prolonged storage or for recharging if electrolyte specific gravity falls below 1.200. Refer to page 58 for this procedure.

CAUTION :
When installing the battery, be careful not to bend or twist the vent tube.



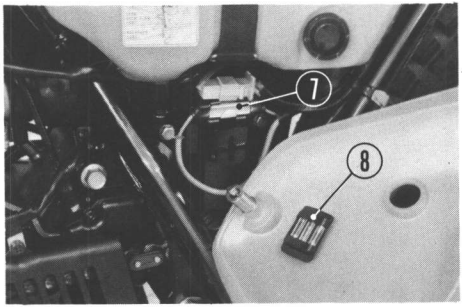
Battery Charging :

If the battery electrolyte specific gravity reading (measured with a hydrometer) drops below 1.200 @ 68°F (20°C), the battery should be charged at a rate not to exceed 0.6 amps until the specific gravity reading is between 1.260 and 1.280 @ 68°F (20°C.) Frequent discharging or a partially discharged battery condition are the results of electrical system problems. To locate and correct the cause of this condition, we suggest you contact your Honda dealer.

When storing the motorcycle for an extended period, the battery should be removed and stored in a cool place. The battery should be charged at least once a month during the storage period to preserve battery life.

Fuse :

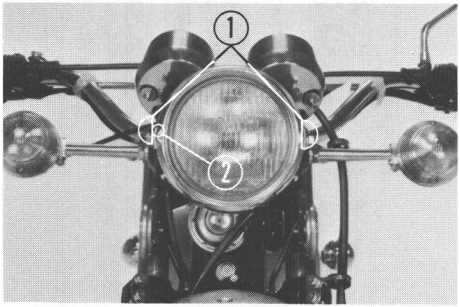
The fuse holder ⑦ is located on the battery stay as shown. The recommended fuse for the MT-250 is 10A. If frequent failure of the fuse occurs, it usually indicates a short circuit or an overload in the electrical system. In this case the electrical system should be checked visually for a short circuit or other possible malfunctions. If the problem cannot be located visually, the motorcycle should be examined by an authorized Honda dealer.



⑦ Fuse holder ⑧ Spare fuses

Headlight Beam Adjustment

The headlight must be kept properly adjusted for safe nighttime riding.
Vertical adjustment is made by pivoting the headlight case on its mounting bolts ①.
Horizontal adjustment is made by turning the adjusting screw ② located on the headlight rim.

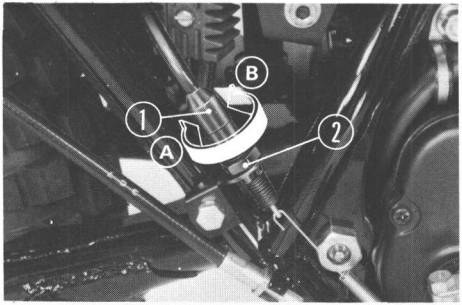


① Headlight mounting bolts
② Adjusting screw

Stoplight Switch Adjustment

The stoplight switch ① must be adjusted so that the stoplight will come on when the rear brake is applied. Rear brake free play (page 53) should be adjusted before performing the stoplight switch adjustment. The procedure for adjusting the stoplight switch is as follows:

1. Turn the main switch to the "ON" position.



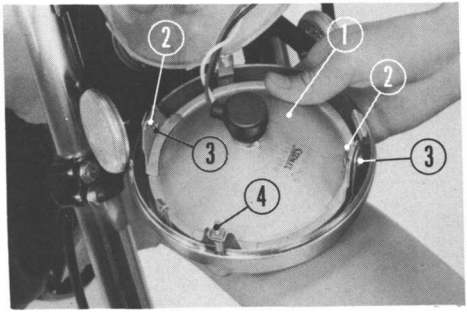
① Stoplight switch ② Adjusting nut

2. Turn the adjusting nut ② to position the stoplight switch at a point where the stoplight will come on when the brake pedal is depressed.
   Turn the adjusting nut in direction Ⓐ to advance switch timing or in direction Ⓑ to retard switch timing.

Headlight Replacement

Replace the sealed beam unit as follows;

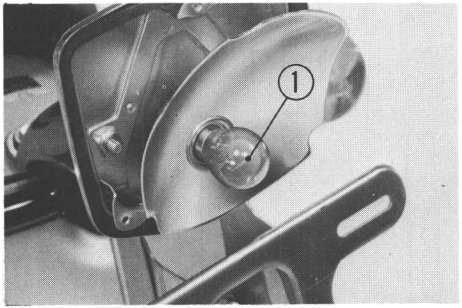
1. Remove the two headlight attaching screws and remove the headlight from the headlight case.
2. Remove the two retaining lock pins ② and lock screws ③ from the headlight rim.
3. Remove the beam adjusting screw ④.
4. Remove the sealed beam unit.
5. Install new sealed beam unit in the reverse order of removal.
6. Check headlight beam adjustment.



① Headlight ② Lock pins
③ Lock screws ④ Beam adjusting screw

Tail/stoplight Bulb Replacement

1. Remove the two screws retaining the tail/stoplight lens.
2. Press the bulb ① inward and twist to the left and the bulb can be removed.
3. Replace with a good bulb.
4. Reinstall tail/stoplight lens.



① Tail/stoplight bulb

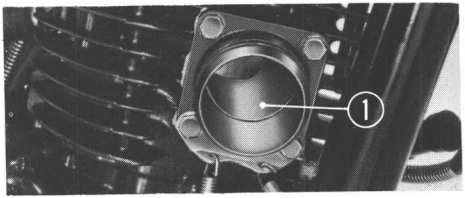
Decarbonizing

Carbon deposits on the cylinder head, combustion chamber walls, piston crown and ring grooves, exhaust port, the front part of muffler, diffuser pipe, etc. may result in reduced horsepower or in overheating. Decarbonize the above parts in accordance with the maintenance schedule.

Muffler and Diffuser Pipe :

Remove the muffler, and decarbonize the cylinder side of the muffler.

Disconnect the diffuser pipe from the muffler chamber and decarbonize it.



① Exhaust port

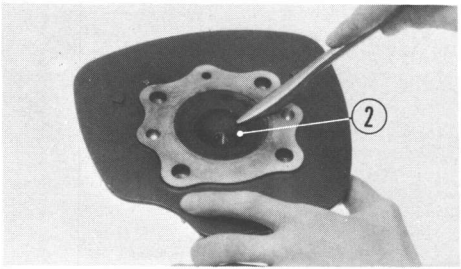
Cylinder Head, Cylinder and Piston:

1. Remove the spark plug and cylinder head nuts and remove the cylinder head.
2. Decarbonize the combustion chamber walls and piston crown using a scraper of soft material. Take care not to score or scratch the surfaces. Ensure that debris does not enter ports.
3. To assemble, reverse the disassembly procedures.

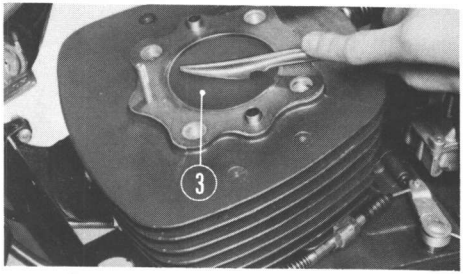
Cylinder head tightening torque is as follows.

8 mm flange nut:
14.5–18.1 lbs-ft (2.0–2.5 kg-m)

6 mm flange nut:
7.2–9.4 lbs-ft (1.0–1.3 kg-m)



② Combustion chamber



③ Piston crown

TROUBLE SHOOTING

Use the following table to help determine the cause of problems with your Honda motorcycle. Contact your Honda dealer for assistance in matters beyond the scope of the table.

1. Engine will not start.

	Cause	Remedy
Fuel system	1. Insufficient gasoline. 2. Clogged fuel cock. 3. Clogged tank cap breather tube. 4. Clogged fuel tube.	Add. Clean. Clean. Clean.
Electrical system	1. Damaged, wet or fouled plug. 2. Incorrect plug gap. 3. Dirty or damaged contact points. 4. Incorrect point gap. 5. Incorrect ignition timing.	Replace or clean. Adjust. Replace or clean. Replace or adjust. Adjust.
Compression	1. Loose spark plug. 2. Loose cylinder head.	Retighten. Retighten.

2. Engine does not develop sufficient power or overheats.

Cause	Remedy
1. Incorrect ignition timing.	Adjust.
2. Clogged air cleaner element.	Clean.
3. Carbon deposits in muffler, cylinder head or on piston crown.	Decarbon.
4. Clogged cylinder fins.	Clean.

SPECIFICATIONS

ITEM	
DIMENSIONS	
Overall length	2,160 mm (85.0 in.)
Overall width	890 mm (35.0 in.)
Overall height	1,130 mm (44.5 in.)
Wheel base	1,440 mm (56.7 in.)
WEIGHT	
Dry weight	118 kg (260 lbs)
CAPACITIES	
Engine oil	1.3 *l* (1.4 US qt.)
Transmission oil	1.0 *l* (1.0 US qt.)
Fuel tank	8.5 *l* (2.2 US gal.)
Fuel reserve tank	1.5 *l* (0.4 US gal.)
Front fork	145 cc (4.9 ozs.)

ENGINE	
Bore and stroke	70.0×64.4 mm (2.756×2.535 in.)
Compression ratio	9.0 : 1
Displacement	248 cc (15.1 cu-in.)
Contact breaker point gap	0.2~0.6 mm (0.008~0.024 in.)
Spark plug gap	0.6~0.7 mm (0.024~0.028 in.)
CHASSIS AND SUSPENSION	
Caster	59.5°
Trail	143 mm (5.6 in.)
Tire size, front	3.00–21 (4 PR), 21 psi
Tire size, rear	4.00–18 (4 PR), 21 psi

POWER TRANSMISSION	
Primary reduction	3.300
Final reduction	2.933
Gear ratio, 1st.	2.235
2nd.	1.571
3rd.	1.160
4th.	0.896
5th.	0.718
ELECTRICAL	
Battery	6V–6AH
Generator	A.C. Generator
Fuse	10 amp.

LIGHTS	
Headlight	6V–35/25W
Tail/Stoplight	6V–3/32 cp
Turn signal light	6V–21 cp SAE TRADE No. 1129
Meter lights	6V–1 cp SAE TRADE No. 51
Neutral indicator light	6V–2 cp SAE TRADE No. 55
High beam indicator light	6V–1 cp SAE TRADE No. 51
Turn signal indicator light	6V–1 cp SAE TRADE No. 51

MEMO

MEMO

WIRING DIAGRAM

WIRING DIAGRAM