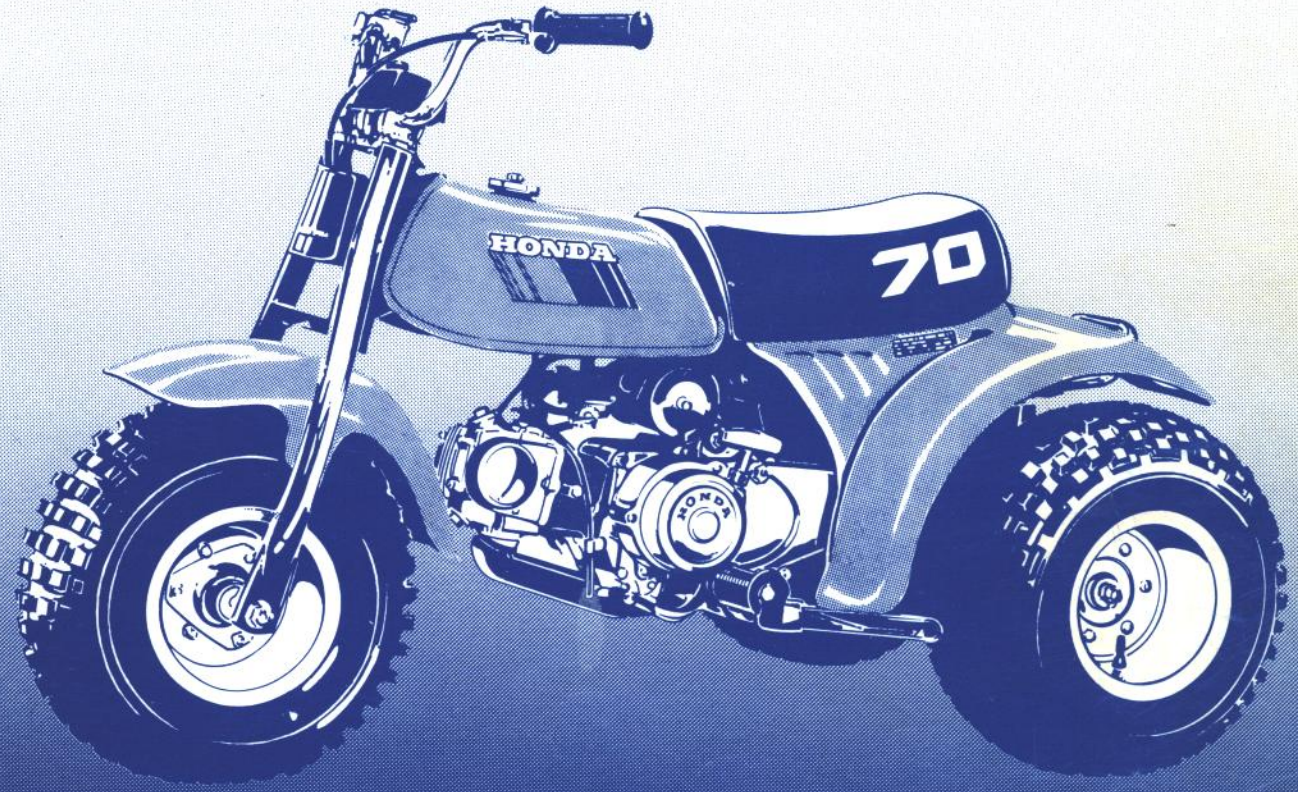
Official

# HONDA

# SHOP MANUAL

# ATC70

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## IMPORTANT SAFETY NOTICE

**WARNING** ***Indicates a strong possibility of severe personal injury or loss of life if instructions are not followed.***

**CAUTION:** *Indicates a possibility of personal injury or equipment damage if instructions are not followed.*

NOTE: Gives helpful information.

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains some warnings and cautions against some specific service methods which could cause **PERSONAL INJURY** to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover and conceivable ways in which service, whether or not recommended by Honda, might be done or of the possible hazardous consequences of each conceivable way, nor could Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda *must safety himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized by the service methods or tools selected.

HONDA
ATC70

## HOW TO USE THIS MANUAL

Sections 1 through 3 apply to the whole ATC, while sections 4 through 13 describe parts of the ATC, grouped according to location.

Find the section you want on this page, then turn to the table of contents on page 1 of that section.

Most sections start with an assembly or system illustration and all the required specifications, torque values, general instructions, tools and troubleshooting for the section. The subsequent pages give detailed procedures.

If you don't know the source of the trouble, see section 14, TROUBLESHOOTING.

All information, illustrations, directions and specifications incl

## CONTENTS



Date of Issue: June, 1984

# 1. GENERAL INFORMATION





## GENERAL SAFETY

**WARNING**

*If the engine must be running to do some work, make sure the area is well-ventilated. Never run the engine in a closed area. The exhaust contains poisonous carbon monoxide gas.*

**WARNING**

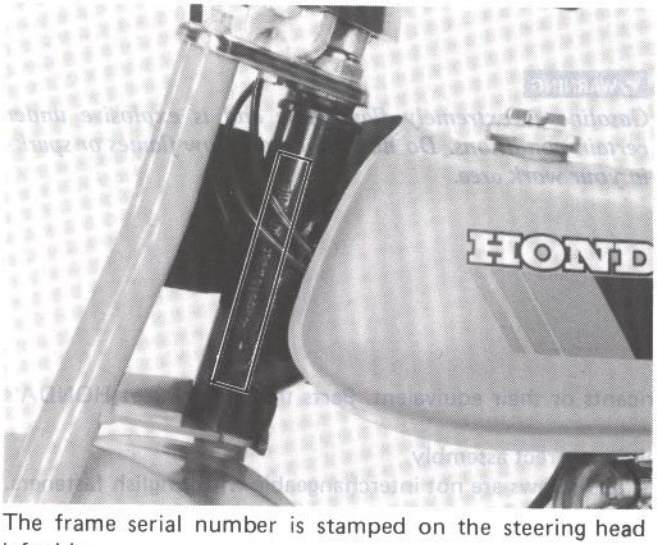
*Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in your work area.*

## SERVICE RULES

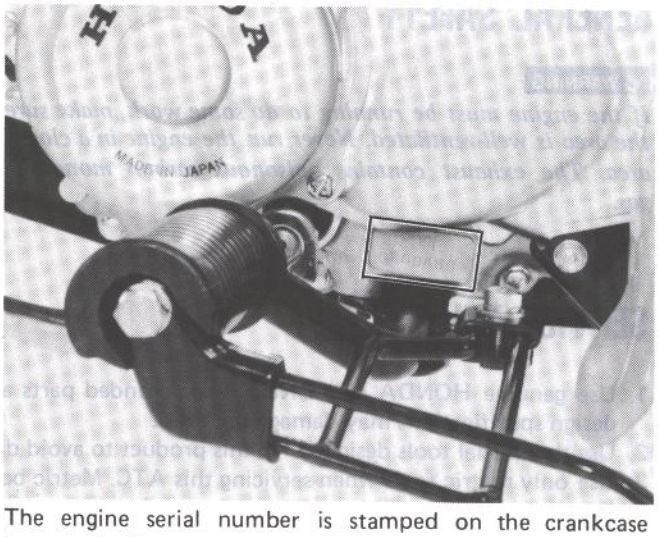
1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalent. Parts that don't meet HONDA's design specifications may damage the ATC.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing this ATC. Metric bolts, nuts, and screws are not interchangeable with English fasteners.
4. Install new gaskets, O-rings, cotter pins, and lock plates when reassembling.
5. When tightening bolts or nuts, begin with the larger-diameter or inner bolt first. Then tighten to the specified torque diagonally in 2–3 steps, unless a particular sequence is specified.
6. Clean parts in non-flammable or high flash point solvent upon disassembly.
7. Lubricate any sliding surfaces before reassembly.
8. After reassembly, check all parts for proper installation and operation.

Date of Issue: June, 1984

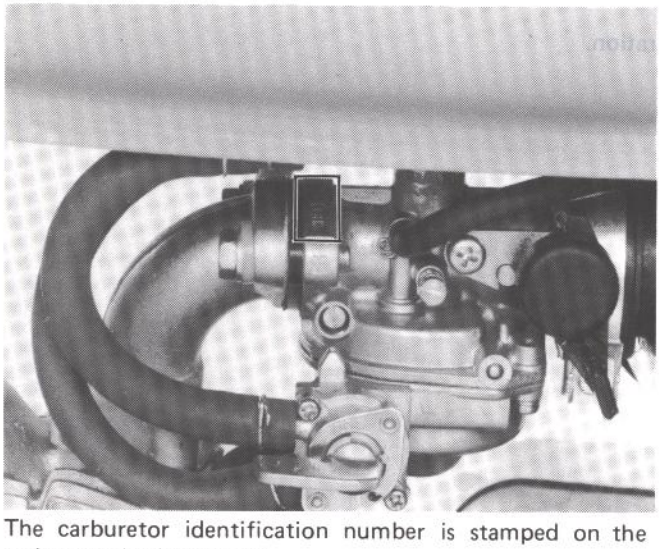
# MODEL IDENTIFICATION


The frame serial number is stamped on the steering head left side.




The engine serial number is stamped on the crankcase lower left side.



The carburetor identification number is stamped on the carburetor body left side.



Date of Issue: June, 1984

# SPECIFICATIONS

| Item | | | Specifications |
|---|---|---|---|
| DIMENSIONS | Overall length | | 1,300 mm (51.2 in) |
| | Overall width | | 800 mm (31.5 in) |
| | Overall height | | 800 mm (31.5 in) |
| | Wheelbase | | 895 mm (33.2 in) |
| | Rear tread | | 610 mm (24.1 in) |
| | Seat height | | 570 mm (22.4 in) |
| | Foot peg height | | 180 mm (7.1 in) |
| | Ground clearance | | 85 mm (3.3 in) |
| | Dry weight | | 77 kg (169.8 lb) |
| FRAME | Type | | Backbone (Pressed) |
| | Rim size | Front | 6.5 spw x 7DT |
| | | Rear | 6.5 spw x 7DT |
| | Front tire size/pressure | | 16 x 8.0-7/2.2 psi (0.15 kg/cm$^2$, 15 kPa) |
| | Rear tire size/pressure | | 16 x 8.0-7/2.2 psi (0.15 kg/cm$^2$, 15 kPa) |
| | Rear brake | | Internal expanding shoe |
| | Fuel capacity | | 4.3 liters (1.1 US gal, 0.96 Imp gal) |
| | Fuel reserve capacity | | 0.8 liters (0.2 US gal, 0.17 Imp gal) |
| | Caster angle | | 20° |
| | Trail length | | 32 mm (1.26 in) |
| ENGINE | Type | | Gasoline, air-cooled 4-stroke |
| | Cylinder arrangement | | Single cylinder, 80 inclined from vertical |
| | Bore x stroke | | 47.0 x 41.4 mm (1.850 x 1.630 in) |
| | Displacement | | 72 cc (4.4 cu in) |
| | Compression ratio | | 7.5 : 1 |
| | Valve train | | Overhead camshaft chain driven |
| | Maximum horse power | | 3.6 BHP/6,500 rpm |
| | Maximum torque | | 0.42 kg-m/5,000 rpm (3.04 ft-lb/5,500 rpm) |
| | Oil capacity | | 0.7 liters (0.4 US qt, 0.62 Imp qt) at draining |
| | Cylinder compression | | 12.0 kg/cm$^2$ (170.64 psi) |
| | Lubrication system | | Forced pressure and wet sump |
| | Intake valve | OPENS | 0° BTDC } at 1 mm lift |
| | | CLOSES | 20° ABDC |
| | Exhaust valve | OPENS | 25° BBDC |
| | | CLOSES | 5° BTDC |
| | Valve clearance (Cold) | Intake | 0.05 mm (0.002 in) |
| | | Exhaust | 0.05 mm (0.002 in) |
| | Idle speed | | 1,500 rpm |
| CARBURETOR | Type/Identification mark | | Piston valve/PB-38A |
| | Main jet No. | | #58 |
| | Slow jet No. | | #38 |
| | Pilot screw opening | | 1-3/4 turns out |
| | Float level | | 10.7 mm (0.42 in) |

| Item | | Specifications | |
|---|---|---|---|
| DRAIN TRAIN | Clutch | Wet multi-plate centrifugal type | |
| | Transmission | 4-speed constant-mesh, semi automatic | |
| | Primary reduction | 4.058 | |
| | Gear ratio I | 3.273 | |
| | Gear ratio II | 1.938 | |
| | Gear ratio III | 1.350 | |
| | Gear ratio IV | 1.043 | |
| | Final reduction | 2.769, drive sprocket 13T, driven sprocket 36T | |
| ELECTRICAL | Ignition system | Flywheel magnet | |
| | Starting system | Recoil starter | |
| | Alternator | AC generator | |
| | Spark plug | ND | NGK |
| | Standard | U22FSR-L | CR7HS |
| | Option | U20FSR-L | CR6HS |
| | | U24FSR-L | CR8HS |
| | Spark plug gap | 0.6–0.7 mm (0.024–0.028 in) | |
| | Point gap | 0.3–0.4 mm (0.012–0.016 in) | |



Date of Issue: June, 1984

# TORQUE VALUES

## ENGINE

| Item | Q'ty | Thread-dia. (mm) | TORQUE: N·m (kg-m, ft-lb) |
|---|---|---|---|
| Valve inspection cap | 2 | – | 10–14 (1.0–1.4, 7–10) |
| Cylinder head nut | 4 | 6 | 9–12 (0.9–1.2, 6.5–8.7) |
| Camshaft sprocket bolt | 2 | 5 | 5–9 (0.5–0.9, 3.6–6.5) |
| Cam chain guide roller bolt | 1 | 6 | 7–13 (0.7–1.3, 5.1–9.4) |
| Clutch lock nut | 1 | 14 | 38–45 (3.8–4.5, 27.5–32.5) |
| Flywheel nut | 1 | 10 | 30–38 (3.0–3.8, 21.7–27.5) |
| Shift drum bolt | 1 | 6 | 9–15 (0.9–1.5, 6.5–10.8) |

## FRAME

| Item | Q'ty | Thread dia.(mm) | TORQUE: N·m (kg-m, ft-lb) |
|---|---|---|---|
| Handlebar upper holder bolt | 4 | 8 | 19–25 (1.9–2.5, 14–18) |
| Steering stem nut | 1 | 22 | 50–70 (5.0–7.0, 36–51) |
| Bearing adjustment nut first | 1 | 22 | 25–35 (2.5–3.5, 18–25) |
| final | 1 | 22 | 6–7 (0.6–0.7, 4–5) |
| Fork bridge bolt | 2 | 10 | 40–48 (4.0–4.8, 29–35) |
| Handlebar lower holder nut | 2 | 10 | 40–48 (4.0–4.8, 29–35) |
| Front wheel hub nut | 3 | 8 | 19–25 (1.9–2.5, 14–18) |
| Front axle nut | 1 | 14 | 60–80 (6.0–8.0, 43–58) |
| Drive chain tensioner nut | 2 | 10 | 25–33 (2.5–3.3, 18–24) |
| Rear axle nut | 2 | 14 | 60–80 (6.0–8.0, 43–58) |
| Rear wheel hub nut | 6 | 8 | 19–25 (1.9–2.5, 14–18) |
| Brake cam holder bolt | 2 | 6 | 7–12 (0.7–1.2, 5–9) |
| Brake anchor pin bolt | 2 | 6 | 7–12 (0.7–1.2, 5–9) |
| Gearshift pedal bolt | 1 | 6 | 7–12 (0.7–1.2, 5–9) |
| Rear fender bolt | 2 | 8 | 15–21 (1.5–2.1, 11–15) |
| Seat bolt | 2 | 6 | 6–9 (0.6–0.9, 4–7) |
| Rear fender bracket bolt | 4 | 6 | 6–9 (0.6–0.9, 4–7) |
| Foot peg guard bolt A | 2 | 8 | 19–25 (1.9–2.5, 14–18) |
| Foot peg guard bolt B | 2 | 10 | 40–48 (4.0–4.8, 29–35) |
| Foot peg bolt | 4 | 8 | 19–25 (1.9–2.5, 14–18) |
| Engine hanger bolt | 2 | 8 | 19–25 (1.9–2.5, 14–18) |

Torque specifications listed above are for the most important tightening points. If a torque specification is not listed, use the standards given below.

## STANDARD TORQUE VALUES

| Item | TORQUE N·m (kg-m, ft-lb) | Item | TORQUE N·m (kg-m, ft-lb) |
|---|---|---|---|
| 5 mm bolt, nut | 4.5–6 (0.45–0.6, 3.3–4.3) | 5 mm screw | 3.5–5 (0.35–0.5, 2.5–3.6) |
| 6 mm bolt, nut | 8–12 (0.8–1.2, 5.8–8.7) | 6 mm screw and 6 mm bolt with 8 mm head | 7–11 (0.7–1.1, 5–8) |
| 8 mm bolt, nut | 18–25 (1.8–2.5, 13–18) | 6 mm flange bolt, nut | 10–14 (1.0–1.4, 7.2–10) |
| 10 mm bolt, nut | 30–40 (3.0–4.0, 22–29) | 8 mm flange bolt, nut | 24–30 (2.4–3.0, 17–22) |
| 12 mm bolt, nut | 50–60 (5.0–6.0, 36–43) | 10 mm flange bolt, nut | 30–40 (3.0–4.0, 22–29) |

# TOOLS

## SPECIAL

| TOOL NAME | TOOL NUMBER | ALTERNATIVE TOOL | REF. PAGE |
|---|---|---|---|
| Valve adjusting wrench, 8 x 9 mm | 07908–GE20200 | Equivalent commercially available in U.S.A. | 3-7 |
| Ball race remover | 07944–1150001 | M9360–277–91774 (U.S.A. only) | 11-13 |
| Steering stem driver | 07946–GC40000 | | 11-14 |
| Valve guide reamer | 07984–0980000 | | 3-7 |
| Universal bead remover | GN–AH–958–BB1 | U.S.A. only | 11-8 |

## COMMON

| TOOL NAME | TOOL NUMBER | ALTERNATIVE TOOL | REF. PAGE |
|---|---|---|---|
| Float level gauge | 07401–0010000 | | 4-8 |
| Valve adjusting wrench B | 07708–0030400 | 089201–200–000 (U.S.A. only) | 3-7 |
| Lock nut wrench, 20 x 24 mm | 07716–0020100 | 07916–3710000 or Equivalent commercially available in U.S.A. | 8-4, 8-10 |
| Lock nut wrench, 26 x 30 mm | 07716–0020203 | Equivalent commercially available in U.S.A. | 11-13, 11-15 |
| Lock nut wrench, 30 x 32 mm | 07716–0020400 | | 11-12, 11-16 |
| Extension bar | 07716–0020500 | | |
| Universal holder | 07725–0030000 | | 8-4, 8-10, 9-8 |
| Flywheel puller | 07733–0010000 | 07933–0010000 | 9-8 |
| Attachment 32 x 35 mm | 07746–0010100 | | 11-7 |
| Pilot 15 mm | 07746–0040300 | | 11-7 |
| Attachment 37 x 40 mm | 07746–0010200 | | 10-8, 11-14 |
| Pilot 17 mm | 07746–0040400 | | 10-8 |
| Attachment 52 x 55 mm | 07746–0010400 | | 12-10 |
| Pilot 30 mm | 07746–0040700 | | 12-10 |
| Driver | 07749–0010000 | | |
| Bearing remover shaft | 07746–0050100 | Equivalent commercially available in U.S.A. | 11-7 |
| Bearing remover head 15 mm | 07746–0050400 | | 11-7 |
| Valve spring compressor | 07757–0010000 | 07957–3290001 | 6-6, 6-13 |
| Valve guide remover 5.5 mm | 07742–0010100 | 07942–3290100 | 6-8, 6-9 |
| Driver inner | 07746–0020100 | | 10-5 |
| Attachment 17 mm | 07746–0020300 | | 10-5 |
| Attachment 20 mm | 07746–0020400 | | 10-5 |

## VALVE SEAT CUTTERS

| TOOL NAME | TOOL NUMBER | ALTERNATIVE TOOL | REF. PAGE |
|---|---|---|---|
| Valve seat cutter 24 mm (45 IN) | 07780–0010600 | Not available in U.S.A. | 6-11 |
| Valve seat cutter 22 mm (45 EX) | 07780–0010701 | Equivalent commercially available in U.S.A. | 6-11 |
| Valve seat cutter 25 mm (32 IN) | 07780–0012000 | | 6-11 |
| Valve seat cutter 22 mm (32 EX) | 07780–0012601 | | 6-11 |
| Valve seat cutter 22 mm (60 IN/EX) | 07780–0014202 | | 6-11 |
| Valve seat cutter holder | 07780–0010101 | | 6-11 |

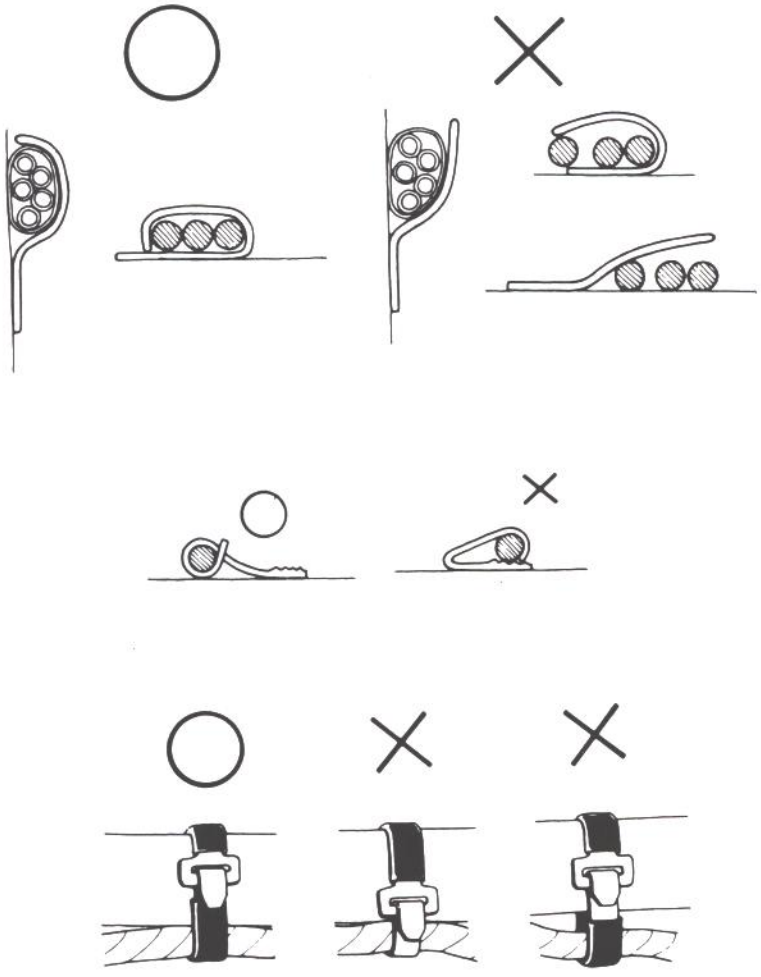


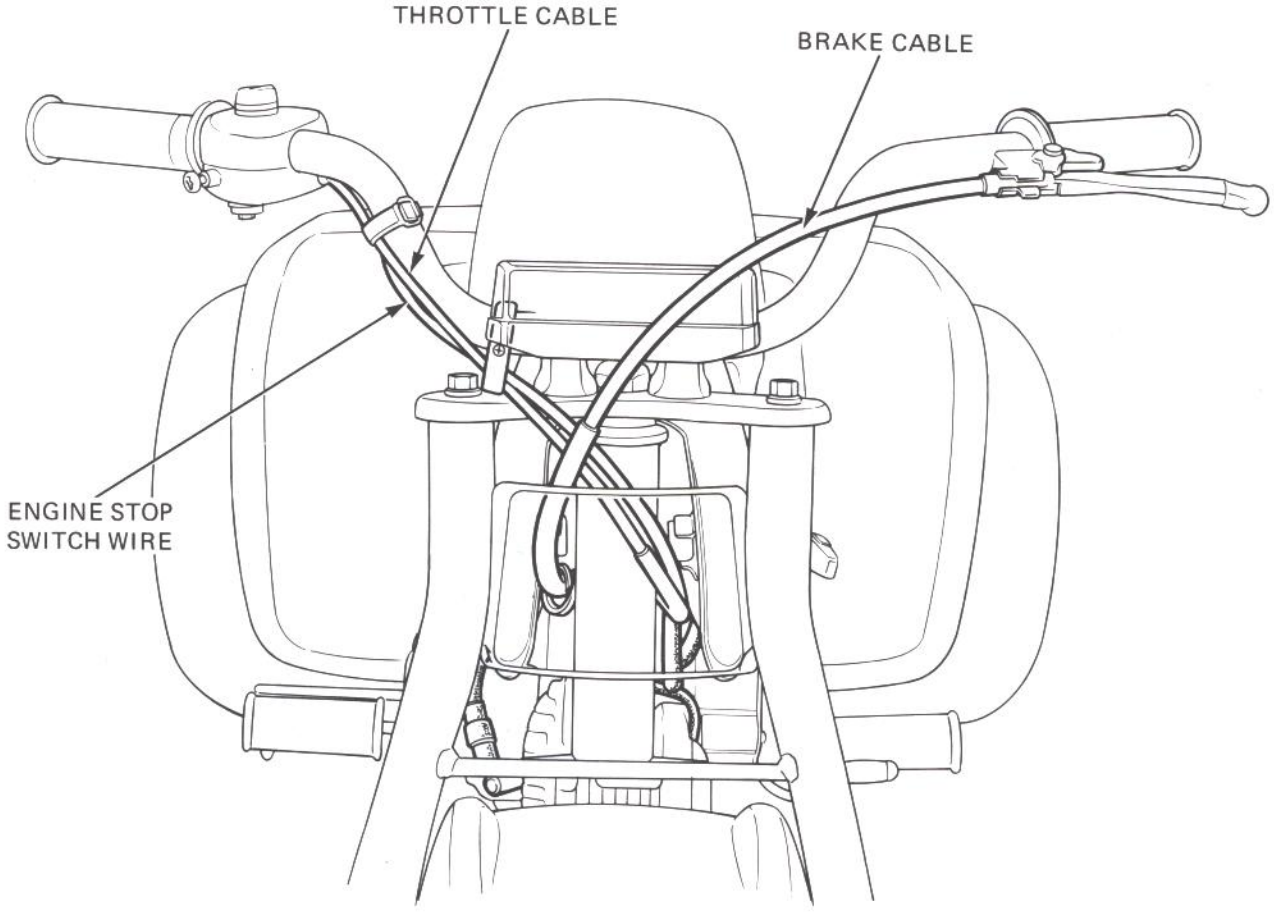
Date of Issue: June, 1984

# CABLE & HARNESS ROUTING

Note the following when routing cables and wire harnesses:

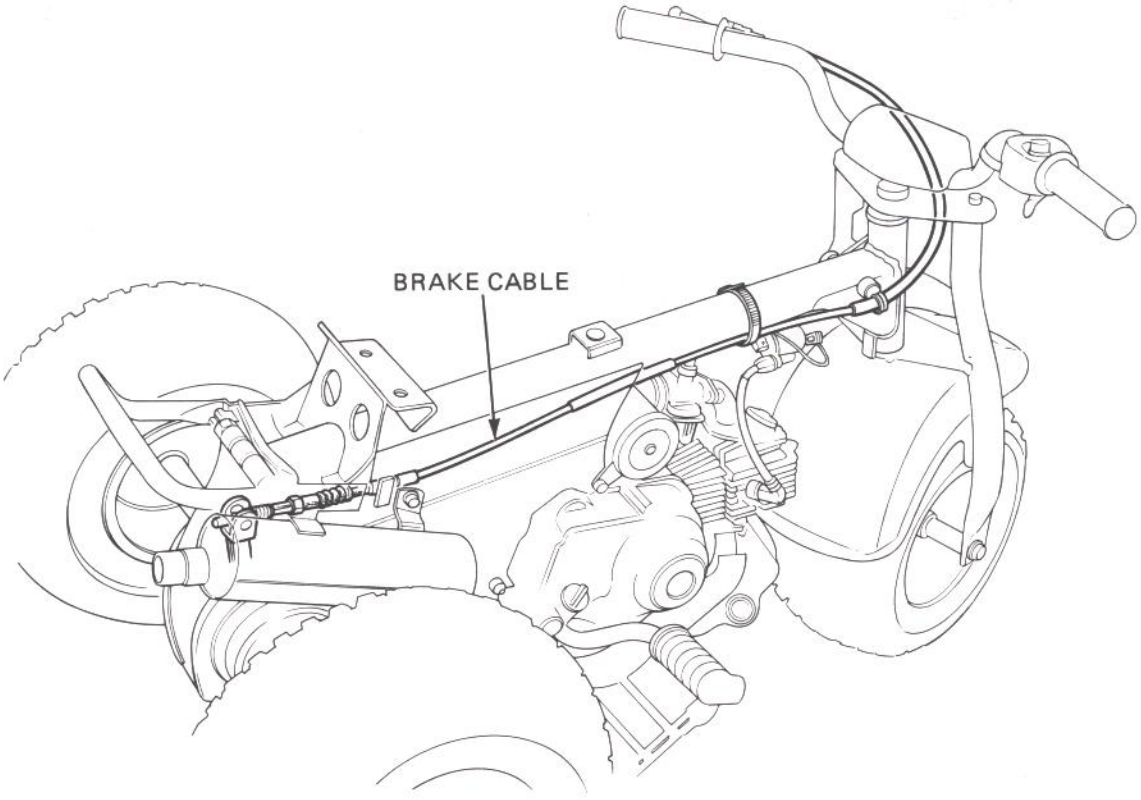
- A loose wire, harness or cable can be a safety harzard. After clamping, check each wire to
- be sure it is secure.
- Do not squeeze wires against the weld or end of its clamp when a weld-on clamp is used.
- Secure wires and wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wires or wire harnesses.
- Route harnesses so they are not pulled taut or have excessive slack.
- Protect wires and harnesses with electrical tape or tubes if they in contact with a sharp edge or corner. Clean the attaching surface thoroughly before applying tape.
- Do not use a wire or harness with a broken insulator. Reair by wrapping them with protective tape or replace them.
- Route wire harnesses to avoid sharp edge or corners.
- Avoid the projected ends of bolts and screws.
- Keep wire harnesses away from the exhaust pipes and other parts that get hot.
- Be sure grommets are seated in their grooves properly.
- After clamping, check each harness to be certain that it does not interference with any moving or sliding parts.
- Wire harnesses routed along the handlebars should not be pulled taut, have excessive slack, be pinched, or interfere with adjacent or surrounding parts in all steering positions.
- After routing, check that the wire harnesses are not twisted or kinked.

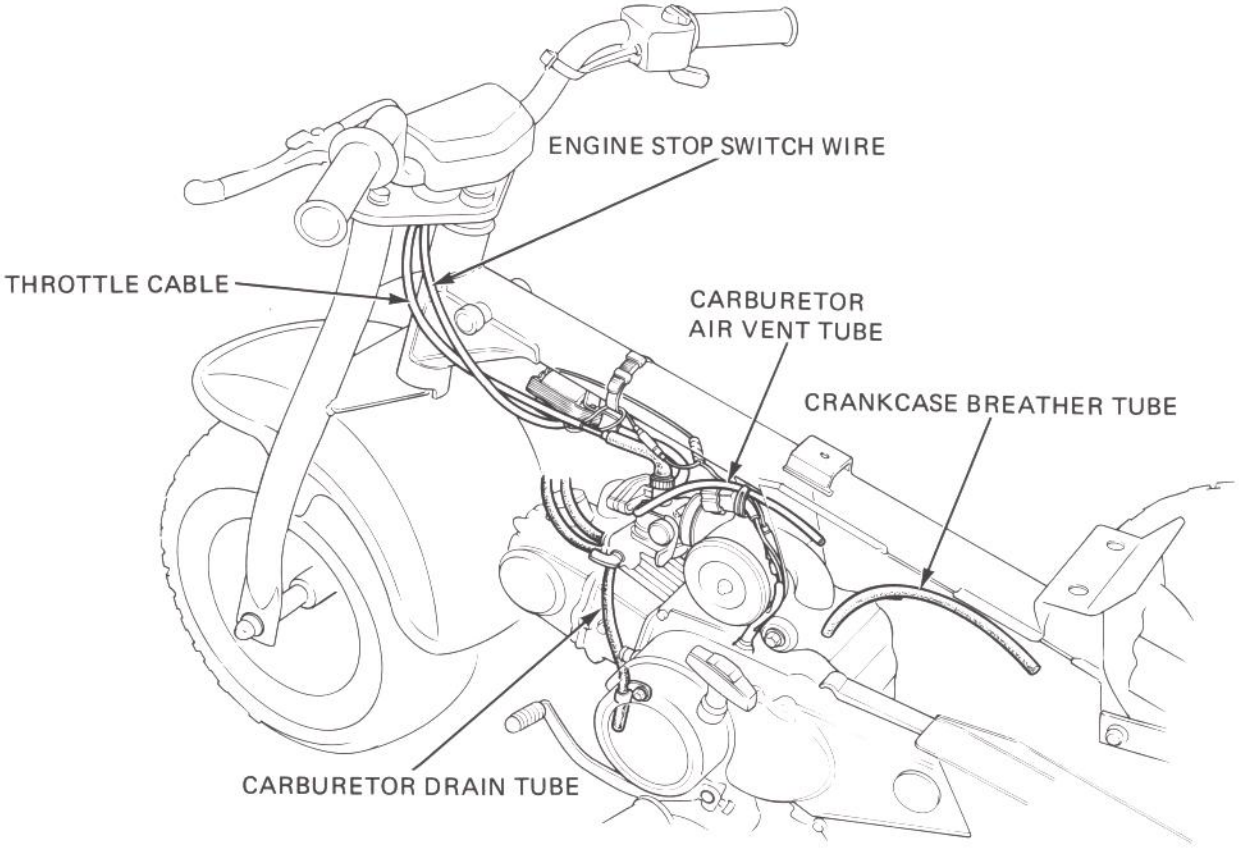







Date of Issue: June, 1984



# NOISE EMISSION CONTROL SYSTEM

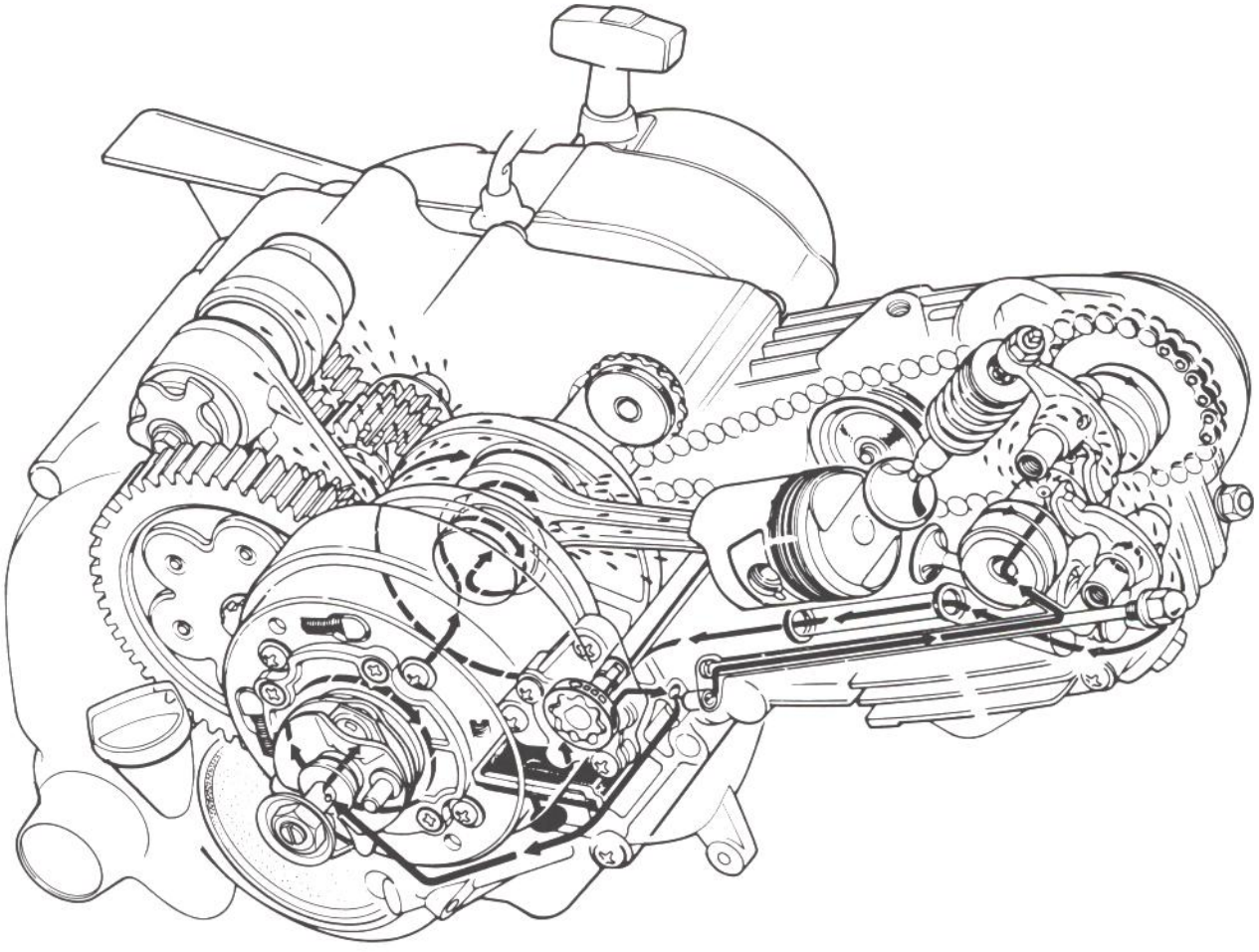
- The U.S. Environmental Protection Agency requires manufacturers to certify that vehicles build after January 1, 1983 will comply with applicable noise emission standards for one year or 1,865 miles (3,000 km) after the time of sale to the ultimate purchaser, when operated and maintained according to the instructions provided. Compliance with the terms of the Distributor's Warranty for the Honda Vehicle Noise Emission Control System is necessary in order to keep the noise emission control system in effect.
- TAMPERING WITH THE NOISE CONTROL SYSTEM IS PROHIBITED: Federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person, other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; or (2) The use of the vehicle after such device or element of design has been removed or rendered inoperative by any person. AMONG THOSE ACTS PRESUMED TO CONSTITUTE TEMPERING ARE THE ACTS LISTED BELOW:

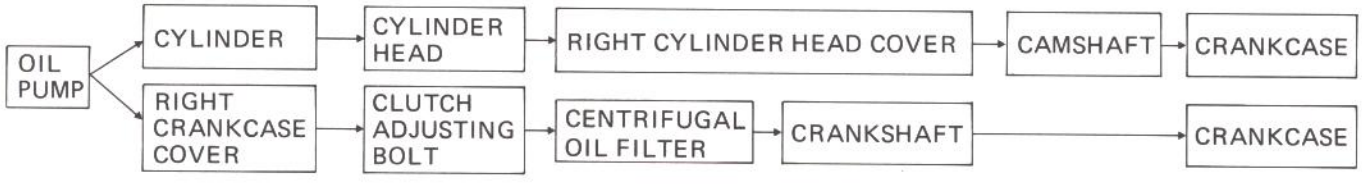
1. Removal of, or puncturing the muffler, bafflers, header pipes or any other component which conducts exhaust gases.
2. Removal of, or puncturing of any part of the intake system.
3. Lack of proper maintenance.
4. Replacing any moving parts of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.



Date of Issue: June, 1984

## ENGINE LUBRICATION SYSTEM








Date of Issue: June, 1984

# 2. LUBRICATION



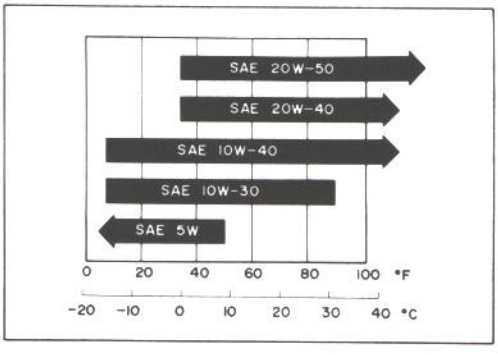


## SERVICE INFORMATION

### GENERAL

Oil filter screen and oil pump inspection and maintenance can be made without removing the engine.

### SPECIFICATIONS

| | | STANDARD | SERVICE LIMIT |
|---|---|---|---|
| Engine oil capacity | | Approximately 0.7 liter (0.74 US qt, 0.62 Imp. qt) at oil change<br>0.8 liter (0.85 US qt, 0.7 Imp. qt) at engine assembly | |
| Recommended oil | | Honda 4 stroke oil SAE 10W-40 or equivalent<br>API service classification: SE or SF<br>Other viscosities may be used when the average temperature in your riding area is within the indicated range.<br>Recommended oil viscosities<br>  | |
| Oil pump | Tip clearance | 0.15 mm (0.006 in) | 0.25 mm (0.010 in) |
| | Body clearance | 0.10–0.15 mm (0.004–0.006 in) | 0.20 mm (0.008 in) |
| | End clearance | 0.02–0.07 mm (0.001–0.003 in) | 0.12 mm (0.005 in) |

## TROUBLESHOOTING

**Oil level too low**
- External oil leaks
- Worn valve guide or seal
- Worn piston rings

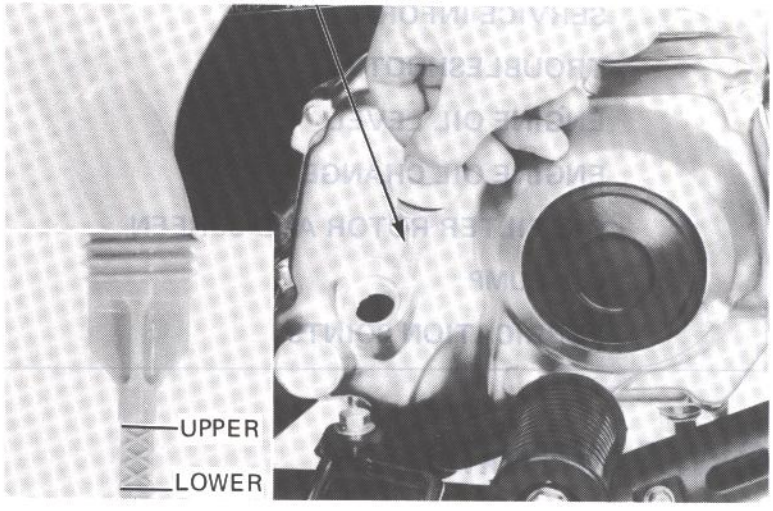
**Oil contamination**
- Oil not changed often enough
- Head gasket faulty
- Worn piston rings

## ENGINE OIL LEVEL

Place the ATC on level ground.
Start the engine and let it idle for 2–3 minutes.
Stop the engine.
Check the oil with the oil cap/dipstick.
Do not screw in the cap when making this check.

If the level is below the lower level mark on the dipstick, fill to the upper level mark with the recommended oil (Page 2-1).

OIL CAP/DIPSTICK




## ENGINE OIL CHANGE

NOTE:

> Drain the oil with the engine warm.

Remove the oil cap/dipstick and drain plug, and drain the oil.

With the engine switch "OFF", pull the recoil starter several times to completely drain any residual oil.

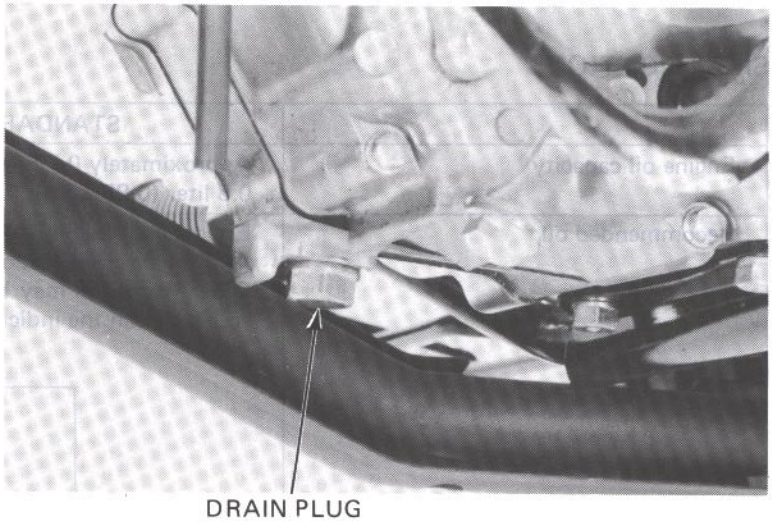
Install the drain plug.

NOTE:

> Check the condition of the sealing washer. If it is damaged, replace it with a new one.

Clean the oil filter rotor.
Fill the crankcase with the recommended grade of oil (Page 2-1).

**ENGINE OIL CAPACITY:**
**0.7 lit (0.74 US qt, 0.62 Imp qt) after draining**



DRAIN PLUG

Install the oil filler cap.
Start the engine and let it idle for 2–3 minutes.
Stop the engine.

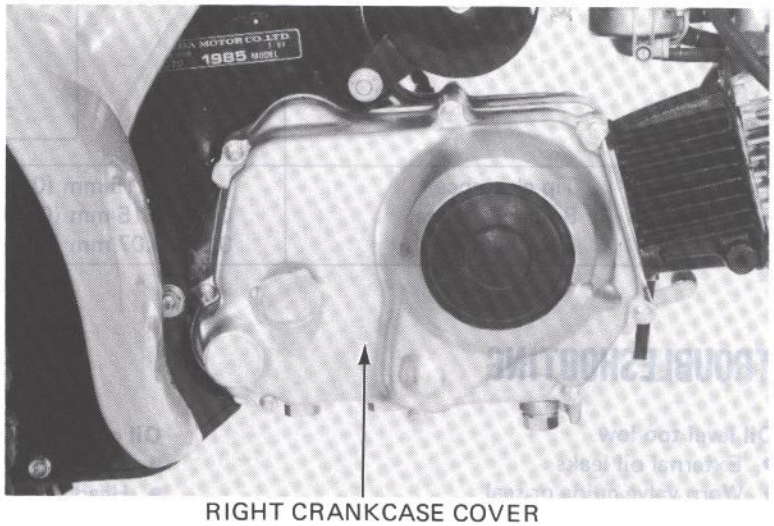
With the ATC on level ground, make sure that the oil level is at the upper level mark and that there are no leaks.

## OIL FILTER ROTOR AND SCREEN

NOTE:

> Clean the oil filter rotor before adding oil.

Remove the right crankcase (Page 8-2).




RIGHT CRANKCASE COVER

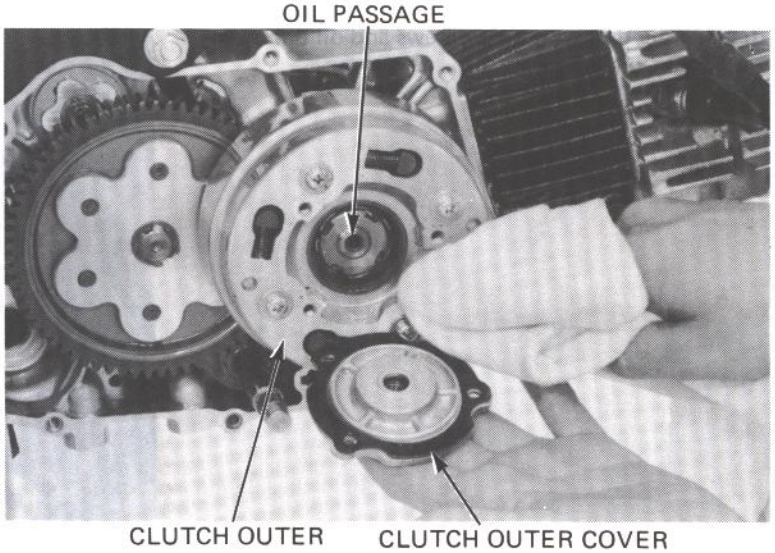


Date of Issue: June, 1984

Remove the clutch lever, cam and outer cover (Page 8-3).
Clean the clutch outer cover and the inside of the clutch outer using clean lint-free cloth.

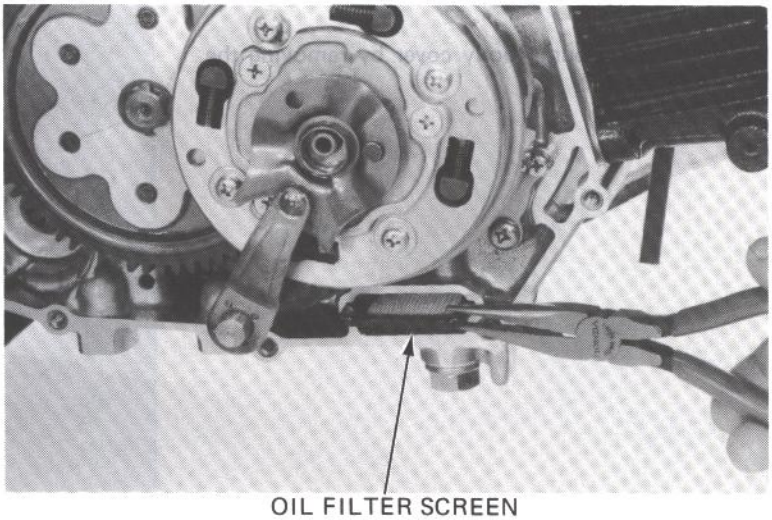
NOTE:

- Do not allow dust and dirt to enter the crankshaft oil passage.
- Do not use compressed air.




Remove the oil filter screen from the crankcase.
Clean the filter screen.

Install the clutch outer cover, cam and lever and right crankcase covers (Page 8-10).
Fill the engine with recommended grade of oil (Page 2-1).



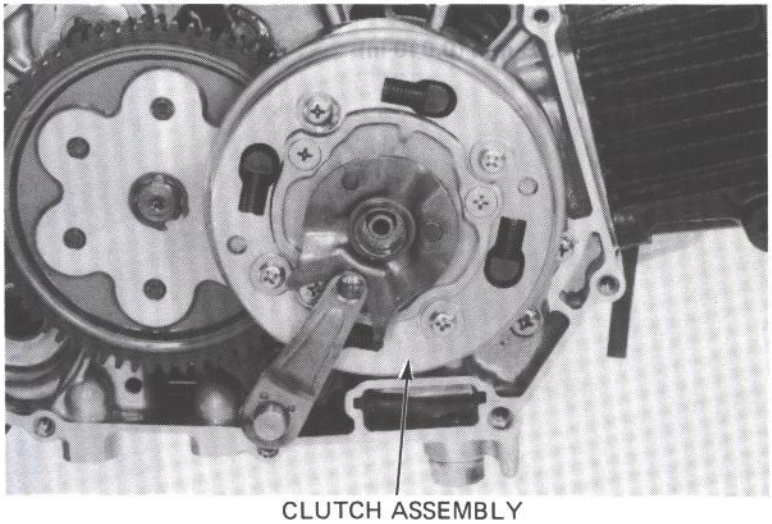

## OIL PUMP

### REMOVAL

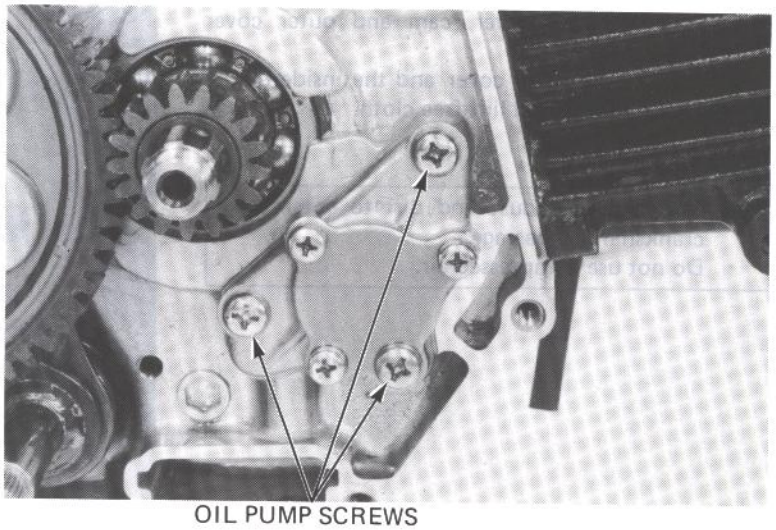
NOTE:

The oil pump can be removed with the engine mounted in the frame.

Remove the oil drain plug and drain the oil from the engine (Page 2-2).
Remove the right crankcase cover (Page 8-2).
Remove the clutch assembly (Page 8-3).



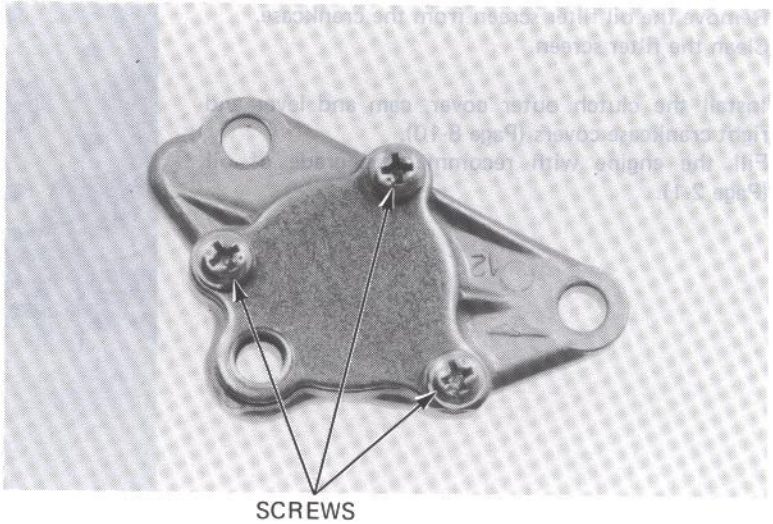
Remove the three oil pump screws and oil pump.



OIL PUMP SCREWS

## INSPECTION

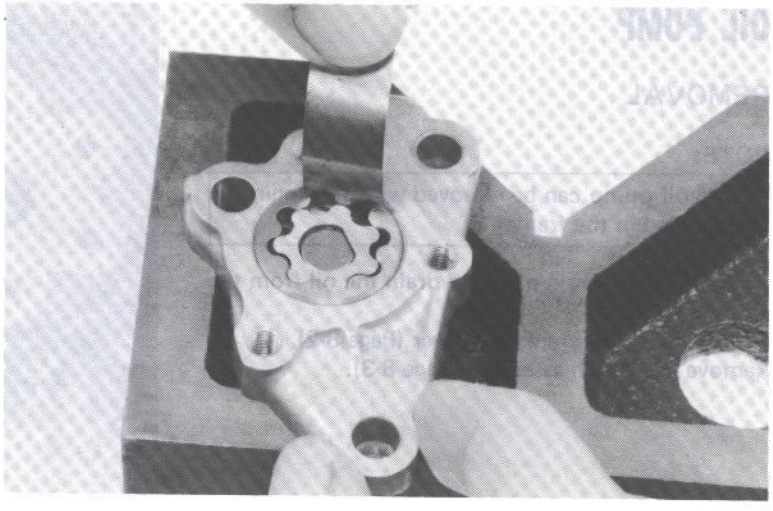
Remove the oil pump body cover by removing the three screws.



SCREWS

Measure the rotor tip clearance.

**SERVICE LIMIT: 0.25 mm (0.010 in)**

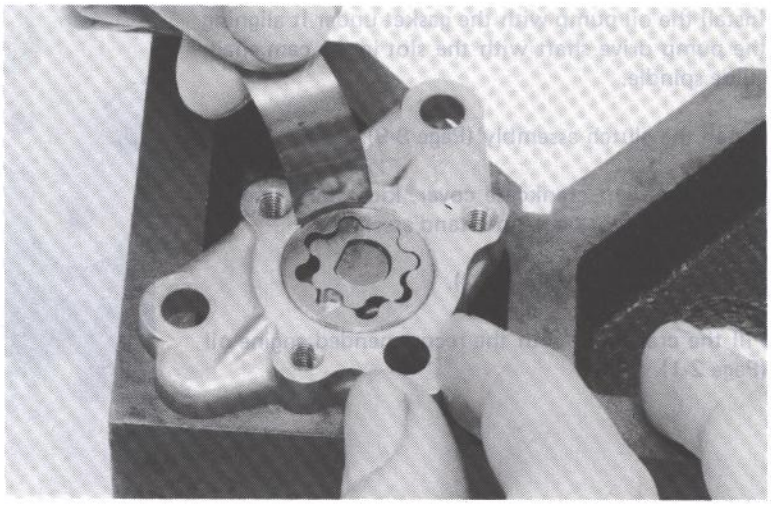




Date of Issue: June, 1984

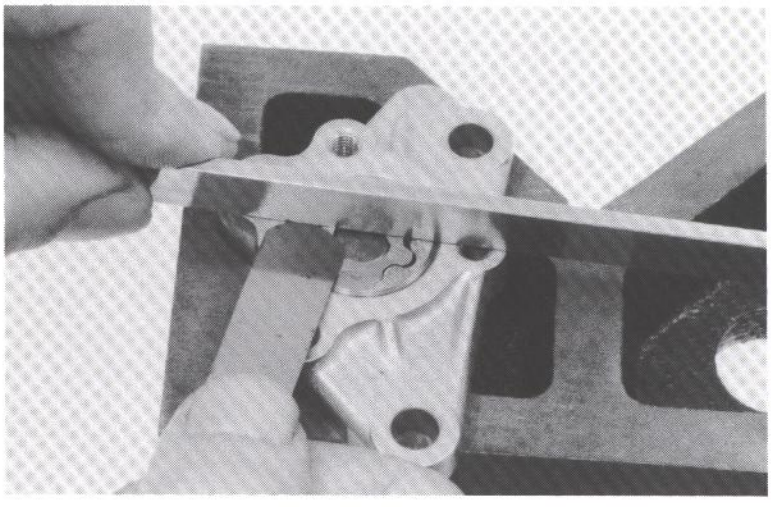
Measure the pump body clearance.

**SERVICE LIMIT: 0.20 mm (0.008 in)**



Place the oil pump cover gasket.
Measure the rotor end clearance.

**SERVICE LIMIT: 0.12 mm (0.005 in)**



## DISASSEMBLY

Remove the drive shaft.

Remove the inner and outer rotors.

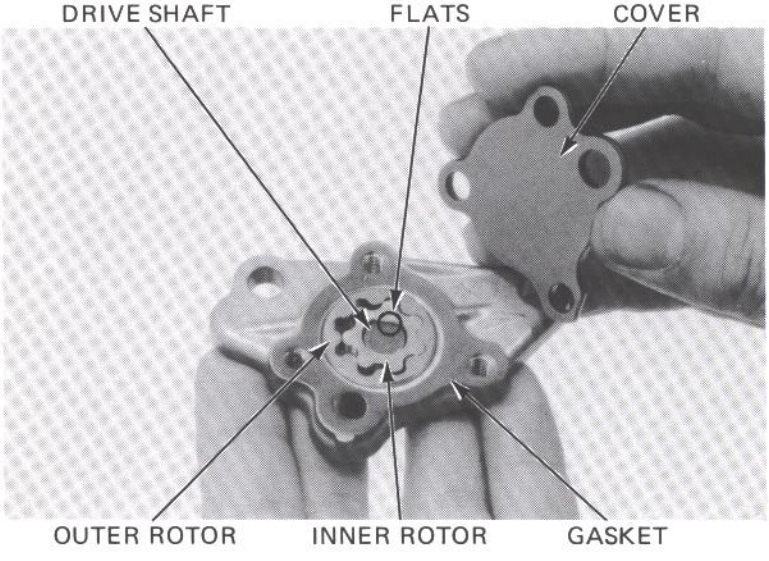
## ASSEMBLY

Install the outer and inner rotors.
Insert the drive shaft and align the flat on the shaft with the flat in the inner rotor. The flats should face each other.

Install the pump body cover gasket and cover.

NOTE:

> Make sure that the pump rotates freely without binding.



## INSTALLATION

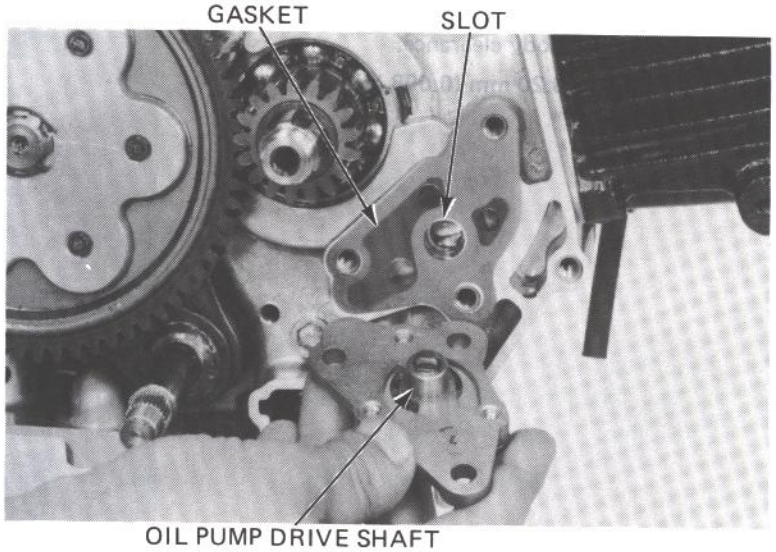
Install the oil pump with the gasket under it aligning the pump drive shaft with the slot in the cam chain guide spindle.

Install the clutch assembly (Page 8-9).

Install the right crankcase cover, kick starter pedal, muffler and foot pegs/side stand assembly.

Adjust the clutch (Page 3-12).

Fill the crankcase with the recommended engine oil (Page 2-1).






Date of Issue: June, 1984

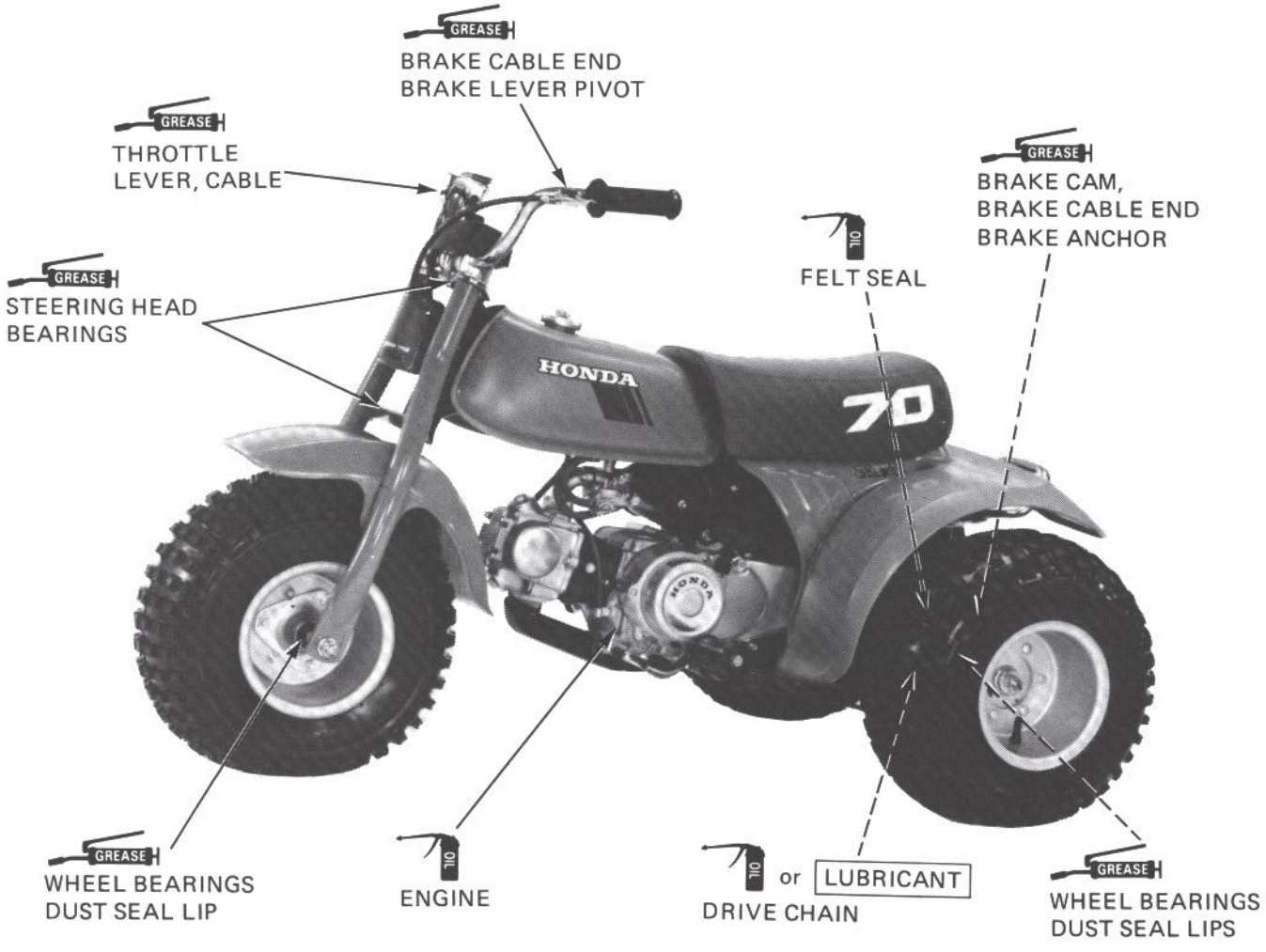
# LUBRICATION POINTS

Use general purpose grease when not specified here.

Apply oil or grease to the other sliding surfaces not shown here.

## CONTROL CABLE LUBRICATION

Periodically disconnect the throttle, and front brake cables at their upper ends. Thoroughly lubricate the cables and their pivot points with a commercially available cable lubricant.



# 3. MAINTENANCE





## SERVICE INFORMATION

### SPECIFICATIONS

| | |
|---|---|
| Ignition timing: | |
| Initial | 25° ± 2° BTDC at idle |
| Contact point gap | 0.3–0.4 mm (0.012–0.016 in) |
| Spark plug: | |
| Spark plug gap | 0.6–0.7 mm (0.024–0.028 in) |
| Recommended spark plugs | CR7HS (NGK)<br>U22FSR-L (ND) |
| Valve clearance (cold): | |
| Intake/Exhaust | 0.05 mm (0.002 in) |
| Throttle lever free play: | 5–10 mm (3/16–3/8 in) |
| Idle speed: | 1,500 ± 100 rpm |
| Cylinder compression: | |
| Standard | 1,200 ± 150 kPa (12.0 ± 1.5 kg/cm$^2$, 170.64 ± 21.33 psi) |
| Service limit | 900 kPa (9.0 kg/cm$^2$, 127.98 psi) |
| Brake lever free play | 15–20 mm (5/8–3/4 in) |
| Drive chain free play | 10–20 mm (3/8–3/4 in) |
| Drive chain length (72 pins): | |
| Standard | 901.7 mm (35.5 in) |
| Service limit | 919.7 mm (36.2 in) |
| Front/rear rim size | 6.5 x 7.0 |
| Front/rear tire size | 16 x 8.0–7 |
| Front/rear tire pressure | 2.2 psi (0.15 kg/cm$^2$, 15 kPa) |
| Front/rear tire circumference: | |
| Standard | 1,290 mm (50.7 in) |

## TORQUE VALUES

| | |
|---|---|
| Spark plug | 12–19 N·m (1.2–1.9 kg-m, 9–14 ft-lb) |
| Valve inspection cap | 10–14 N·m (1.0–1.4 kg-m, 7–10 ft-lb) |
| Drive chain adjuster nut | 25–35 N·m (2.5–3.5 kg-m, 18–25 ft-lb) |
| Clutch adjuster lock nut | 8–12 N·m (0.8–1.2 kg-m, 6–9 ft-lb) |
| Valve adjuster lock nut | 7–10 N·m (0.7–1.0 kg-m, 5–7 ft-lb) |

## TOOLS

**Common**

| | |
|---|---|
| Valve Adjuster B | 07708–0030400 or 089201–200–000 (U.S.A. only) |
| Valve Adjuster Wrench, 8 x 9 mm | 07908–GE00200 or equivalent commercially available in U.S.A. |



Date of Issue: June, 1984

# MAINTENANCE SCHEDULE

The maintenance intervals shown in the following schedule are based upon average riding conditions. ATC's subjected to severe use, or ridden in unusually wet or dusty areas, require more frequent servicing. Items marked * should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. Other maintenance items are simple to perform and may be serviced by the owner.

Perform the Pre-ride Inspection in the Owner's Manual at each scheduled maintenance period.

I: Inspect and Clean, Adjust, Lubricate or Replace, if necessary.
C: Clean
R: Replace
A: Adjust
L: Lubricate

| | ITEM | INITIAL SERVICE PERIOD (First week of operation) | REGULAR SERVICE PERIOD (Every 30 operating days) | Ref. Page |
|---|---|---|---|---|
| | ENGINE OIL (NOTE 1, 2) | R | R | 2-2 |
| * | OIL FILTER SCREEN | | C | 2-2 |
| * | CONTACT POINT AND IGNITION TIMING | I | I | 3-4 |
| | AIR CLEANER ELEMENT (NOTE 2) | | I | 3-5 |
| | SPARK PLUG | I | I | 3-6 |
| * | VALVE CLEARANCE | I | I | 3-7 |
| * | CARBURETOR | I | I | 3-8 |
| | FUEL LINES | I (EVERY YEAR) | | 3-8 |
| * | FUEL FILTER | C (EVERY YEAR) | | 3-8 |
| | THROTTLE OPERATION | I | I | 3-9 |
| | DRIVE CHAIN (NOTE 2) | | I, L | 3-10 |
| * | BRAKE SHOES (NOTE 3) | I (EVERY YEAR) | | 3-11 |
| | BRAKE SYSTEM | I | I | 3-12 |
| * | CLUTCH | A | A | 3-12 |
| * | SPARK ARRESTER | | C | 3-13 |
| | ALL NUTS, BOLTS, FASTENERS | I | I | 3-13 |
| | TIRES | I | I | 3-13 |
| * | STEERING HEAD BEARINGS | A (EVERY YEAR) | | 3-14 |

NOTES: 1. Replace every 30 operating days or every 3 months, whichever occurs first.
2. Service more frequently when riding in areas of dust, sand or snow.
3. Service more frequently after riding in very wet or muddy condition.

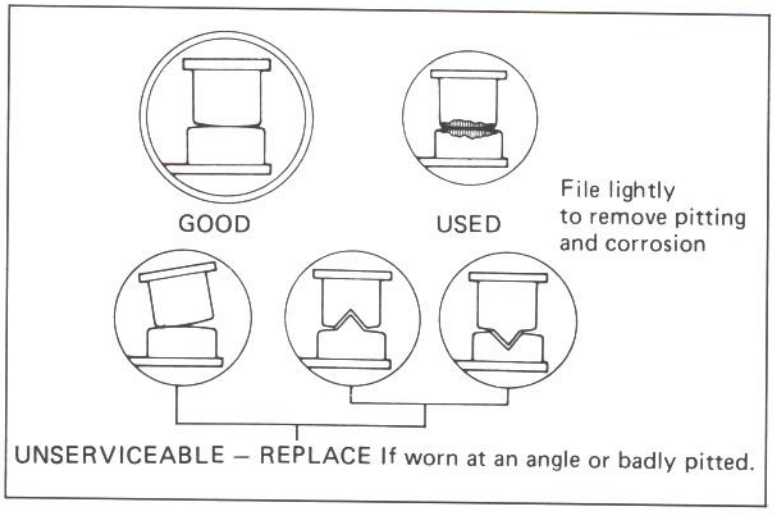
# CONTACT POINTS AND IGNITION TIMING

## CONTACT POINT INSPECTION

Remove the recoil starter (Page 9-2).
Remove the starter driven pulley (Page 9-7).

Inspect the contact point surface.
If the contact surface are level but grayish in color or slightly pitted, file them lightly.

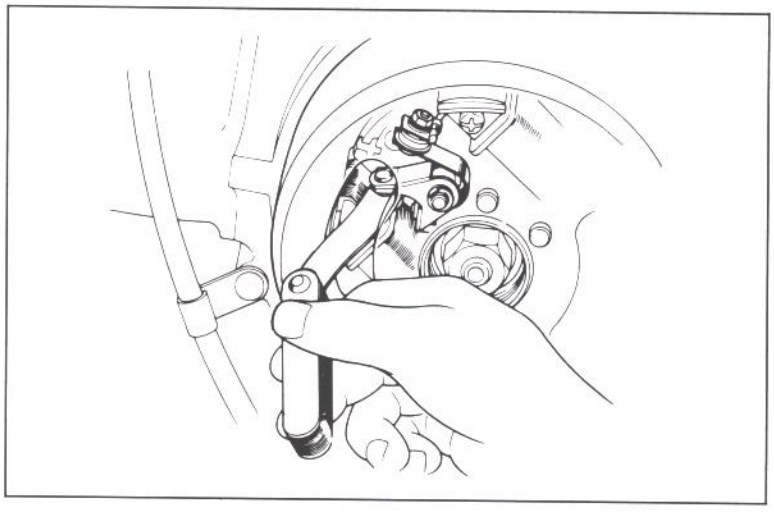
If the point have noticeable transfer of metal from one surface to the other, have evidence of heavy arcing, or are worn at an angle, the point set should be replaced.




Turn the flywheel counterclockwise to obtain maximum point gap and measure the point gap with the filler gauge.

**POINT GAP: 0.3–0.4 mm (0.012–0.016 in)**

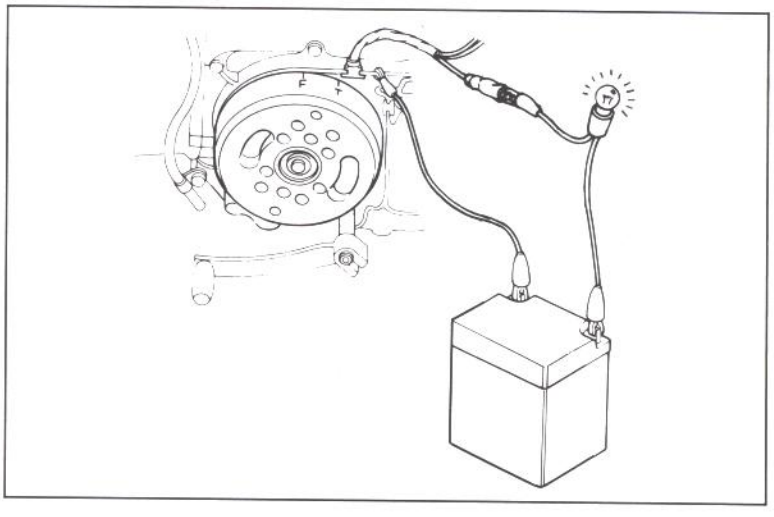
If the contact point gap is incorrect, loosen the locking screw and adjust the point gap.
Clean the contact point surface with an electrical contact cleaner to remove any oil film or dart.



## IGNITION TIMING INSPECTION

Disconnect the alternator wire connector.
Connect the continuity light between the battery positive terminal and alternator wire (Black).
Connect the battery negative cable to the frame ground.

Slowly rotate the flywheel counterclockwise. As the "F" mark on the flywheel aligns with the index mark on the crankcase, the point should be open and the light becomes dim.





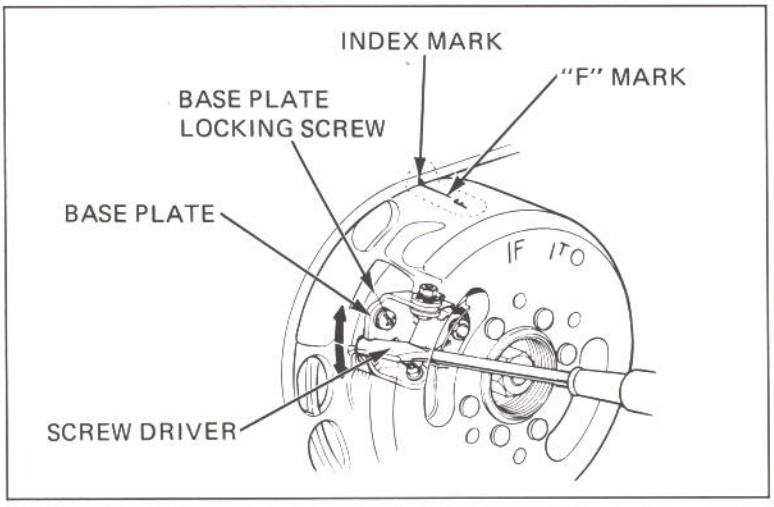

Date of Issue: June, 1984

If the ignition timing is incorrect, loosen the contact point locking screw and adjust contact point gap.
Increasing point gap: Advance ignition timing
Decreasing point gap: Rated ignition timing

Tighten the locking screw.

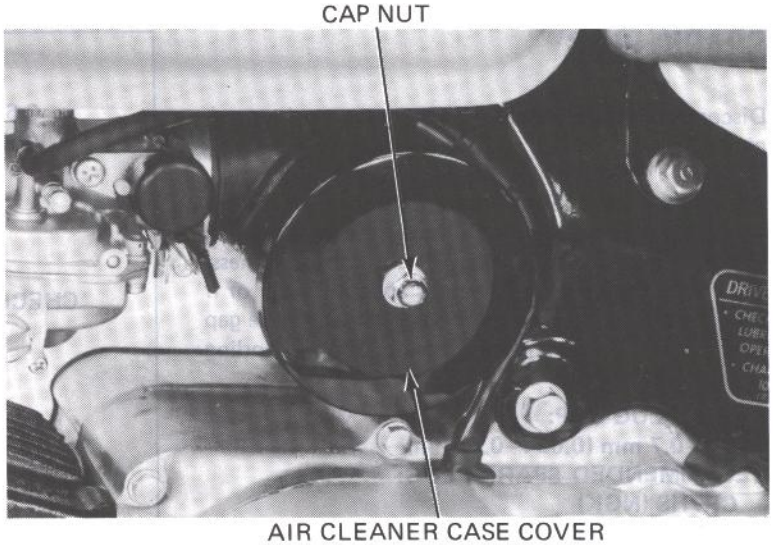
NOTE:

- Replace the contact point if the specified point gap can not be maintained to obtain the correct ignition timing.
- Use stroboscopic timing light to determine accurate ignition timing.

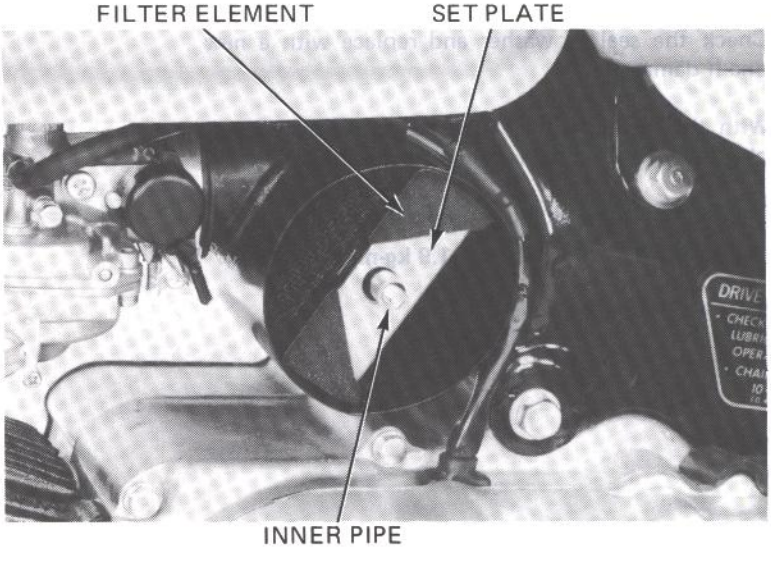



## AIR CLEANER

Remove the case cover cap nut and remove the cover and gasket.



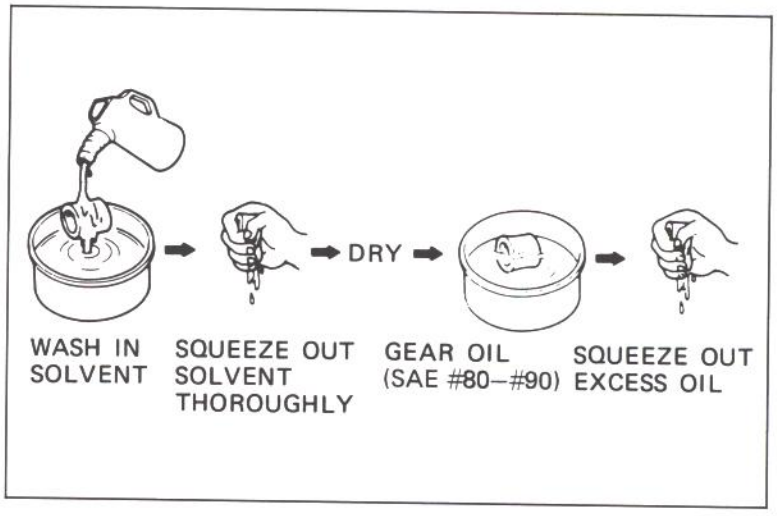

Separate the set plate and inner pipe from the element.
Pull the element from the air cleaner case.



Wash the element in non-flammable or high flash point solvent, squeeze out the solvent thoroughly, and allow to dry.

Soak the element in gear oil (SAE #80—#90) and squeeze out the excess.

Install the element in the air cleaner case with the set plate and inner pipe.
Install the gasket, cover and capnut.

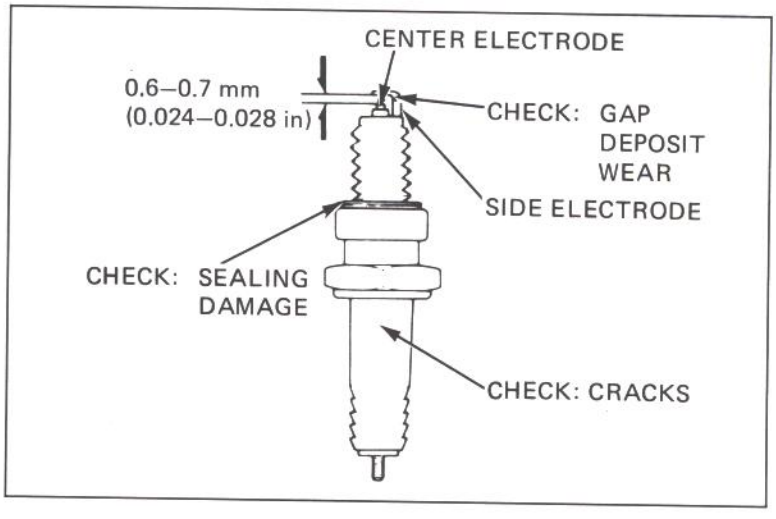



## SPARK PLUG

Disconnect the spark plug cap and remove the spark plug.

Visually inspect the spark plug electrodes for wear. The center electrode should have square edges and the side electrode should have a constant thickness. Discard the spark plug if there is apparent wear or if the insulator is cracked or chipped. Measure the gap with a feeler gauge and adjust by carefully bending the side electrode.

**SPARK PLUG GAP:**
**0.6—0.7 mm (0.024—0.028 in)**
**RECOMMENDED SPARK PLUG:**
**CR7HS (NGK)**
**U22FSR-L (ND)**




Check the sealing washer and replace with a new one if damaged.

With the sealing washer attached, thread the spark plug in by hand to prevent crossthreading.

Tighten the spark plug to the specified torque.

**TORQUE: 12—19 N·m (1.2—1.9 kg-m, 9—14 ft-lb)**

Connect the spark plug cap.



Date of Issue: June, 1984

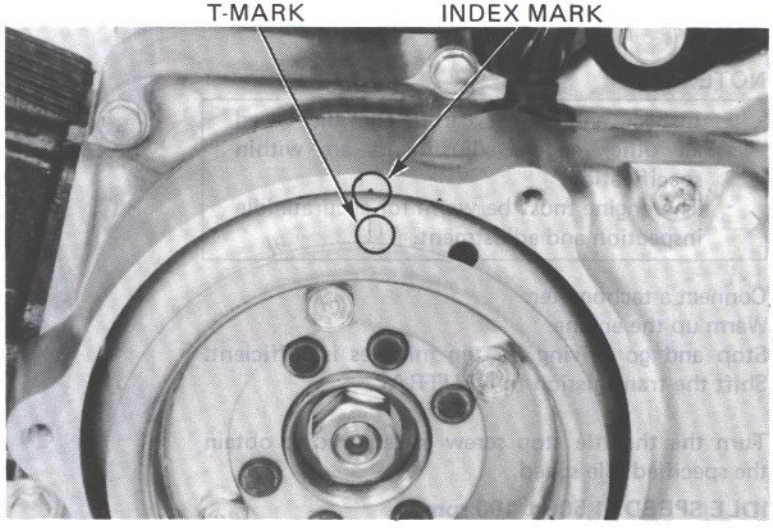
# VALVE CLEARANCE

NOTE:

> Inspect and adjust valve clearance while the engine is cold (below 35°C, 95°F).

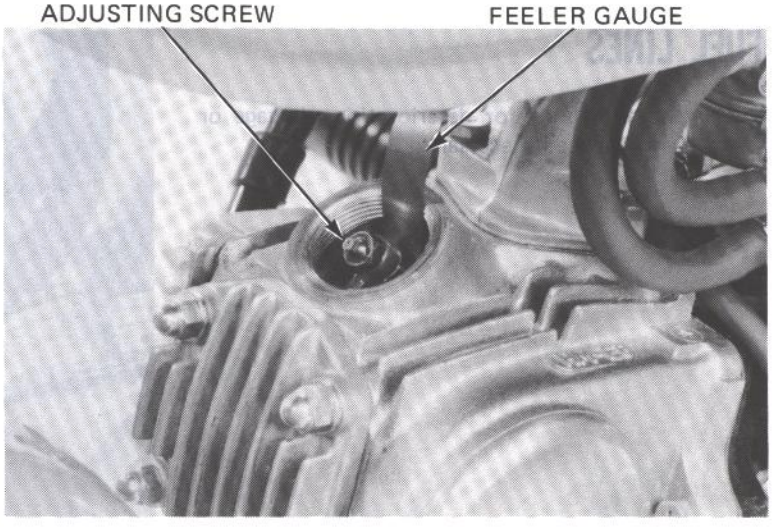
Remove the recoil starter (Page 9-2).
Remove the valve inspection caps.

Turn the flywheel counterclockwise and align the "T" mark with the index mark.
Make sure the piston is T.D.C. on the compression stroke.




Check the valve clearances by inserting a feeler gauge between the adjusting screw and valve stem.

**VALVE CLEARANCES**
**INTAKE/EXHAUST: 0.05 mm (0.002 in)**



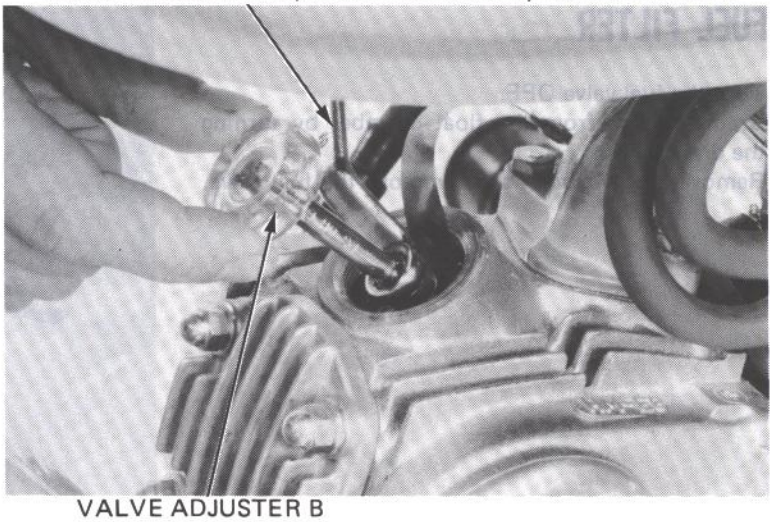

VALVE ADJUSTING WRENCH, 8 x 9 mm
07908–GE00200 or equivalent commercially available in U.S.A.

Adjust by loosening the lock nut and turning the adjusting screw until there is a slight drag on the feeler gauge.

Hold the adjusting screw and tighten the lock nut.
**TORQUE: 7–10 N·m (0.7–1.0 kg-m, 5–7 ft-lb)**

Recheck the valve clearance.

Install the recoil starter and valve inspection caps and tighten the caps.
**TORQUE: 10–14 N·m (1.0–1.4 kg-m, 7–10 ft-lb)**



VALVE ADJUSTER B
07708–0030400 or 089201–200–000 (U.S.A. only)

## CARBURETOR IDLE SPEED

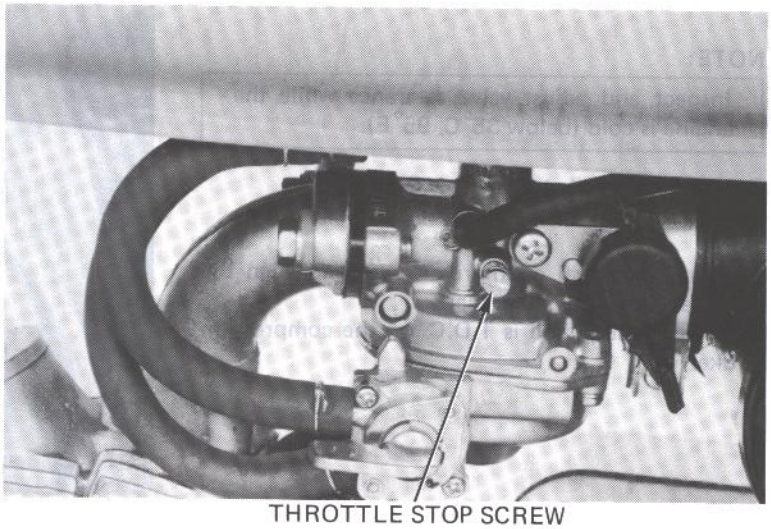
NOTE:

- Inspect and adjust carburetor idle speed all other engine adjustments are within specification.
- The engine must be warm for accurate idle inspection and adjustment.

Connect a tachometer.
Warm up the engine.
Stop and go driving for ten minutes is sufficient.
Shift the transmission to NEUTRAL.

Turn the throttle stop screw as required to obtain the specified idle speed.

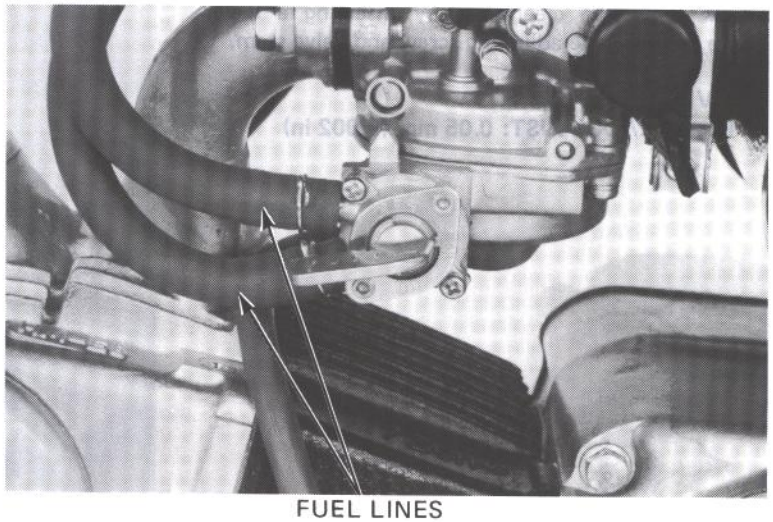
**IDLE SPEED: 1,500 ± 100 rpm**



THROTTLE STOP SCREW

## FUEL LINES

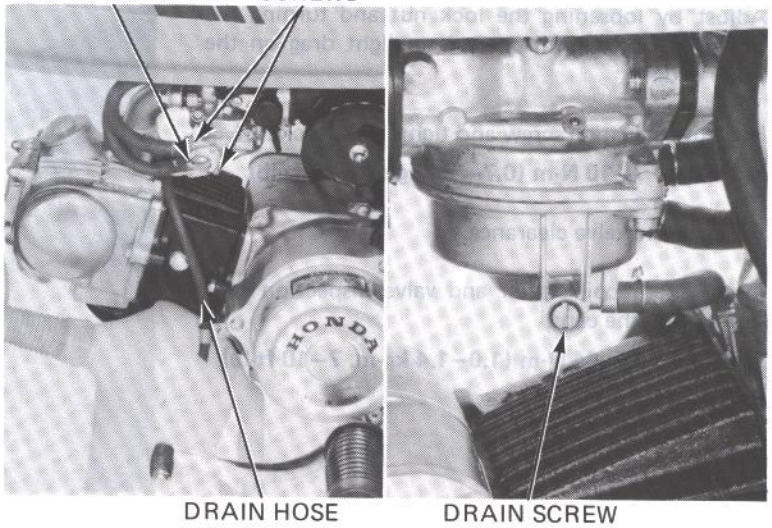
Check the fuel lines for deterioration, damage or leakage and replace if necessary.



FUEL LINES

## FUEL FILTER

Turn the fuel valve OFF.
Drain the fuel from the float chamber by turning the drain screw.
Remove the two screws and remove the fuel valve.





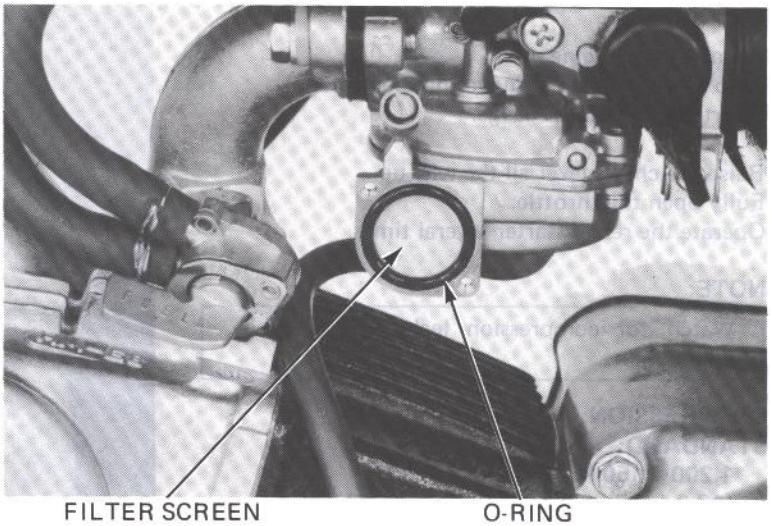

Date of Issue: June, 1984

Remove the O-ring and filter screen.

**WARNING**

***Gasoline is flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks near the equipment while draining fuel.***

Wash the filter screen in clean non-flammable or high flash point solvent.
Reinstall the fulter screen and new O-ring into the carburetor.
Reinstall the fuel valve making sure the O-ring is in place.
After installing, turn the fuel valve ON and check that there are no fuel leaks.




## THROTTLE OPERATION

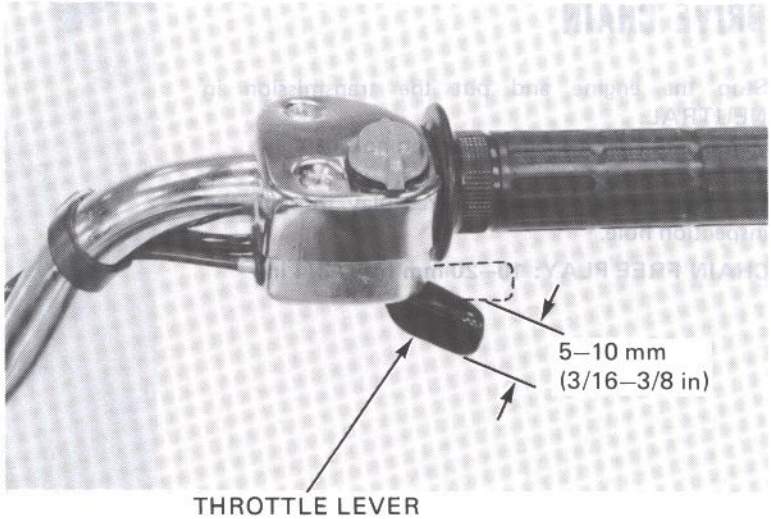
Check for smooth throttle lever full opening and automatic full closing in all steering positions.

Make sure there is no deterioration, damage or kinking in the throttle cable.
Replace any damaged parts.

Disconnect the throttle cable at the upper end (Page 11-3).
Thoroughly lubricate the cable and pivot point with a commercially available cable lubricant to prevent premature wear.

Install the throttle cable in the reverse order of removal.

Make sure the throttle lever free play is 5–10 mm (3/16–3/8 in) at the tip of the throttle lever.

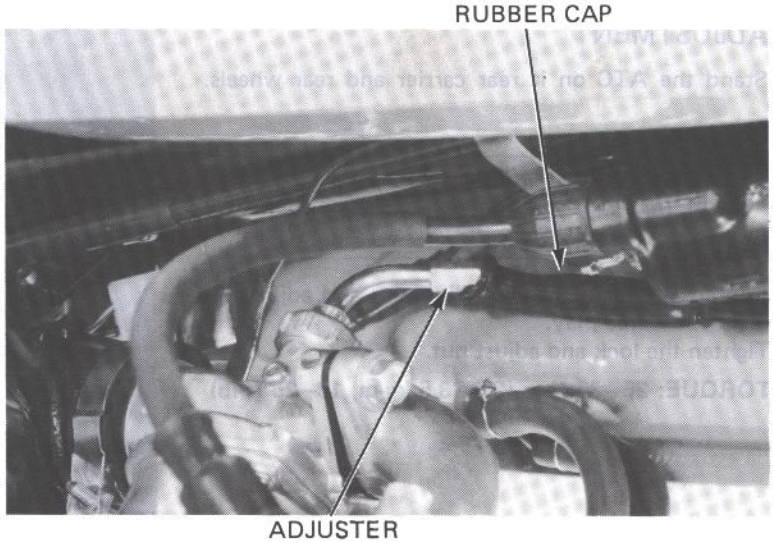



### ADJUSTMENT

Slide the rubber cap of the adjuster on the carburetor top.

Adjust the throttle lever free play by turning the adjuster on the carburetor.

Install the adjuster rubber cap securely.



# CYLINDER COMPRESSION

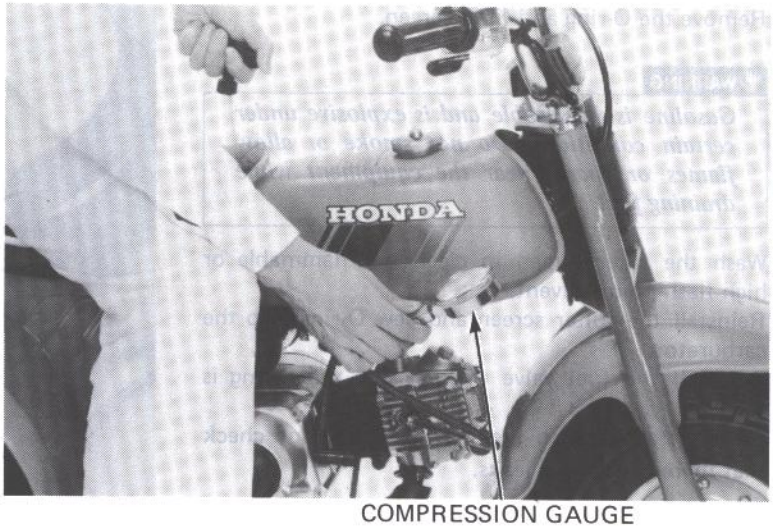
Warm up the engine.
Stop the engine and remove the spark plug.
Insert a compression gauge.

Raise the choke lever all the way up.
Fully open the throttle.
Operate the recoil starter several times.

NOTE:

> Watch for compression leaks at the gauge connection.

**COMPRESSION:**
**STANDARD:**
**1,200 ± 150 kPa**
**(12.0 ± 1.5 kg/cm$^2$, 170.64 ± 21.33 psi)**
**SERVICE LIMIT:**
**900 kPa (9.0 kg/cm$^2$, 127.98 psi)**



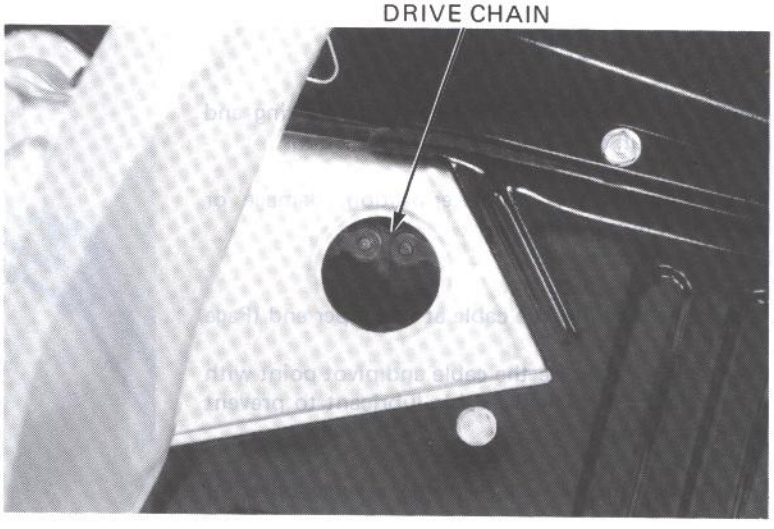
COMPRESSION GAUGE

# DRIVE CHAIN

Stop the engine and put the transmission in NEUTRAL.
Remove the drive chain inspection hole cap.

Check the amount of chain free play through the inspection hole.

**CHAIN FREE PLAY: 10–20 mm (3/8–3/4 in)**




## ADJUSTMENT

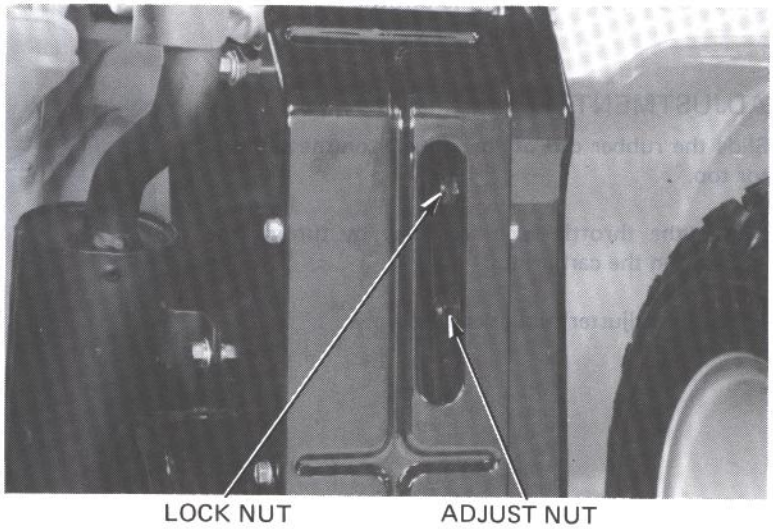
Stand the ATC on it rear carrier and rear wheels.

**CAUTION:**

> *To prevent fuel spillage, if the fuel tank is more than half full, either drain some fuel or remove the tank (Page 4-3).*

Loosen the lock nut and adjust nut and adjust the drive chain free play.
Tighten the lock and adjust nut.

**TORQUE: 25–35 N·m (2.5–3.5 kg-m, 18–25 ft-lb)**

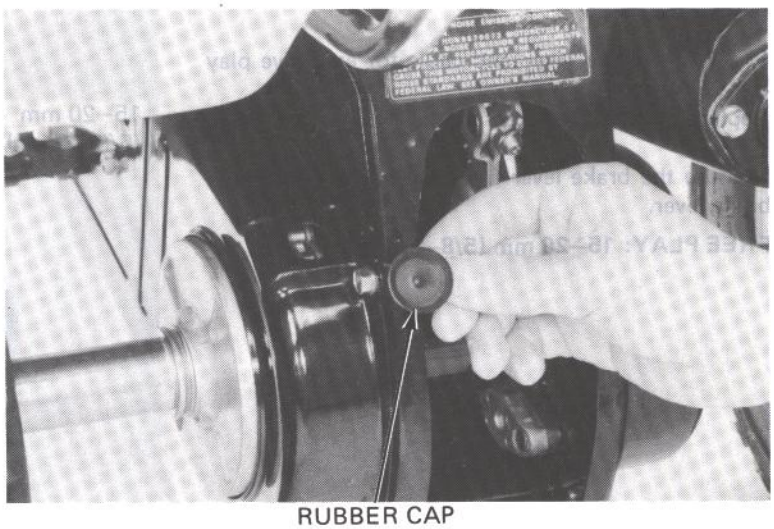





Date of Issue: June, 1984

Remove the rubber cap from the top of the drive chain cover and lubricate the drive chain with a commercially chain lubricants.

After lubricating the drive chain be sure to install the rubber cap.

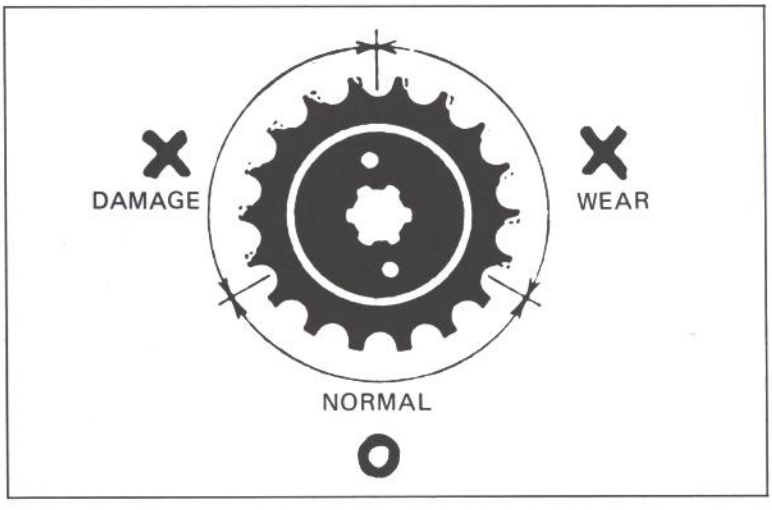

RUBBER CAP

Remove the drive chain cover by removing the four bolts and inspect the driven sprocket teeth for excesive wear or damage.
Replace if necessary.

NOTE:

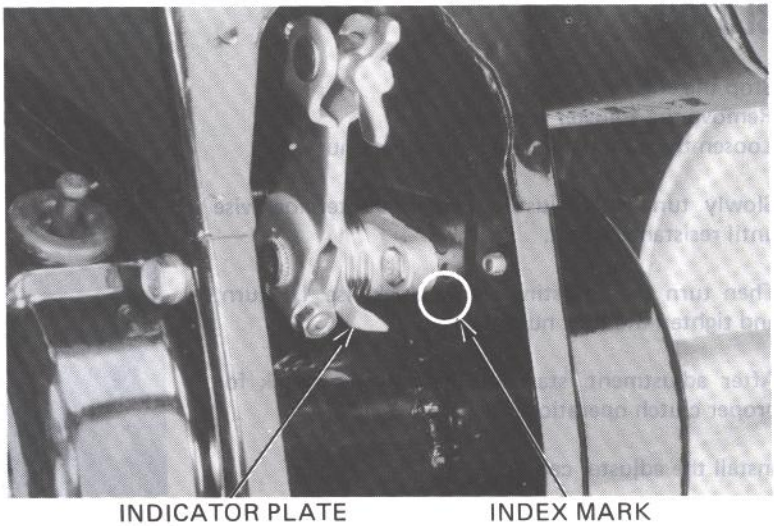
> Never install a new drive chain on worn sprockets or a worn chain on new sprockets. Both chain and sprockets must be in good condition, or the new replacement chain or sprockets will wear rapidly.

To remove the drive chain, remove the drive chain cover and left crankcase cover (Page 9-7).




## BRAKE SHOES

Replace the brake shoes if the indicator plate aligns with the brake panel index mark when the brake lever is applied.

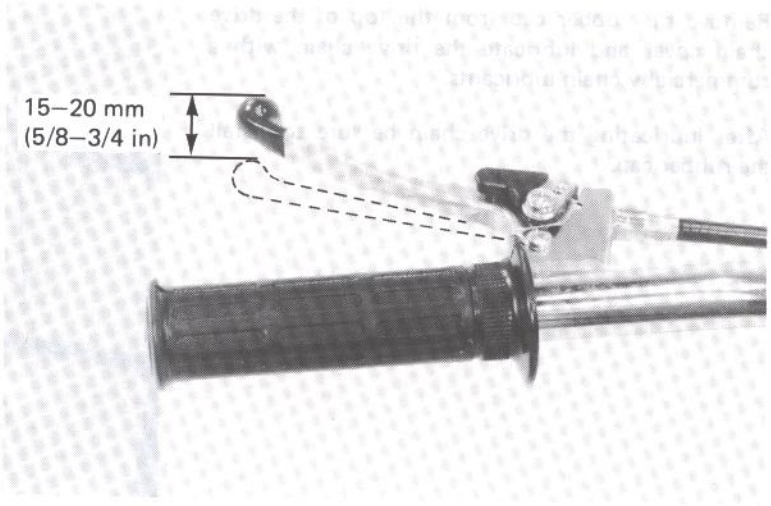


# BRAKE SYSTEM

Check the brake lever and cable for excessive play or other damage.
Replace or repair as necessary.

Measure the brake lever free play at the end of the brake lever.

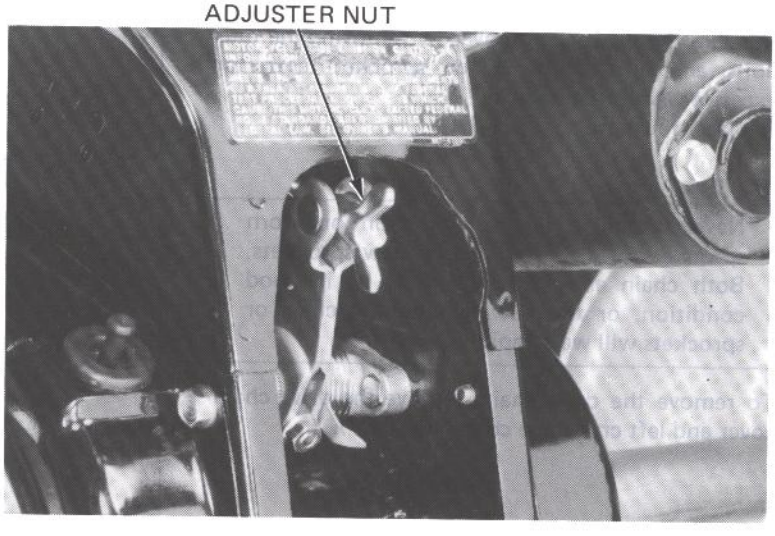
**FREE PLAY: 15–20 mm (5/8–3/4 in)**




Adjust the brake lever free play by turning the adjuster nut.

NOTE:

> Make sure the cut-out of the adjuster is seated on the brake arm pin.




## CABLE LUBRICATION

Loosen the brake adjuster and disconnect the brake cable at the lever.

Lubricate the cable and their pivot point with a commercially available cable lubricant.

Install the brake cable in the reverse order of removal and recheck the brake lever free play.

# CLUTCH

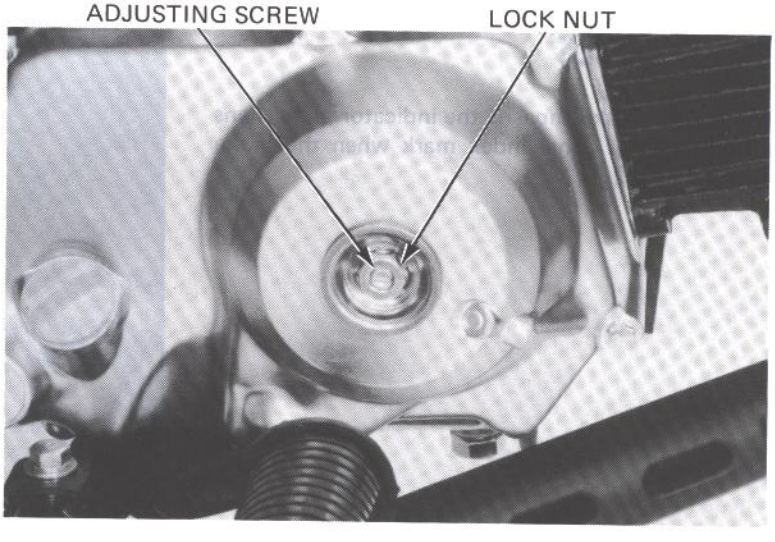
Stop the engine.
Remove the adjuster cap.
Loosen the clutch adjusting screw lock nut.

Slowly turn the adjusting screw counterclockwise until resistance is felt.

Then turn the adjusting screw clockwise 1/8 turn, and tighten the lock nut.

After adjustment, start the engine and check for proper clutch operation.

Install the adjuster cap.






Date of Issue: June, 1984

## SPARK ARRESTER CLEANING

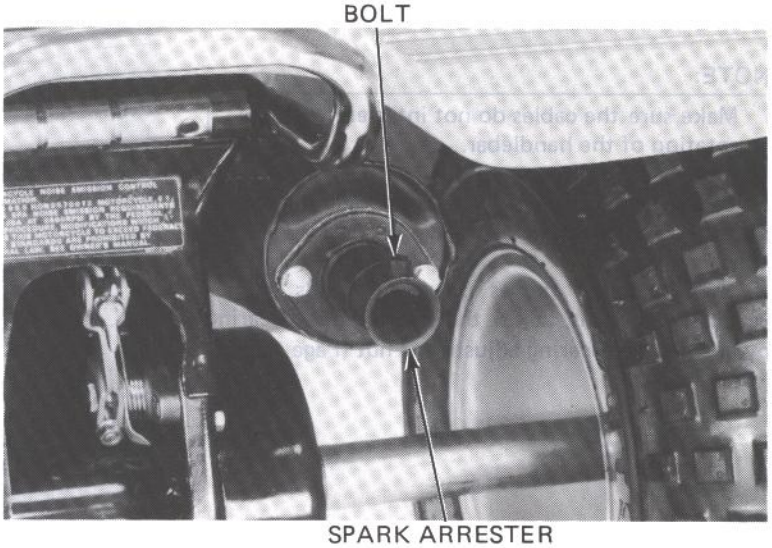
**WARNING**

- *Do not remove and install the spark arrester while the exhaust pipe is hot.*
- *Perform this operation in a wellventilated area, free from fire hazard.*
- *Use adequate eye protection.*

Remove the spark arrester bolt and pull out the spark arrester.
Remove any accumulated carbon from the spark arrester.

Start the engine and remove accumulated carbon from the exhaust system by momentarily reving up the engine several times.

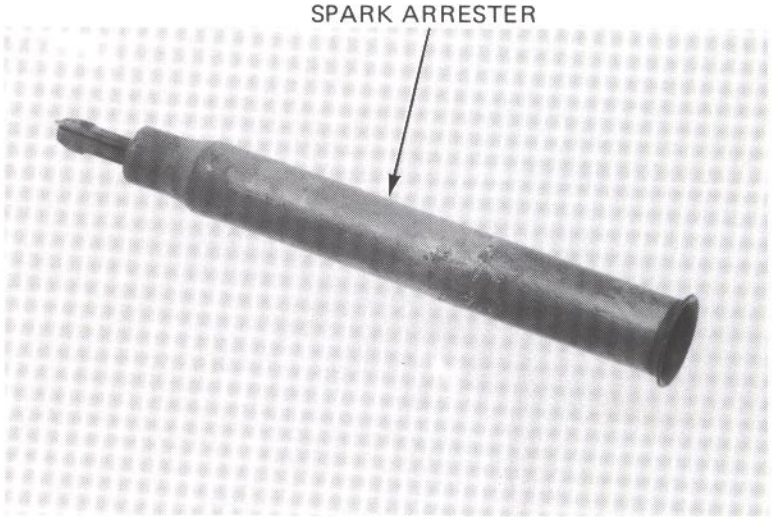
Stop the engine and reinstall the spark arrester.




## NUTS, BOLTS, FASTENERS

Tighten bolts, nuts and fasteners at regular intervals shown in the Maintenance Schedule (Page 3-3).

Check that all chassis nuts and bolts are tightened to their correct torque values (Page 1-5). Check that all cotter pins and safety clips are in place.




## TIRES

Check the tire for cuts, imbedded nails, or other sharp objects.

NOTE:

Tire pressure should be checked when the tires are COLD.

Check the tire pressure.

**TIRE PRESSURES:**
**Recommended pressure:**
**2.2 psi (0.15 kg/cm$^2$, 15 kPa)**
**Minimum pressure:**
**1.7 psi (0.12 kg/cm$^2$, 12 kPa)**
**Maximum pressure:**
**2.6 psi (0.18 kg/cm$^2$, 18 kPa)**

Raise up the rear wheel and check the tire circumference.

**STANDARD TIRE CIRCUMFERENCE:**
**1,290 mm (50.7 in)**

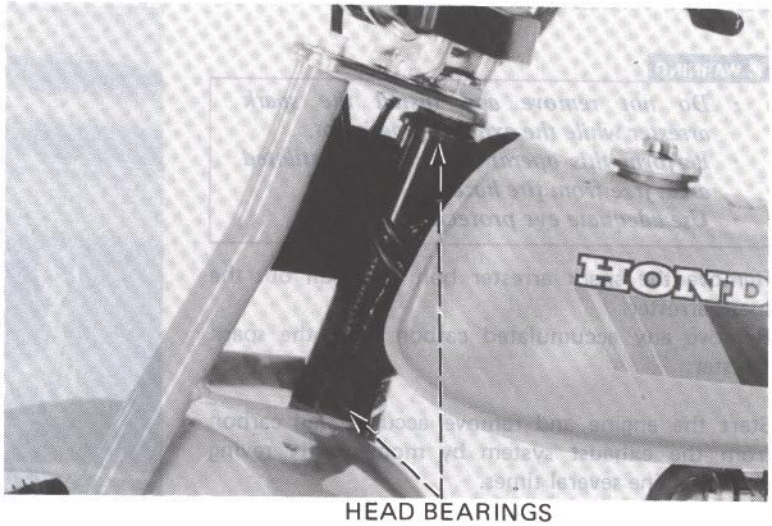
# STEERING HEAD BEARINGS

NOTE:

> Make sure the cables do not interfere with the rotation of the handlebar.

Raise the front wheel off the ground and make sure that the handlebar rotates freely.

If the handlebar moves unevenly, binds or has vertical movement, adjust the steering head bearing by turning the bearing adjustment nut (Page 11-15).




HEAD BEARINGS



Date of Issue: June, 1984