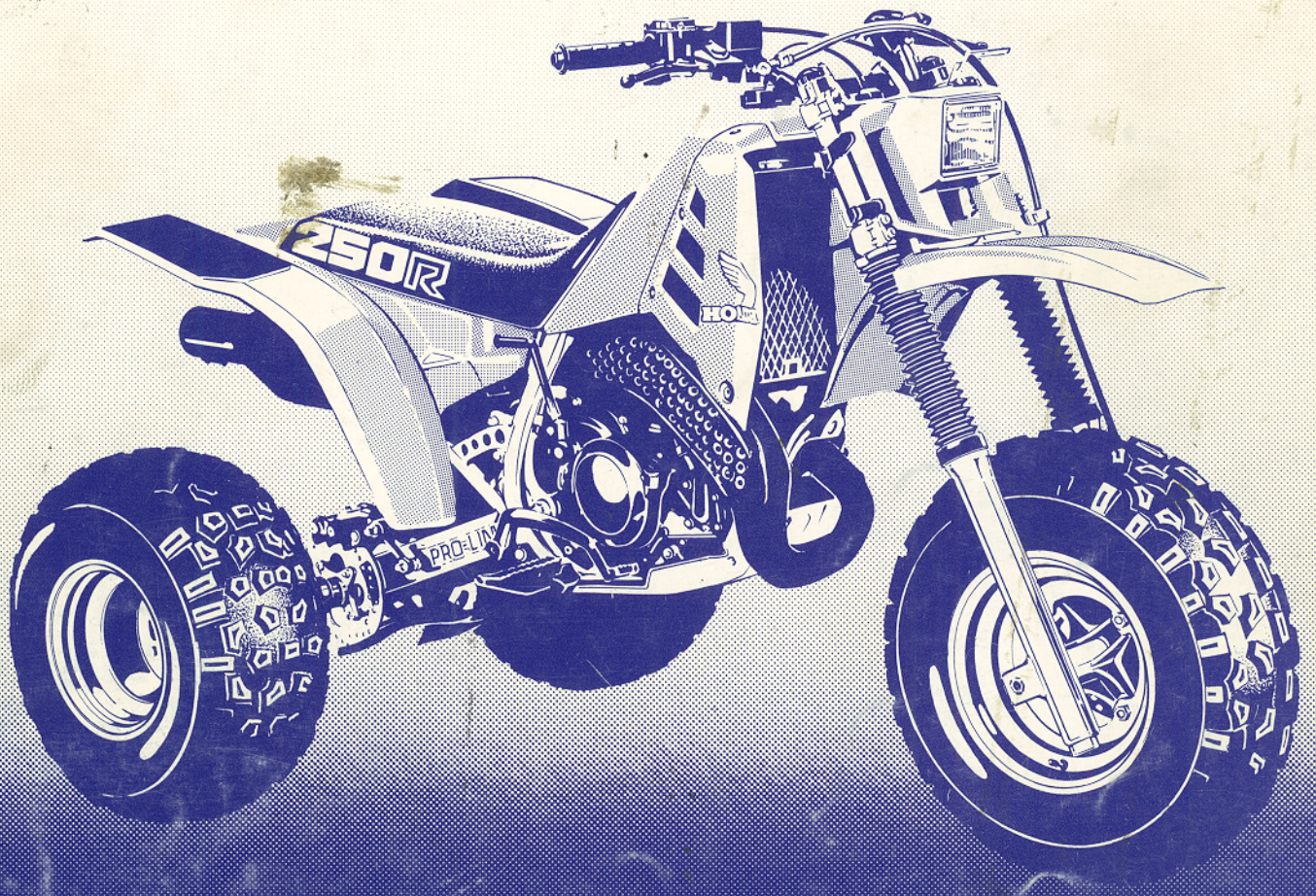


Official

HONDA

SHOP MANUAL

ATC250R



'85~'86

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 all conceivable ways in which service, whether or not recommended by Honda might be done or of the possibly 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 satisfy himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized by the service method or tools selected.

HOW TO USE THIS MANUAL

Sections 1 and 2 apply to the whole ATC while sections 3 through 15 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, general instructions, specifications, torque values, tools and troubleshooting for the section. The subsequent pages give detailed procedures.

If you don't know the source of a problem, see section 16, TROUBLESHOOTING.

All information, illustrations, directions and specifications included in this publication are based on the latest product information available at the time of approval for printing.

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HONDA MOTOR CO., LTD.
Service Publications Office

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1. GENERAL INFORMATION

1

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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 working area.

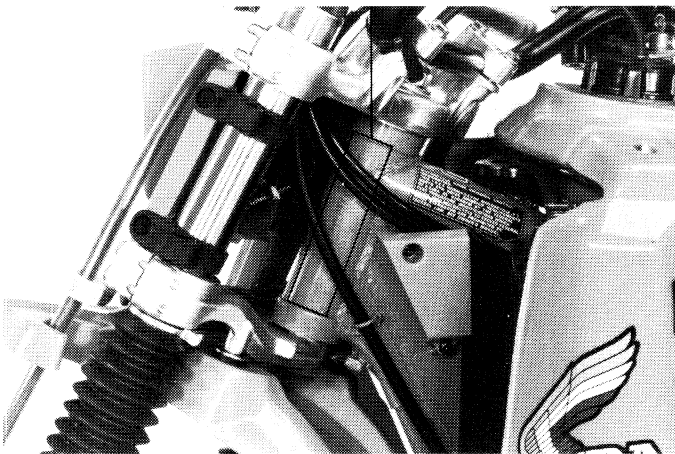
SERVICE RULES

1. Use genuine HONDA or HONDA-recommended parts and lubricants or their equivalent. Parts that do not meet HONDA's design specifications may damage the ATC.
2. Use the special tools designed for this product.
3. Install new gaskets, O-rings, cotter pins, lock plates, etc. when reassembling.
4. When torquing bolts or nuts, begin with larger-diameter or inner bolts first, and tighten to the specified torque diagonally, in incremental steps, unless a particular sequence is specified.
5. Clean parts in non-flammable or high flash point solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
6. When installing a new oil seal, make sure that the sealing lip is lubricated with grease. If an oil seal and related parts have been washed, apply proper grease to the lip of the oil seal.
7. After reassembly, check all parts for proper installation and operation.
8. Use only metric tools when servicing this motorcycle. Metric bolts, nuts, and screws are not interchangeable with English fasteners. The use of incorrect tools and fasteners may damage the ATC.

MODEL IDENTIFICATION

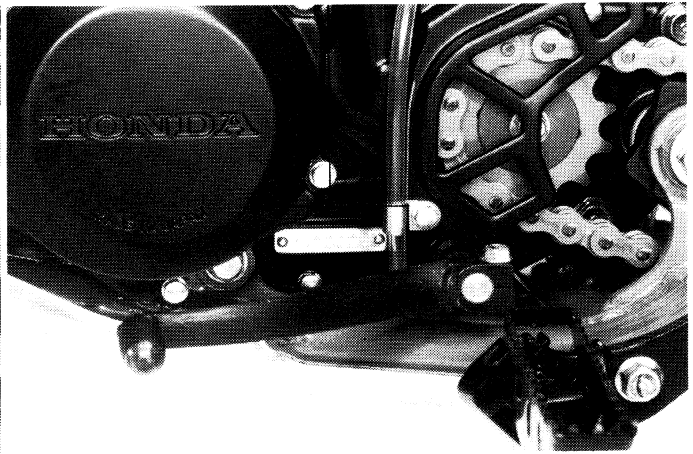


FRAME SERIAL NUMBER



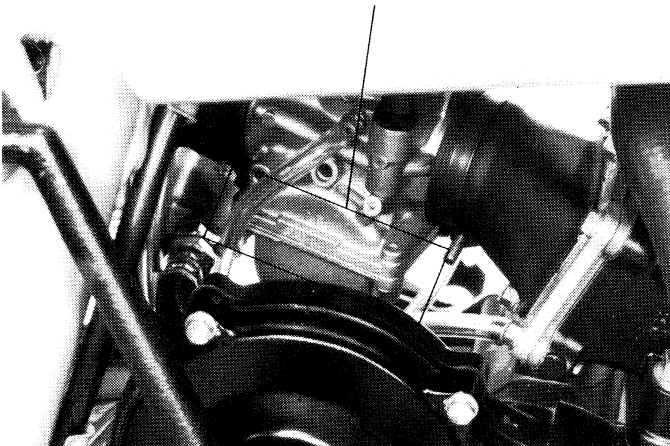
The frame serial number is stamped on the steering head left side.

ENGINE SERIAL NUMBER



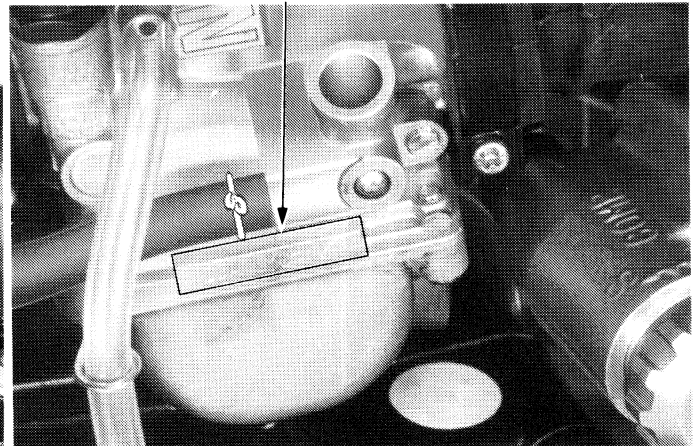
The engine serial number is stamped on the crankcase lower left side.

CARBURETOR IDENTIFICATION NUMBER



'85: The carburetor identification number is stamped on the carburetor body right side.

CARBURETOR IDENTIFICATION NUMBER



AFTER '85: The carburetor identification number is stamped on the carburetor body left side.

SPECIFICATIONS

| | | '85: | AFTER '85: |
|----------------|-------------------------------------|--|--------------------------------------|
| DIMENSIONS | Overall length | 1,895 mm (74.6 in) | 1,905 mm (75.0 in) |
| | Overall width | 1,120 mm (44.1 in) | 1,130 mm (44.5 in) |
| | Overall height | 1,090 mm (42.9 in) | 1,085 mm (42.7 in) |
| | Wheelbase | 1,295 mm (51.0 in) | 1,305 mm (51.4 in) |
| | Seat height | 760 mm (29.9 in) | 780 mm (30.7 in) |
| | Foot peg height | 360 mm (14.2 in) | 340 mm (13.4 in) |
| | Ground clearance | 120 mm (4.7 in) | 110 mm (4.3 in) |
| | Dry weight | 132 kg (291 lb) | 131 kg (289 lb) |
| | Weight distribution | Front Rear | 53.0 kg (117 lb) 79.0 kg (174 lb) |
| FRAME | Type | Semi double cradle | |
| | Front suspension and travel | Telescopic fork, 250 mm (9.84 in) | |
| | Rear suspension and travel | Swingarm, Pro-link, 250 mm (9.84 in) | |
| | Front tire size type | 23X8-11 | |
| | Front tire pressure | 30 kPa (0.3 kg/cm ² , 4.3 psi) | |
| | Rear tire size type | 20X10-9 | |
| | Rear tire pressure | 20 kPa (0.25 kg/cm ² , 3.6 psi) | |
| | Front brake | Single disc (2 pot) | |
| | Rear brake | Single disc (2 pot) | |
| | Fuel capacity | 9.8 lit. (2.6 U.S. gal., 2.16 Imp. gal.) | |
| | Fuel reserve capacity | 2.0 lit. (0.53 U.S. gal., 0.44 Imp. gal.) | |
| | Caster angle | 21° | 21°30' |
| | Trail length | 37 mm (1.5 in) | 38 mm (1.5 in) |
| Front fork oil | 400 cc (13.5 U.S. oz, 0.35 Imp. qt) | 464 cc (15.7 U.S. oz, 0.41 Imp. qt) | |
| ENGINE | Type | Water cooled, 2-stroke | |
| | Engine dry weight | 26.0 kg (57.3 lb) | |
| | Cylinder arrangement | 7° inclined from vertical, single | |
| | Bore x stroke | 66 x 72 mm (2.60 x 2.83 in) | |
| | Displacement | 246 cm ³ (15.01 cu.in) | |
| | Compression ratio | 8.0 | |
| | Transmission oil capacity | 700 cc (24 U.S. oz, 0.62 Imp. qt.) | |
| | Lubrication system | Gasoline/oil mixture | |
| | Fuel required | Gasoline-oil ratio 20:1 (pre-mixed) (R O.N 92-100) | |
| | Air filtration | Oiled polyurethane form | |

GENERAL INFORMATION

| | | '85: | AFTER '85: | |
|-----------------------|--|-----------------------------|-----------------|--|
| CARBURETOR | Type | Piston valve | | |
| | Venturi dia. | 34 mm (1.3 in) | | |
| | Throttle lever free play | 3–8 mm (1/8–5/16 in) | | |
| | Float level | 16 mm (0.63 in) | | |
| | Setting mark | PE37A | PJ03A | |
| | Air screw opening | 2 turns out | 2-1/4 turns out | |
| | Idle speed | 1,400±150 rpm | 1,500±150 rpm | |
| | Jet needle | 2nd groove | 3rd groove | |
| DRIVE TRAIN | Clutch | Wet multi-plate type | | |
| | Transmission | 6-speed, constant mesh | | |
| | Primary reduction ratio | 2.652 | | |
| | Gear ratio | I | 2.570 | |
| | | II | 2.062 | |
| | | III | 1.667 | |
| | | IV | 1.333 | |
| | | V | 1.083 | |
| VI | | 0.884 | | |
| Final reduction ratio | 3.000 (39T/13T) | | | |
| Gearshift pattern | Left foot operated return system 1-N 2-3-4-5-6 | | | |
| ELECTRICAL | Ignition system | CDI | | |
| | Ignition timing "F" mark | 19° BTDC/1,500 rpm | | |
| | Starting system | Primary kickstarter | | |
| | Alternator | 14.5V 159W/5,000 rpm | | |
| | Spark plug | NORMAL | COLD WEATHER | |
| | | BR9ES (NGK) | BR8ES (NGK) | |
| | | RN2C (CHAMPION) | RN3C (CHAMPION) | |
| | Spark plug gap | 0.7–0.8 mm (0.028–0.031 in) | | |
| Taillight | 12V 5W | 12V 5W | | |
| Headlight | 12V 45/45W | 12V 60/55W | | |

GENERAL INFORMATION

| Item | Q'ty | Thread Dia. (mm) | Torque N·m (kg·m, ft-lb) | Remarks |
|------------------------------------|--------------|------------------|--------------------------|---------|
| Shock absorber upper mounting bolt | 1 | 10 | 45–55 (4.5–5.5, 33–40) | |
| Shock link-to-frame bolt | 1 | 12 | 70–80 (7.0–8.0, 51–58) | |
| Shock link-to-shock arm bolt | 1 | 12 | 70–80 (7.0–8.0, 51–58) | |
| Shock arm-to-swingarm bolt | 1 | 12 | 70–80 (7.0–8.0, 51–58) | |
| Swing arm pivot nut | 1 | 14 | 70–110 (7.0–11.0, 51–80) | |
| Swing arm bearing holder bolt | 2 | 8 | 18–25 (1.8–2.5, 13–18) | |
| Skid plate | 4 | 8 | 28–34 (2.8–3.4, 20–25) | |
| Driven sprocket bolt | '85: 4 | 10 | 32–37 (3.2–3.7, 23–27) | |
| | AFTER '85: 4 | 10 | 47–55 (4.7–5.5, 34–40) | |
| Driven sprocket bolt | 4 | 8 | 32–37 (3.2–3.7, 23–27) | |
| Kick starter pedal bolt | 1 | 8 | 20–35 (2.0–3.5, 14–25) | |
| Engine hanger plate bolt (8 mm) | 6 | 8 | 25–35 (2.5–3.5, 18–25) | |
| Engine mounting bolt (10 mm) | 5 | 10 | 50–60 (5.0–6.0, 36–43) | |
| Footpeg mounting bolt | 4 | 10 | 50–60 (5.0–6.0, 36–43) | |
| Front fork cap bolt | 2 | – | 15–30 (1.5–3.0, 11–22) | |
| Shock absorber spring lock nut | 1 | – | 80–100 (8.0–10.0, 58–72) | |
| Sub muffler mounting bolt | 3 | 8 | 28–32 (2.8–3.2, 20–23) | |
| Gear change pedal bolt | 1 | 6 | 10–14 (1.0–1.4, 7–10) | |

Torque specifications listed above are for important fasteners. Others should be tightened to standard torque values listed below.

STANDARD TORQUE VALUES

| Item | Torque Values N·m (kg·m, ft-lb) | Item | Torque Values N·m (kg·m, ft-lb) |
|--------------------|------------------------------------|--|------------------------------------|
| 5 mm bolt and nut | 4.5–6 (0.45–0.6, 3–4) | 5 mm screw | 3.5–5 (0.35–0.5, 2–4) |
| 6 mm bolt and nut | 8–12 (0.8–1.2, 6–9) | 6 mm screw and 6 mm bolt with 8 mm head | 7–11 (0.7–1.1, 5–8) |
| 8 mm bolt and nut | 18–25 (1.8–2.5, 13–18) | 6 mm flange bolt and nut | 10–14 (1.0–1.4, 7–10) |
| 10 mm bolt and nut | 30–40 (3.0–4.0, 22–29) | 8 mm flange bolt and nut | 24–30 (2.4–3.0, 17–22) |
| 12 mm bolt and nut | 50–60 (5.0–6.0, 36–43) | 10 mm flange bolt and nut | 35–45 (3.5–4.5, 25–33) |

TOOLS

SPECIAL

| DESCRIPTION | TOOL NUMBER | ALTERNATE TOOL | TOOL NUMBER | REF TO PAGE |
|--|---|---|---|--------------------------------|
| Lock nut wrench, 56 mm | 07916-HA20100 (07916-9580500) | Lock nut wrench, 56 mm | 07916-HA2010A | 11-4, 8 |
| Lock nut wrench, 45 mm | 07916-1870101 | Adjustable opened wrench | Commercially available in U.S.A. | 11-4, 5 |
| Steering stem socket | 07916-3710100 | | | 10-23, 26 |
| Bearing remover set, 12 mm (Bearing remover, 12 mm) (Remover weight) | 07936-1660001 (07936-1660100) (07741-0010201) | Remover weight | 07936-3710200 | 9-6 |
| Bearing remover, 17 mm | 07936-3710300 | | | 8-13, 14 |
| Remover handle | 07936-3710100 | | | 8-13, 14 |
| Remover weight | 07741-0010201 | Remover weight | 07936-3710200 | 8-13, 14 |
| Crankcase puller | 07937-4300000 | | | 8-6 |
| Mechanical seal driver attachment | 07945-4150400 | Mechanical seal installer | GN-AH-065-415 | 9-6 |
| Attachment, 28 x 30 mm | 07946-1870100 | | | 9-6 |
| Needle bearing remover | 07946-KA50000 | | | 12-6, 8 |
| Snapling pliers | 07914-3230001 | Equivalent available in U.S.A. | | 10-6, 20 13-20, 22 10-19 |
| Fork seal driver | 07947-4630100 | | | 10-25 |
| Steering stem driver | 07946-MB00000 | Steering stem driver and Attachment | 07946-4300100 GN-HT-54 (U.S.A. only) | |
| Ball race remover | 07953-KA50000 | Race remover attachment | 07953-MJ1000A | 10-24 |
| Assembly bolt | 07965-1660200 | | | 8-13, 15 |
| Thread adaptor | 07965-KA30000 | | | 8-15 |
| Drive shaft dis/assembly tool | 07964-MB00200 | | | 8-13, 15 |
| Assembly collar | 07931-KF00100 | Driver | 07945-3710101 | 8-16 |
| Hex wrench, 6 mm | 07917-3230000 | Equivalent commercially available in U.S.A. | | 10-15, 19 |
| Valve wrench | 07920-KA30001 | | | 12-6, 8 |
| Universal bead breaker driver | 07949-3710001 | U.S.A. only | 6N-AH-958-BB1 | |

COMMON

| DESCRIPTION | TOOL NUMBER | ALTERNATE TOOL | TOOL NUMBER | REF TO PAGE |
|-----------------------------|---------------|--------------------------------|---------------|--------------------|
| Float level gauge | 07401-0010000 | | | 3-12, 3-21 |
| Lock nut wrench, 17 x 27 mm | 07716-0020300 | Equivalent available in U.S.A. | | 7-4, 8 |
| Lock nut wrench, 30 x 32 mm | 07716-0020400 | | | 10-22, 26 |
| Extension bar | 07716-0020500 | | | 7-4, 8 |
| Universal holder | 07725-0030000 | | | 10-22, 26 |
| Clutch center holder | 07724-0050000 | Equivalent available in U.S.A. | | 6-2, 4 |
| Rotor puller | 07733-0010000 | Rotor puller | 07933-0010000 | 8-3, 6 |
| Pilot, 12 mm | 07746-0040200 | | | 7-4, 8 |
| Attachment, 37 x 40 mm | 07746-0010200 | | | 6-2 |
| Pilot, 17 mm | 07746-0040400 | | | 9-6 |
| Attachment, 42 x 47 mm | 07746-0010300 | | | 8-4, 14, 15 |
| Pilot, 15 mm | 07746-0040300 | | | 8-4 |
| Pilot, 22 mm | 07746-0041000 | | | 10-8, 25 |
| Attachment, 52 x 55 mm | 07746-0010400 | | | 10-8 |
| Pilot, 25 mm | 07746-0040600 | | | 8-14, 15 |
| Pilot, 28 mm | 07746-0041100 | | | 8-14, 15 |
| Attachment, 62 x 68 mm | 07746-0010500 | | | 8-14, 15, 11-10 |
| Pilot, 40 mm | 07746-0040900 | | | 11-10 |
| Attachment, 32 x 35 mm | 07746-0010100 | | | 10-24 |
| Driver | 07749-0010000 | | | |
| Bearing remover shaft | 07746-0050100 | Equivalent available in U.S.A. | | 10-8 |
| Bearing remover head, 15 mm | 07746-0050400 | | | 10-8 |

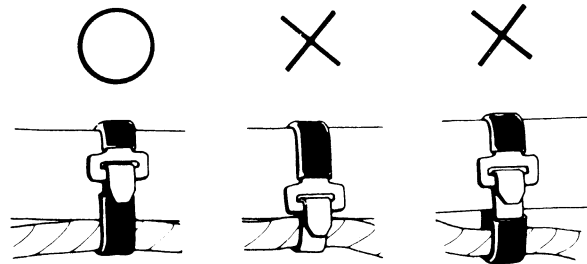
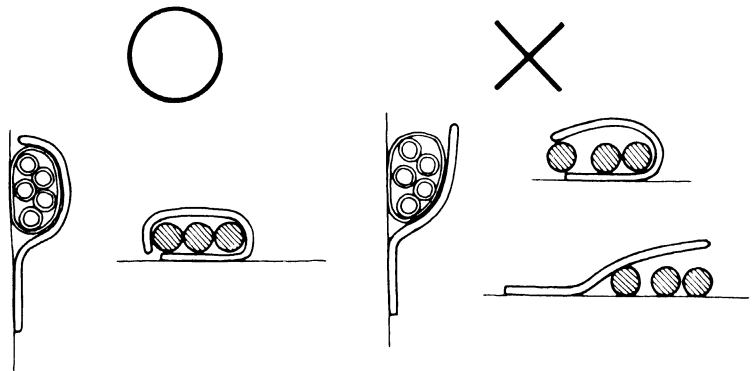
OPTIONAL TOOLS

| | |
|-------------|---------------|
| Pin spanner | 89201-KA4-820 |
| Pin spanner | 89202-KA4-820 |

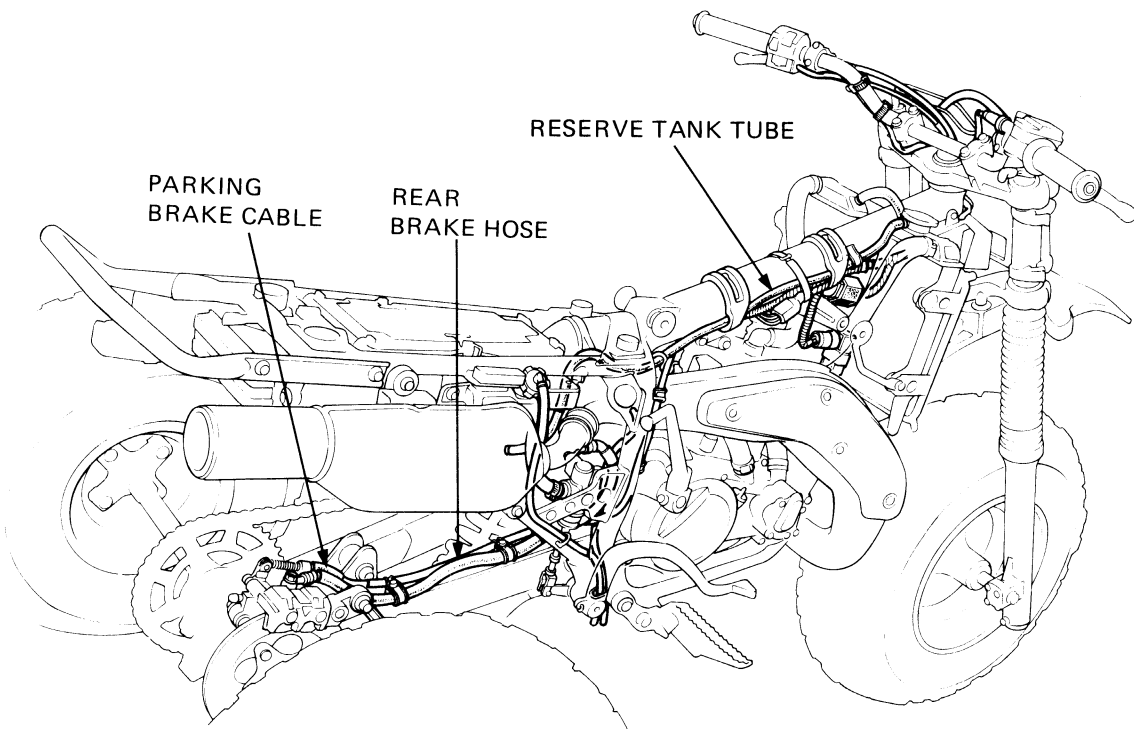
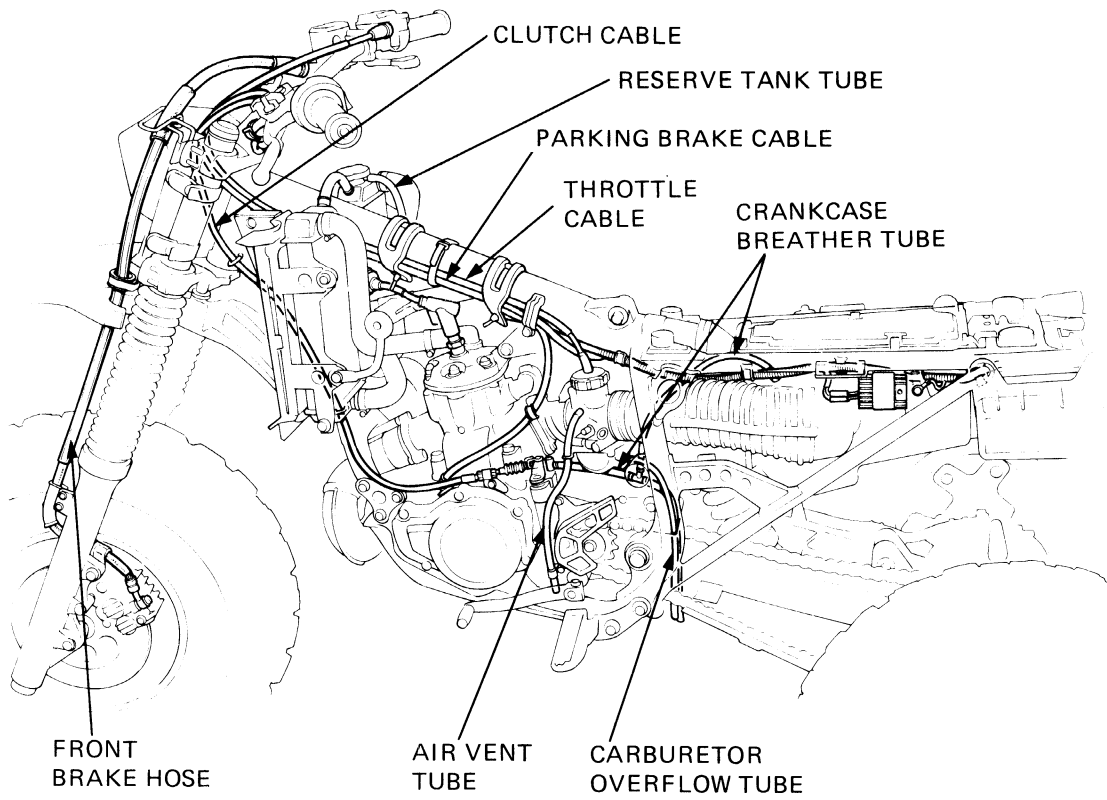
CABLE & HARNES ROUTING

Note the following when routing cables and wire harnesses.

- A loose wire harness or cable can be a safety hazard. After clamping, check each wire to be sure it is secure.
- Do not squeeze wires against a weld or end of its clamp.
- 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 tight or have excessive slack.
- Protect wires and harnesses with electrical tape or tubes if they contact a sharp edge or corner. Clean the attaching surface thoroughly before applying tape.
- Do not use wires or harnesses with a broken insulator. Repair by wrapping them with a protective tape or replace them.
- Route wire harnesses to avoid sharp edges or corners.
- Also avoid the projected ends or bolts and screws.
- Keep wire harnesses away from the exhaust pipes and other hot parts.
- Be sure grommets are seated in their grooves properly.
- After clamping, check each harness to be certain that it is not interfering 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.

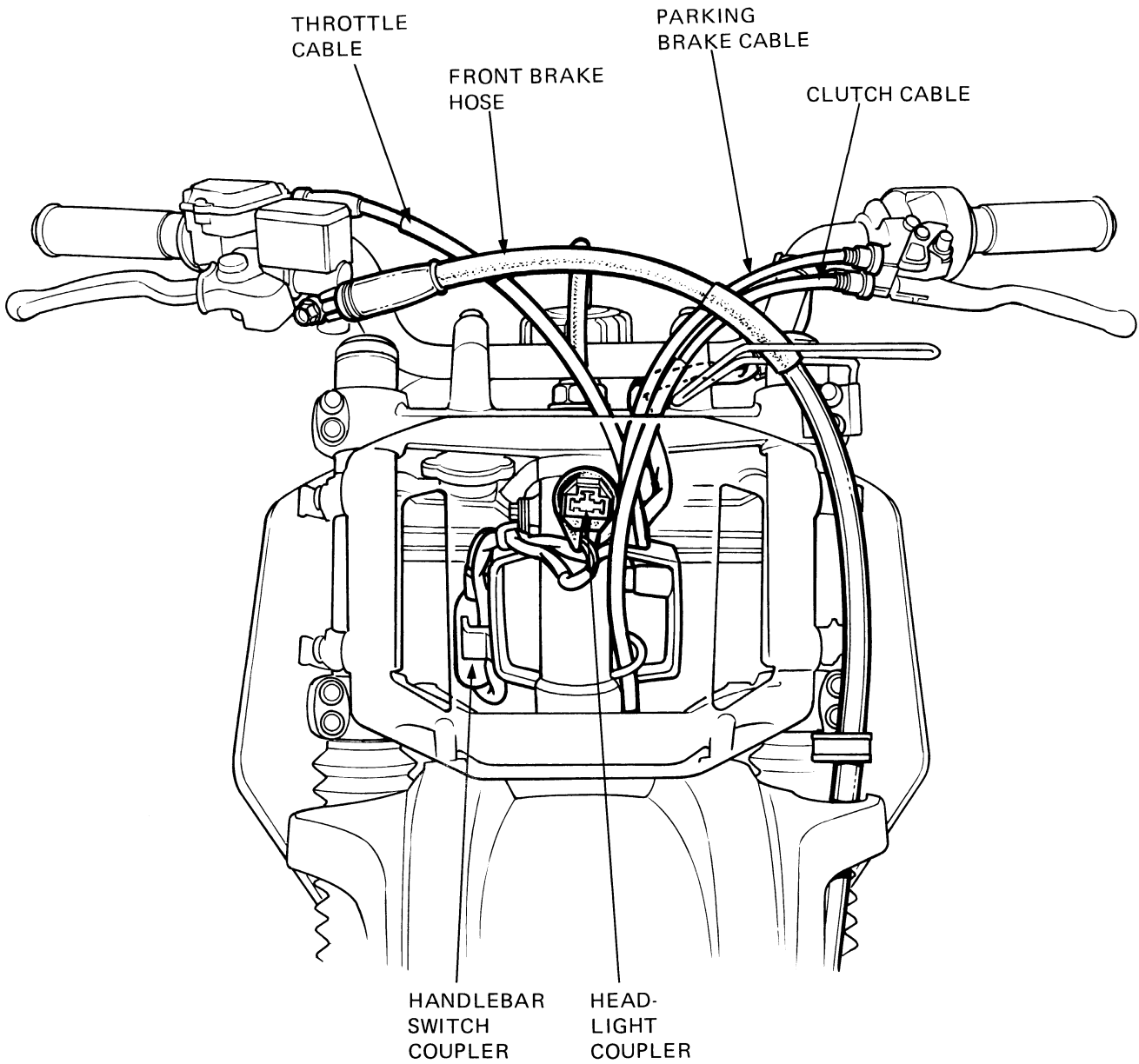


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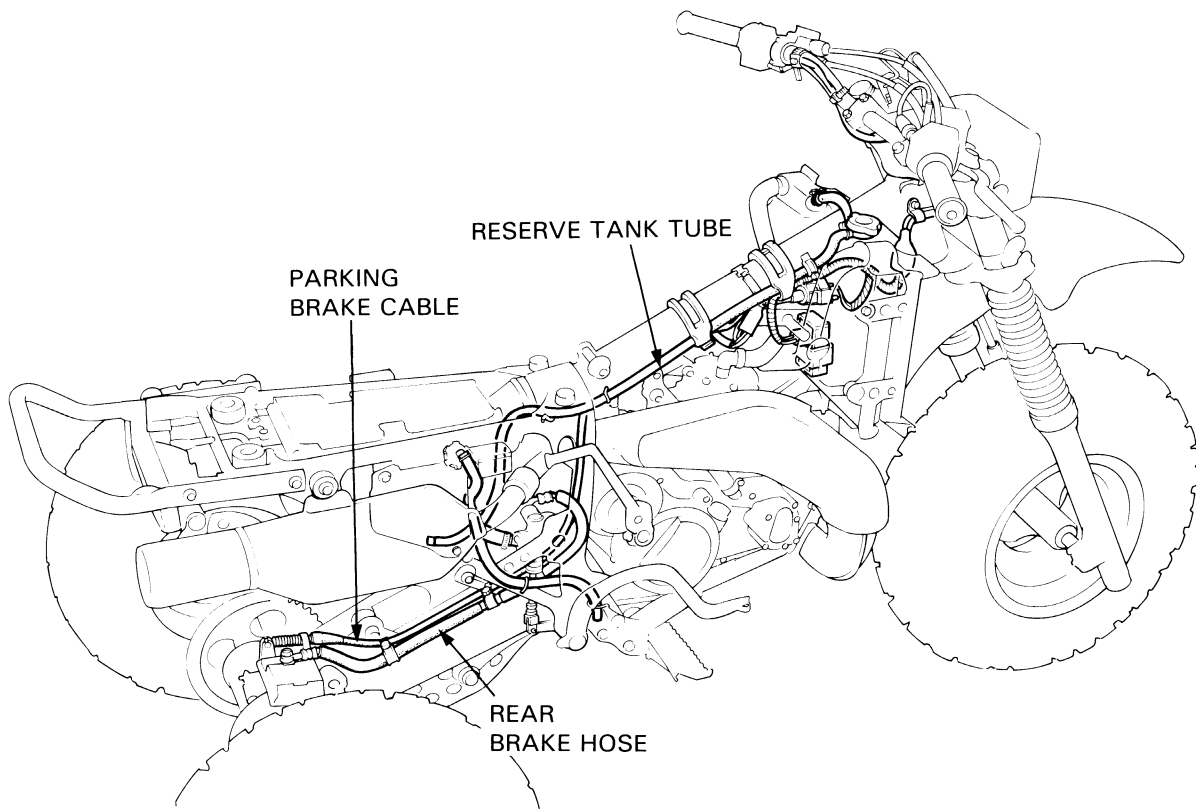
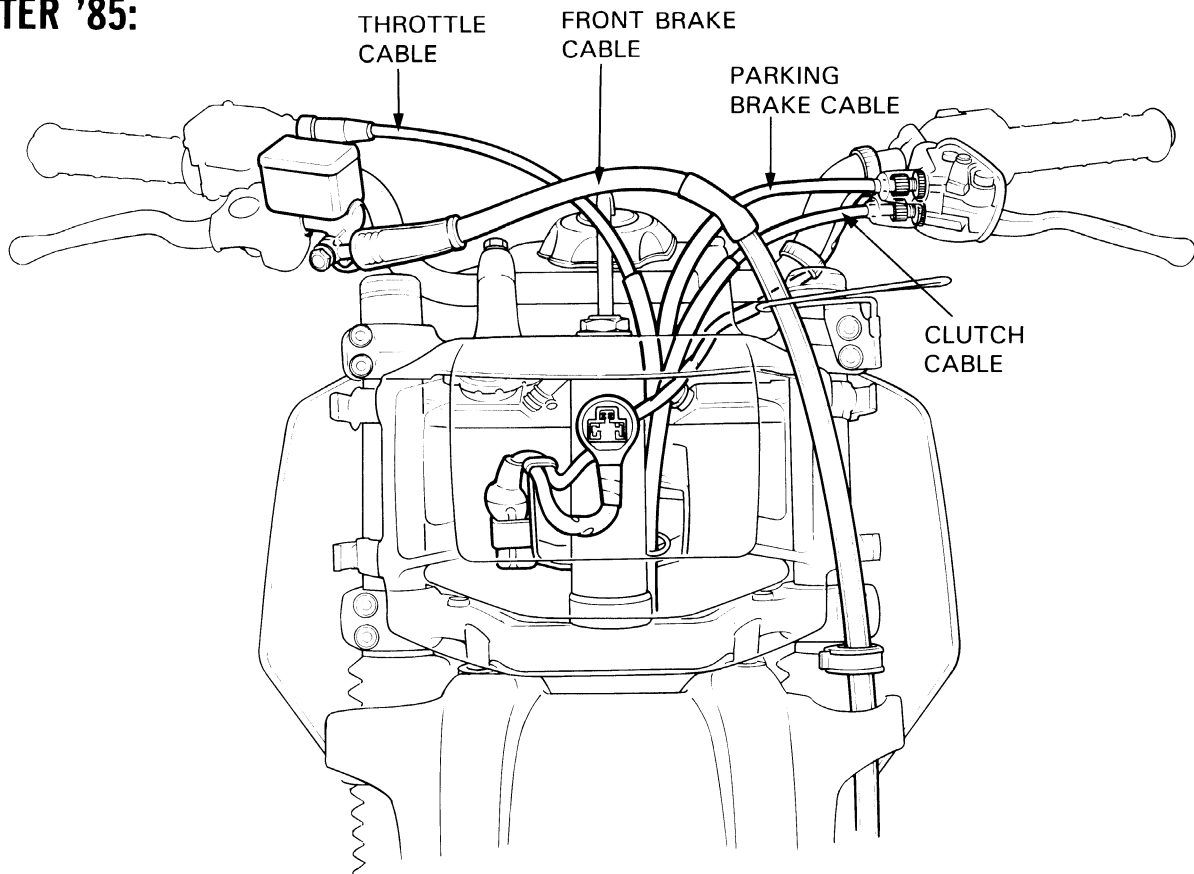


GENERAL INFORMATION

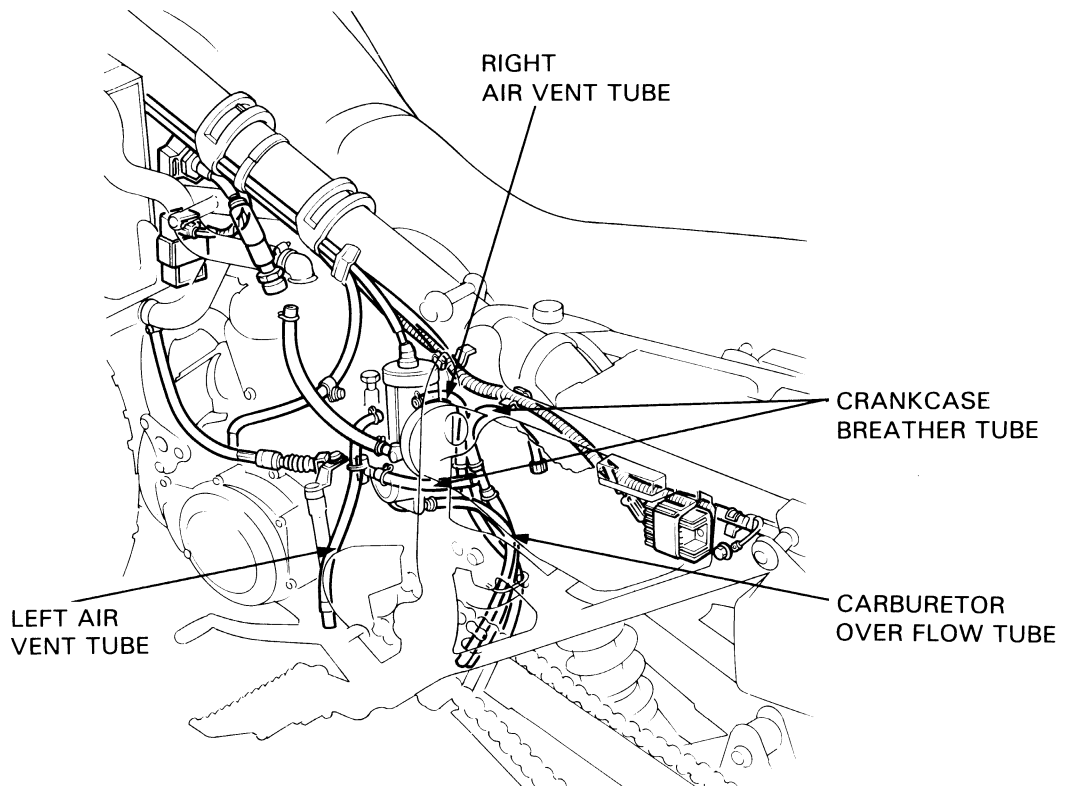
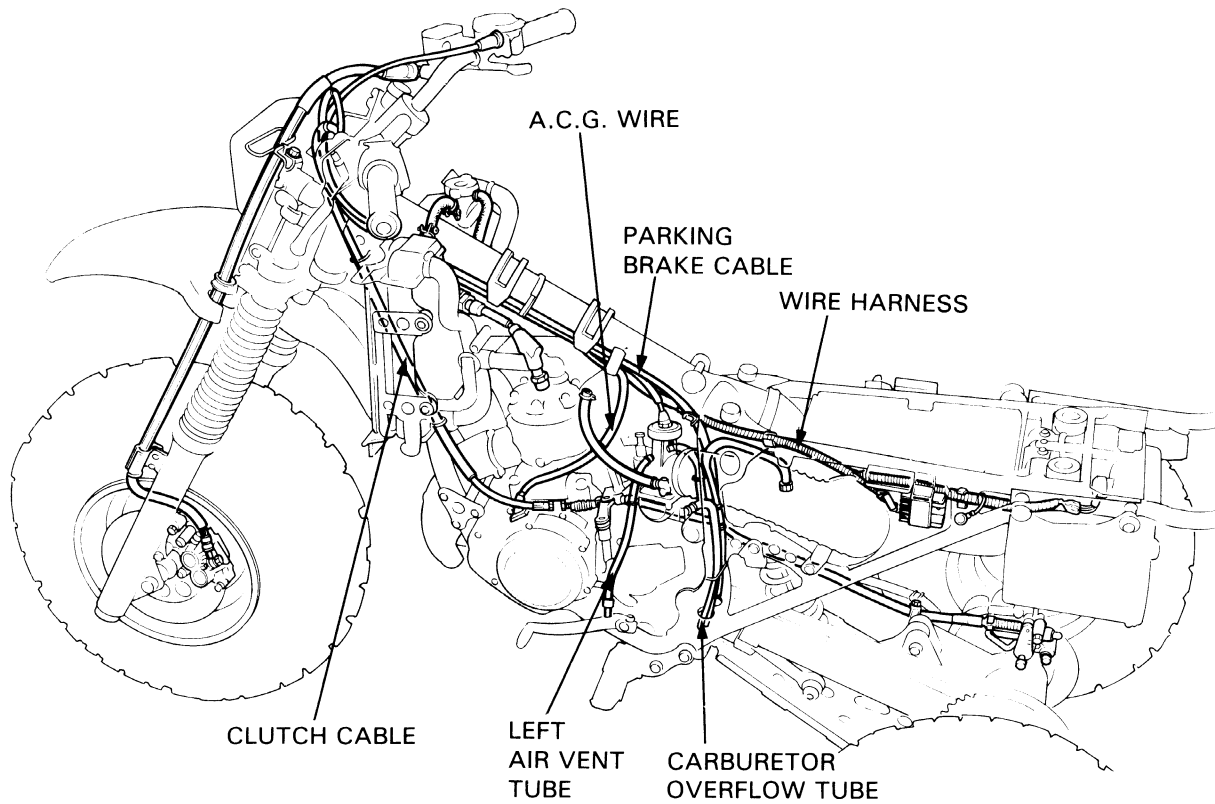
'85:



AFTER '85:



AFTER '85:



OPTIONAL PARTS LIST

| ITEM | | REMARKS | | | | | | | | | | | | |
|--|-------------------------------------|---|-----------------------|-------------------|-------------------------------|-------------------|-------------------------------|-----------------|-------------------------------------|-------------------|-----------------|-------------------|-----------------|---|
| ENGINE <ul style="list-style-type: none"> • Oversize pistons <table border="1"> <thead> <tr> <th>Piston oversize</th> <th>Cylinder I.D. mm (in)</th> </tr> </thead> <tbody> <tr> <td>0.25 mm (0.01 in)</td> <td>66.270–66.285 (2.6090–2.6096)</td> </tr> <tr> <td>0.50 mm (0.02 in)</td> <td>66.520–66.535 (2.6189–2.6195)</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Piston oversize</th> <th>Cylinder I.D. Service limit mm (in)</th> </tr> </thead> <tbody> <tr> <td>0.25 mm (0.01 in)</td> <td>66.320 (2.6110)</td> </tr> <tr> <td>0.50 mm (0.02 in)</td> <td>66.570 (2.6209)</td> </tr> </tbody> </table> | | Piston oversize | Cylinder I.D. mm (in) | 0.25 mm (0.01 in) | 66.270–66.285 (2.6090–2.6096) | 0.50 mm (0.02 in) | 66.520–66.535 (2.6189–2.6195) | Piston oversize | Cylinder I.D. Service limit mm (in) | 0.25 mm (0.01 in) | 66.320 (2.6110) | 0.50 mm (0.02 in) | 66.570 (2.6209) | <p>0.25 mm, 0.50 mm (2 sizes) The cylinder must be rebored, and an oversize piston and piston rings fitted if worn or seized. Use the correct oversize piston rings with an oversize piston.</p> <p>0.25 mm, 0.50 mm (2 sizes)</p> <p>NOTE:</p> <ul style="list-style-type: none"> • After reboring, remove all burrs from each port edge and chamfer as indicated below. |
| Piston oversize | Cylinder I.D. mm (in) | | | | | | | | | | | | | |
| 0.25 mm (0.01 in) | 66.270–66.285 (2.6090–2.6096) | | | | | | | | | | | | | |
| 0.50 mm (0.02 in) | 66.520–66.535 (2.6189–2.6195) | | | | | | | | | | | | | |
| Piston oversize | Cylinder I.D. Service limit mm (in) | | | | | | | | | | | | | |
| 0.25 mm (0.01 in) | 66.320 (2.6110) | | | | | | | | | | | | | |
| 0.50 mm (0.02 in) | 66.570 (2.6209) | | | | | | | | | | | | | |
| CARBURETOR <ul style="list-style-type: none"> • Main jet | | <p>'85: #138, #140, #145, #148 (See page 3-15 for altitude and temperature adjustment.) AFTER '85: #140, #142, #148, #150 (See page 3-29 for altitude and temperature adjustment.)</p> | | | | | | | | | | | | |

NOISE EMISSION CONTROL SYSTEM (U.S.A. only)

The U.S. Environmental Protection Agency requires manufacturers to certify that vehicles built 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 TAMPERING 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.

MEMO

2. MAINTENANCE

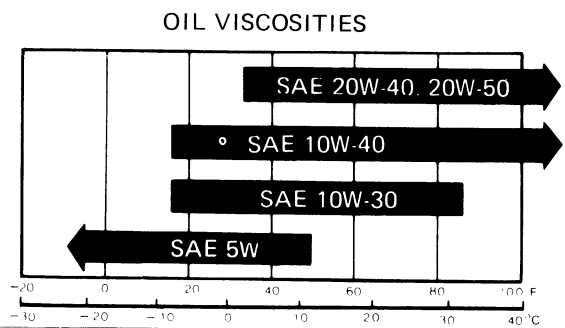
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| MAINTENANCE SCHEDULE | 2-2 | DRIVE CHAIN SLIDER | 2-12 |
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SERVICE INFORMATION

SPECIFICATIONS

Transmission oil

| | |
|----------------|---|
| Capacity | 0.61 ℓ (0.65 U.S. qt.) at oil change 0.7 ℓ (0.74 U.S. qt.) after disassembly |
| Recommendation | Use HONDA 4-STROKE OIL or equivalent. API SERVICE CLASSIFICATION: SE or SF VISCOSITY: SAE 10W-40 Other oil viscosities may be used when the average temperature in your riding area is within the indicated range on the chart. |



Spark plug gap: 0.7–0.8 mm (0.028–0.031 in)

Spark plug type:

| NORMAL | COLD WEATHER |
|-----------------|-----------------|
| BR9ES (NGK) | BR8ES (NGK) |
| RN2C (CHAMPION) | RN3C (CHAMPION) |

Throttle lever free play: 3–8 mm (1/8–5/16 in)

Parking brake lever free play: 31–39 mm (1-1/4–1-1/2 in)

Cylinder compression: 1200–1400 kPa (12.0–14.0 kg/cm², 170.7–199.1 psi)

Carburetor idle speed: '85: 1,400±150 rpm

AFTER '85: 1,500±150 rpm

Air screw opening

'85: 2 turns out

AFTER '85: 2-1/4 turns out

TORQUE:

Transmission oil drain bolt: 25–35 N·m (2.5–3.5 kg·m, 18–25 ft·lb)

Drive chain slack: 30–40 mm (1-1/4–1-1/2 in)

Tire size: Front 23x8–11

Rear 20x10–9

Recommended tire pressure:

Front 4.3 psi (30 kPa, 0.30 kg/cm²)

Rear 3.6 psi (25 kPa, 0.25 kg/cm²)

Standard tire circumference: Front 1,845.0 mm (72.6 in)

Rear 1,560.8 mm (61.4 in)

Clutch lever free play: 10–20 mm (3/8–3/4 in)

MAINTENANCE

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 at each scheduled maintenance period.

| I: Inspect and Clean, Adjust, Lubricate or Replace, if necessary C: Clean R: Replace A: Adjust L: Lubricate | | EVERY | INITIAL SERVICE PERIOD (First week of operation) | REGULAR SERVICE PERIOD (Every 30 operating days) | Refer to page |
|--|------------------------------|-------------|--|--|------------------|
| | TRANSMISSION OIL | 2 YEARS: R | | I | 2-4 |
| | AIR CLEANER | NOTE 2 | | C | 2-5 |
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| * | CARBURETOR IDLE SPEED | | I | I | 2-6 |
| | RADIATOR COOLANT | 2 YEARS: R* | | I | 2-7 |
| * | RADIATOR CORE | NOTE 3 | | I | 2-8 |
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| * | FUEL LINE | YEAR: I | | | 2-8 |
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| | DRIVE CHAIN | NOTES 2, 3 | I, L | i, L | 2-10 |
| | DRIVE CHAIN SLIDER | | | I | 2-12 |
| * | SUSPENSION | | | I | 2-13 |
| | SWING ARM BEARINGS | | I, L | I, L | 2-14 |
| | BRAKE FLUID | 2 YEARS: R | I | I | 2-17 |
| * | BRAKE PAD WEAR | YEAR: I | | | 2-16 |
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| * | CLUTCH SYSTEM | | I | I | 2-17 |
| * | SPARK ARRESTER (U.S.A. ONLY) | NOTE 1 | | C | 2-18 |
| | NUTS, BOLTS, FASTENERS | | I | I | 2-20 |
| | LIGHTING EQUIPMENT | | I | I | 2-19 |
| | TIRES | | I | I | 2-19 |
| * | STEERING HEAD BEARINGS | YEAR: I | | | 2-19 |

NOTES: (1) U.S.A. only.

(2) Service more frequently when riding in dusty areas, sand or snow.

(3) Service more frequently after riding in very wet or muddy conditions.

PERIODIC REPLACEMENT PARTS

Machines subject to severe use, or ridden in unusually dusty, or muddy areas, require more frequent servicing. The following table serves as a guide in replacing parts when machines are used for competition.

| Part Name | Interval | Items to be checked |
|--------------------------------|----------------|--|
| Piston | Every 30 hours | Seizure, damage, wear |
| Piston pin | Every 30 hours | Seizure, damage, wear |
| Piston rings | Every 30 hours | Seizure, chipped end, wear |
| Connecting rod big end bearing | Every 30 hours | Seizure, wear, damage |
| Spark plug | Every 20 hours | Worn electrode, improper gap, cracked insulator, fouling |
| Transmission oil | 30 hours | Emulsion |
| Drive sprocket | Every 20 hours | Wear, damage |
| Chain slider and roller | Every 30 hours | Amount of recess: 2.0 mm max. |
| Drive chain | — | Wear |
| Chain master link | Every 30 hours | Wear |
| Front brake pads | — | Wear indicator |
| Rear brake pads | — | Wear indicator |
| Front brake fluid | Every year | Emulsion |
| Rear brake fluid | Every year | Emulsion |
| Master cylinder oil cap | Every 2 years | Damage |
| Front brake hose | Every 4 years | Cracks, damage |
| Rear brake hose | Every 4 years | Cracks, damage |
| Fuel hose | Every 4 years | Cracks, leaks, damage |
| Cylinder head gasket | 30 hours | Leak |
| Clutch disc | — | Discoloration, wear |
| Exhaust chamber spring | — | Weak connecting hook |

TRANSMISSION OIL

OIL LEVEL CHECK

Place the ATC on level ground.
Stop the engine and remove the oil level check bolt from the right crankcase cover.
A small amount of oil should flow out of the oil level check bolt hole.



OIL CHECK BOLT

OIL CHANGE

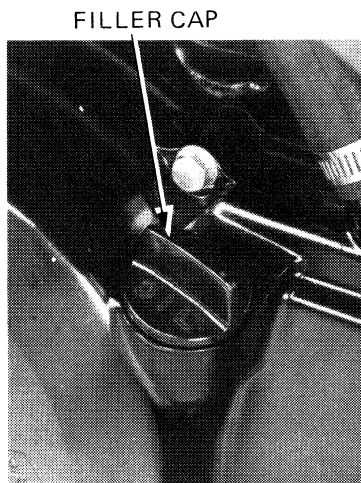
Remove the oil filler cap.
Remove the oil drain bolt and drain the oil.

Reinstall the drain bolt.

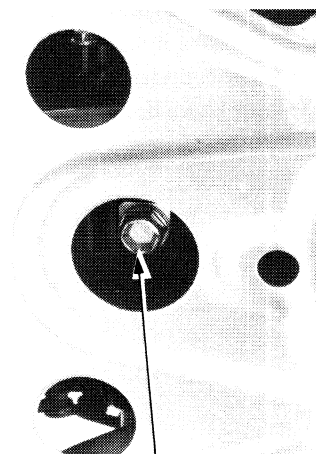
TORQUE: 25–35 N·m
(2.5–3.5 kg·m, 18–25 ft·lb)

CAUTION

Make sure that the sealing washer on the drain bolt is in good condition.



FILLER CAP



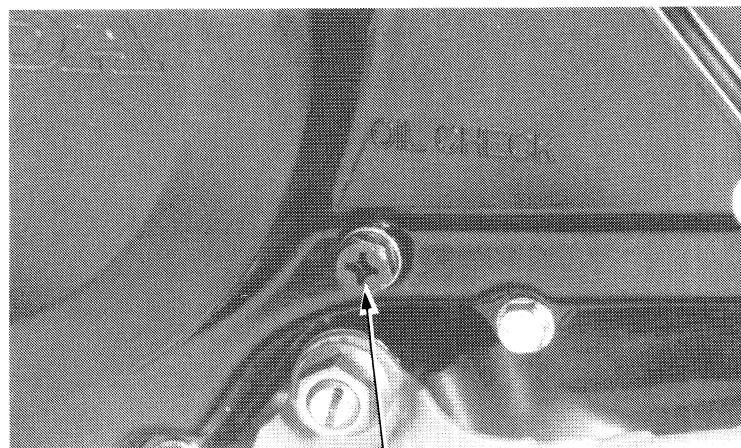
DRAIN BOLT

Refill the transmission gradually up to the proper level.

OIL CAPACITY:

0.61 ℓ (21 U.S. oz.) at oil change
0.7 ℓ (24 U.S. oz.) after disassembly

Reinstall the oil level check bolt and sealing washer.
Start the engine and check for leaks. Stop the engine, wait a few minutes, and recheck the oil level.



OIL CHECK BOLT

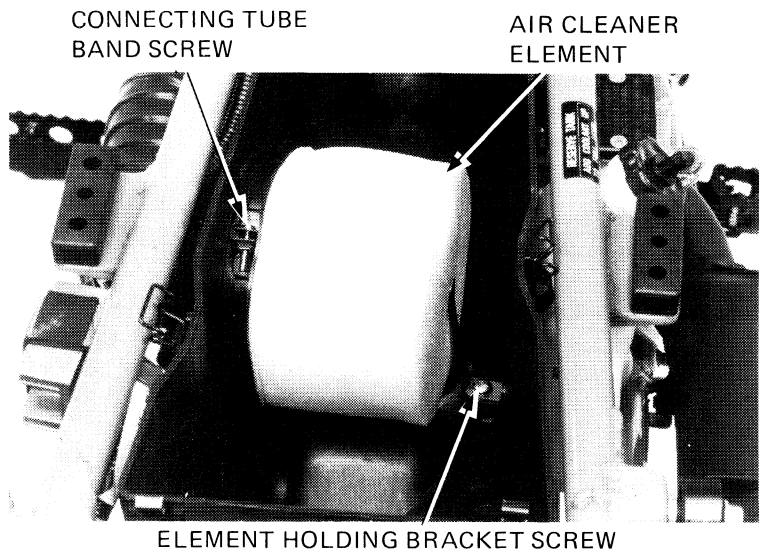
AIR CLEANER

Remove the seat.
Remove the clips attaching the air cleaner cover and remove the cover.



Loosen the connecting tube band screw.
Remove the element holding bracket screw and element.

Remove the element from the holder.



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

CAUTION

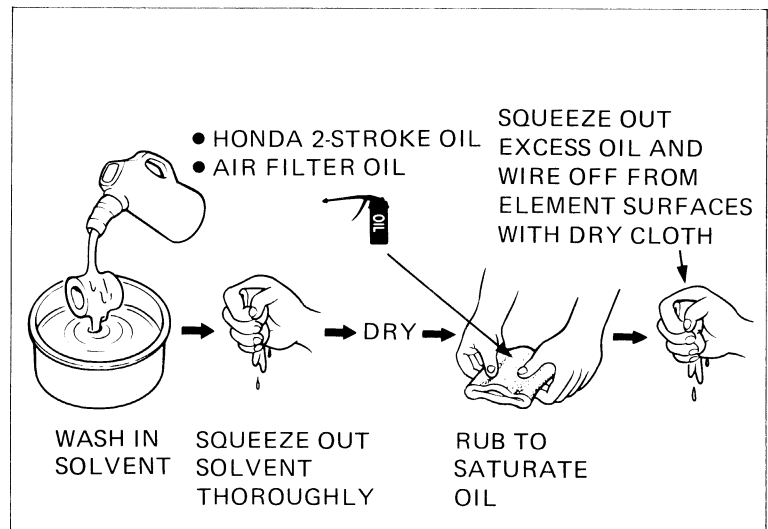
The element is made of several different materials bonded together; to prevent damaging the element, handle it gently.

Soak the element in Honda 2-stroke oil or equivalent and gently squeeze out the excess.

NOTES

- Use commercially available air filter oil when riding dusty track.
- Apply air filter oil to whole surfaces of the element and rub it with both hands to saturate the oil in the element. Squeeze out excess oil and wipe oil off from the element surfaces with a dry cloth.

Apply a thin coat of grease to the sealing surface of the element and install the element holder into the air cleaner case.
Install the air cleaner cover.



MAINTENANCE

SPARK PLUG

Disconnect the spark plug cap and remove the spark plug using the wrench provided in the tool kit.

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 wire-type feeler gauge and adjust by carefully bending the side electrode.

SPARK PLUG GAP: 0.7–0.8 mm (0.028–0.031 in)
RECOMMENDED SPARK PLUG:

| NORMAL | COLD WEATHER |
|-----------------|-----------------|
| BP9ES (NGK) | BR8ES (NGK) |
| RN2C (CHAMPION) | RN3C (CHAMPION) |

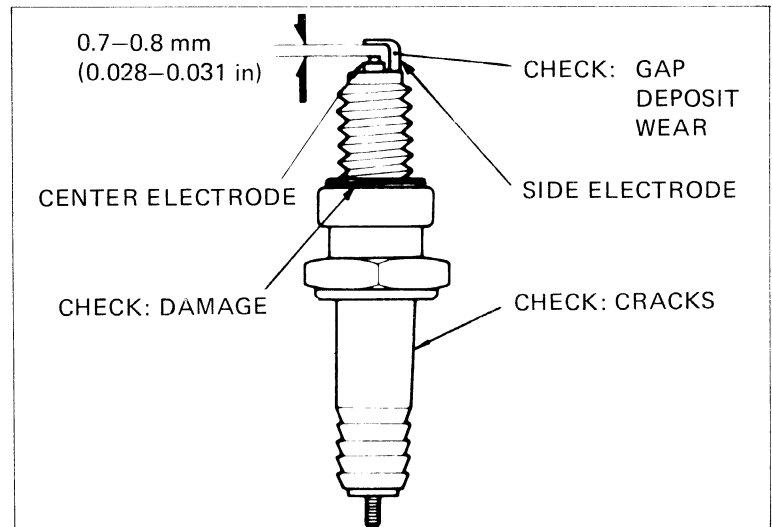
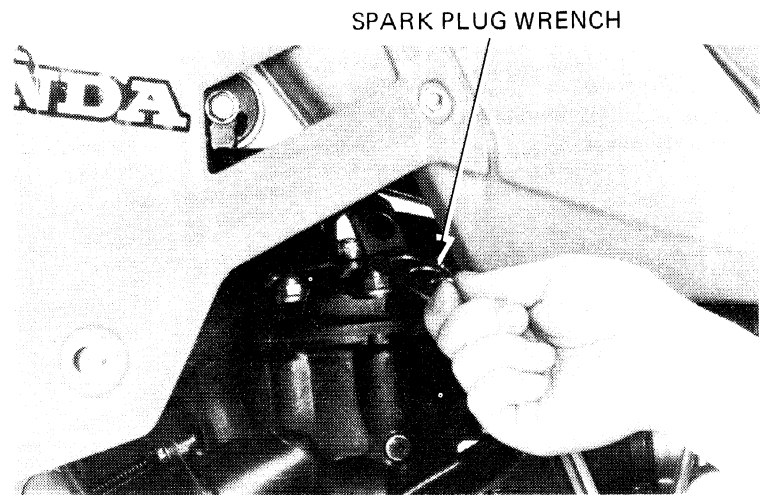
Check the sealing washer and replace the spark plug if the washer is damaged.

With the sealing washer attached, thread the spark plug in by hand to prevent cross-threading.

Tighten the spark plug to the specified torque.

TORQUE: 15–20 N·m
(1.5–2.0 kg·m, 11–14 ft·lb)

Connect the spark plug cap.



CARBURETOR IDLE SPEED

Place the ATC on level ground and shift it into neutral warm up the engine.

Attach an engine tachometer.

'85:

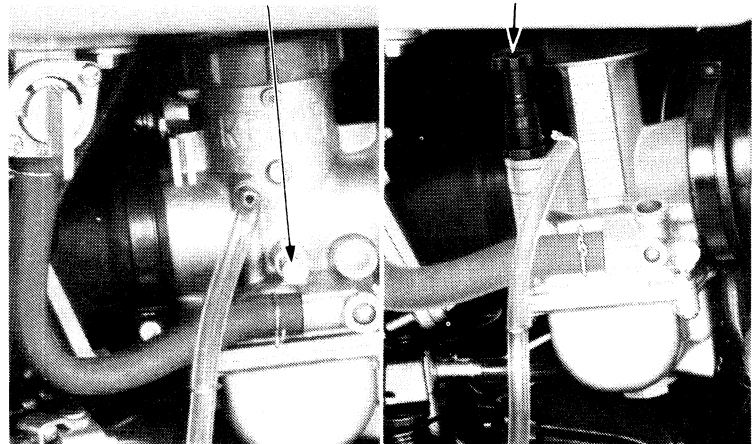
Adjust the idle speed with the throttle stop screw.

AFTER '85:

Adjust the idle speed with the choke/idle speed knob.

IDLE SPEED: '85: 1,400 ± 150 rpm
AFTER '85: 1,500 ± 150 rpm

'85: THROTTLE STOP SCREW **AFTER '85: CHOKE/IDLE SPEED KNOB**





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