

Official

HONDA

SHOP MANUAL ATC70



'73—'84

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.

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.



HONDA ATC70

HOW TO USE THIS MANUAL

This shop manual describes the technical features and servicing procedures for the Honda ATC70. Since this model uses the same basic engine as the CT70, this shop manual should be used with the ST50•70/CT70•70H manuals for complete information and procedures.

Refer to the Addendums beginning on page 35 for servicing of 1978 and later ATC70's. Note that addendums were not issued between 1979 and 1981.

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HOW TO USE THIS MANUAL

This manual contains the technical features and wiring diagrams for the Honda ATC100. Since the model year the same basic engine as the ATC100's shop manual should be used with the ATC100-700T (1970) manual for complete information and procedures.

Refer to the Addendum beginning on page 32 for listings of 1975 and later ATC100's. Those that Addendum were not issued between 1975 and 1981.

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I. SERVICE PRECAUTIONS

1. Always use new gaskets, O-rings and cotter pins whenever reassembling.
2. When tightening bolts or nuts for which sequence is not specified, begin on center or larger diameter bolts, and tighten them in a criss-cross pattern to specified torque in two or more steps if necessary.
3. Use genuine HONDA PARTS and LUBRICANTS or those recommended by HONDA.
4. Use special service tool where use of such a tool is specified.
5. Clean engine parts in or with cleaning solvent upon disassembly. Apply lubricant to their sliding surfaces when reassembling.
6. Coat or fill parts with grease where specified as such.
7. Upon assembling, check every possible part for proper installation and movement or operation.
8. When working with others, try to give a signal or communicate for safety.

NOTES:

1. The procedures for reassembling the engine and frame parts are not described when these are performed by reversing the disassembling procedures.
2. All the service data for each component are compiled on the last pages of this manual.



II. INSPECTION AND ADJUSTMENT

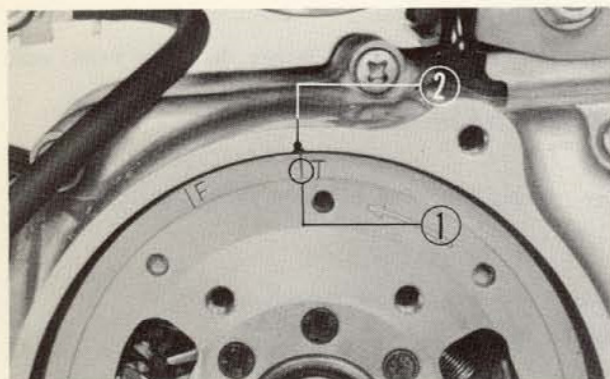


Fig. 2-1
① "T" mark ② Index mark

The services set forth in this section are those which are important of all listed in the MAINTENANCE SCHEDULE on page 25. Those not listed in the Schedule are covered in procedures under "INSPECTION" in each section.

1. TAPPET

The tappet clearance adjustment should be made while the engine is cold.

1. Remove the recoil starter and tappet adjusting hole caps.
2. Rotate the generator rotor counterclockwise until the mark "T" on the rotor aligns with the index mark on the stator.

In this position, the piston may either be on the compression or the exhaust stroke. The adjustment must be made when the piston is at the top dead center on its compression stroke when the intake and exhaust valves are closed.

This can be determined by moving the tappets with the fingers. If the tappets are free, it is an indication that the valves are closed and that the piston is on the compression stroke.

If the tappets are tight and the valves are open, rotate the generator rotor 360° and realign the "T" mark with the index mark.

3. Check the clearance of both valves by inserting the 0.05 mm (0.002 in.) gauge between the valve stem and the adjusting screw.

To adjust, loosen the adjusting screw lock nut and turn the adjusting screw either in or out to allow the gauge to pass through the clearance with slight resistance.

4. After completing the adjustment, tighten the lock nut firmly to secure the adjustment. Recheck the clearance to make sure that the adjustment has not been disturbed.

5. Install the tappet adjusting hole caps and recoil starter.

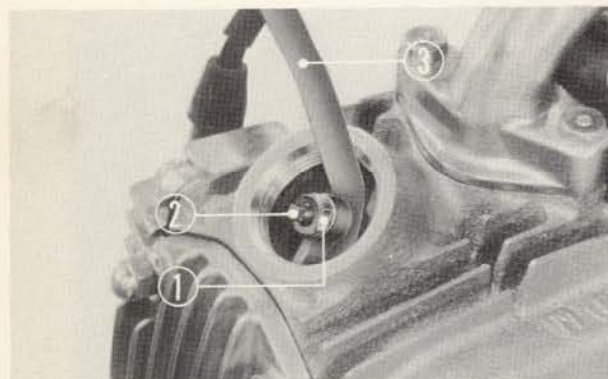


Fig. 2-2
① Adjusting screw lock nut ③ Feeler gauge
② Adjusting screw

2. CONTACT BREAKER POINT GAP AND IGNITION TIMING

Ignition timing is adjusted by altering the contact breaker point gap.

1. Remove the recoil starter located on the left side of the engine.
2. Rotate the generator rotor counterclockwise until the mark "F" aligns with the index mark. Ignition timing is correct if the contact breaker points begins to open as the marks align.
3. If ignition timing is incorrect, loosen the contact breaker locking screw and adjust the gap to specification. Increasing the gap will advance timing. Decreasing the gap will retard the timing.
4. Retighten the contact breaker locking screw and recheck the ignition timing.

NOTE:

Point gap must remain within limits of 0.3 to 0.4 mm (0.012 to 0.016 in.) after ignition timing has been set. If correct timing results in a point gap which is outside these limits, replace the breaker points.

3. CARBURETOR

The carburetor should be adjusted with the engine at operating temperature and the choke fully open.

1. Turn in the idle screw until the engine idles at approximately 1,500 rpm. Turn the idle screw in to increase engine speed and out to decrease engine speed.
2. Turn the air screw in until you hear engine missing or engine rpm begins to drop; then, turn it out until the engine again misses or decreases in speed.

Set the air screw midway between these two extreme positions. Turn this screw in to make the mixture richer or out to make it leaner. Correct setting will be usually obtained when the screw is turned out $\frac{1}{8}$ to $1\frac{1}{2}$ turns from its fully closed position.

3. If the idle speed changes after adjusting the mixture, readjust the idle screw as required.

4. CLUTCH

The automatic clutch should be adjusted with the engine stopped.

1. Remove the clutch adjuster rubber cap.
2. Loosen the lock nut and turn out the clutch adjuster until resistance is felt; turn in the adjuster $\frac{1}{8}$ to $\frac{1}{4}$ turn. Tighten the lock nut firmly to secure the adjustment.
3. After adjustment, start the engine and test ride the ATC70 to be sure that the clutch is operating properly.

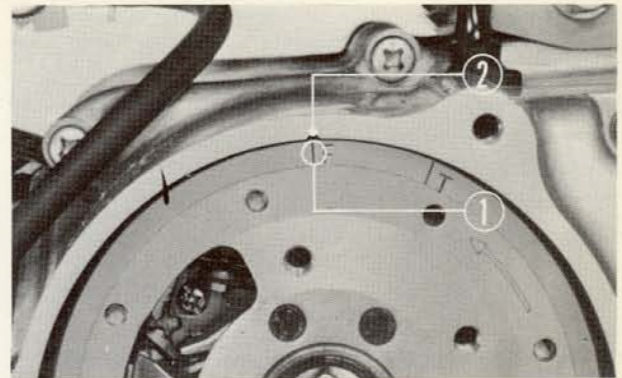


Fig. 2-3

① "F" mark ② Index mark

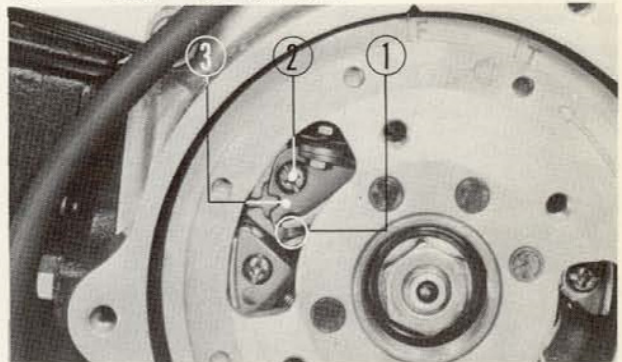


Fig. 2-4

① Contact breaker point ③ Contact breaker point base
② Contact breaker locking screw

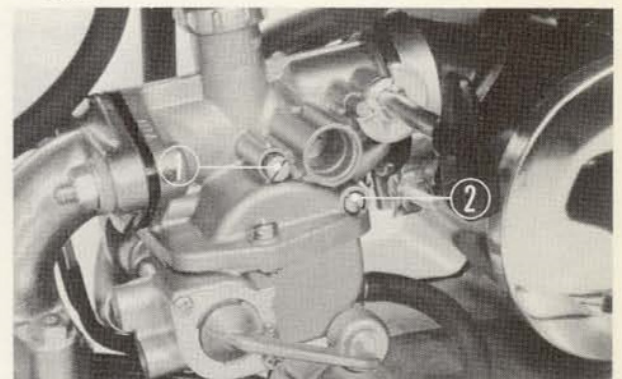


Fig. 2-5

① Idle screw ② Air screw

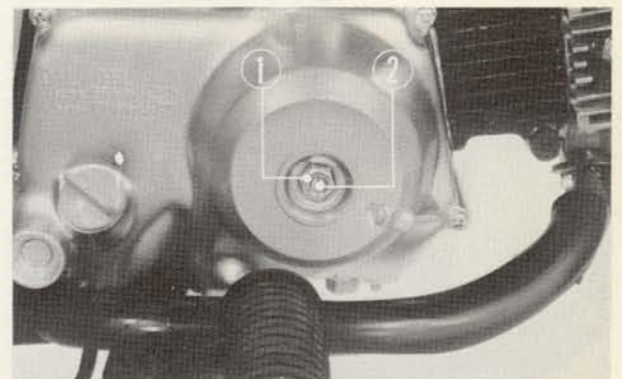


Fig. 2-6

① Lock nut ② Clutch adjuster

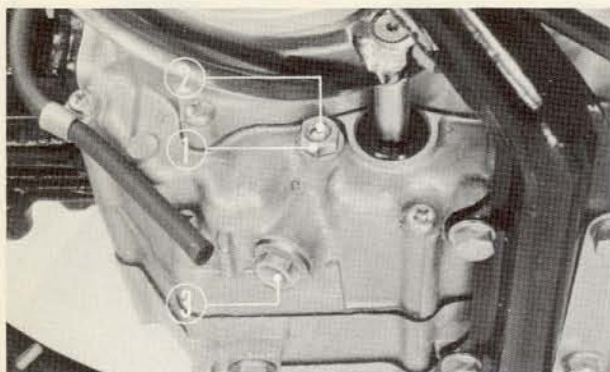


Fig. 2-7

- ① Lock nut ③ Sealing bolt
② Tensioner adjusting bolt

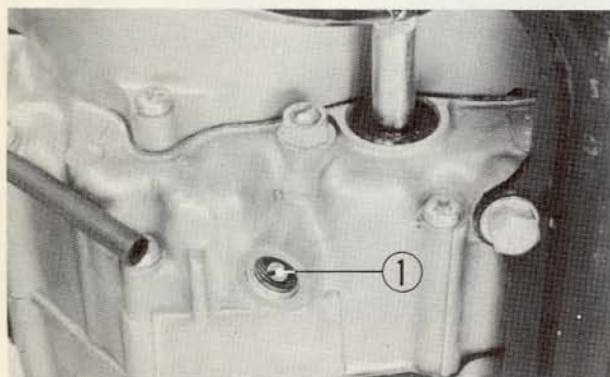


Fig. 2-8

- ① Tensioner bolt

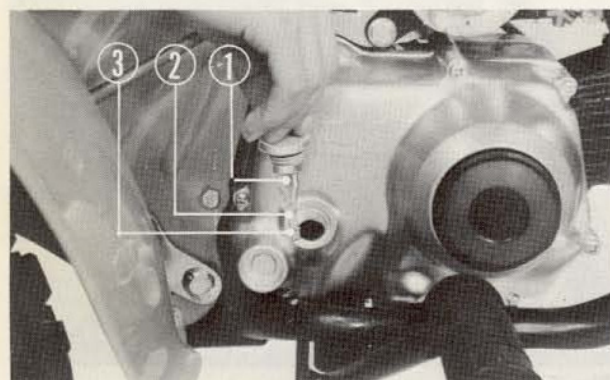


Fig. 2-9

- ① Dipstick ③ Lower level mark
② Upper level mark

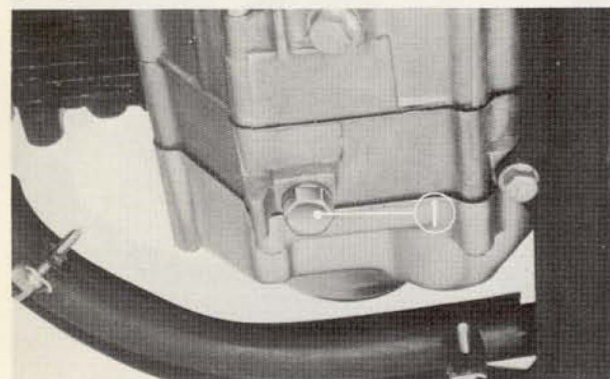


Fig. 2-10

- ① Drain plug

5. CAM CHAIN

Tension adjustment should be made while the engine is running at idle speed, if unusual noise is heard.

1. To adjust, with the lock nut loosened, turn out the tensioner adjusting bolt approximately one-half turn.
2. If the chain is still noisy even after the above adjustment, loosen off the 14 mm sealing bolt, and screw in the tensioner bolt gradually until noise is minimized. The sealing bolt will be found on the left bottom side of the engine crankcase.
3. After completing the adjustment, tighten the tension adjusting bolt, lock nut, and 14 mm sealing bolt securely.

6. ENGINE OIL

Oil level check

1. Place the ATC70 on a level ground.
2. Insert the oil level gauge into the oil filler hole to check the oil level. (Do not screw it in.)

Oil level should be anywhere between the upper and lower level marks on the dipstick.

3. If necessary, refill the crankcase with specified oil.

API classification: SE

Specified viscosity:

In all seasons SAE 10W-40 or SAE 10W-30

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

Oil change

1. Remove the oil filler cap from the right crankcase cover.
2. Place a drip pan under the engine to catch the oil, and then remove the drain plug.
3. After the oil stops draining from the crankcase, operate the recoil starter rope several times to drain any oil which may be left in the engine.
4. When the oil has been completely drained, reinstall the drain plug. Be sure the washer which seals the drain plug is in good condition.
5. Fill the crankcase through the oil filler opening with approximately 0.8 liter (0.8 U.S. qt.) of specified grade of motor oil. Make sure that the oil level is up to the upper level mark. If the level is low, add oil.

7. BRAKE

1. Correct free play is **15 to 20 mm (0.6 to 0.8 in.)** as measured at the tip of the brake lever.

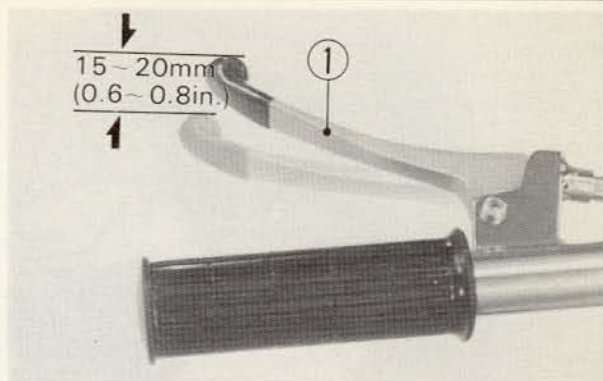


Fig. 2-11
① Brake lever

2. Free play can be adjusted by turning the adjusting nut on the brake rod. Turn this nut in direction **A** to decrease the play and in direction **B** to increase it.

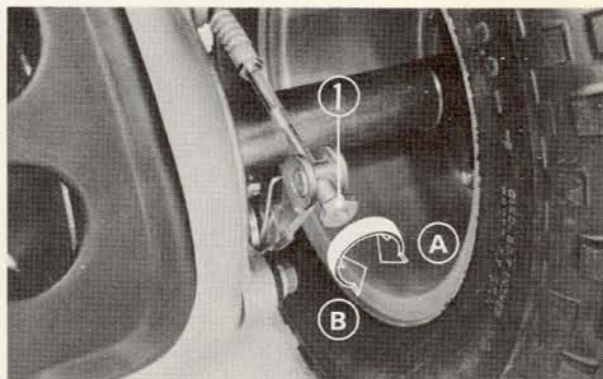


Fig. 2-12
① Brake adjusting nut

8. AIR CLEANER

1. Remove the cap bolt and take out the cover from the case together with the gasket.

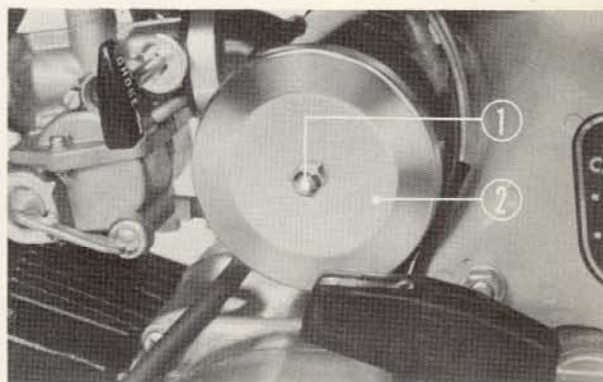


Fig. 2-13
① Nut ② Air cleaner cover

2. Pull out the element from the case; separate the set plate and inner pipe from the element.
3. Wash the element in clean stoddard solvent and allow to dry thoroughly.
4. Soak the element in clean gear oil (SAE 80-90) until saturated, then squeeze out excess oil.
5. Assemble the cleaner in the reverse order of the disassembly.

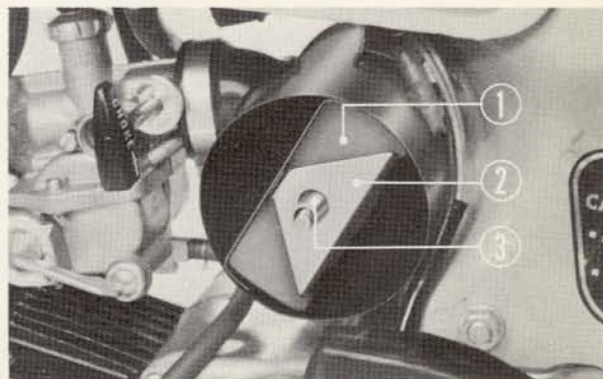


Fig. 2-14
① Filter element ② Set plate ③ Inner pipe

WARNING:

Gasoline or low flash point solvents are highly flammable and must not be used to clean the element.

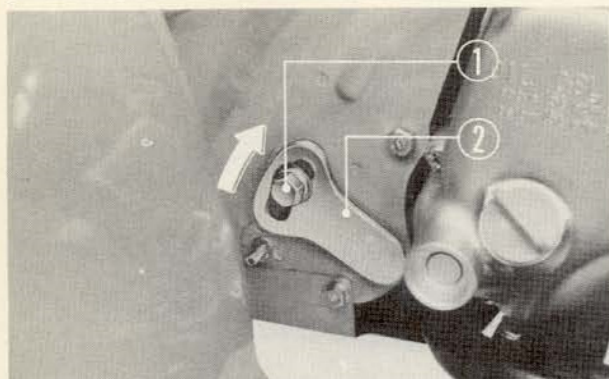


Fig. 2-15

① Lock bolt ② Tensioner shaft

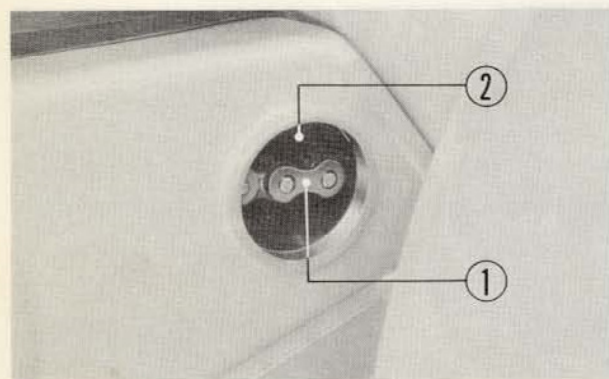


Fig. 2-16

① Drive chain ② Inspection window

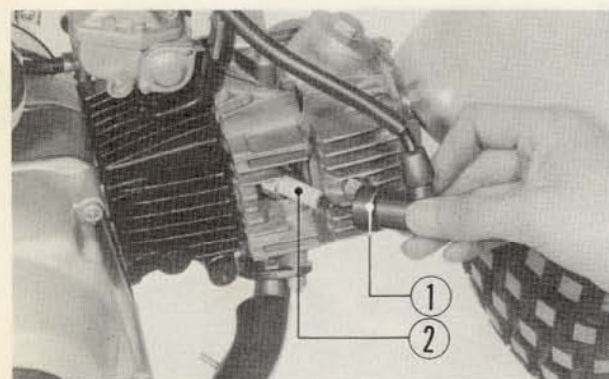


Fig. 2-17

① Spark plug cap ② Spark plug

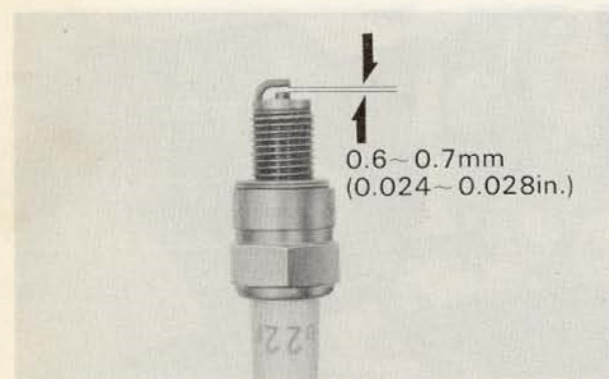


Fig. 2-18

Bending side electrode to adjust plug gap

9. DRIVE CHAIN

1. Loosen the tensioner lock bolt just enough to permit movement of the tensioner shaft.
2. Rotate the tensioner shaft all the way up by hand until it will no longer go; tighten the lock bolt.
3. Apply thumb pressure to the chain through the inspection window. Proper tension is obtained when the chain deflection is **10 to 20 mm (0.4-0.8 in.)**.

10. DRIVE CHAIN LUBRICATION

1. Remove the rubber cap from the drive chain inspection window.
2. Working through the window, lubricate the chain with clean engine oil.
3. After lubricating the chain, be sure to install the rubber cap.

11. SPARK PLUG

1. Remove the spark plug cap from the spark plug. Unscrew the plug, using spark plug wrench, and remove the plug.
2. Check the firing ends of the spark plug for deposits and electrode erosion. A fouled spark plug indicates too cold a plug, too rich a fuel mixture or otherwise excessive oil coming up into the combustion chamber.
3. A spark plug with burned electrodes and a glazed or blistered insulator nose indicates too hot a plug, too lean a fuel mixture or too early ignition timing.

NOTE:

The use of spark plugs of incorrect size or heat range can cause serious damage to the engine.

4. Check to be sure that the gap is **0.6-0.7 mm (0.024-0.028 in.)**. If not, correct the gap by bending the side electrode only.

If the electrodes are pitted or roughened, clean and dress the electrodes with a file, keeping the surfaces of both center and side electrodes parallel.

5. Place a new gasket on the spark plug and screw the plug into the threaded hole in the cylinder head in two steps; first, finger tight, and then to the specified torque using a wrench. Install the spark plug cap on the spark plug.

12. THROTTLE CABLE

1. Examine the condition and operation of the throttle cable. The cable should not bind or impair smooth operation of the throttle lever in any steering position. Re-route the cable if it is improperly installed. Replace the cable if it has become worn or kinked.
2. Free play, measured at the tip of the throttle lever, should be maintained at **5 mm (0.2 in.)**.

The adjusting nut is located at the top of the carburetor against the end of the throttle cable sheath. Slide back the rubber sleeve to expose the throttle cable adjuster. Replace the sleeve after adjustment.

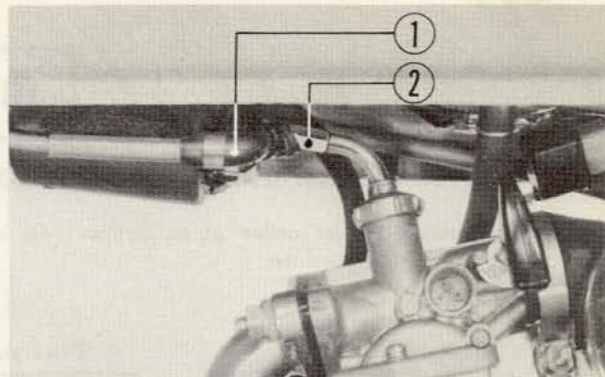


Fig. 2-19

① Rubber sleeve ② Throttle cable adjuster

13. FUEL FILTER

1. Turn the fuel valve to the "S" position.
2. Remove the two screws attaching fuel filter cover in place; remove the cover.
3. Remove the neoprene O-ring and the filter screen.
4. Wash the filter screen in solvent.
5. Reassemble by reversing the disassembly procedures.
6. Turn the fuel valve to the "ON" position, and check for leaks at the fuel filter cover.

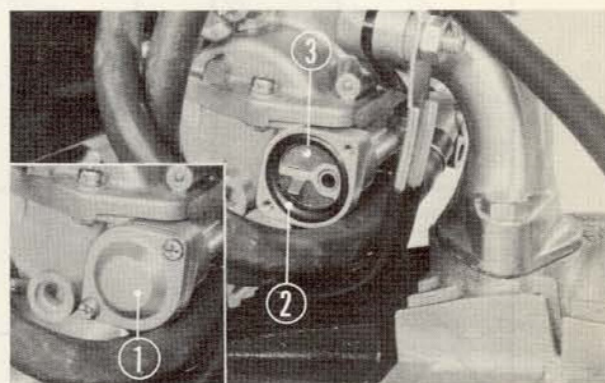


Fig. 2-20

① Filter cover ② O-ring ③ Filter screen

MEMO:

III. ENGINE

1. ENGINE REMOVAL AND INSTALLATION

Remove the engine in the order given below. To install, reverse the removal procedure.

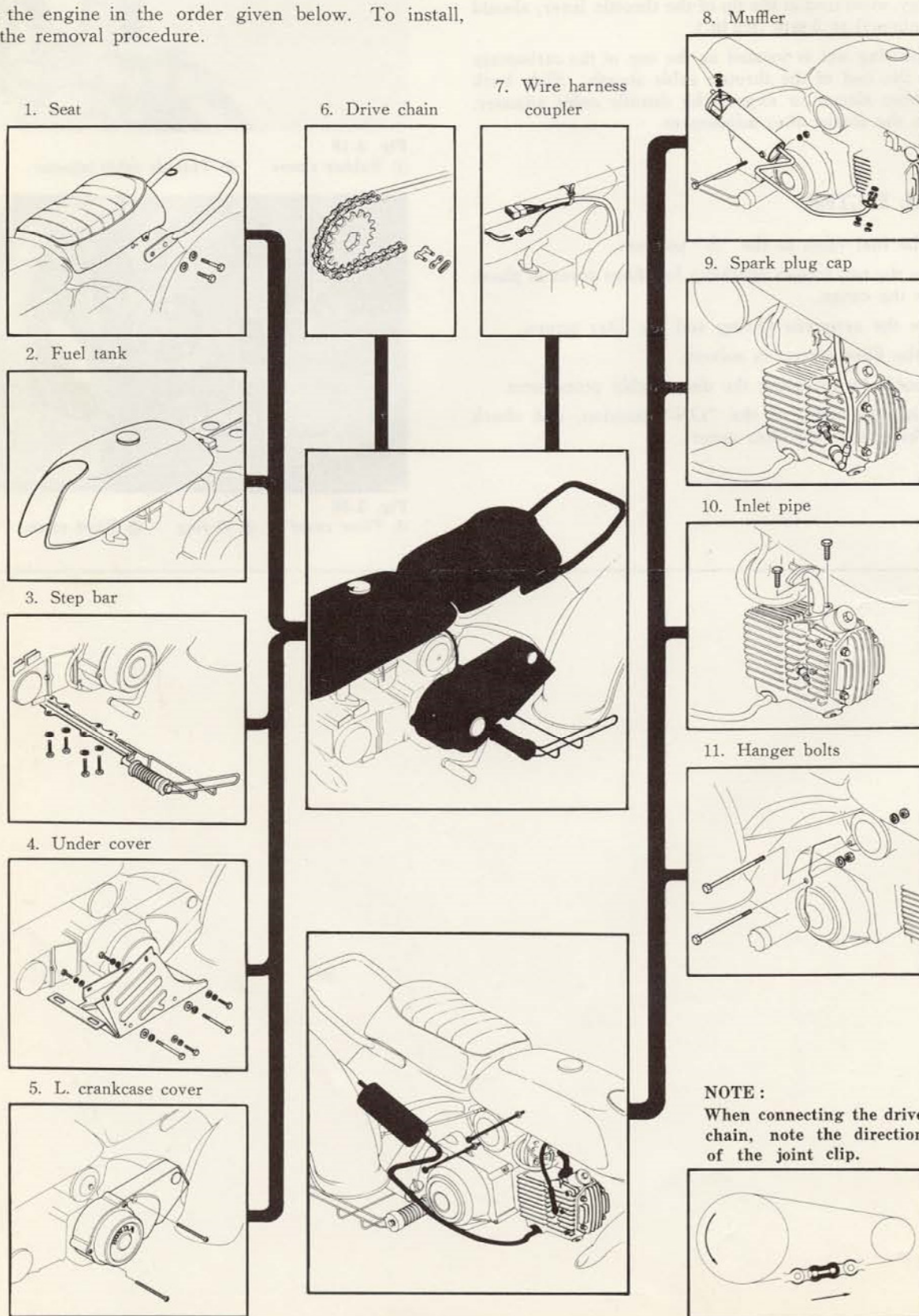


Fig. 3-1

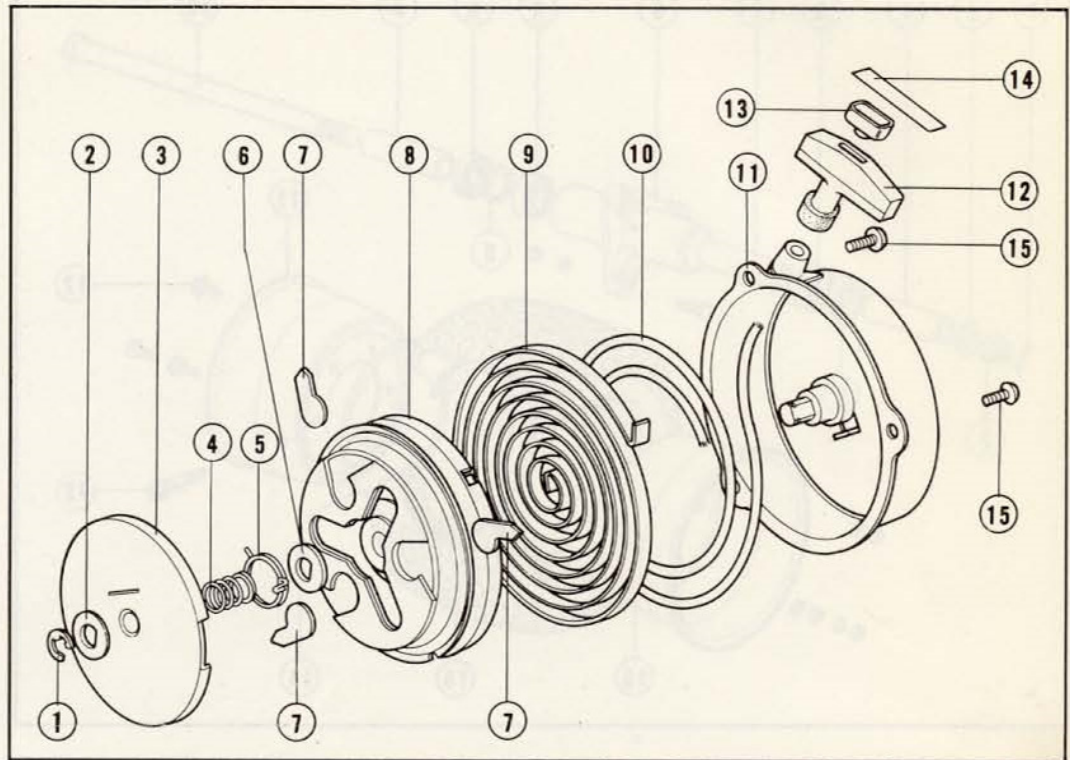
2. MAJOR DIFFERENCE BETWEEN ATC70 AND CT70 ENGINES

ATC70 engines use a recoil starter in place of the kick starter.
The carburetor is also new for ATC70 engines.

Recoil starter

Fig. 3-2

- ① E-ring
- ② Washer
- ③ Friction plate
- ④ Friction spring
- ⑤ Set spring
- ⑥ Washer
- ⑦ Starter ratchet
- ⑧ Recoil starter pulley
- ⑨ Starter return spring
- ⑩ Recoil starter rope
- ⑪ Recoil starter case
- ⑫ Starter knob
- ⑬ Rope stopper
- ⑭ Knob tape
- ⑮ Screw



Carburetor

Specifications

Unit: mm

Main jet		# 60	Slow jet	AB1	0.9 dia. × 2
Air jet		# 150		AB2	# 35 0.9 dia. × 2
Air bleed	AB1	0.5 dia. × 4		AB3	0.9 dia. × 2
	AB2	0.5 dia. × 4	Valve seat 1.0 dia.		
	AB3	0.5 dia. × 2	Pilot outlet 0.8 dia. P=5.7		
	AB4	0.5 dia. × 2	Main bore 13 dia.		
Needle jet		2.6 dia. × 3.8 dia.	Setting mark 695A		
Air screw opening		1⅛ ± ⅛	Fuel level 20		
Cutaway		# 2.5 (width × depth) 2.0×0.2	Needle jet holder 5.0 dia.		

IV. FRAME

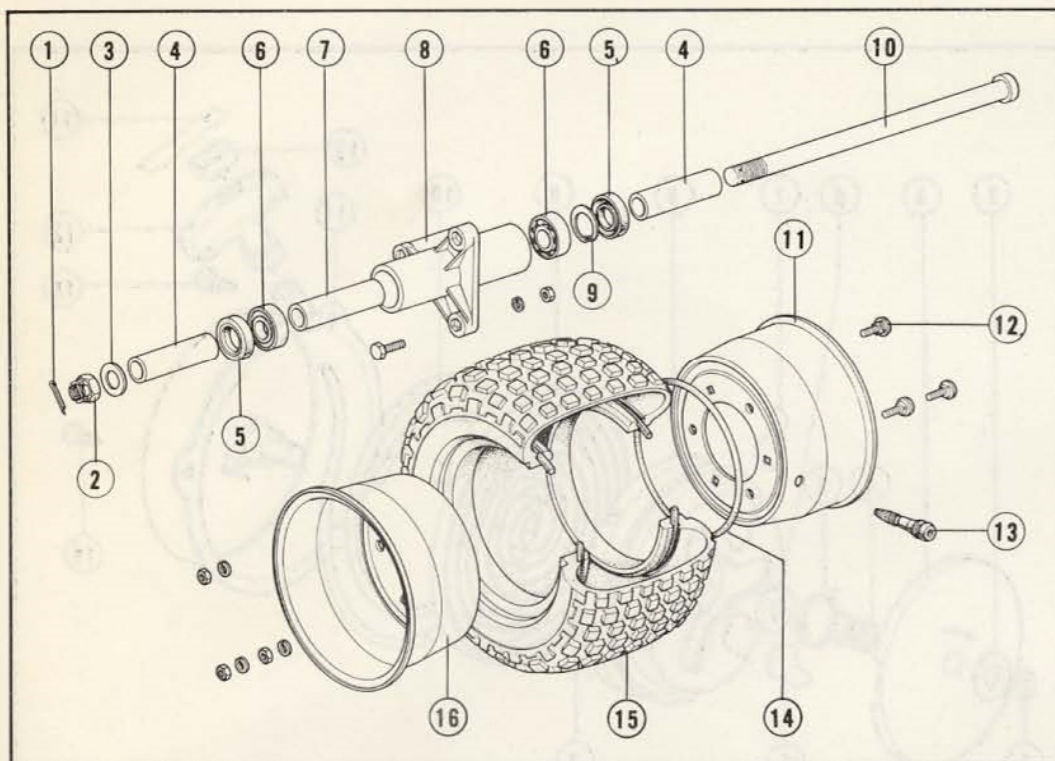


Fig. 4-1

- ① Cotter pin
- ② Castle nut
- ③ Plain washer
- ④ Front collar
- ⑤ Oil seal
- ⑥ Radial ball bearing
- ⑦ Front center collar
- ⑧ Front wheel hub
- ⑨ Snap ring
- ⑩ Front wheel axle
- ⑪ Outer rim
- ⑫ Wheel bolt
- ⑬ Rim valve
- ⑭ Wheel O-ring
- ⑮ Wheel tire (16×8.0-7)
- ⑯ Inner rim

1. FRONT WHEEL

Disassembly

1. Raise the front wheel off the ground and position a suitable stand under the engine.
2. Remove the cotter pin from the castle nut and loosen off the nut from the front wheel axle.
3. Remove the front axle and take out the front wheel.
4. Take out the front collars from the wheel.

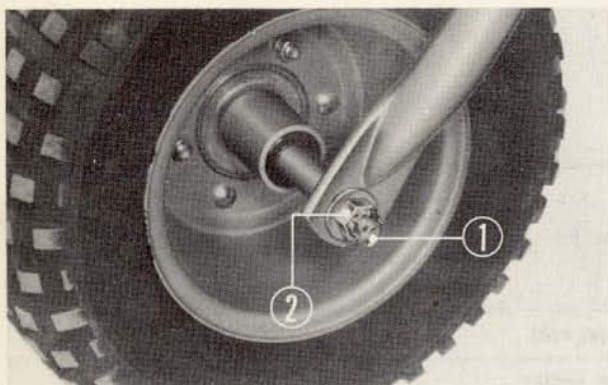


Fig. 4-2

- ① Cotter pin
- ② Castle nut

5. Remove the bolts securing the front wheel hub in position; take out the hub.
6. Remove the oil seals, snap ring, ball bearings and center collar from the wheel hub.

NOTE:

Always replace the oil seal whenever removed.



Fig. 4-3

- ① Front wheel hub

7. After complete deflation, break the tire beads loose from the inner and outer rim flanges by means of a tire tool as shown.

NOTE:

Do not use tire irons to force the beads away from the rim flanges; this could damage the rim seals on the beads and cause an air leak.

8. After the tire is loosened, remove the wheel bolts and then, remove the inner and outer rims from the tire.

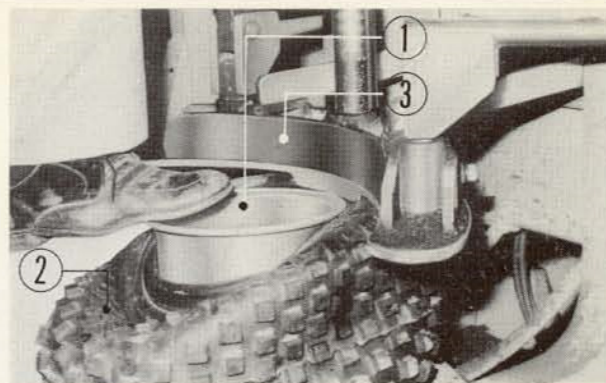


Fig. 4-4

① Rim ② Tire ③ Tire tool

Inspection and repair

1. Examine if the wheel axle is not bent.
2. Check the oil seal for worn or damaged sealing lip.
3. Check for signs of air leak through the rim valve.
4. Check if the rim and wheel O-ring is not deformed or damaged.
5. Check the tire pressure using a commercial tire pressure gauge. Correct tire pressure is 0.2 kg/cm^2 (2.8 psi). If such a gauge is not immediately available, using a linen or steel tape, measure the length around the circumference and in the center of the tire. It should read 1,290–1,320 mm (50 to 52 in.). See Fig. 4-9.
6. Check the tire for cut, tear, wear or any other defects.
7. Puncture repair.
 - 1. First examine the tire tread carefully for nails or other puncturing objects.
 - 2. Remove the tire from the rims.
 - 3. Remove dirt and roughen the punctured area with sandpaper or wire brush. Clean the area with solvent.
 - 4. Apply rubber cement around the torn area and allow it dry. Remove the lining from the patch and center it over the injury. Press the patch against the injury, using a special roller as shown.

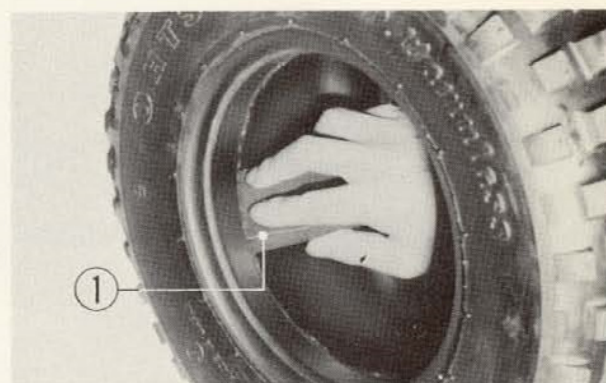


Fig. 4-5

① Sandpaper

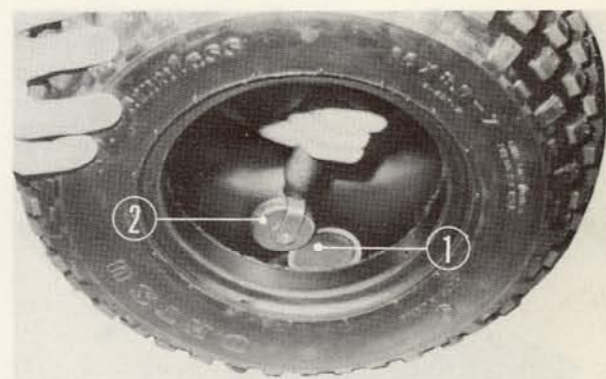


Fig. 4-6

① Patch ② Roller

NOTE:

Apply the patch after rubber cement is dried sufficiently. Do not touch with dirty fingers after applying the rubber cement.

Assembly

1. Tire

- 1. Make sure that the beads are up on the bead seats and are uniformly seated all around.
- 2. Applying water on the rim flanges, bead seats and bead base makes the mounting procedure easier.

NOTE:

Use only clean water. Make sure that the seal surface of the rim flange is clean. If necessary, wipe it clean with a clean, lint-free cloth.

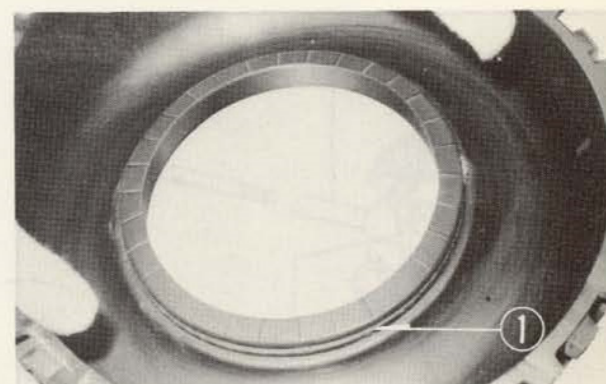


Fig. 4-7

① Bead

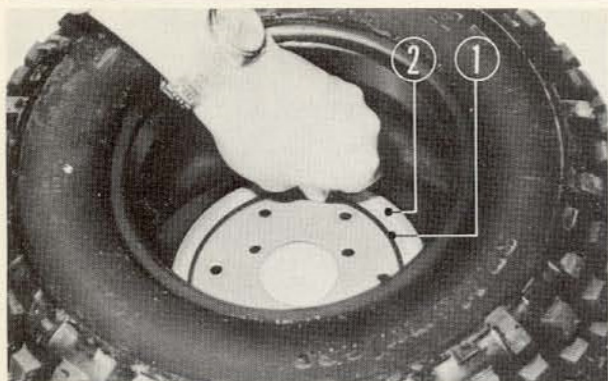


Fig. 4-8

① Rim O-ring ② Outer rim

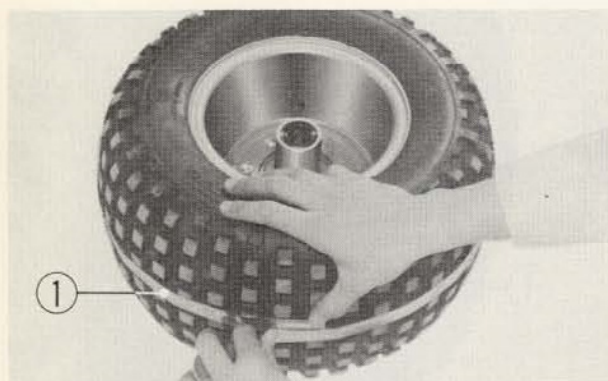


Fig. 4-9

① Linen (or steel) tape

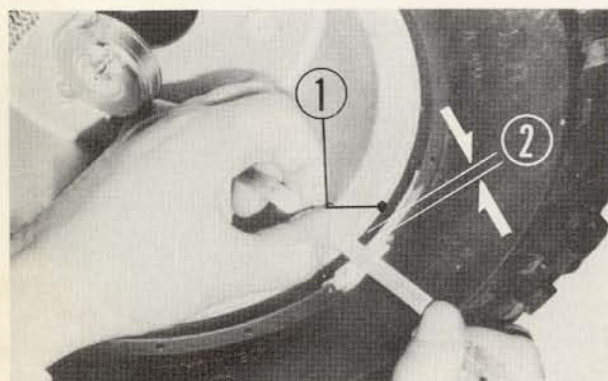


Fig. 4-10

① Rim flange ② Clearance between flange and tire

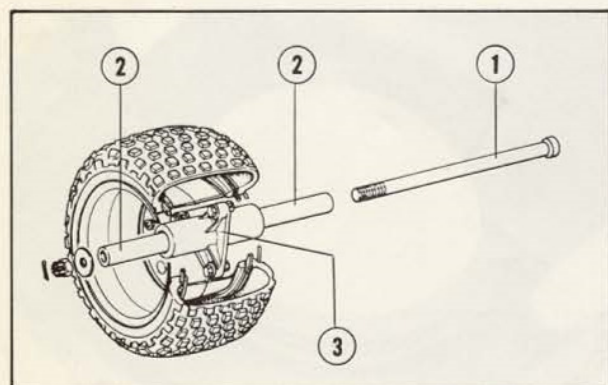


Fig. 4-11

① Front wheel axle ② Front collar ③ Wheel hub

- 3. Set up the tire in place on the outer rim (on rim valve side); seat the O-ring in the groove in the rim.

NOTE:

Examine the O-ring carefully for presence of dust and dirt before installation.

- 4. Press the inner rim into place in the tire, being sure that the bolt holes align. Install the wheel bolts through the holes and tighten to proper torque.

- 5. Inflate the tire to 0.8 kg/cm^2 (11.5 psi) pressure. This operation assures good fitting of the tire on the rim.

NOTE:

● If tire gauge is not available, inflate the tire until the circumferential length is 1,520 mm (60 in.).

● Use care so that the clearance between the rim flange and tire is held within 5 mm (0.2 in.).

- 6. Inflate the tire to specification. The specified tire pressure is 0.2 kg/cm^2 (2.8 psi). Check for air leaks.

2. Hand pack cavities of the wheel bearing and wheel hub with grease. Drive the bearing into position in the hub. Do not angle the bearing while driving. Be sure to install the center collar at this point of assembly.
3. Coat the sealing lip of the new oil seals with a small amount of grease; press the oil seals into the hub only far enough to make them flush with the hub end.
4. Slide the front collar into the hub, being sure to avoid damaging the oil seal lip. After installation, make sure that the sealing lip is properly positioned.

5. Line up the hole in the wheel hub with those in the front fork; without disturbing the above setup, install the axle with the end through these holes. Install the axle with the end through these holes. Install the axle from the side as shown in Fig. 4-11. Bend the ends of the cotter pin against the sides of the nut. Tighten the castle nut to specification and if the cotter pin hole does not align with the slot of the nut, back off the castle nut until the hole aligns with the next slot.

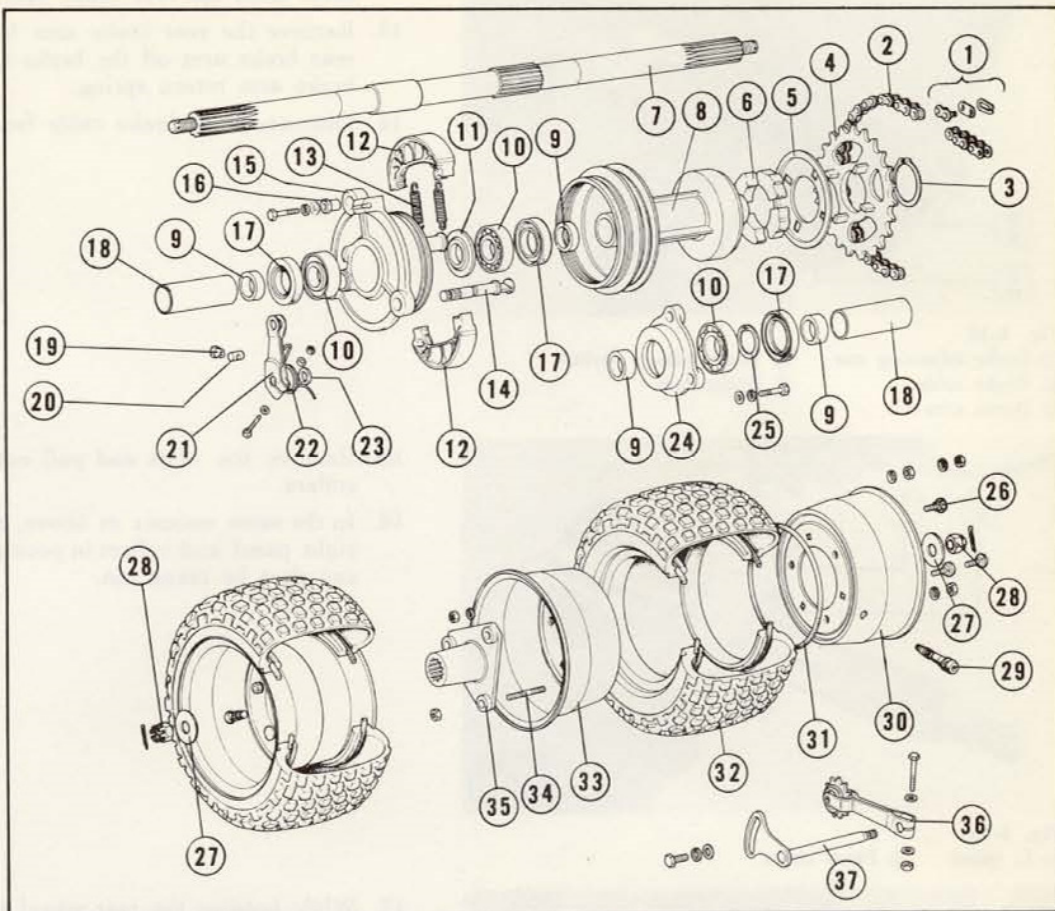
NOTE:

Do not force the front collar out of position while inserting the axle.

2. REAR WHEEL AND BRAKE

Fig. 4-12

- ① Drive chain joint
- ② Drive chain
- ③ Snap ring
- ④ Final driven sprocket
- ⑤ Dumper cover
- ⑥ Rear wheel damper
- ⑦ Rear wheel axle
- ⑧ Rear wheel hub
- ⑨ Panel collar
- ⑩ Radial ball bearing
- ⑪ R. panel spacer
- ⑫ Brake shoe
- ⑬ Brake shoe spring
- ⑭ Rear brake cam
- ⑮ R. panel
- ⑯ Panel cushion
- ⑰ Oil seal
- ⑱ Rear axle pipe
- ⑲ Adjusting nut
- ⑳ Brake arm joint
- ㉑ Rear brake arm
- ㉒ Return spring
- ㉓ Dust seal
- ㉔ L. panel
- ㉕ Snap ring
- ㉖ Wheel bolt
- ㉗ Washer
- ㉘ Castle nut
- ㉙ Rim valve
- ㉚ Outer rim
- ㉛ Wheel O-ring
- ㉜ Wheel tire
- ㉝ Inner rim
- ㉞ Stud bolt
- ㉟ Rear wheel flange
- ㊱ Chain tensioner
- ㊲ Tensioner shaft



Disassembly

1. Raise the rear wheel off the ground and place a stand under the rear of the frame.
2. Pull off the cotter pin and remove the wheel castle nut.
3. Remove the rear wheels and rear axle pipes from the rear axle shaft.
4. Remove the left rear fender.
5. Remove the rear cover.
6. Remove the step bar.
7. Remove the undercover.
8. Remove the left crankcase cover.
9. Loosen the tensioner lock bolt.
10. Remove the chain clip and disconnect the drive chain.
11. Remove the lock bolt and separate the chain tensioner from the shaft, remove the shaft from the frame.

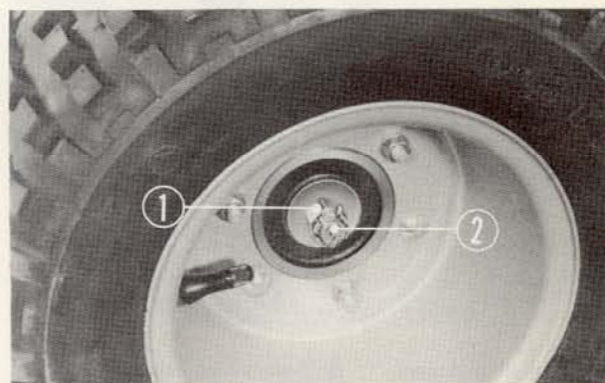


Fig. 4-13

- ① Castle nut ② Rear axle shaft

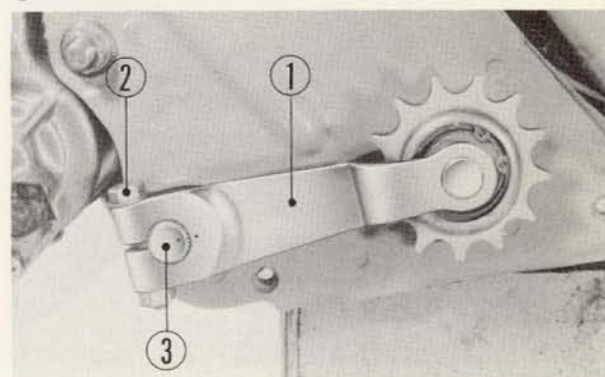


Fig. 4-14

- ① Chain tensioner ② Lock bolt ③ Tensioner shaft

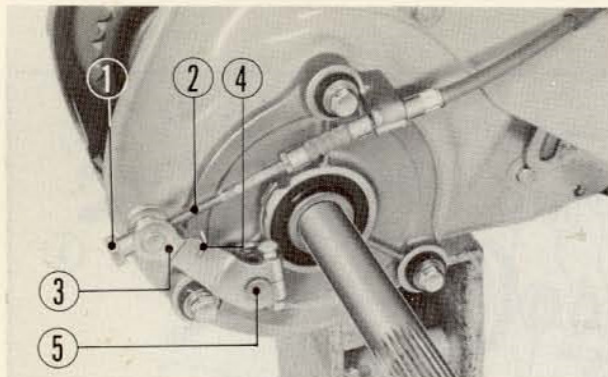


Fig. 4-15

- ① Brake adjusting nut ④ Brake return spring
 ② Brake cable ⑤ Brake cam
 ③ Brake arm

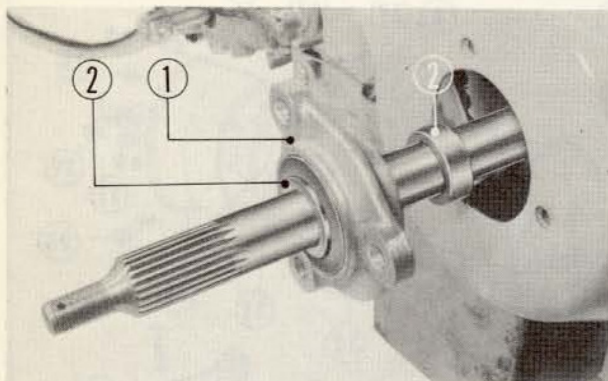


Fig. 4-16

- ① L. panel ② Panel collar

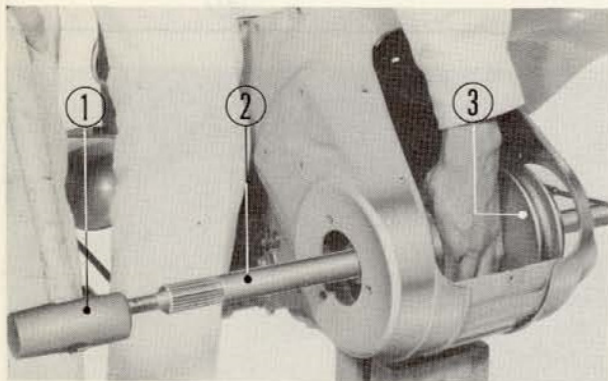


Fig. 4-17

- ① Wooden hammer ③ Rear wheel hub
 ② Rear wheel axle

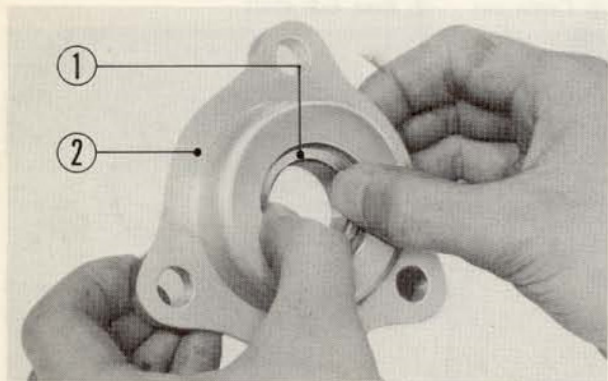


Fig. 4-18

- ① Ball bearing ② L. panel

12. Loosen off the brake adjusting nut; disconnect the brake cable from the rear brake arm.
13. Remove the rear brake arm locking bolt, and pull the rear brake arm off the brake camshaft together with the brake arm return spring.
14. Disconnect the brake cable from the right panel clamp.

15. Remove the bolts and pull out the left panel and panel collars.
16. In the same manner as above, remove bolts securing the right panel and collars in position. The panel and collars can then be taken out.

17. While holding the rear wheel hub by hand, drive out the axle. Use a wooden or soft-faced hammer and give careful hammer blows from the side as shown in Fig. 4-17.

NOTE:

Be sure that the axle is not bent or damaged on its threads and bearing journal when removed.

18. Disassemble the left panel.

-1. Remove the oil seal from the left panel.

NOTE:

Always replace the oil seal whenever removed.

-2. Remove the snap ring, and press the bearing out of position from the inside, using both hands as shown.

19. Disassemble the right panel.

- 1. Take out the cushions from the right panel.
- 2. Remove the brake arm dust seal from the panel.

- 3. Detach the brake shoe springs. The shoes can then be taken out from the right panel.
- 4. Pull the rear brake cam out of the right panel.
- 5. Remove the oil seals from the right panel.

NOTE:

Always replace the oil seal whenever removed.

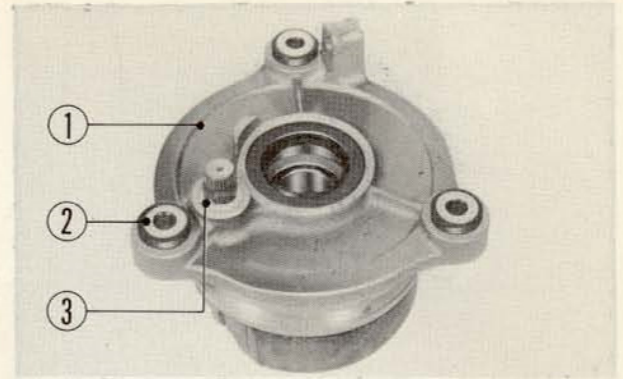
- 6. Press the bearings out of place together with the panel spacer.

20. Disassemble the rear wheel hub.

- 1. Remove the snap ring from the ring groove in the hub. Remove the final driven sprocket while tapping it around with a wooden or soft-faced hammer.
- 2. Remove the rear wheel dumpers from the rear wheel hub.
- 3. Take out the dumper cover from the sprocket.

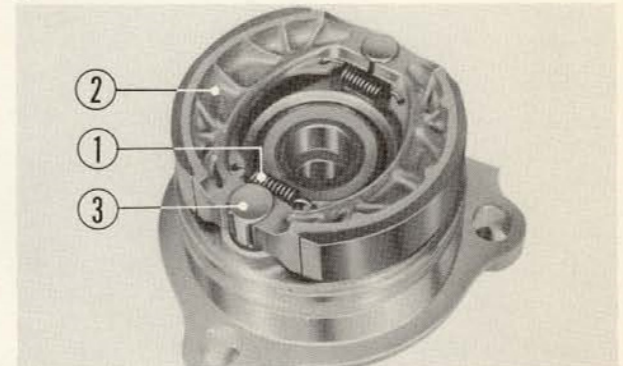
21. Disassemble the wheel.

- 1. Applying a suitable wrench, loosen the nuts on the outer rim side; remove the rear wheel flange.
- 2. Separate the stud bolts from the flange.
- 3. Refer to page 11 for procedures to be followed in disassembling tire.

**Fig. 4-19**

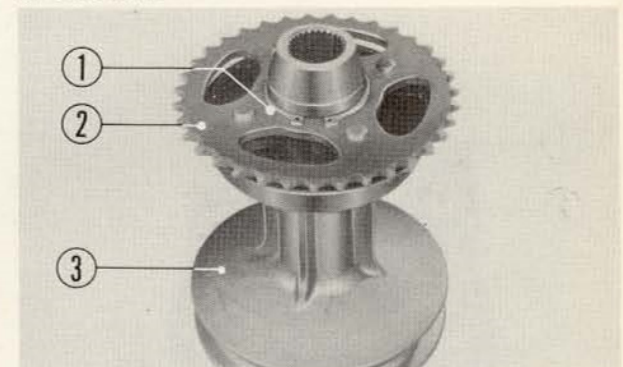
① R. panel
② Panel cushion

③ Brake arm dust seal

**Fig. 4-20**

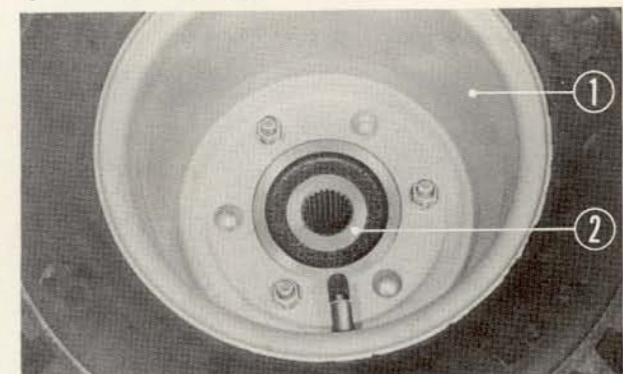
① Brake shoe spring
② Brake shoe

③ Rear brake cam

**Fig. 4-21**

① Snap ring
② Final driven sprocket

③ Rear wheel hub

**Fig. 4-22**

① Outer rim ② Rear wheel flange

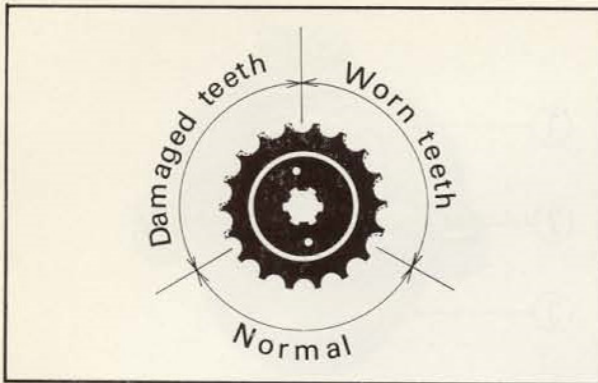


Fig. 4-23

Inspection and repair

1. Make sure that the rear wheel axle is not bent.
2. Inspect the lip of the oil seal for wear or damage.
3. Examine the final driven sprocket for wear, damage or any other defects which might interfere with proper sprocket operation.
4. Check the drive chain for wear, damage or elongation.
5. The brake shoes should be in good condition and not worn excessively.
6. Observe the brake drum for excessive wear.
7. Make sure that the right and left panels were not damaged or cracked; that the rear wheel hub is not damaged nor worn.
8. Make sure that there is no evidence of air leakage around the area just past the rim valve.
9. Make sure that the rim and wheel O-rings are not deformed or damaged.
10. Using a commercial tire pressure gauge, test if the tire is inflated to the correct pressure. The specified tire pressure is **0.2 kg/cm² (3.0 psi)**. If such a gauge is not immediately available, use a linen or steel tape to measure the length around the circumference and in the center of the tire. It should be **1,290-1,320 mm (50-52 in.)**.
11. Check the tire for cut, wear or any other defects.
12. For tire repair, refer to page 11.

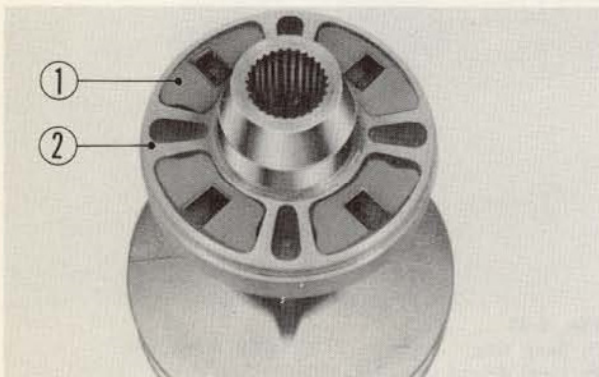


Fig. 4-24

① Rear wheel damper ② Rear wheel hub

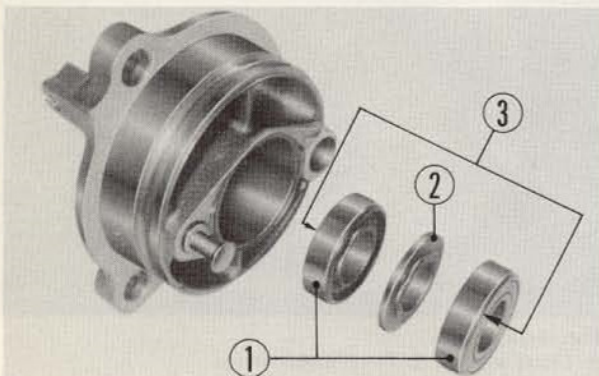


Fig. 4-25

① Ball bearing ③ Bearing seal end
② R. panel spacer

Assembly

1. Assemble the wheel.
 - 1. Refer to page 11 for the procedures to be followed in assembling tire.
 - 2. Install and tighten the rear wheel flange reaching from inner rim side.
2. Install the dampers in the rear wheel hub. If necessary, coat the hub with a soap and water to facilitate installation.
3. Assemble the right panel.
 - 1. Coat the sealing lip of the oil seal with a small amount of grease; press the seal into position until it is flush with the end of the wheel hub.
 - 2. Hand pack all cavities in the ball bearings with grease. With the seal end facing out, install the bearings in the right panel with the panel spacer sandwiched in between.
 - 3. Coat the sealing lip of the other side oil seal with a small amount of grease; press the seal into position until it is flush with the end of the wheel hub.

- 4. Position the brake shoes on the brake cam and anchor pin and secure the assembly with the springs.

NOTE:

Apply a light coating of grease to the anchor pin before installing the shoes. Be very careful not to allow grease getting on the linings; otherwise the brake will not function properly.

4. Assemble the left panel.

- 1. Lubricate ball bearing with grease. With the seal end facing toward inside, press the bearing into place in the left panel.
 - 2. Apply a light coating of grease to the sealing lip of the oil seal, and tap it squarely until it is flush with the end of the left panel.
5. Drive the rear wheel axle into place in the wheel hub from the brake side toward the sprocket side.

6. With the return spring installed, slide the brake arm over the brake cam shaft, being careful that the serrations are align properly.

7. Install the tensioner. Position the tensioner on the shaft, being careful that the punched marks are lined up properly.

NOTE:

Before installation, coat the shaft with grease.

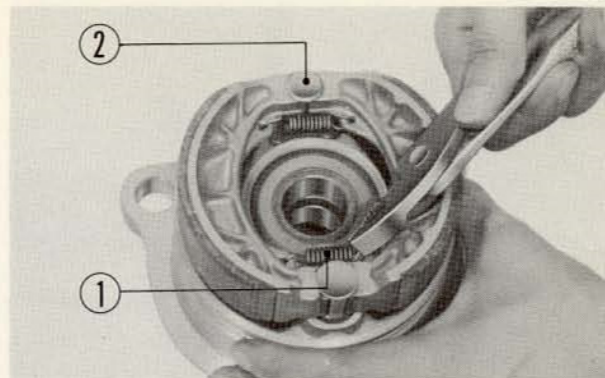


Fig. 4-26

① Rear brake spring ② Anchor pin

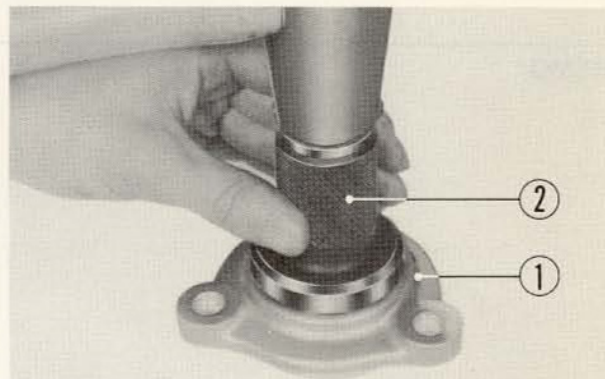


Fig. 4-27

① L. panel ② Oil seal driver

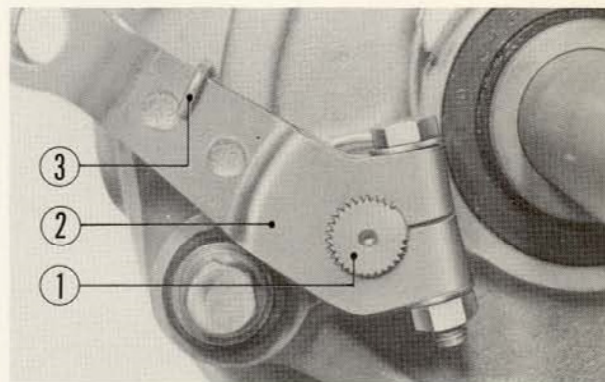


Fig. 4-28

① Brake cam ② Brake arm ③ Return spring

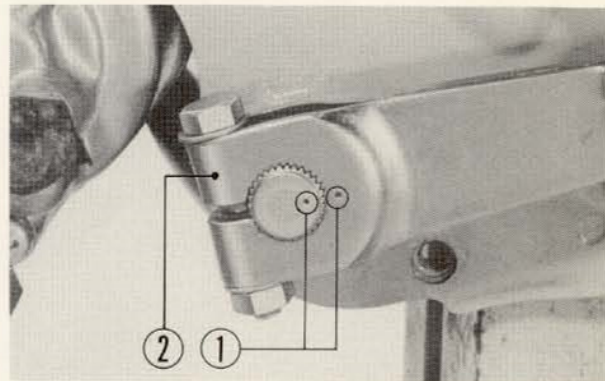


Fig. 4-29

① Punched mark ② Chain tensioner

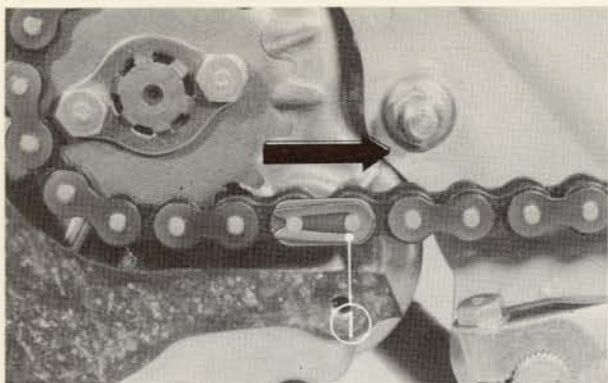


Fig. 4-30

① Chain clip

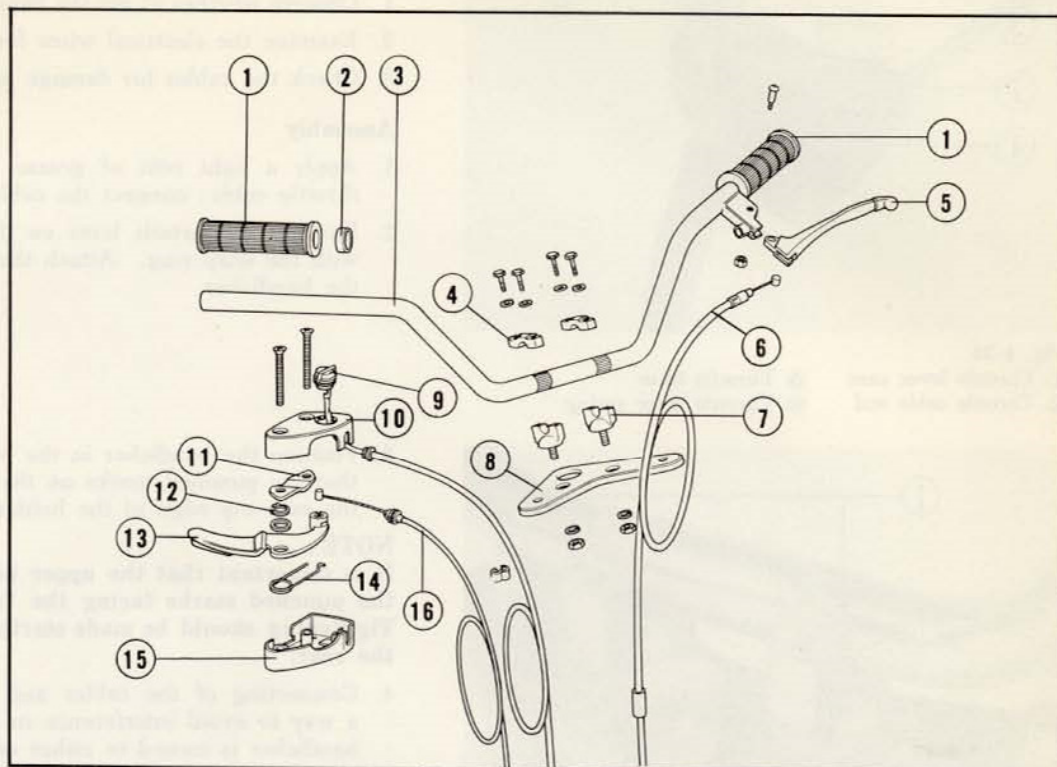
8. With the close end toward the direction of rotation, install the drive chain.
9. To install the wheels, start with the left wheel, finishing with the right wheel.
10. After the above steps have been completed, inspect the drive chain for deflection and the brake lever for free play.

MEMO:

3. HANDLEBAR

Fig. 4-31

- ① Handle grip
- ② Lever case stopper
- ③ Handlebar
- ④ Upper holder
- ⑤ Brake lever
- ⑥ Rear brake cable
- ⑦ Lower holder
- ⑧ Fork top bridge plate
- ⑨ Ignition switch
- ⑩ Throttle lever cover
- ⑪ Throttle case seat
- ⑫ Snap ring
- ⑬ Throttle lever
- ⑭ Throttle lever spring
- ⑮ Throttle lever case
- ⑯ Throttle cable



Disassembly

1. Loosen the brake adjusting nut.
2. Remove the brake lever from the handlebar; disconnect the brake cable at the lever.
3. Disconnect the throttle cable at the carburetor, and the ignition switch wires from the coupler.
4. Unscrew the bolts which hold the upper holders in position; take out the handlebar.
5. Turn off the steering stem nut and fork bolts. The fork top bridge plate will then be removed.
6. Remove the screws securing the throttle lever case and cover on the handlebar.
7. Remove the throttle case seat.
8. Remove the snap ring and take out the throttle lever from the case.
9. Disconnect the throttle cable at the throttle lever.

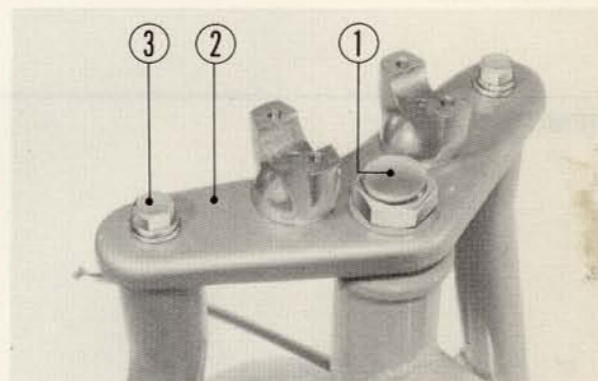


Fig. 4-32

- ① Steering stem nut ③ Fork bolt
- ② Fork top bridge plate

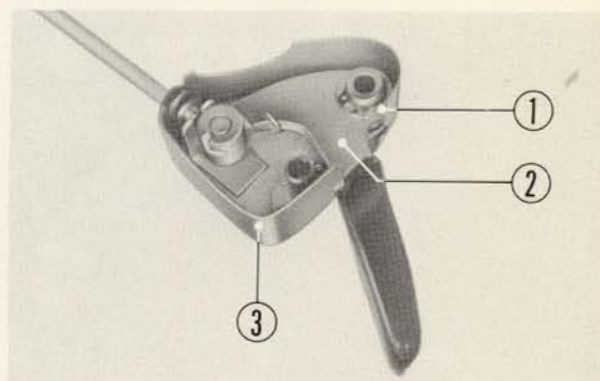


Fig. 4-33

- ① Snap ring ③ Throttle lever case
- ② Throttle lever

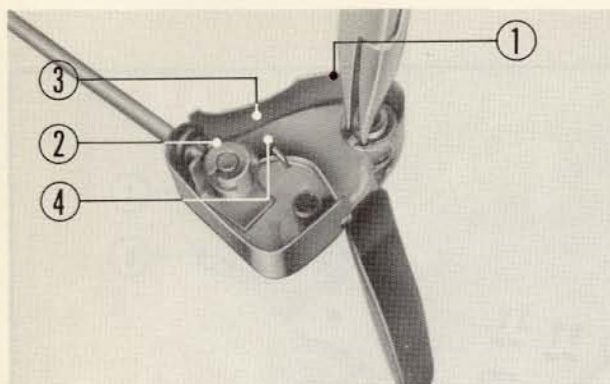


Fig. 4-34

- ① Throttle lever case ③ Throttle lever
② Throttle cable end ④ Throttle lever spring

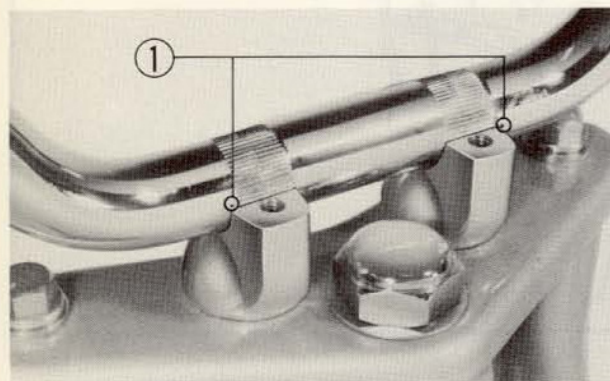


Fig. 4-35

- ① Punched marks

Inspection

1. Observe whether or not the handlebar is bent or damaged.
2. Examine the electrical wires for broken insulator or cut.
3. Check the cables for damage or other defects.

Assembly

1. Apply a light coat of grease to the end fitting of the throttle cable; connect the cable to the throttle lever.
2. Position the throttle lever on the lever case and secure with the snap ring. Attach the assembly horizontally to the handlebar.

3. Position the handlebar in the lower holders. Be certain that the punched marks on the handlebar are flush with the rear top edge of the holders.

NOTE:

It is important that the upper holders be installed with the punched marks facing the front of the motorcycle. Tightening should be made starting with the front toward the rear.

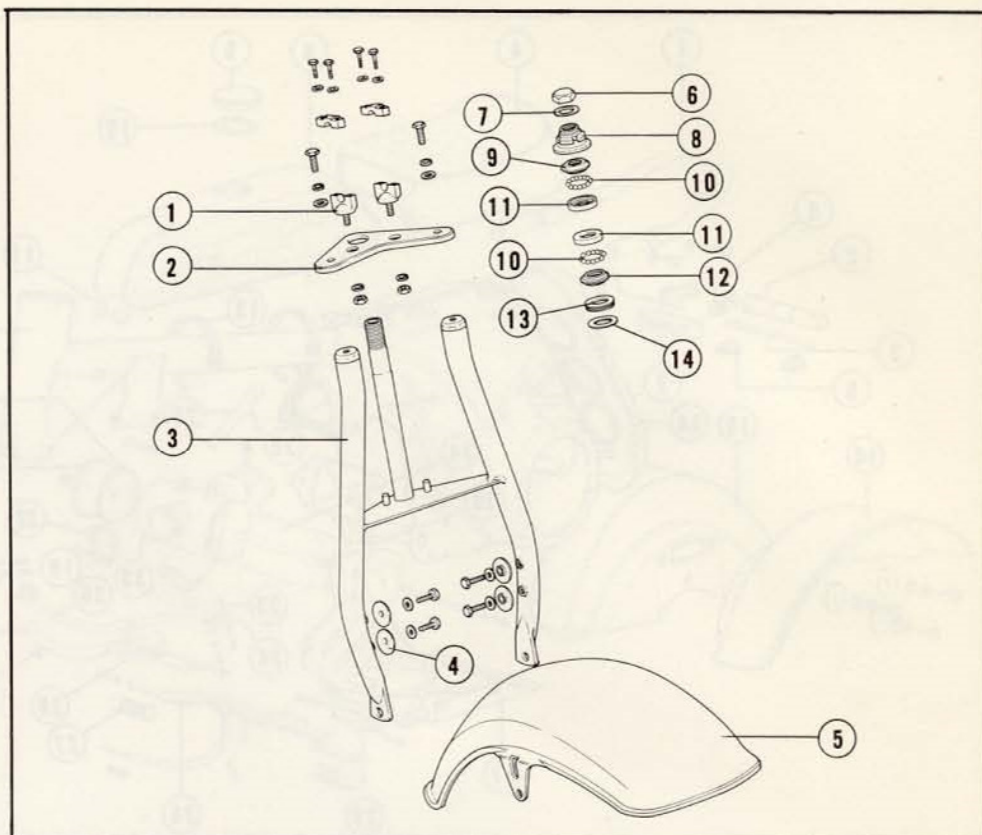
4. Connecting of the cables and wires should be done in a way to avoid interference or undue stresses when the handlebar is turned to either of two extreme positions.
5. Adjust the brake lever free play to specification. See page 5.
6. Make sure that the throttle lever operates freely; that the free play is held within the prescribed limits. See page 7.

MEMO:

4. FRONT FORK

Fig. 4-36

- ① Lower holder
- ② Fork top bridge plate
- ③ Front fork
- ④ Front cover retaining washer
- ⑤ Front fender
- ⑥ Steering stem nut
- ⑦ Stem nut washer
- ⑧ Steering top thread
- ⑨ Top cone race
- ⑩ Steel ball
- ⑪ Steering ball race
- ⑫ Bottom cone race
- ⑬ Steering head dust seal
- ⑭ Dust seal washer



Disassembly

1. Remove the front wheel. See page 10.
2. Remove the handlebar. See page 19.
3. Remove the fork top bridge plate. See page 19.
4. To remove the front fork, unscrew the steering top thread.

NOTE:

Keep steel balls in a part container so that they are not scattered and lost.

Inspection

1. Inspect the front fork to see that it is not bent or damaged.
2. Be sure that the top and bottom cones are not damaged, worn or otherwise dented.
3. Observe whether or not the steering head dust seal is in good condition and not worn.

Assembly

1. Install a total of 21 steel balls on top and bottom. Turn in the steering top thread all the way until it will no longer go; then, turn it out 2/3 turn. Be sure that the fork rotates freely without binding.

NOTE:

Before assembly, clean the cone and ball races and all steel balls in solvent and lubricate with grease.

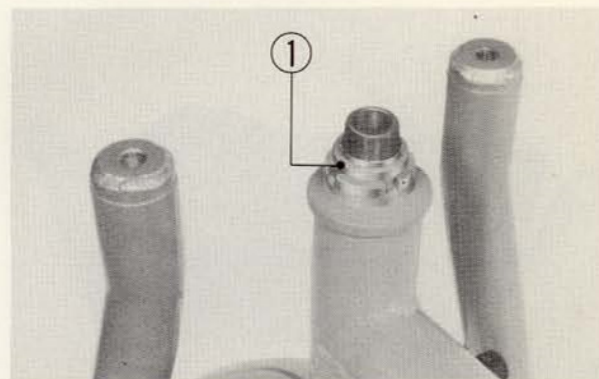


Fig. 4-37

① Steering top thread

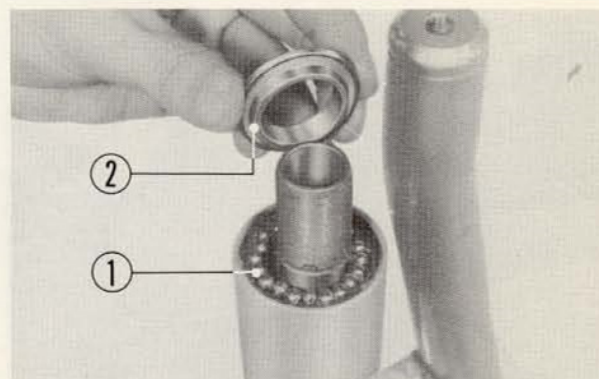


Fig. 4-38

① Steel ball ② Top cone race

5. FRAME BODY

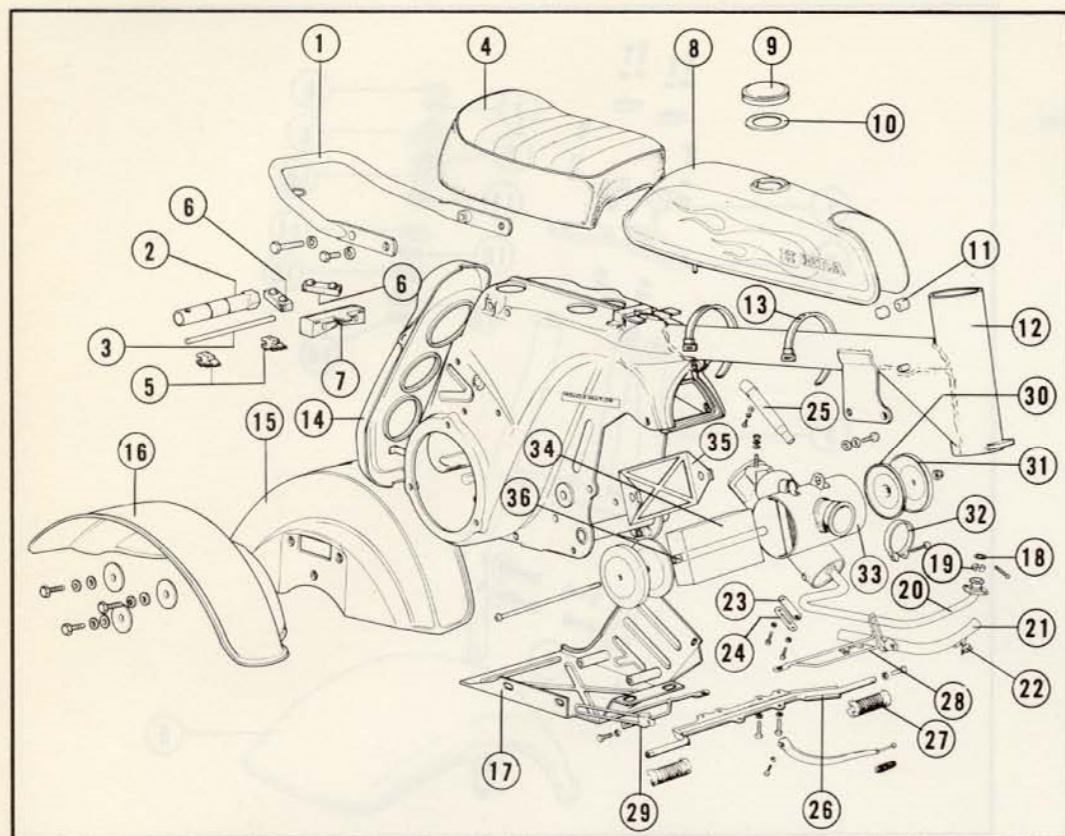


Fig. 4-39

- ① Rear handle pipe
- ② Spark plug wrench
- ③ Handle lever
- ④ Seat
- ⑤ Rubber retainer
- ⑥ Seat setting rubber
- ⑦ Fuel tank rear cushion
- ⑧ Fuel tank
- ⑨ Fuel tank cap
- ⑩ Packing
- ⑪ Fuel tank front cushion
- ⑫ Frame body
- ⑬ Wire band
- ⑭ Rear cover
- ⑮ L. rear fender
- ⑯ R. rear fender
- ⑰ Under cover
- ⑱ Exhaust pipe gasket
- ⑲ Exhaust pipe joint collar
- ⑳ Exhaust muffler
- ㉑ Exhaust cover
- ㉒ Exhaust cover setting band
- ㉓ Muffler lid packing
- ㉔ Muffler lid
- ㉕ Diffuser pipe
- ㉖ Step bar
- ㉗ Step rubber
- ㉘ L. step guard
- ㉙ R. step guard
- ㉚ Air cleaner cover
- ㉛ Air cleaner case packing
- ㉜ Connecting tube band
- ㉝ Air cleaner case
- ㉞ Air cleaner element
- ㉟ Element set plate
- ㊱ Air cleaner inner pipe

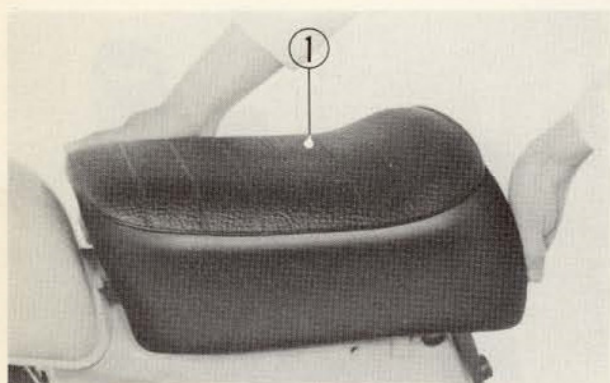


Fig. 4-40

① Seat

Disassembly

1. Remove the seat.
 - 1. Remove the rear handle pipe by removing the attaching bolts.
 - 2. Lift the rear of the seat slightly and pull it toward the rear.
2. Remove the fuel tank.
 - 1. Disconnect the fuel hoses at the carburetor. Crush the sections of the fuel hoses while disconnecting to prevent spilling of fuel on the floor.
 - 2. Remove the fuel tank from the rear cushion and pull it toward the rear.

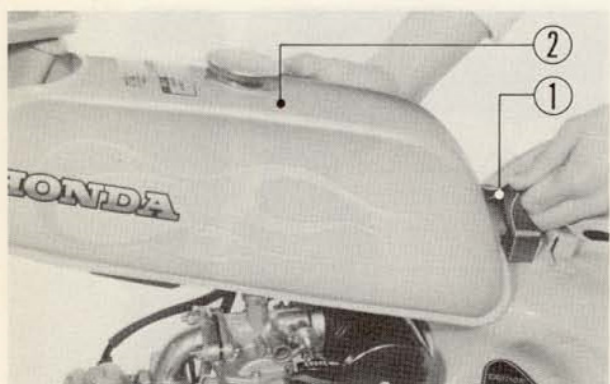


Fig. 4-41

① Rear fuel tank cushion ② Fuel tank

3. Remove the step bar.
4. Remove the under cover.
5. Remove the rear cover.
6. Remove the muffler.
 - 1. Unscrew the nuts securing the exhaust pipe to the engine.
 - 2. Remove the bolt which holds the muffler to the side of the frame.
 - 3. Remove the nut holding the muffler at the rear. The muffler will be taken out.
7. Remove the front wheel.
8. Remove the handlebar.
9. Remove the front fork.
10. Remove the engine.
11. Remove the carburetor.
12. Remove the rear wheel.
13. Take out the air cleaner case.
14. Disconnect the brake cable.
15. Remove the rear fenders.
16. Take out the ignition coil.

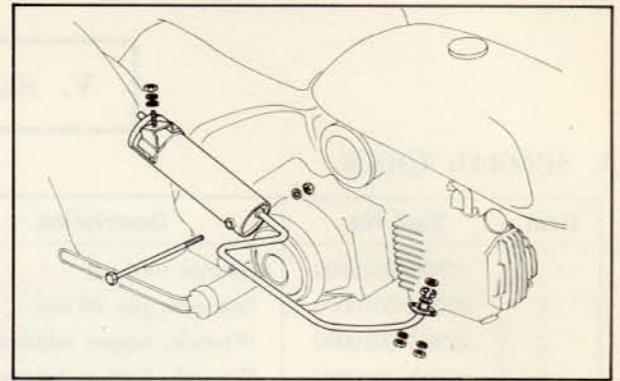


Fig. 4-42

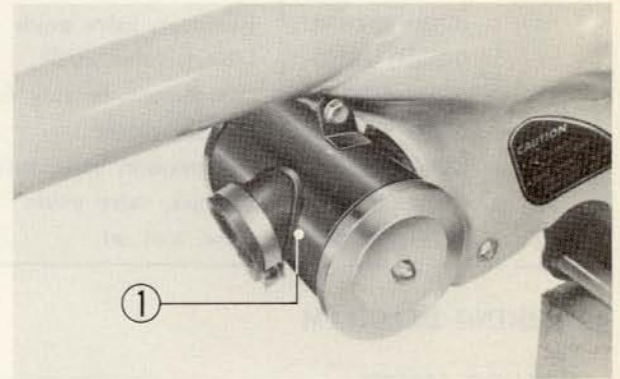


Fig. 4-43

① Air cleaner case

17. Remove the upper and lower ball races.

Inspection

1. Check the entire frame for freedom from damage, distortion or otherwise crack.
2. Examine the head pipe for incorrect angle or deformation.
3. Check to determine that the ball race is not worn, dented or otherwise damaged.
4. Be sure that the muffler and exhaust pipe are not damaged or cracked.
5. See that the fuel tank is not leaking or corroded.
6. Check all fuel tubes for deterioration or damage.

Assembly

1. When install the upper and lower ball races, do not angle the race.
2. Clean the air cleaner before installation. See page 5.
3. Allow sufficient space around the muffler. Be sure that the muffler is not leaking.
4. Check to see that the fuel hoses are put over the fittings all the way and secure with clips. Install the hoses in such a way as to avoid interference with adjacent or surrounding parts.

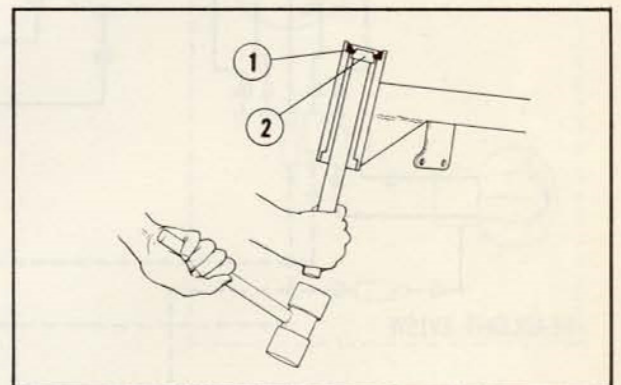


Fig. 4-44

① Ball race ② Ball race remover

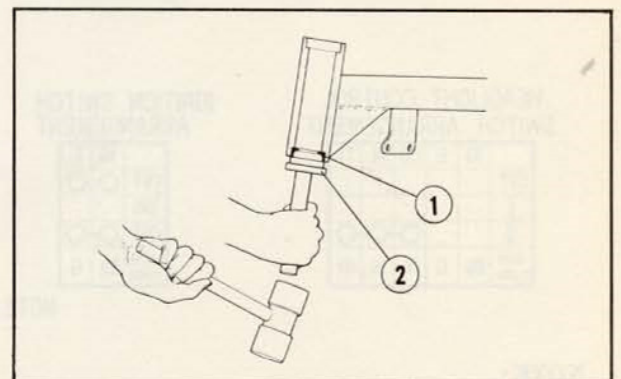


Fig. 4-45

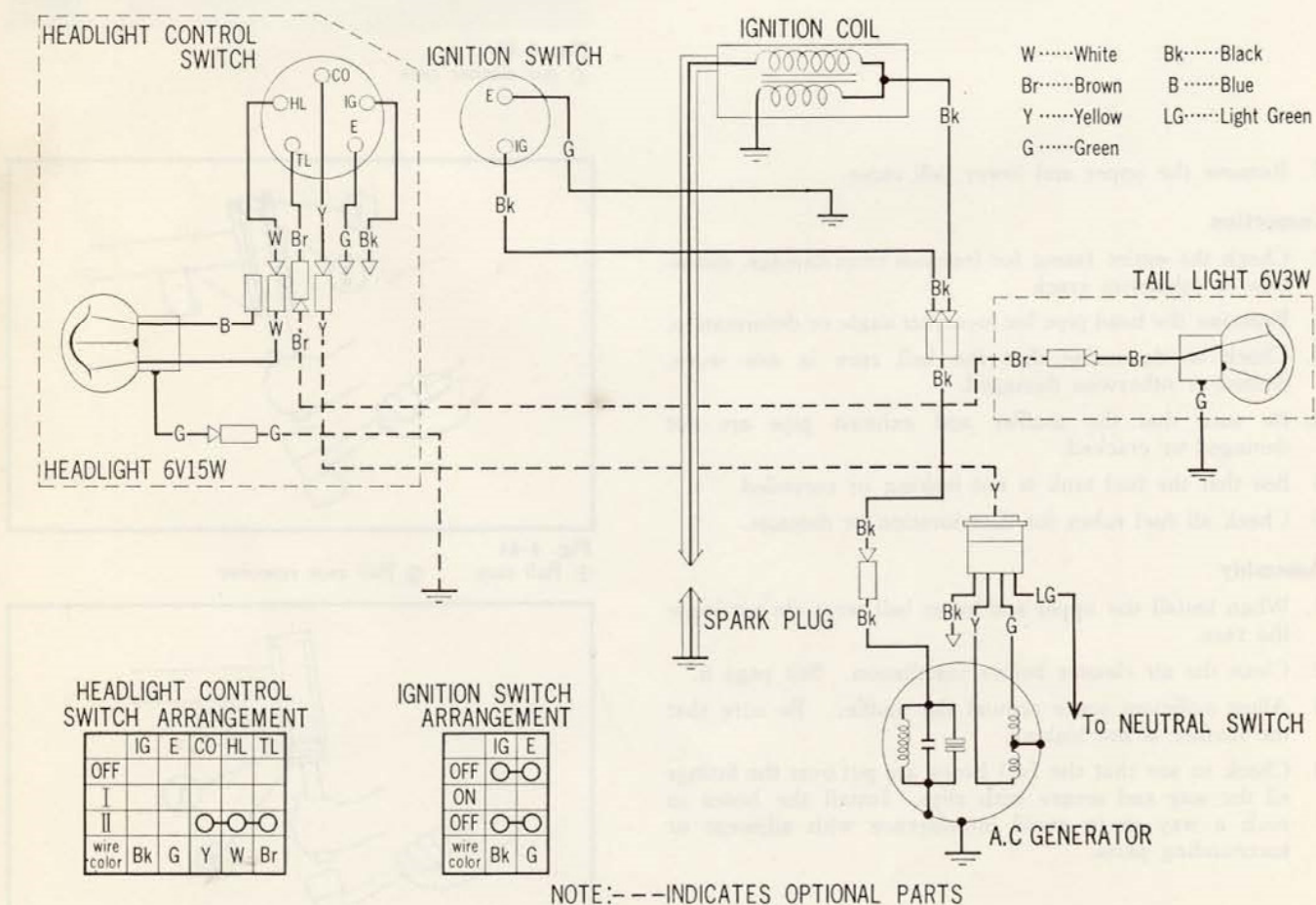
① Ball race ② Ball race driver

V. SERVICE DATA

1. SPECIAL TOOLS

Item	Tool No.	Description	Remarks
1	07900-9370000	Special tool set	All special tools below included Steering head top adjusting
2	07902-0010000	Spanner, pin 36 mm	
3	07908-0010000	Wrench, tappet adjusting	6202 and 6205 ball bearing disassembling and assembling Use with item No. 8
4	07916-0010000	Wrench, lock nut 14 mm	
5	07923-0400000	Holder, clutch outer	
6	07933-0010000	Puller, flywheel	
7	07942-3290100	Remover, valve guide	
8	07942-1180100	Driver, valve guide	
9	07946-9370100	Attachment, bearing driver	
10	07949-6110000	Handle, driver	
11	07957-3290000	Compressor, valve spring	
12	07984-0980000	Reamer, valve guide	
12	07797-2920300	Case, tool set	

2. WIRING DIAGRAM



NOTE:

On units equipped with an optional head and tail lights, the yellow cord of the harness is connected to the engine green cord.

3. MAINTENANCE SCHEDULE

The maintenance intervals shown in the following schedule are based upon average riding conditions. Vehicles subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.

Items marked * should be serviced by 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.

INITIAL SERVICE PERIOD FIRST WEEK OF OPERATION	● ENGINE OIL - Change. ● *CONTACT POINTS AND IGNITION TIMING - Clean, check, and adjust or replace if necessary. ● *VALVE TAPPET CLEARANCE - Check and adjust if necessary. ● *CAM CHAIN TENSION - Adjust. ● *CARBURETOR - Check and adjust if necessary. ● THROTTLE OPERATION - Inspect cable. Check and adjust free play. ● *CLUTCH - Check operation and adjust if necessary.	● DRIVE CHAIN - Check, lubricate, and adjust if necessary. ● BRAKE CONTROL LINKAGE - Check linkage and adjust if necessary. ● TIRES - Inspect and check air pressure. ● ALL NUTS, BOLTS, AND OTHER FASTENERS - Check security and tighten if necessary.
REGULAR SERVICE PERIOD EVERY 30 OPERATING DAYS NOTE: Change oil every 30 operating days or every 3 months, whichever occurs first.	● ENGINE OIL - Change. ● SPARK PLUG - Clean and adjust gap, or replace if necessary. ● *CONTACT POINTS AND IGNITION TIMING - Clean check, and adjust or replace if necessary. ● *VALVE TAPPET CLEARANCE - Check and adjust if necessary. ● *CAM CHAIN TENSION - Adjust. ● POLYURETHANE FOAM AIR FILTER ELEMENT - Clean and oil. Service more frequently if operated in dusty areas. ● *CARBURETOR - Check and adjust if necessary.	● THROTTLE OPERATION - Inspect cable. Check and adjust free play. ● *CLUTCH - Check operation and adjust if necessary. ● DRIVE CHAIN - Check, lubricate, and adjust if necessary. ● BRAKE CONTROL LINKAGE - Check linkage and adjust if necessary. ● TIRES - Inspect and check air pressure. ● ALL NUTS, BOLTS, AND OTHER FASTENERS - Check security and tighten if necessary.
EVERY YEAR	● *CENTRIFUGAL OIL FILTER - Clean. ● *OIL FILTER SCREEN - Clean. ● FUEL FILTER SCREEN - Clean. ● FUEL LINES - Check. ● *STEERING HEAD BEARINGS - Adjust. ● *BRAKE SHOES - Inspect and replace if worn.	

4. TIGHTENING TORQUE

	Tightening point	Thread dia. (mm)	Torque	
			kg-cm	lbs-ft
Engine	R. & L. Crankcases	6	80~110	5.8~ 8.0
	Cam chain guide roller	6	70~130	5.1~ 9.4
	Cylinder head stud	6	90~120	6.5~ 8.7
	Cylinder side bolt	6	80~110	5.8~ 8.0
	Cylinder head side bolt	6	100~150	7.2~10.8
	Cam sprocket	5	50~ 90	3.6~ 6.5
	Cylinder head R. side cover	6	70~ 90	5.1~ 6.5
	Cylinder head L. side cover	6	80~120	5.8~ 8.7
	Tappet lock nut	—	70~100	5.1~ 7.2
	Cam chain tensioner push rod	—	150~250	10.8~18.1
	Oil pump	6	80~120	5.8~ 8.7
	Shift drum side bolt	6	90~150	6.5~10.8
	Shift drum stopper plate	6	90~130	6.5~ 9.4
	Shift drum stopper	6	100~160	7.2~11.6
	Clutch nut	14	380~450	27.5~32.5
	R. Crankcase cover	6	80~120	5.8~ 8.7
	Starter	6	80~120	5.8~ 8.7
	Flywheel	—	330~380	23.9~27.5
	Drive sprocket	6	90~150	6.5~10.8
	L. Crankcase cover	6	70~100	5.1~ 7.2
	Drain cock bolt	—	250~450	18.1~25.3
	Spark plug	—	110~150	8.0~10.8
	Carburetor	6	90~140	6.5~10.1
	Recoil starter	6	70~100	5.1~ 7.2
Frame	Brake lever	5	40~ 60	2.9~ 4.3
	Handlebar upper holder	6	60~ 90	4.3~ 6.5
	Handlebar lower holder	10	400~480	29.0~34.5
	Steering stem nut	22	500~700	36.2~50.5
	Fork top bridge plate	10	400~480	29.0~34.5
	Front fender	6	70~100	5.1~ 7.2
	Front wheel hub	8	200~240	14.5~17.4
	Wheel bolt	8	200~240	14.5~17.4
	Front wheel axle shaft	14	600~800	43.4~57.9
	Rear wheel axle shaft	14	600~800	43.4~57.9
	L. panel	8	200~240	14.5~17.4
	R. panel	8	200~240	14.5~17.4
	Rear brake arm	6	80~110	5.8~ 8.0
	Rear wheel boss	8	200~240	14.5~17.4
	Engine slinger bolt	8	200~240	14.5~17.4
	Step bar	8	200~240	14.5~17.4
	Gear change pedal	6	70~100	5.1~ 7.2
	Exhaust pipe	6	70~100	5.1~ 7.2
	Carry pipe	8	200~240	14.5~17.4
	Rear fender	6	70~100	5.1~ 7.2
	Under cover	6	70~100	5.1~ 7.2

5. SERVICE DATA

mm (in.)

	Item	Assembly standard	Service limit
Engine	Cam base circle	21.0 (0.827)	20.8 (0.819)
	Cam lift (including the base circle)	26.079 (1.0266)	25.8 (1.012)
	Valve seat width	1.0~1.3 (0.040~0.051)	2.0 (0.080)
	Valve to valve guide clearance	Intake 0.01~0.03 (0.0004~0.0012) Exhaust 0.03~0.05 (0.0012~0.002)	0.08 (0.0032) 0.10 (0.004)
	Valve stem O.D.	Intake 5.455~5.465 (0.2148~0.2187) Exhaust 5.435~5.445 (0.2070~0.2109)	5.40 (0.2126) 5.38 (0.2048)
	Valve spring free length	Inner 25.1 (0.988) Outer 28.1 (1.106)	23.9 (0.941) 26.9 (1.059)
	Valve spring compression	Inner 2.45~2.75 kg/22.7 mm (5.37~6.03 lb/0.894 in.) Outer 6.65~7.75 kg/24.9 mm (14.66~17.09 lb/0.980 in.)	2.0 kg/22.7 mm (4.41 lb/0.894 in.) 4.6 kg/24.9 mm (10.14 lb/0.980 in.)
	Cylinder bore	47.005~47.015 (1.8506~1.8510)	47.1 (1.854)
	Piston skirt O.D.	46.98~47.00 (1.8492~1.8500)	46.9 (1.847)
	Piston pin side clearance	Top and second 0.015~0.045 (0.0006~0.0018) Oil 0.010~0.045 (0.0004~0.0018)	0.12 (0.0047) 0.12 (0.0047)
	Piston ring gap	Top and second 0.15~0.35 (0.0059~0.0138) Oil 0.15~0.40 (0.0059~0.01575)	0.5 (0.0197) 0.5 (0.0197)
	Outer rotor to pump body clearance	0.10~0.15 (0.004~0.006)	0.20 (0.0079)
	Rotor end clearance	0.02~0.07 (0.0008~0.0027)	0.12 (0.0047)
	Friction disc	Thickness 3.50 (0.138) Flatness —	3.10 (0.122) 0.15 (0.006)
	Clutch spring free length	21.4 (0.843)	20.4 (0.803)
	Crankshaft runout	0.015 (0.0006)	0.05 (0.002)
	Connecting rod side play	0.1~0.35 (0.004~0.014)	0.80 (0.0315)
	Connecting rod oil clearance	0.12 (0.0005)	0.05 (0.002)
	Gear shift fork thickness	R. 5.5~6.3 (0.217~0.248) L. 4.5~5.3 (0.177~0.209)	5.3 (0.209) 4.3 (0.169)
	Gear shift fork hole dia.	34.0~34.03 (1.3385~1.3395)	34.2 (1.347)
	Gear shift drum O.D.	33.95~33.98 (1.3366~1.3377)	33.9 (1.335)
	Gear backlash	0.09~0.18 (0.0035~0.0070)	0.25 (0.010)
	Gear to shaft clearance	Mainshaft to gear 0.02~0.06 (0.001~0.0025) Countershaft to gear 0.032~0.077 (0.0013~0.0030)	0.1 (0.004) 0.1 (0.004)
	Carburetor	Main jet #60 Air jet #150 Slow jet #35 Air screw $1\frac{3}{4} \pm \frac{1}{8}$ Fuel level 20 (0.787)	
Frame	Front wheel axle runout	—	0.2 (0.008) max.
	Rear wheel axle runout	—	0.5 (0.02) max.
	Rear brake drum I.D.	109.9~110.1 (4.3267~4.3346)	111.0 (4.37)
	Rear brake shoe thickness	4.0 (0.1575)	2.0 (0.079)

6. TROUBLE SHOOTING

	Trouble	Probable cause	Remedies
Engine	Engine does not start	1. Excessive wear on piston ring or cylinder. 2. Seized valve in valve guide. 3. Seized piston. 4. Faulty valve timing. 5. Low or lack of compression pressure. 6. Blown out cylinder head gasket. 7. Warped gasketing surface of cylinder and cylinder head.	Replace. Replace. Replace. Adjust. Lap valve against seat; if necessary, replace. Replace. Repair or replace.
	Poor engine idling	1. Incorrect tappet clearance. 2. Low or lack of compression pressure. 3. Excessive valve stem clearance.	Adjust to specification. Repair. Replace valve and guide.
	Loss of power	1. Valve stuck open. 2. Incorrect seating of valve. 3. Weak or broken valve spring. 4. Faulty valve timing. 5. Blown out cylinder head gasket. 6. Excessive wear on cylinder and piston. 7. Worn, weak or broken piston ring. 8. Loose spark plug.	Replace. Lap valve. Replace. Check valve timing and adjust if necessary. Replace. Replace. Replace. Retighten.
	Backfire	1. Incorrect seating of inlet valve. 2. Faulty valve timing. 3. Incorrect ignition timing. 4. Excessive spark plug gap. 5. Improper fuel.	Check the valve seating. Adjust. Adjust. Adjust gap to (0.6~0.7 mm) 0.024~0.028 in. Use good quality fuel.
	White exhaust smoke	1. Excessive wear on cylinder and piston. 2. Oil level too high. 3. Oil pressure too high. 4. Poor quality oil.	Replace piston. Adjust oil level. Check breather. Replace with good quality oil.
	Black exhaust smoke	1. Too rich a fuel mixture.	Adjust carburetor.
	Difficult gear shifting	1. Clutch dragging. 2. Damaged gear or foreign object in gear. 3. Gear shift fork inoperative. 4. Incorrect operation of gear shift drum stopper and change pedal. 5. Mainshaft and countershaft out of alignment. 6. High oil viscosity.	Adjust clutch. Replace defective parts. Repair or replace. •Repair or replace. Repair or replace. Change oil.
	Excessive high gear noise	1. Excessive backlash in gears. 2. Worn main and countershaft bearings.	Repair or replace. Repair or replace.
	Gear jumps out of position	1. Worn gear shift fork fingers. 2. Worn gear dog hole. 3. Worn spline.	Replace. Replace. Replace.
	Clutch slippage	1. Clutch out of adjustment. 2. Weak or none uniform clutch spring. 3. Worn or grazed friction disc.	Adjust clutch. Replace weak spring. Replace.

	Trouble	Probable cause	Remedies
	Engine does not start	Carburetor 1. Choke fully open. 2. Carburetor air screw improperly set. 3. Air leaking into cylinder head. 4. Clogged carburetor slow jet. 5. Clogged fuel valve or piping. 6. Clogged vent hole in the fuel tank cap. 7. Fuel tank empty.	Close choke. Adjust air screw. Retighten carburetor connecting tube. Check, clean and retighten. Disassemble and clean. Disassemble and clean. Fill tank full.
	Poor engine idling	Carburetor 1. Clogged or loose carburetor slow jet. 2. Improper float level. 3. Incorrect air screw adjustment. 4. Air leaks.	Check, clean and retighten. Adjust. Adjust. Tighten all air connections or joints.
	Poor engine performance	Carburetor 1. Jet size too small. 2. Improper float level. 3. Clogged carburetor main jet. 4. Air leaks.	Replace with larger size jet. Adjust. Clean and retighten. Tighten all air passage connection.
Frame	Heavy steering	1. Steering stem excessively tightened. 2. Damaged steering stem steel balls. 3. Low front tire pressure.	Loosen steering stem nut. Replace. Inflate to 1.2 kg/sq-cm (17 psi).
	Front and rear wheel wobble	1. Worn front and rear wheel bearings. 2. Front or rear wheel runout or distorted. 3. Defective tire.	Replace bearing. Repair or replace. Replace.
	Defective brake	1. Worn brake lining. 2. Worn brake shoe or poor shoe-to-drum contact. 3. Worn brake cam. 4. Water or oil getting on lining. 5. Worn brake shaft. 6. Brake lever out of adjustment.	Replace. Replace. Replace. Clean. Replace. Readjust.

7. SPECIFICATIONS

	Item	U.S. measure	Metric
Dimension	Overall length	51.1 in.	1,300 mm
	Overall width	31.5 in.	800 mm
	Overall height	30.9 in.	785 mm
	Wheelbase	35.2 in.	895 mm
	Turning circle	4.6 ft.	1.4 m
	Seat height	22.4 in.	570 mm
	Foot peg height	7.9 in.	200 mm
	Ground clearance	3.5 in.	90 mm
	Dry weight	163.1 lb.	74 kg
	Weight distribution dry F/R	59.5/103.6 lb.	27/47 kg
	Curb weight	170 lb.	77 kg
Frame	Type	Back-born	
	Front tire size, type, pressure	16×8-7, ATV tire, 2.8 psi (0.2 kg/cm ²)	
	Rear tire size, type, pressure	16×8-7, ATV tire, 2.8 psi (0.2 kg/cm ²)	
	Brake type, lining area	Internal expanding shoes, 3.83 sq. in. (24.7 cm ²)	
	Fuel capacity	0.66 U.S. gal.	2.5 lit.
	Fuel reserve capacity	0.13 U.S. gal.	0.5 lit.
	Caster angle	67°	
	Trail length	1.26 in.	32 mm
Engine	Type	Air cooled 4-stroke O.H.C. engine	
	Cylinder arrangement	Single cylinder 80° inclined from vertical	
	Bore and stroke	1.85×1.63 in.	47.0×41.4 mm
	Displacement	4.4 cu. in.	72 cc
	Compression ratio	7.5:1	
	Valve train	Chain driven overhead camshaft	
	Maximum horsepower	3.6 BHP/6,500 rpm (SAE)	
	Maximum torque	3.04 lb-ft/5,500 rpm	0.42 kg-m/5,000 rpm
	Oil capacity	0.8 U.S. qt.	0.8 lit.
	Lubrication system	Forced and wet sump	
	Valve tappet clearance	IN, EX: 0.002 in.	IN, EX: 0.05 mm
	Engine weight (dry)	41.8 lb.	18.95 kg

	Item	U.S. measure	Metric
Drive train	Clutch	Wet, multi-plate automatic centrifugal type	
	Transmission	3-speed constant mesh	
	Primary reduction	4.058	
	Gear ratio I	3.272	
	Gear ratio II	1.722	
	Gear ratio III	1.190	
	Final reduction	2.500, drive sprocket 14T, driven sprocket 35T	
Electrical	Ignition	Flywheel magneto	
	Starting system	Recoil starter	
	Alternator	A.C. generator	
	Spark plug	NGK C7HS, ND U22FS	



VI. MAJOR MODIFIED POINTS OF ATC70K1

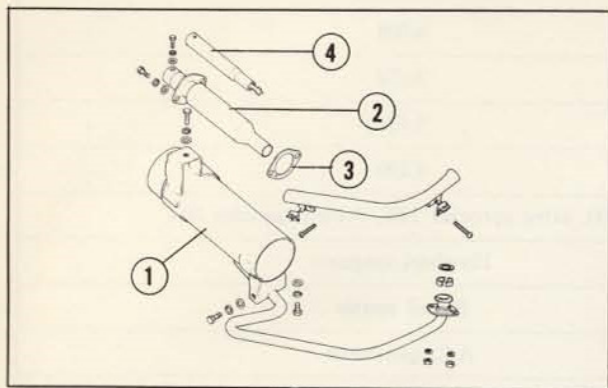


Fig. 6-1

- ① Exhaust muffler ③ Arrestor gasket
② Spark arrestor ④ Diffuser pipe

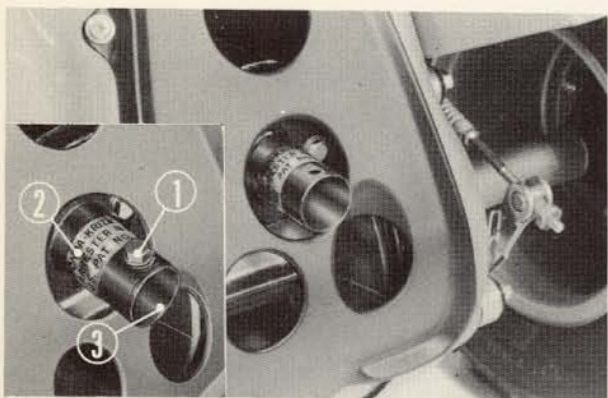


Fig. 6-2

- ① Diffuser pipe mounting bolt ③ Diffuser pipe
② Spark arrestor

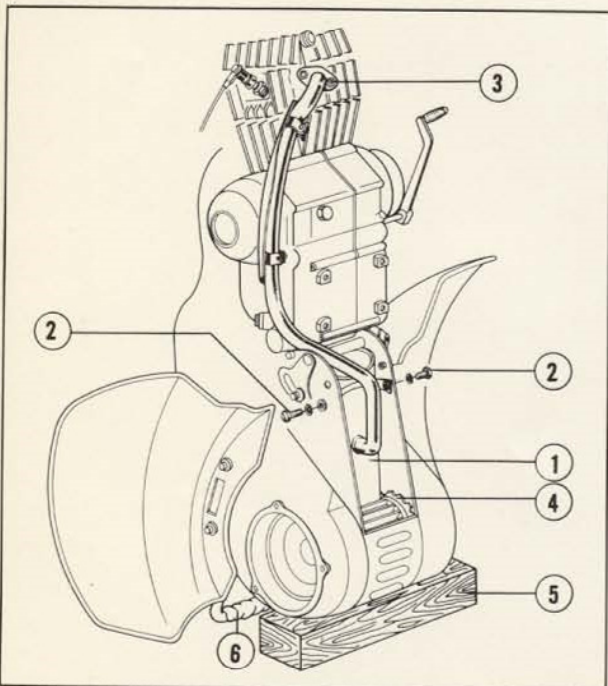


Fig. 6-3

- ① Muffler assembly ④ Rear wheel hub
② Bolt ⑤ Wooden block
③ Joint nut ⑥ Carry pipe

1. EXHAUST MUFFLER

ATC70K1 comes up with a new exhaust system spark arrestor and consequent exhaust muffler modification in shape.

For the new type spark arrestor, the removal and installation procedures of the muffler have changed as follows to allow its maintenance.

Spark Arrestor Maintenance

The exhaust system spark arrestor must be cleaned free from accumulated carbon periodically (every 30 operating days).

1. Shift the gear change pedal to place the transmission in "Neutral" position, and stop the engine.
2. Remove the diffuser pipe mounting bolt and slide out the diffuser pipe.
3. Start the engine and purge accumulated carbon from the spark arrestor by momentarily revving up the engine.
4. Stop the engine.
5. Reinstall the diffuser pipe with the mounting bolt.

Removal

1. Turn off the screws and take out the rear cover.
2. Remove the rear wheels.
3. Disconnect the brake cable at the rear brake arm.
4. Remove the bolt; take out the right brake panel.
5. While holding the rear wheel hub by hand, drive out the rear wheel axle from the left side. Use a suitable wooden hammer to drive the axle.
6. Remove the bolts securing the muffler to the rear of the frame.
7. Wrap the carry pipe with rug to avoid damaging the pipe while operation. Place the machine so that it is on the carry pipe and rear frame through a block as shown.
8. Remove the bolts and take out the step bar.
9. Remove the bolts and remove the undercover.
10. Loosen the chain tensioner locking bolt.
11. Remove two bolts securing the muffler to the side of the frame.
12. Remove the joints nuts holding the muffler and cylinder head together.
13. Move the rear wheel hub so that it will not interfere with the muffler while the muffler is being removed; take out the muffler toward the front of the machine.

Installation

To install, reverse the removal procedures. However, observe the following installation points:

1. Make drive chain tension and brake adjustments after assembling.
2. To install a new muffler (ATC70K1) on ATC70 (former), observe the following:
 - a. Elongate muffler attaching holes (7mm (0.275 in)) in the frame side with a 10mm (0.394 in) drill.
 - b. Install the muffler on the frame side and the rear of the frame side with the following parts:

Part No.	Name of Part	Q'ty
92000-08012-0A	Bolt, hex., 8×12	3
94101-08000	Washer, plain, 8 mm	3
94111-08000	Washer, spring, 8 mm	3

Rear Wheel

Do not remove the rear wheel hub from the frame without first removing the muffler due to the installation of the new muffler.

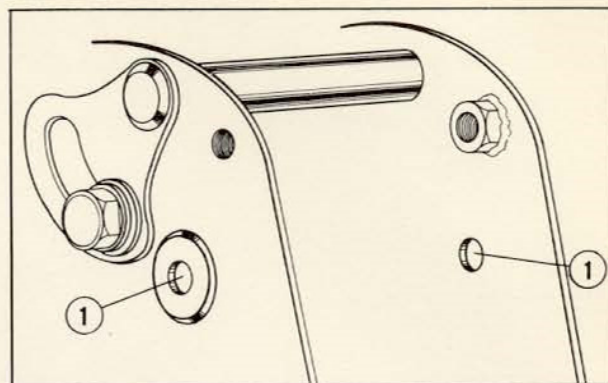


Fig. 6-4

① Muffler mounting hole (frame side)

MEMO:



Fig. 4-1
W. Major modified points of view

1. To show the main part of the machine. 2. To show the main part of the machine. 3. To show the main part of the machine. 4. To show the main part of the machine. 5. To show the main part of the machine. 6. To show the main part of the machine.

View	Scale	Notes
Front	1/2"	1. To show the main part of the machine.
Top	1/2"	2. To show the main part of the machine.
Side	1/2"	3. To show the main part of the machine.
End	1/2"	4. To show the main part of the machine.

5. To show the main part of the machine. 6. To show the main part of the machine. 7. To show the main part of the machine. 8. To show the main part of the machine. 9. To show the main part of the machine. 10. To show the main part of the machine.

SHOP MANUAL

HONDA

ATC70

ADDENDUM SHEET '78

PREFACE

This Service Manual has been prepared as a "SERVICE GUIDANCE" for the mechanics responsible for the upkeep of the HONDA ATC70. Since the model uses the same basic engine as the CT70, it should be used in conjunction with the manuals prepared for the ST50·70/CT70·H for complete information.

It is compiled into six sections and summarizes the procedures for disassembling, inspecting and reassembling the components of the machine. Strict adherence to the instructions given herein will result in better, safer service work.

All information, illustrations and specifications contained herein are based on units manufactured after March of 1973.

HONDA reserves the right to make changes at any time without notice and obligation.

HONDA MOTOR CO., LTD.
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PREFACE

This Service Manual has been prepared as a "SERVICE GUIDE" for the technician responsible for the upkeep of the HONDA ATC90. Since the model uses the same basic engine as the CT90, it should be used in conjunction with the manual prepared for the CT90-70/CT90-80 for complete information.

It is compiled into six sections and summarizes the procedures for disassembling, inspecting and reassembling the components of the machine. Strict adherence to the instructions given herein will result in better, safer service work.

All information, illustrations and specifications contained herein are based on units manufactured after March of 1977.

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This addendum applies to ATC70 ('78).

Engine No. ATC70E- 2000004 and subsequent

Frame No. ATC70- 2000004 and subsequent

1. INSPECTION AND ADJUSTMENT

CARBURETOR IDLE ADJUSTMENT

1. Shift to NEUTRAL and warm the engine to operating temperature.
2. Turn the throttle stop screw as required to obtain an idle speed of $1,500 \pm 100$ rpm.

CARBURETOR FUEL-AIR MIXTURE ADJUSTMENT

1. Shift to NEUTRAL and warm up the engine.
2. Turn the throttle stop screw to obtain the lowest practical idle speed.
3. Turn the pilot screw and obtain the highest idle speed possible with it.
4. Repeat steps 2 and 3.

NOTE:

Turning the pilot screw in produces a lean fuel mixture; turning it out produces a rich fuel mixture.

5. Turn the throttle stop screw as required to obtain the specified idle speed.
6. Operate the throttle slowly and check for smooth engine response.

BRAKE ADJUSTMENT

1. Measure the brake lever free play.

BRAKE LEVER FREE PLAY: 15-20 mm (5/8-3/4 in.)

2. Turn the brake adjusting nut, if adjustment is necessary.

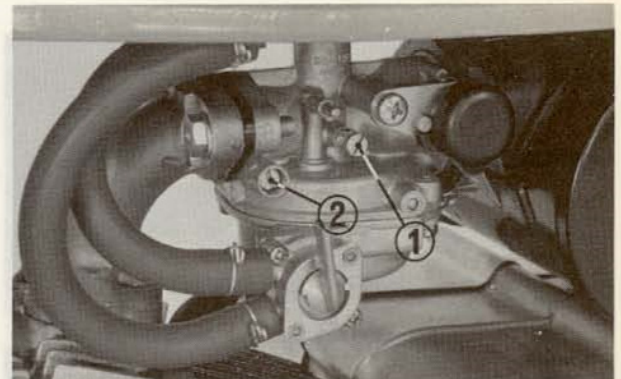


Fig. 1 (1) Throttle stop screw
(2) Pilot screw



Fig. 2

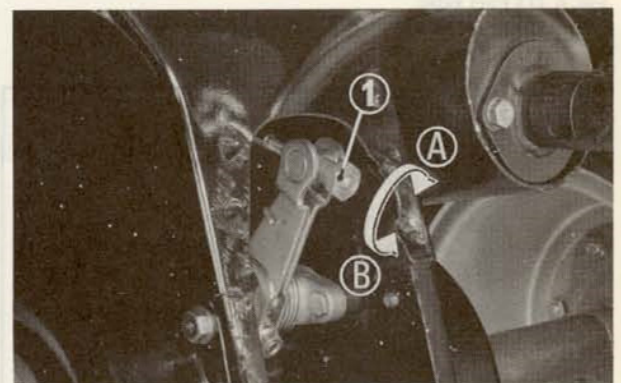


Fig. 3 (1) Brake adjusting nut
(A) Decrease play
(B) Increase play

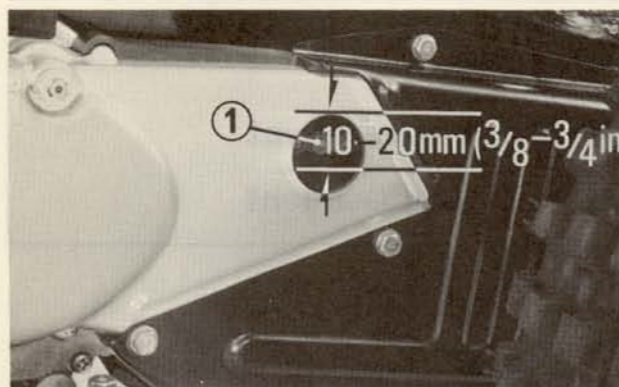
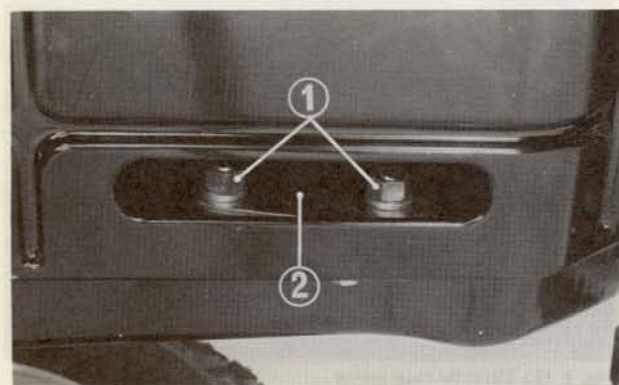


Fig. 4 (1) Drive chain

DRIVE CHAIN TENSION

1. Shift the transmission into neutral.
2. Remove the drive chain inspection cap.
3. Check the drive chain free play.

FREE PLAY: 10-20 mm (3/8-3/4 in.)

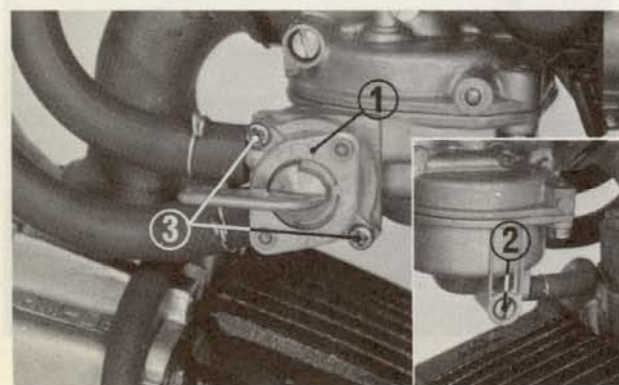
Fig. 5 (1) Lock nuts
(2) Adjuster

4. Adjust by loosening the two adjuster lock nut and moving the adjuster.

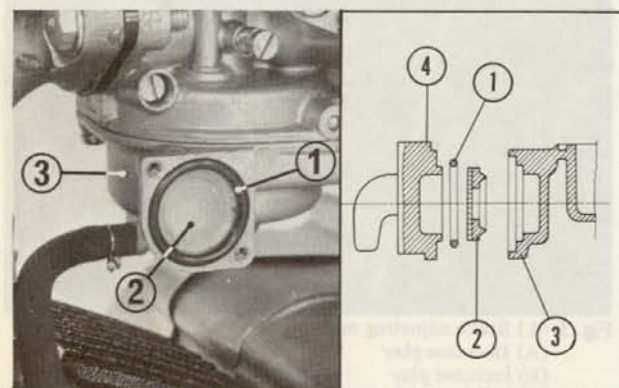
Tighten the lock nuts.

TORQUE: 2.5-3.3 kg-m (18.1-23.8 ft-lbs)

5. Install the inspection cap.

Fig. 6 (1) Fuel valve
(2) Drain screw
(3) Screws**FUEL FILTER CLEANING**

1. Turn the fuel valve to "OFF".
2. Loosen the drain screw to drain gasoline from the carburetor.
3. Remove the two fuel valve screws and fuel valve.

Fig. 7 (1) O-ring
(2) Filter screen
(3) Carburetor
(4) Fuel valve

4. Remove the O-ring and filter screen. Check the filter screen and O-ring for damage.
5. Wash the filter screen in solvent.
6. Install the filter screen, O-ring and fuel valve.

NOTE:

Install the filter screen so that the cupped face is toward the carburetor body, as illustrated.

7. Tighten the drain screw. Turn the fuel valve to "ON" and check for leakage.

2. NEUTRAL INDICATOR

A neutral indicator is installed on the left crankcase cover.

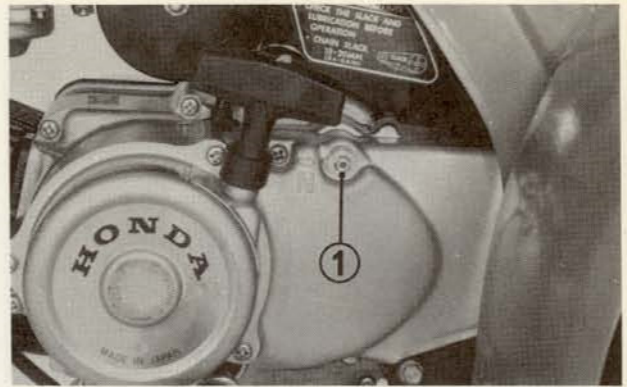


Fig. 8 (1) Neutral indicator

3. ENGINE REMOVAL AND INSTALLATION

REMOVAL

1. Remove the two rear fender mounting nuts, two bolts and rear fender with seat.

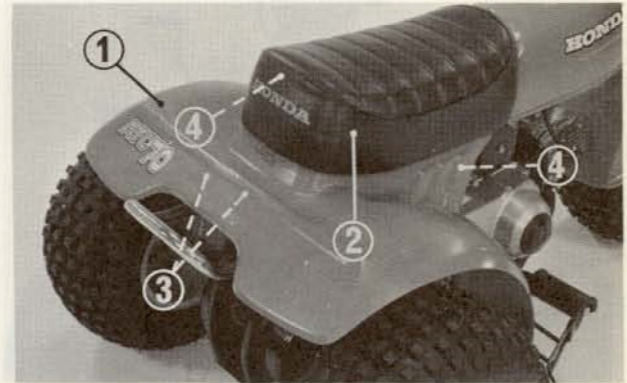


Fig. 9 (1) Rear fender (2) Seat (3) Nuts (4) Bolts

2. Turn the fuel valve to "OFF" and drain the carburetor by loosening the drain screw.
3. Remove the fuel valve from the carburetor.

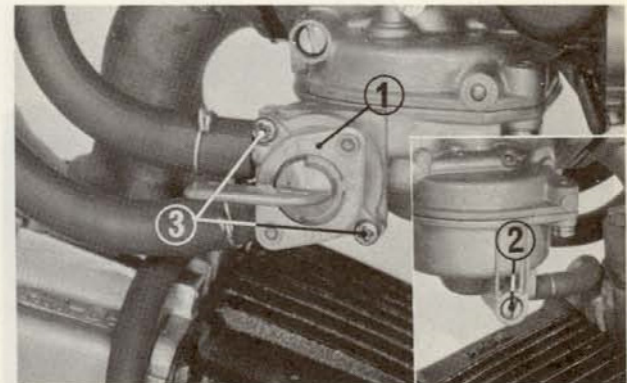


Fig. 10 (1) Fuel valve (2) Drain screw (3) Screws

4. Remove the fuel tank.
5. To aid engine removal, place the machine so that it rests on the rear carry pipe.

NOTE:

Use preventative measures to avoid damaging the pipe.



Fig. 11 (1) Bolt (2) Fuel tank

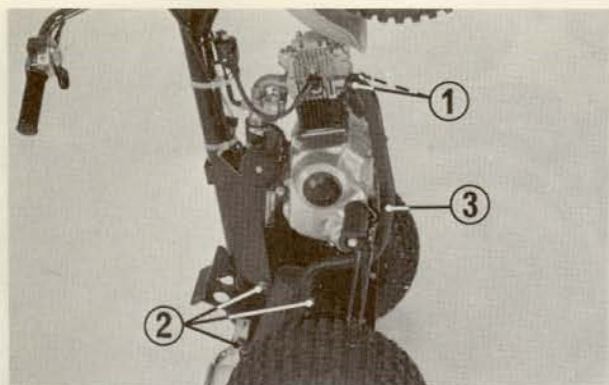


Fig. 12 (1) Nuts
(2) Mounting bolts
(3) Muffler

6. Remove the two exhaust pipe nuts, three muffler mounting bolts and muffler.

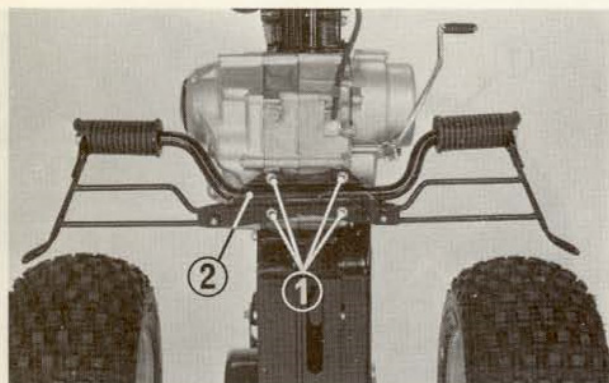


Fig. 13 (1) Bolts
(2) Footpeg assembly

7. Remove the footpeg assembly.

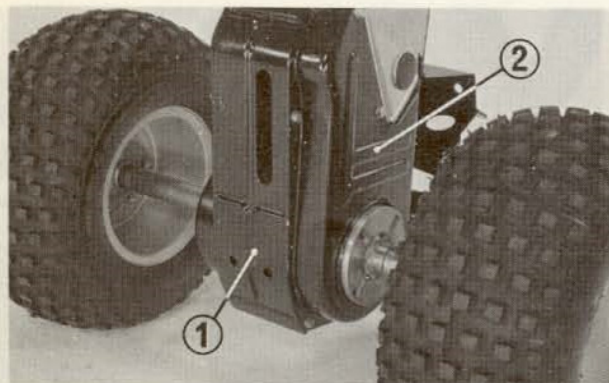


Fig. 14 (1) Under plate
(2) Chain case

8. Remove the under plate and chain case by removing the seven mounting bolts.

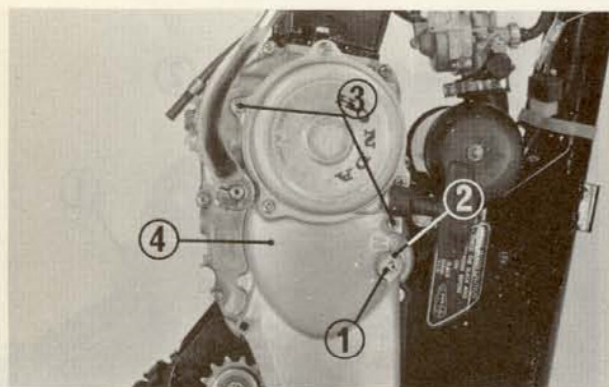


Fig. 15 (1) Clip
(2) Neutral indicator
(3) Screws
(4) Left crankcase cover

9. Shift the transmission into neutral and remove the neutral indicator retaining clip and indicator.
10. Remove the left crankcase cover.

11. Loosen the drive chain tensioner.
12. Remove the drive chain master link retaining clip. Do not bend or twist the clip.
Remove the master link and drive chain.

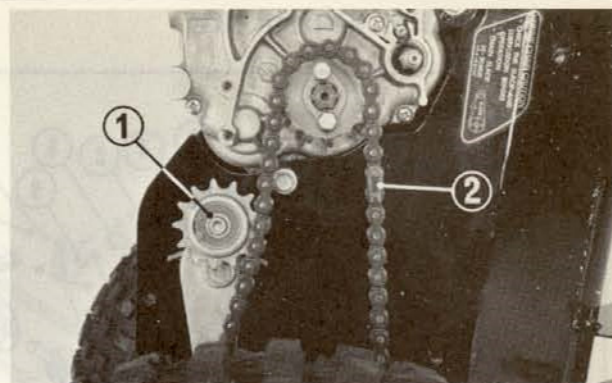


Fig. 16 (1) Drive chain tensioner
(2) Clip

13. Remove the intake pipe.
Remove the spark plug cap.
Disconnect the wire harness leads.

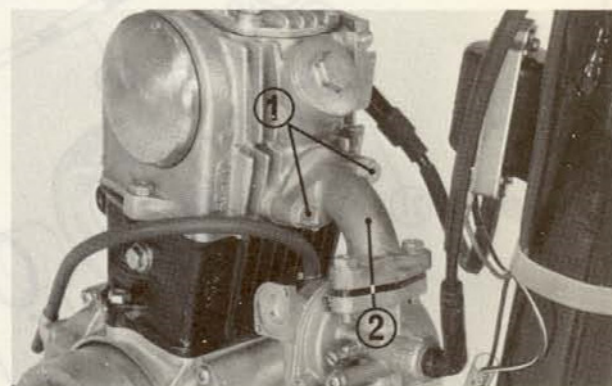


Fig. 17 (1) Bolts
(2) Intake pipe

14. Remove the two engine mounting bolts.
Remove the engine.

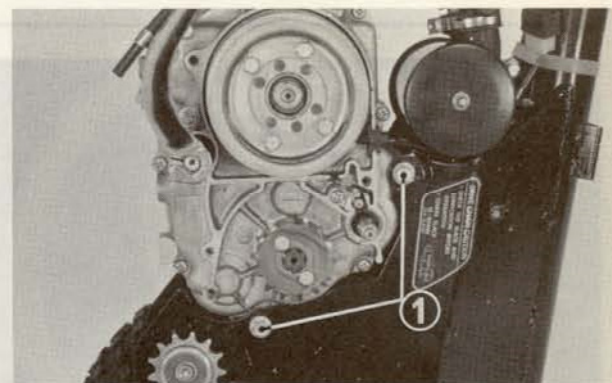


Fig. 18 (1) Mounting bolts

INSTALLATION

The installation sequence is essentially the reverse of removal.

NOTE:

1. Install the master link retaining clip so that the closed end of the clip will face the direction of forward wheel rotation.
2. Tighten each bolt to specification.

TORQUE:

ENGINE MOUNTING BOLTS: 1.9-2.5 kg-m
(13.7-18.1 ft-lbs)

DRIVE CHAIN TENSIONER: 2.5-3.3 kg-m
(18.1-23.9 ft-lbs)

3. After mounting the engine, adjust the drive chain.

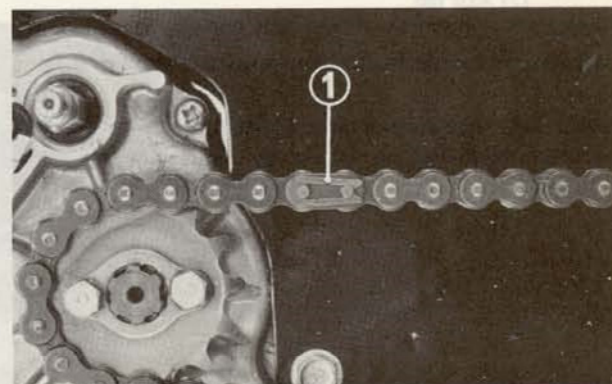


Fig. 19 (1) Retaining clip

4. REAR WHEEL AND BRAKE

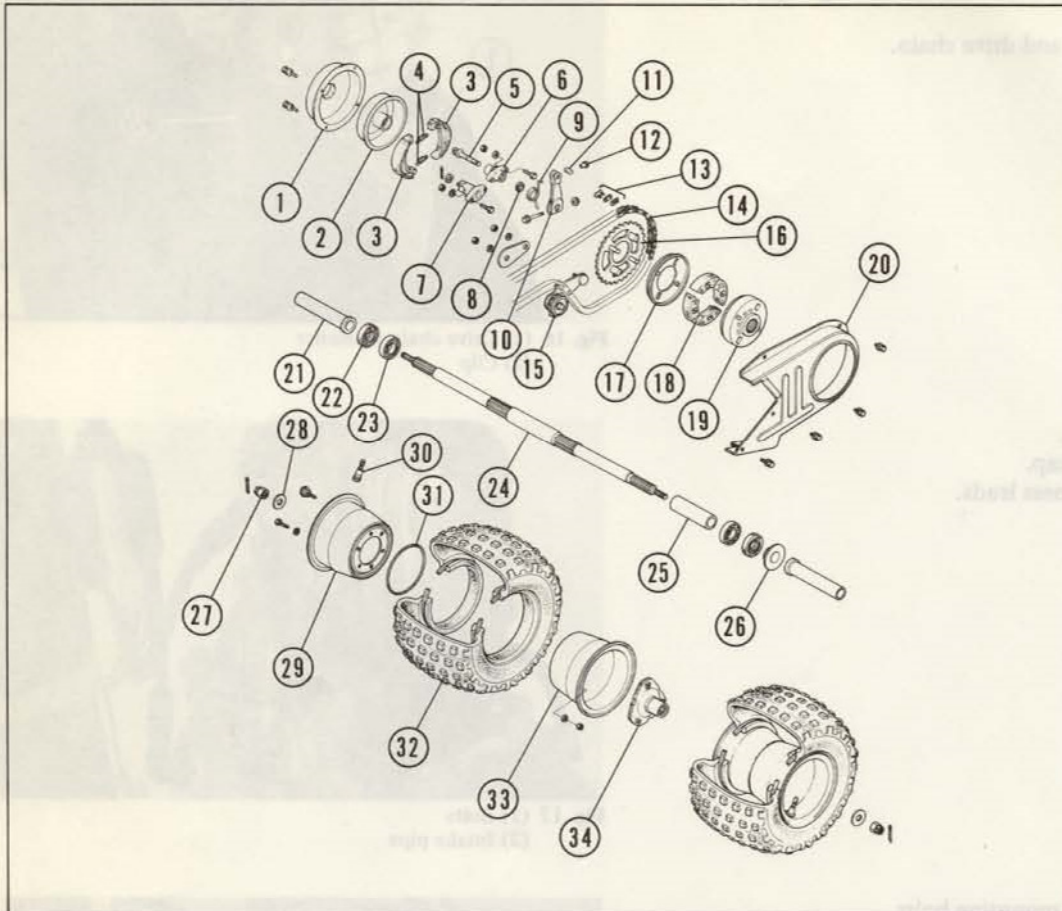
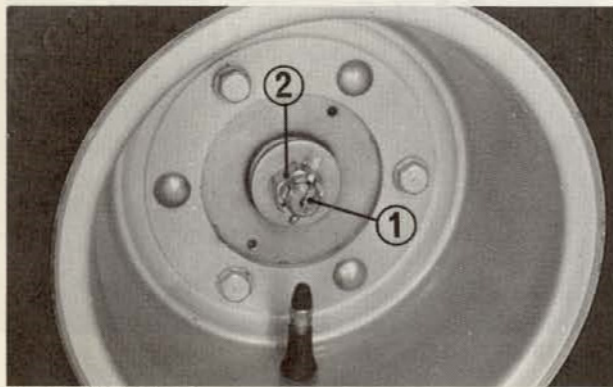


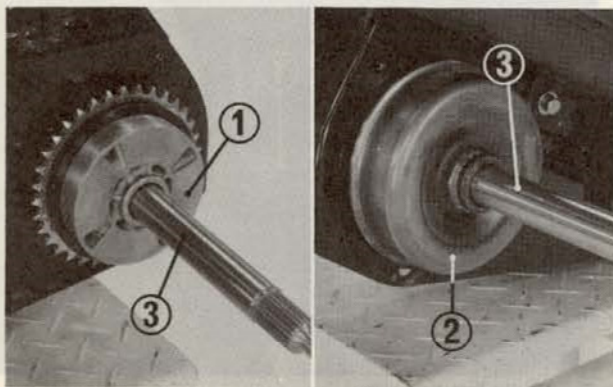
Fig. 20

- (1) Brake drum cover
- (2) Brake drum
- (3) Brake shoes
- (4) Brake shoe springs
- (5) Brake camshaft
- (6) Brake cam holder
- (7) Brake anchor
- (8) Oil felt
- (9) Brake arm return spring
- (10) Brake arm
- (11) Brake arm joint
- (12) Adjusting nut
- (13) Chain master link
- (14) Drive chain
- (15) Chain tensioner
- (16) Driven sprocket
- (17) Damper cover
- (18) Sprocket damper
- (19) Damper case
- (20) Chain case
- (21) Rear axle pipe
- (22) Oil seal
- (23) Ball bearing
- (24) Rear axle
- (25) Distance collar
- (26) Sprocket retainer
- (27) Axle nut
- (28) Washer
- (29) Outer rim
- (30) Stem valve
- (31) Wheel O-ring
- (32) Tire
- (33) Inner rim
- (34) Rear wheel flange

Fig. 21 (1) Cotter pin
(2) Axle nut

DISASSEMBLY

1. Remove the rear fender with seat.
2. Remove the cotter pins and loosen the axle nuts.
3. Place a suitable stand under the footpegs to raise the rear wheels.
4. Remove the axle nuts, rear wheels and axle pipes.
5. Remove the under cover, chain cover and drum cover.
6. Remove the neutral indicator and left crankcase cover.
7. Loosen the drive chain tensioner.
8. Remove the drive chain master link and drive chain.

Fig. 22 (1) Sprocket assembly
(2) Brake drum

(3) Rear axle

9. Slide the sprocket assembly and brake drum off the rear axle.
10. Remove the rear axle.

11. Remove the brake adjusting nut and brake cable.
12. Remove the brake arm locking bolt and nut.
Remove the brake arm and return spring from the brake camshaft.

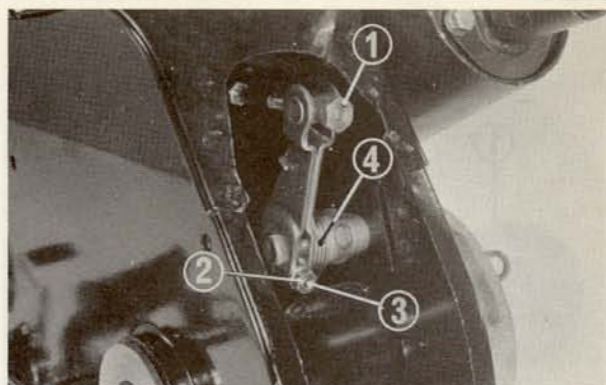


Fig. 23 (1) Adjusting nut (4) Return spring
(2) Lock nut
(3) Bolt

13. Remove the cotter pin and retaining washer from the brake anchor.
14. Remove the brake shoes, shoe springs and brake camshaft as an assembly.

NOTE:

Take care not to damage the oil felt when removing the brake camshaft.

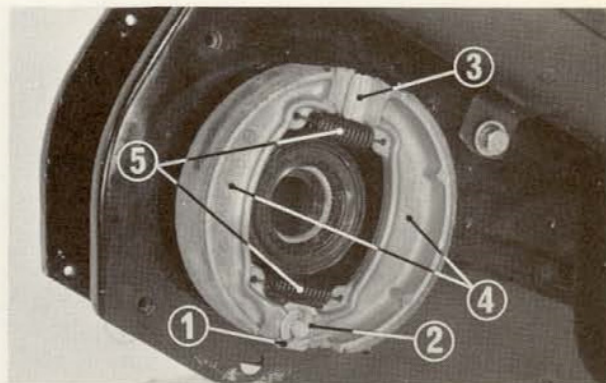


Fig. 24 (1) Cotter pin (4) Brake shoes
(2) Retaining washer (5) Brake shoe springs
(3) Brake camshaft

15. Remove the brake anchor and brake cam holder.

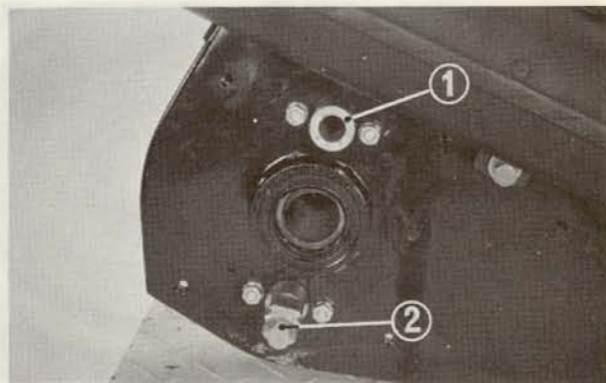


Fig. 25 (1) Brake cam holder
(2) Brake anchor

16. Remove the axle oil seals and bearings from the frame.

NOTE:

Replace the oil seal with a new one if it is removed.

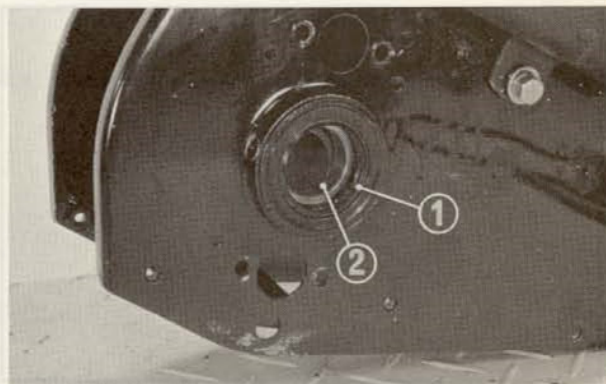


Fig. 26 (1) Oil seal
(2) Bearing

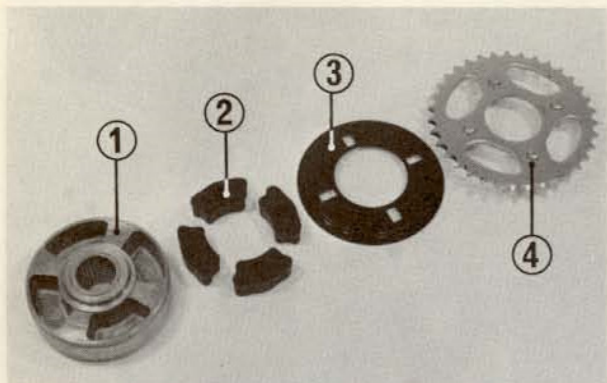


Fig. 27 (1) Damper case
(2) Sprocket damper
(3) Damper cover
(4) Driven sprocket

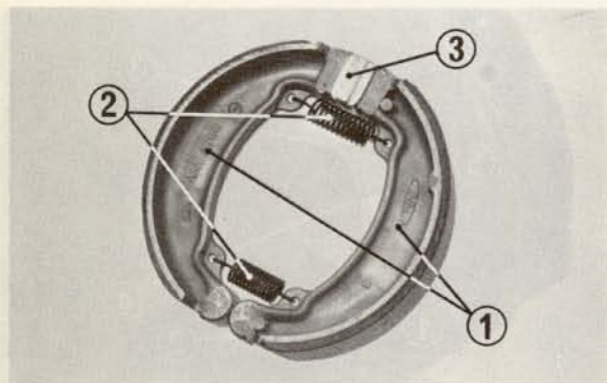


Fig. 28 (1) Brake shoes
(2) Brake shoe springs
(3) Brake camshaft

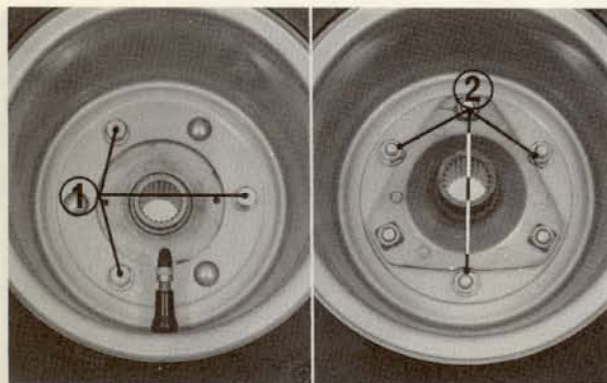


Fig. 29 (1) Rear wheel boss bolts
(2) Nuts for special bolts

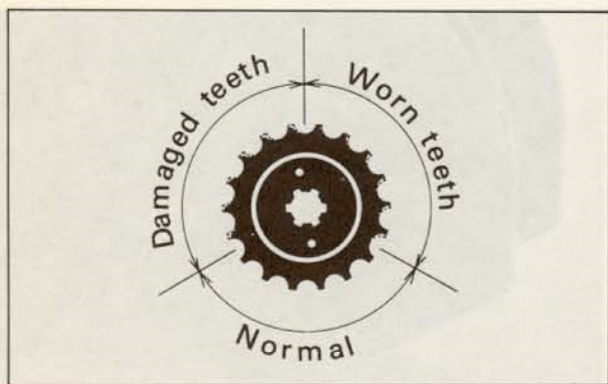


Fig. 30 Sprocket conditions

17. Disassemble the driven sprocket assembly.

18. Separate the brake shoe springs, camshaft, and brake shoes.

19. Rear wheel disassembly
Remove the rear wheel boss.
Remove the three nuts and special bolts.
Refer to page 11 for tire repair.

INSPECTION

1. Check the rear wheel axle for runout.
SERVICE LIMIT: 2.0 mm (0.079 in.)
2. Inspect the lip of the oil seal for wear or damage.
3. Check the drive and driven sprockets for wear or damage.
4. Check the drive chain for wear or damage.
5. Check the wheel bearings for excessive play.
6. Check the sprocket damper rubber for damage or deterioration.
7. Check the brake shoe spring for damage or weakness.

8. Measure the rear brake shoe lining thickness.

STANDARD: 4.0 mm (0.158 in.)

SERVICE LIMIT: 2.0 mm (0.079 in.)

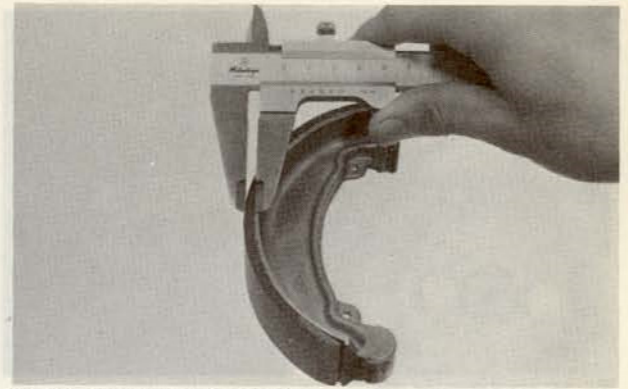


Fig. 31 Measuring lining thickness

9. Measure the brake drum I.D..

STANDARD: 130.00-130.02 mm (5.122-5.125 in.)

SERVICE LIMIT: 131 mm (5.161 in.)

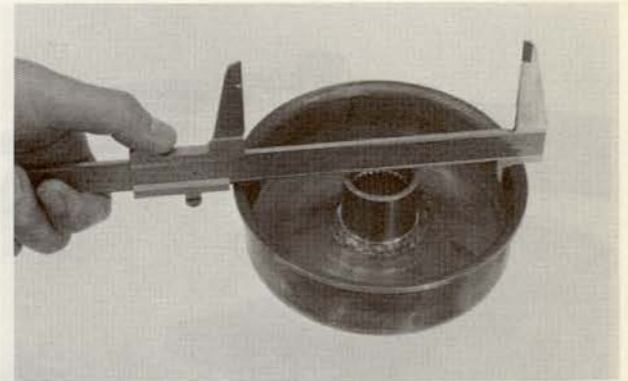


Fig. 32 Measuring brake drum I.D.

ASSEMBLY

The assembly sequence is essentially the reverse of disassembly.

1. Install the brake camshaft so that its punch mark is positioned upward (12 o'clock).

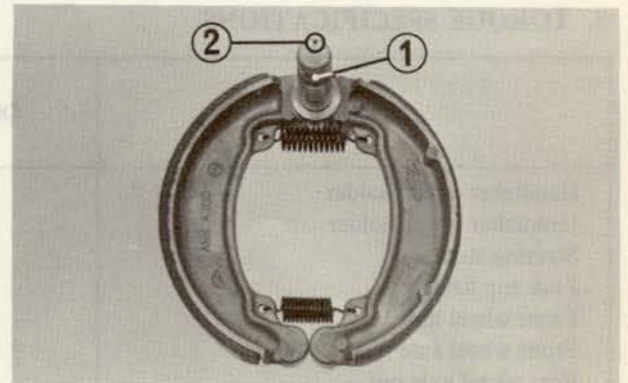


Fig. 33 (1) Camshaft
(2) Punch mark

2. Install the brake anchor and brake cam holder using the correct bolts.

NOTE:

If a longer bolt is used, it will interfere with the brake shoe.

TORQUE: 0.7-1.2 kg-m (5.1-8.7 ft-lbs)

3. Align the brake arm and brake camshaft punch marks and install the brake arm.
Install the brake cable.

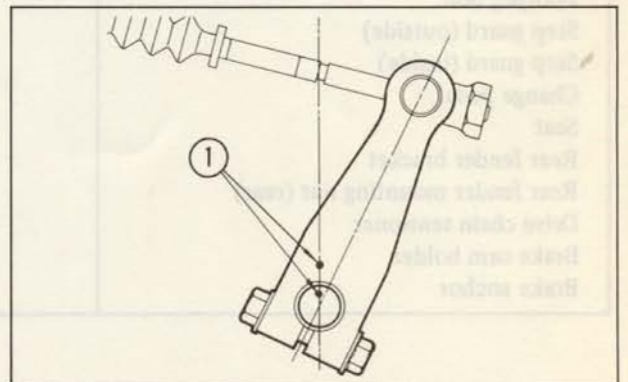


Fig. 34 (1) Punch marks

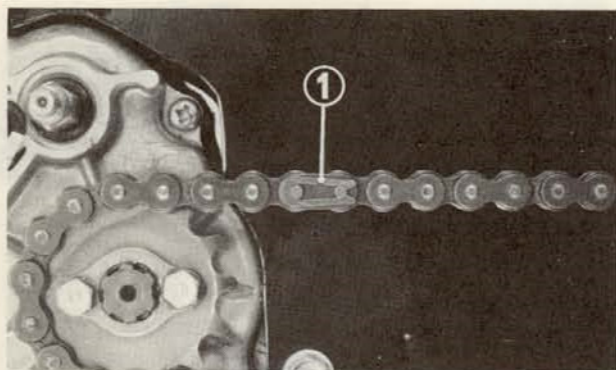


Fig. 35 (1) Retaining clip

4. Install the drive chain. Install the master link retaining clip so that the closed end of the clip will face the direction of forward rotation.
5. Install the rear wheels as follows:
 - 1. Install the rear wheels.
 - 2. Tighten the rear axle nut of one side to 1-2 kg-m (7.2-14.5 ft-lbs) and then loosen it 1/4 turn.
 - 3. Torque the opposite rear axle nut to the specification.
TORQUE: 6.0-8.0 kg-m (43.4-57.8 ft-lbs)
 - 4. Tighten the remaining axle nut to the same torque.
6. After assembly, adjust the drive chain and brake.

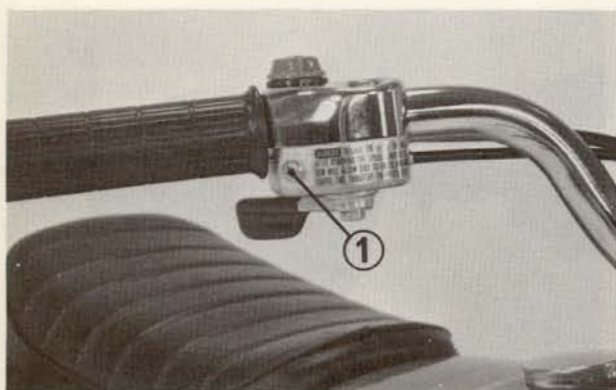


Fig. 36 (1) Speed limiter screw

4. SPEED LIMITER

The throttle lever case is equipped with a speed limiter.

NOTE:

When the machine is used without the speed limiter, plug the speed limiter screw hole to prevent dust and water from entering.

5. TORQUE SPECIFICATIONS

Item	Dia. (mm)	Torque value	
		Kg-m	ft-lbs
Handlebar upper holder	6	0.7-1.2	5.1- 8.7
Handlebar lower holder	10	4.0-4.8	28.9-34.7
Steering stem nut	22	5.0-7.0	36.2-50.6
Fork top bridge	10	4.0-4.8	28.9-34.7
Front wheel hub	8	1.9-2.5	13.7-18.1
Front wheel axle nut	14	6.0-8.0	43.4-57.8
Rear wheel axle nut	14	6.0-8.0	43.4-57.8
Rear wheel boss	8	1.9-2.5	13.7-18.1
Engine mounting bolt	8	1.9-2.5	13.7-18.1
Footpeg bolt	8	1.9-2.5	13.7-18.1
Step guard (outside)	10	4.0-4.8	28.9-34.7
Step guard (inside)	8	1.9-2.5	13.7-18.1
Change pedal	6	0.7-1.2	5.1- 8.7
Seat	6	0.5-0.7	3.6- 5.1
Rear fender bracket	6	0.5-0.7	3.6- 5.1
Rear fender mounting nut (rear)	8	1.4-1.8	10.1-13.0
Drive chain tensioner	10	2.5-3.3	18.1-23.9
Brake cam holder	6	0.7-1.2	5.1- 8.7
Brake anchor	6	0.7-1.2	5.1- 8.7

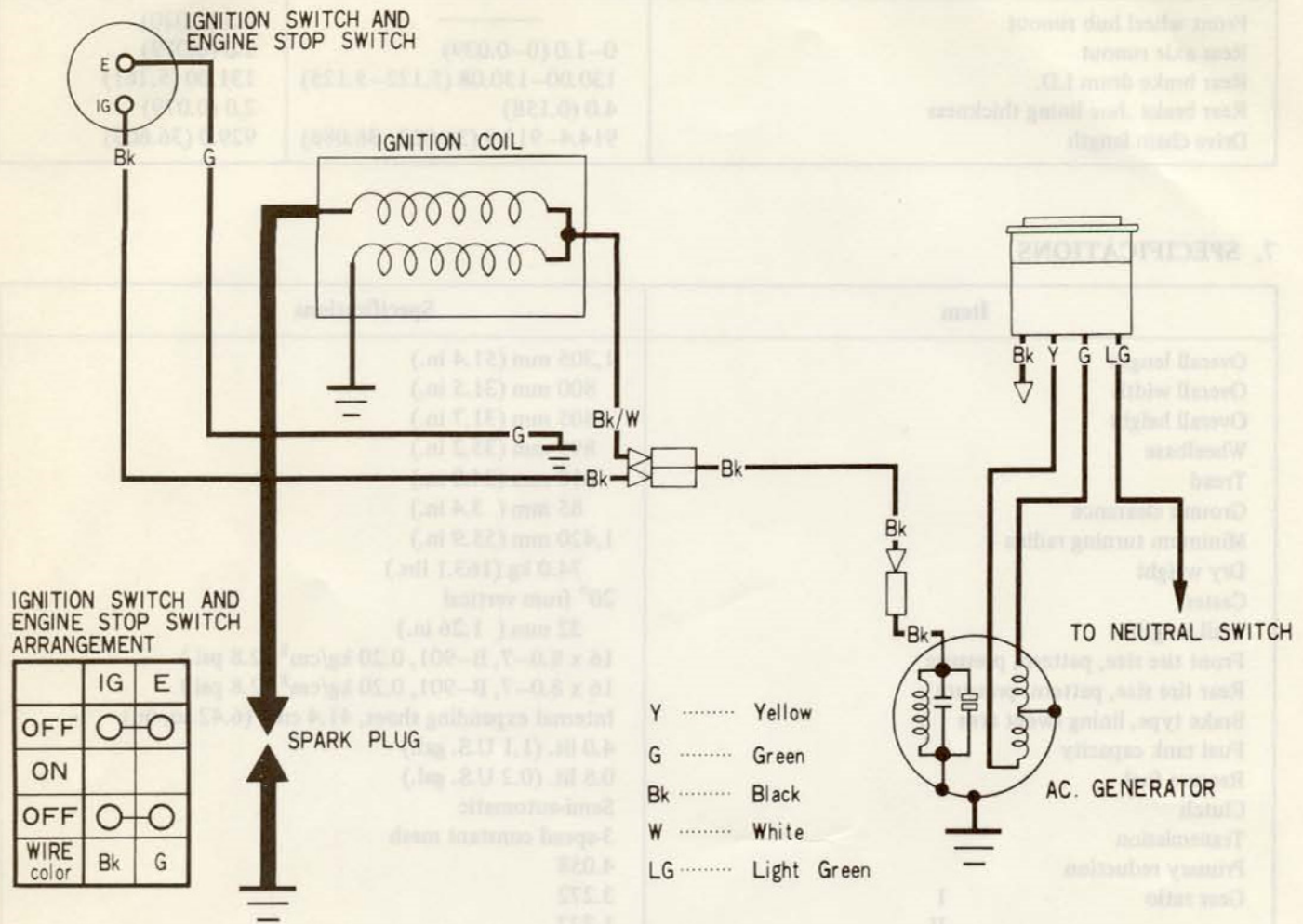
6. SERVICE DATA

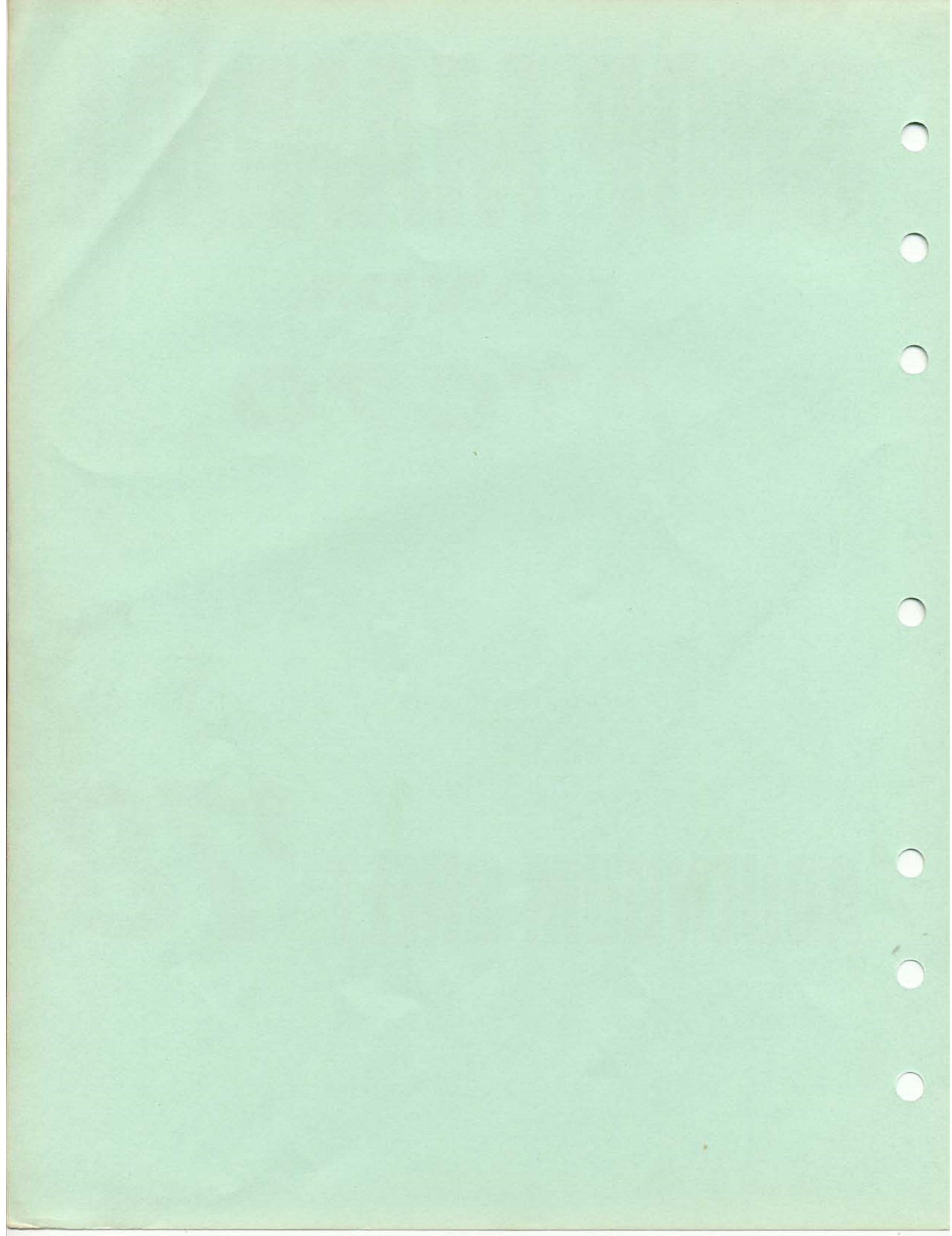
Item	Standard mm (in.)	Service limit mm (in.)
Front wheel hub runout	—	0.5 (0.020)
Rear axle runout	0–1.0 (0–0.039)	2.0 (0.079)
Rear brake drum I.D.	130.00–130.08 (5.122–5.125)	131.00 (5.161)
Rear brake shoe lining thickness	4.0 (0.158)	2.0 (0.079)
Drive chain length	914.4–915.9 (36.027–36.086)	929.0 (36.603)

7. SPECIFICATIONS

Item	Specifications
Overall length	1,305 mm (51.4 in.)
Overall width	800 mm (31.5 in.)
Overall height	805 mm (31.7 in.)
Wheelbase	895 mm (35.2 in.)
Tread	610 mm (24.0 in.)
Ground clearance	85 mm (3.4 in.)
Minimum turning radius	1,420 mm (55.9 in.)
Dry weight	74.0 kg (163.1 lbs.)
Caster	20° from vertical
Trail length	32 mm (1.26 in.)
Front tire size, pattern, pressure	16 x 8.0–7, B–901, 0.20 kg/cm ² (2.8 psi.)
Rear tire size, pattern, pressure	16 x 8.0–7, B–901, 0.20 kg/cm ² (2.8 psi.)
Brake type, lining swept area	Internal expanding shoes, 41.4 cm ² (6.42 sq. in.)
Fuel tank capacity	4.0 lit. (1.1 U.S. gal.)
Reserve fuel	0.8 lit. (0.2 U.S. gal.)
Clutch	Semi-automatic
Transmission	3-speed constant mesh
Primary reduction	4.058
Gear ratio	I 3.272
	II 1.722
	III 1.190
Final reduction	2.500

8. WIRING DIAGRAM





**INTRODUCTION**

This addendum describes the new technical features and servicing procedures for the 1982 Honda ATC70.

Use this addendum with the base ATC70 and CT70 Shop Manuals for complete servicing procedures.

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I. SPECIFICATIONS

DIMENSION	Overall length Overall width Overall height Wheelbase Turning circle Seat height Footpeg height Ground clearance Dry weight Weight distribution dry F/R Curb weight	1,300 mm (51.2 in) 800 mm (31.5 in) 800 mm (31.5 in) 895 mm (35.2 in) 2.8 m (9.3 ft) 570 mm (22.4 in) 180 mm (7.1 in) 85 mm (3.3 in) 77 kg (169.8 lb) 30/47 kg (66.1/103.6 lb) 80 kg (176.4 lb)
FRAME	Type Front tire size, type, pressure Rear tire size, type, pressure Brake type, lining area Fuel capacity Fuel reserve capacity Caster angle Trail length	Backbone 16x8-7, ATV tire, 0.15 kg/cm ² (2.2 psi) 16x8-7, ATV tire, 0.15 kg/cm ² (2.2 psi) Internal expanding shoes, 122 cm ² (19.0 sq in) 4.3 liters (1.1 U.S. gal) 0.8 liters (0.2 U.S. gal) 70° 32 mm (1.26 in)
ENGINE	Type Cylinder arrangement Bore and stroke Displacement Compression ratio Valve train Maximum horsepower Maximum torque Oil capacity Lubrication system Valve tappet clearance Engine weight (dry)	Air cooled 4-stroke O.H.C. engine Single cylinder 75° inclined from vertical 47.0 x 41.4 mm (1.85 x 1.63 in) 72 cc (4.4 cu in) 7.5:1 Chain driven overhead camshaft 3.4 BHP 9,000 rpm (SAE 245) 0.42 kg-m/3,000 rpm (3.04 lb-ft/3,000 rpm) 0.8 liters (0.8 U.S. qt) Forced and wet sump INTAKE, EXHAUST: 0.05 mm (0.002 in) 18.2 kg (40.1 lb)
DRIVE TRAIN	Clutch Transmission Primary reduction Gear ratio I Gear ratio II Gear ratio III Gear ratio IV Final reduction	Wet, multi-plate centrifugal type 4-speed constant mesh, semi-automatic 4.058 3.273 1.938 1.350 1.043 2.769, drive sprocket 13T, driven sprocket 36T
ELECTRICAL	Ignition Starting system Alternator Spark plug	Flywheel magneto Recoil starter A.C. generator CR7HS NGK, U22FSR-L ND



INSPECTION & ADJUSTMENT

SPARK PLUG

REPLACEMENT AND ADJUSTMENT

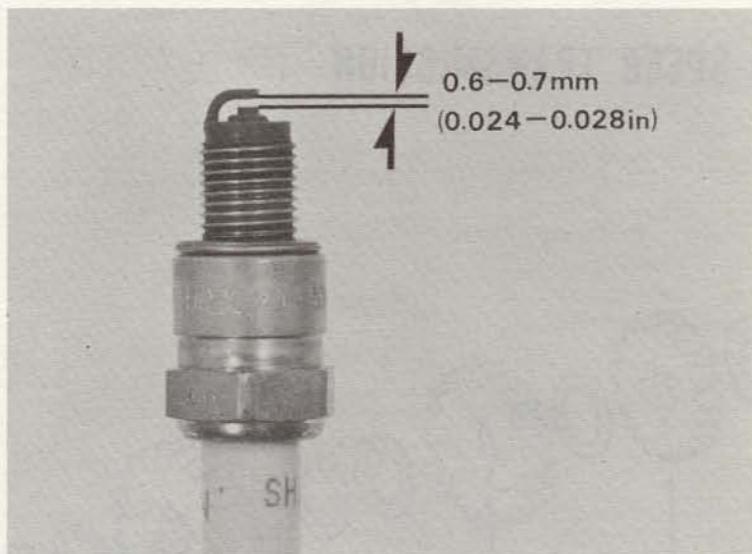
Spark plugs for 1982 are resistor-type plugs. Refer to the chart below for the proper spark plug heat range and gap.

RECOMMENDED SPARK PLUG

Standard	CR7HS (NGK) U22FSR-L (ND)
For cold climate below 41°F (5°C)	CR6HS (NGK) U20FSR-L (ND)
For extended high speed riding	CR8HS (NGK) U24FSR-L (ND)

SPARK PLUG GAP:

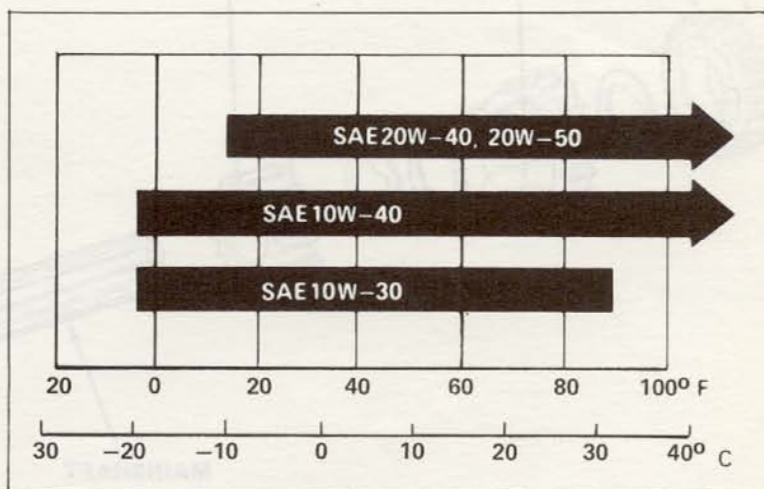
0.6–0.7 mm (0.024–0.028 in)



OIL RECOMMENDATION

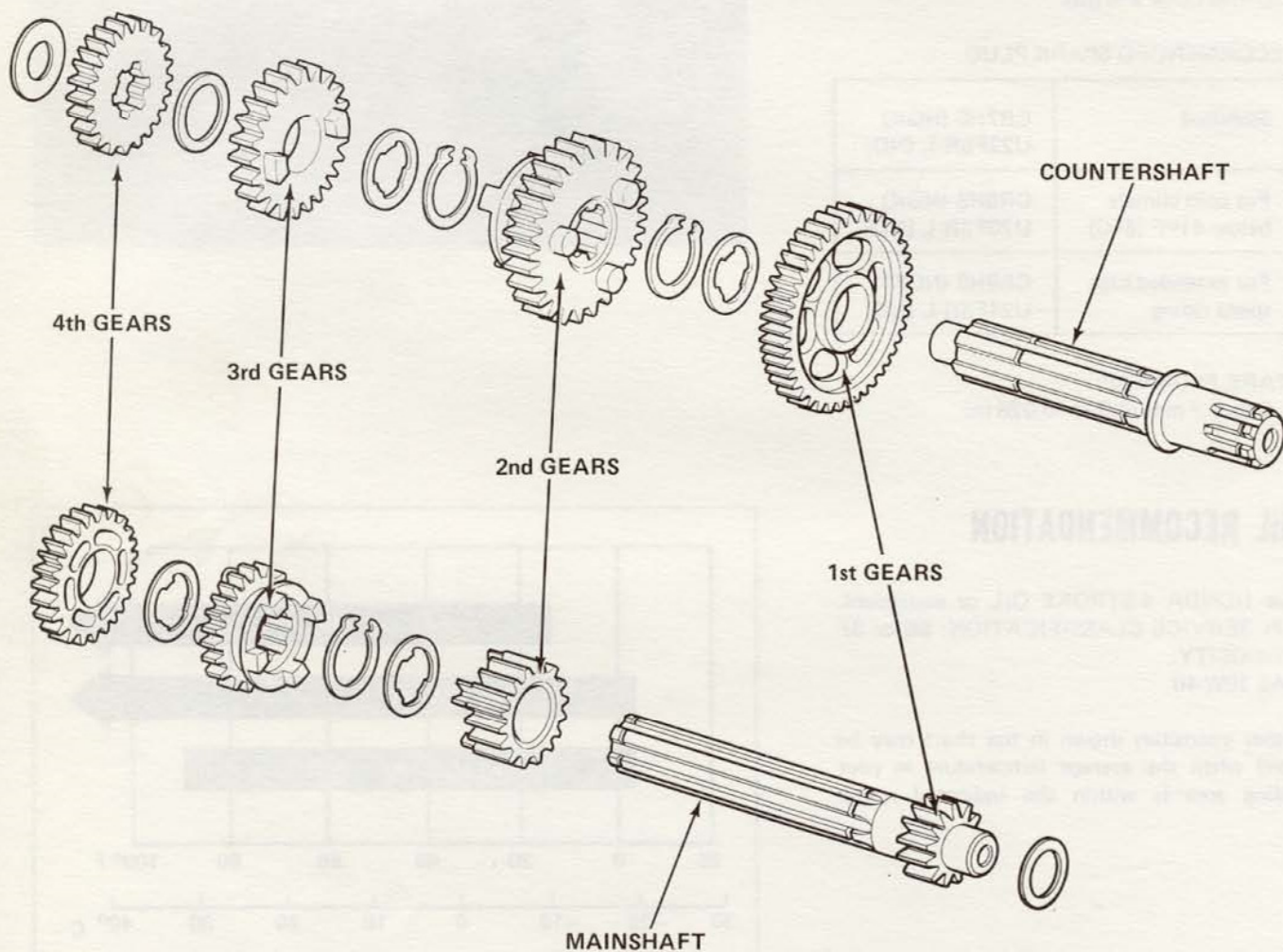
Use HONDA 4-STROKE OIL or equivalent.
API SERVICE CLASSIFICATION: SE or SF
VISCOSITY:
SAE 10W-40

Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.





4-SPEED TRANSMISSION





III. TRANSMISSION

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GENERAL INSTRUCTIONS

- The ATC70's transmission has been changed from a 3-speed to a 4-speed.
- To service the transmission, the following parts must be removed (refer to the CT70 Shop Manual on the pages indicated for the procedures).
 - flywheel (page 15)
 - cylinder head (page 16)
 - cylinder (page 16)



GEARSHIFT LINKAGE DISASSEMBLY AND OIL PUMP REMOVAL

Remove the clutch (page 24 CT70 Shop Manual).

Remove the primary driven gear.

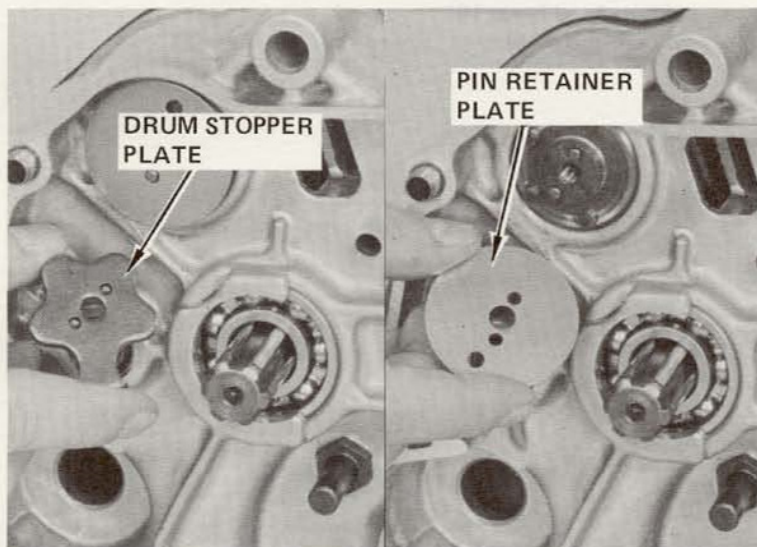
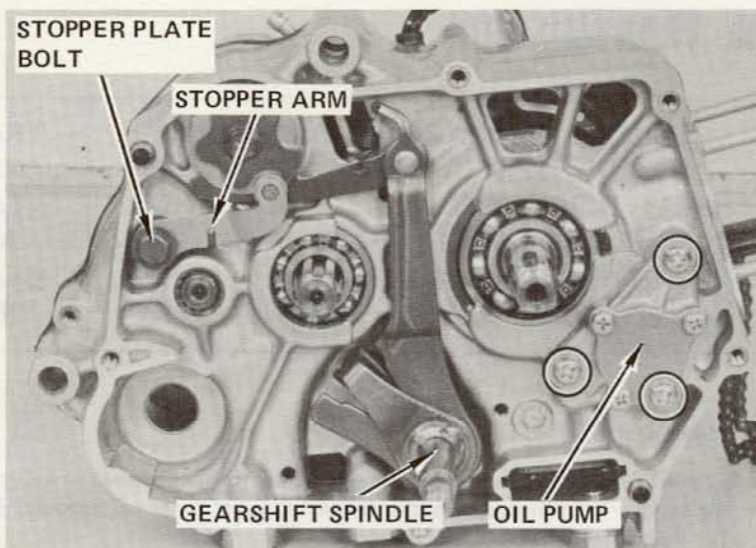
Remove the gearshift spindle and gearshift return spring.

Remove the stopper plate bolt.

Remove the shift drum stopper arm.

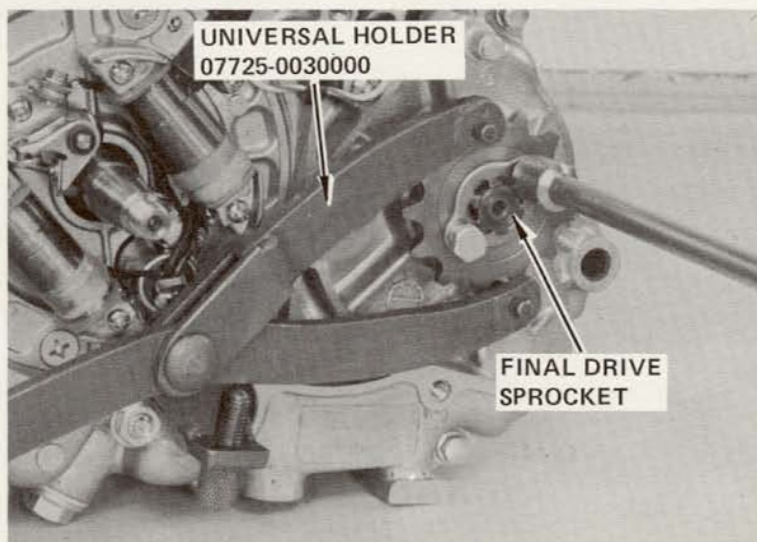
Remove the oil pump assembly.

Remove the drum stopper plate and the pin retainer plate.



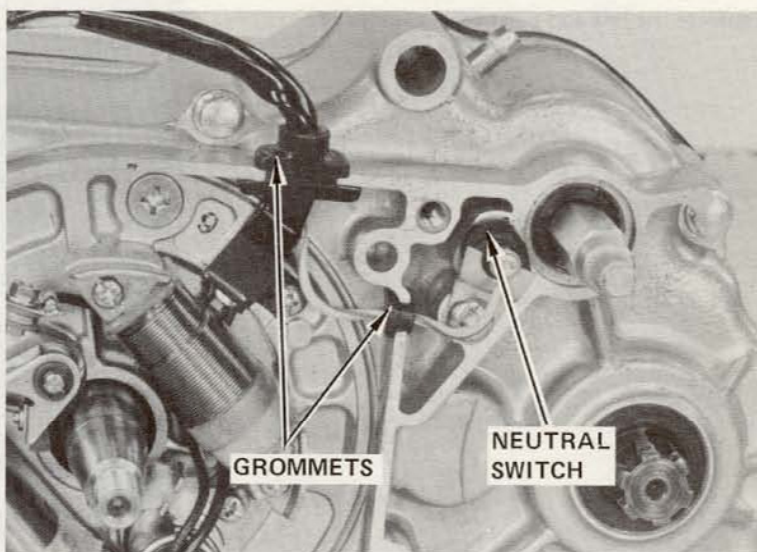
STATOR REMOVAL

Remove the final drive sprocket.

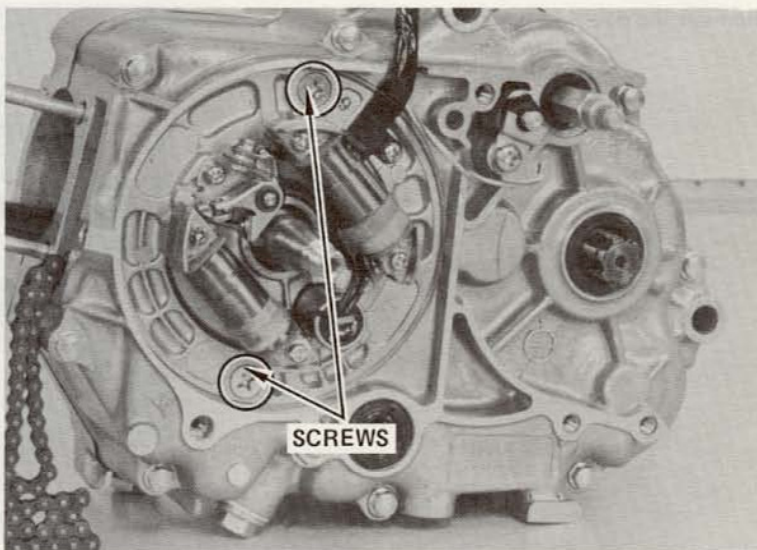




- Remove the wire from the neutral switch and the grommet from the crankcase.
- Remove the stator wire's grommet from the crankcase.



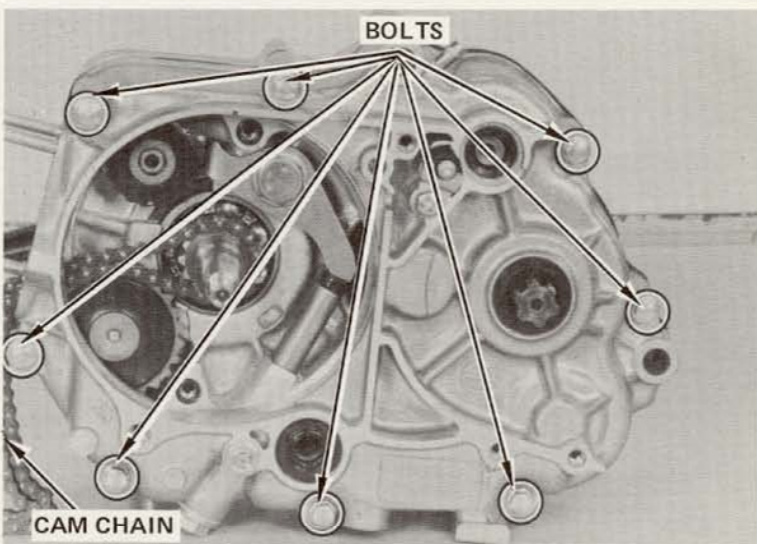
Remove the two screws and the stator assembly.



CRANKCASE DISASSEMBLY

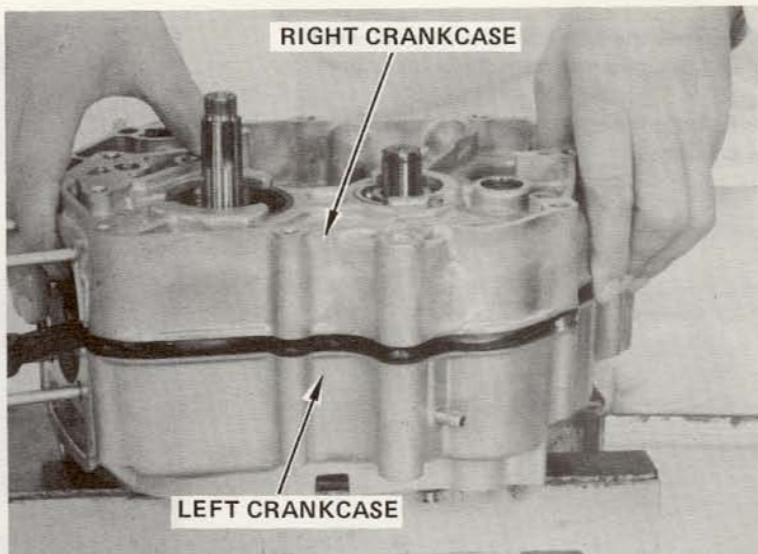
Remove the cam chain.

Remove the eight crankcase bolts.

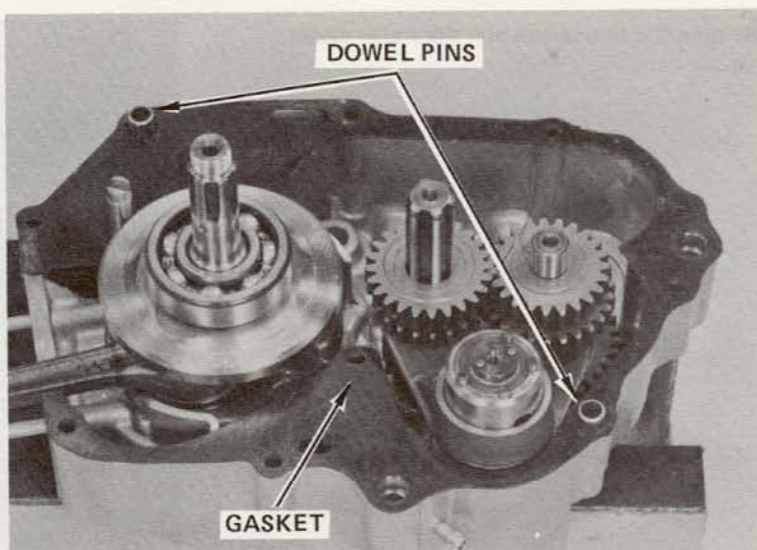




Separate the left and right crankcase halves.



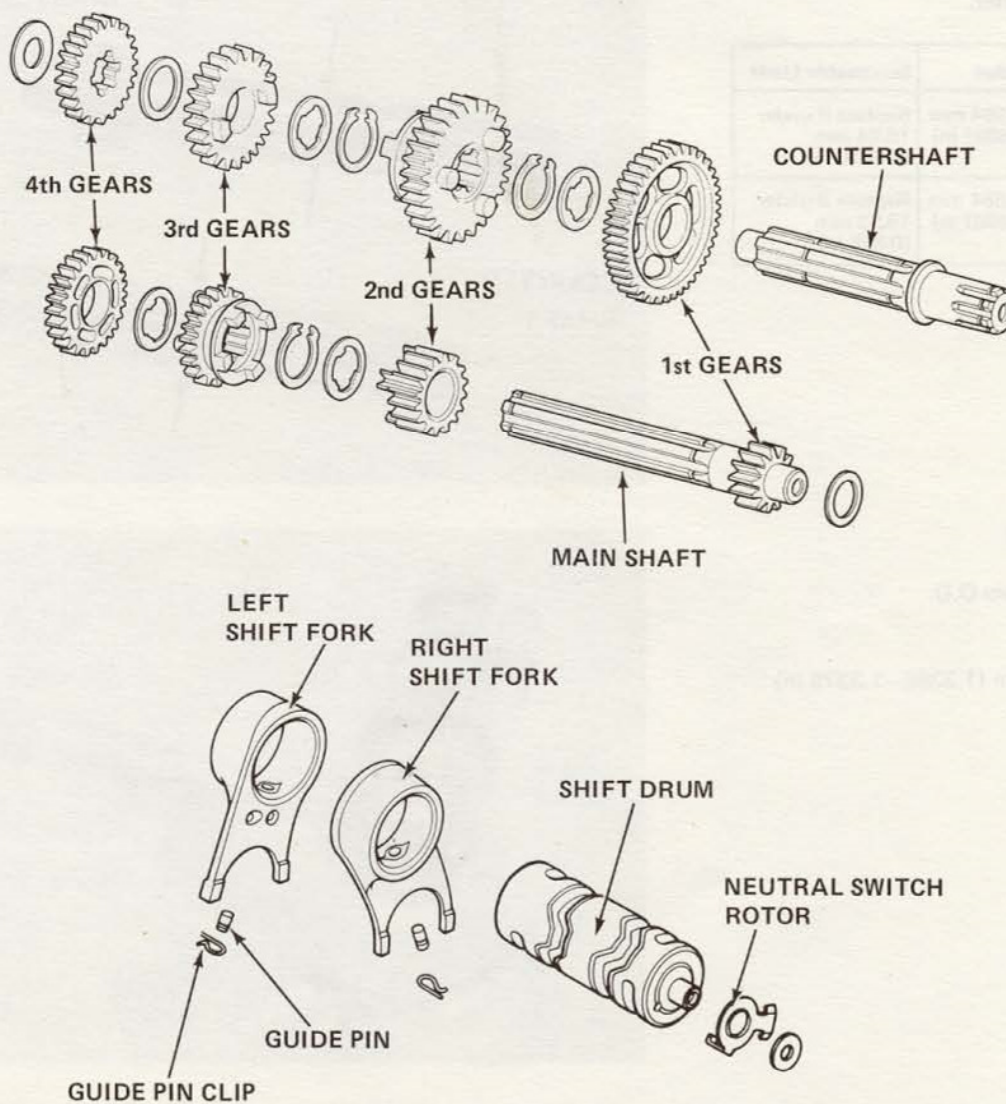
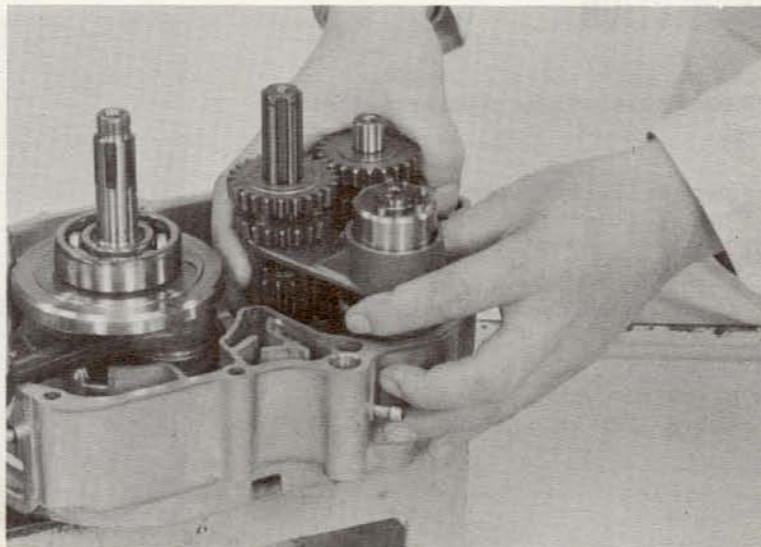
Remove the dowel pins and gasket.





TRANSMISSION DISASSEMBLY

Remove and disassemble the transmission assembly as shown.





INSPECTION

Check the gear dogs for excessive or abnormal wear.

Inspect the I.D. of each gear:

Mainshaft

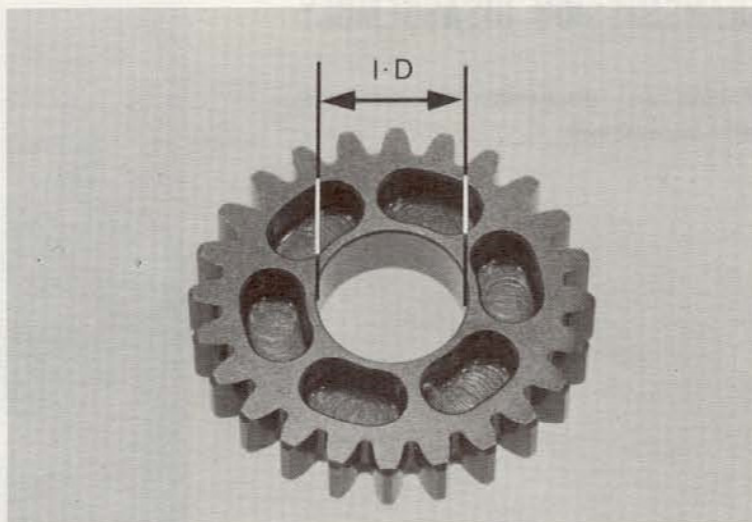
Second gear, fourth gear:

17.016–17.043 mm (0.6700–0.6710 in)

Countershaft

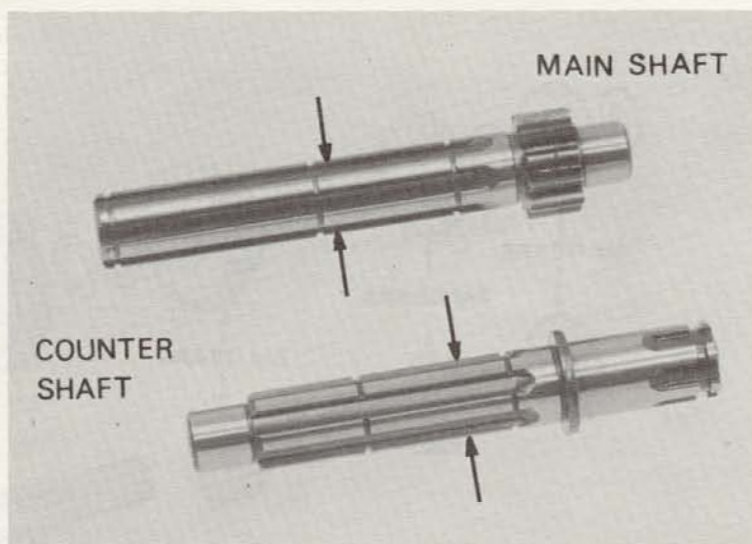
First gear, third gear:

17.016–17.043 mm (0.6700–0.6710 in)



Measure the O.D. of the main and countershaft with a micrometer.

Item	Standard Value	Serviceable Limit
Main shaft	16.983–16.994 mm (0.6686–0.6691 in)	Replace if under 16.94 mm (0.6670 in)
Counter shaft	16.966–16.984 mm (0.6680–0.6687 in)	Replace if under 16.92 mm (0.666 in)



GEARSHIFT DRUM

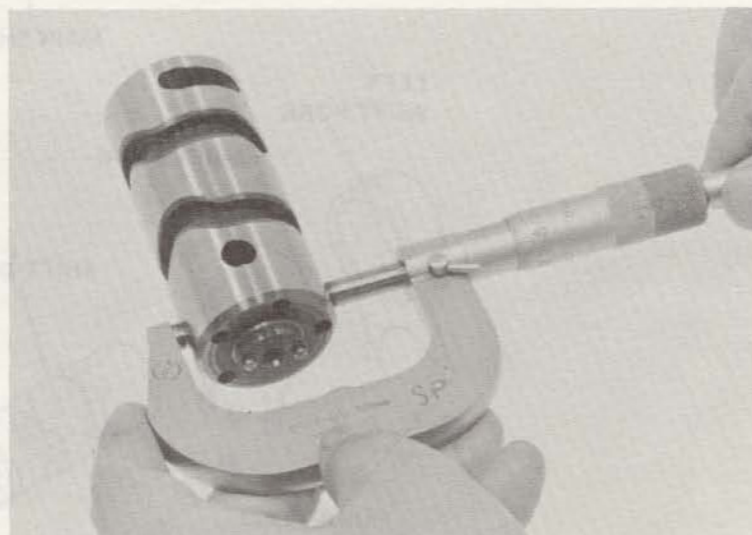
Measure the shift drum O.D.

STANDARD:

33.950–33.975 mm (1.3366–1.3376 in)

SERVICE LIMIT:

33.93 (1.336 in)





SHIFT FORK

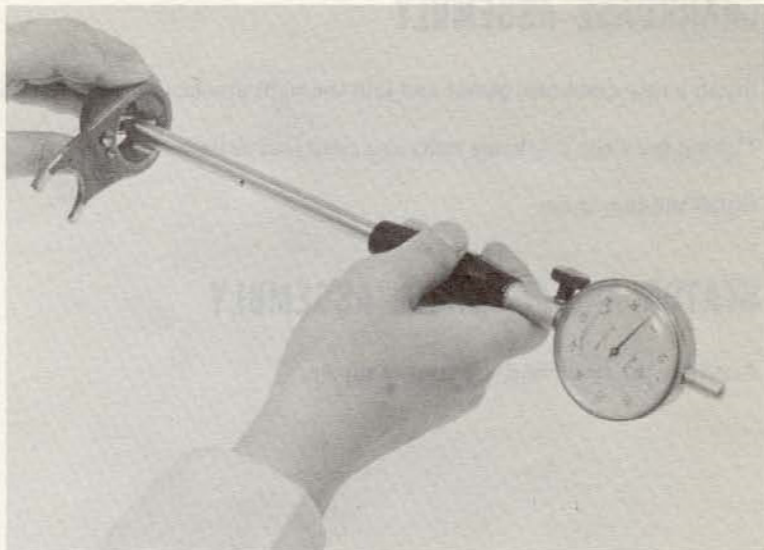
Measure the shift fork I.D.

STANDARD:

34.000–34.025 mm (1.3386–1.3396 in)

SERVICE LIMIT:

34.14 mm (1.344 in)



Measure the shift fork claw thickness.

STANDARD:

4.86–4.94 mm (0.191–0.195 in)

SERVICE LIMIT:

4.6 mm (0.18 in)



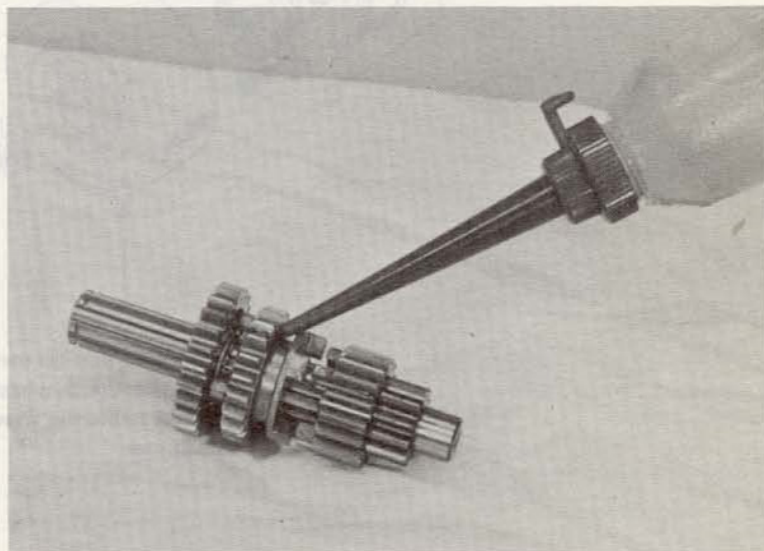
TRANSMISSION ASSEMBLY

Reassemble the gears on their shafts.

Install the gear and shaft assemblies with the shift drum in the left crankcase half.

Apply oil to the gears.

Make sure the gears rotate freely.





CRANKCASE ASSEMBLY

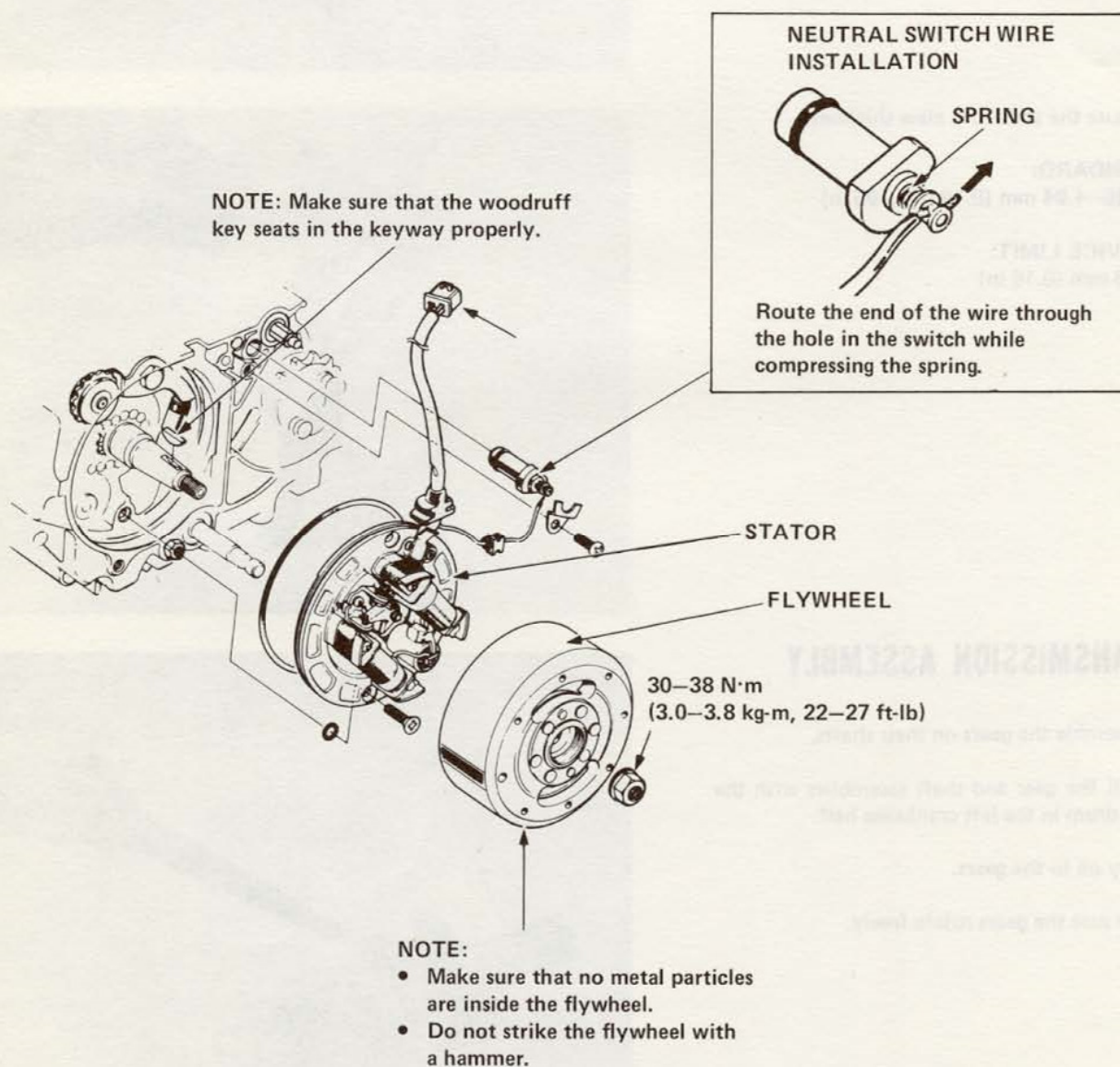
Install a new crankcase gasket and join the right crankcase to the left half.

Tighten the eight crankcase bolts in a crisscross pattern.

Install the cam chain.

STATOR AND FLYWHEEL ASSEMBLY

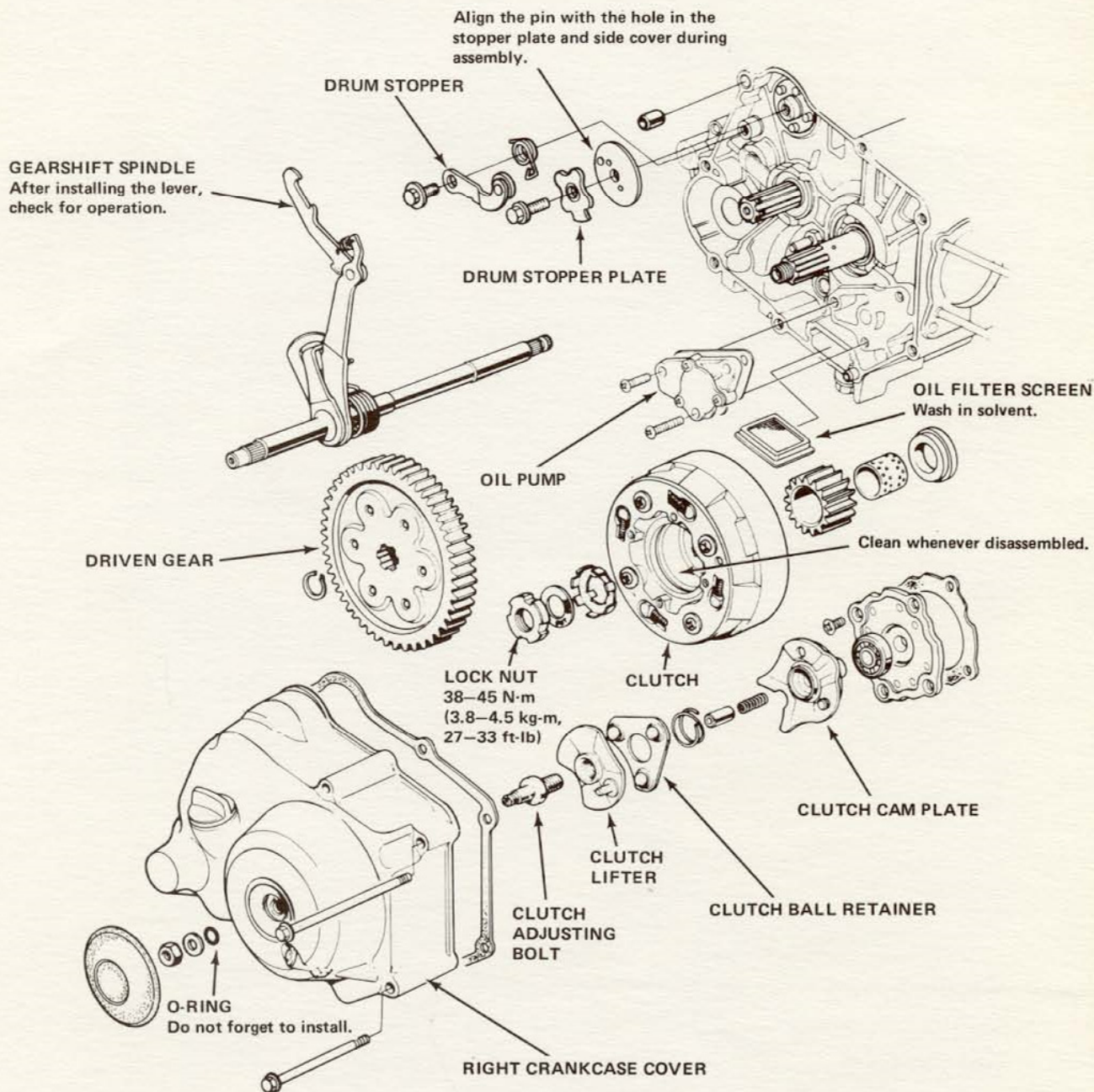
Assemble the stator and flywheel as shown.





GEARSHIFT LINKAGE AND OIL PUMP ASSEMBLY

Reassemble the gearshift linkage and oil pump as shown.





INTRODUCTION

This addendum describes the new technical features and servicing procedures for the 1983 and 1984 Honda ATC70.

Use this addendum with the base ATC70 and CT70 Shop Manuals for complete servicing procedures.

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. HONDA MOTOR CO., LTD. RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION WHATEVER.

NO PART OF THIS PUBLICATION MAY BE REPRODUCED WITHOUT WRITTEN PERMISSION.

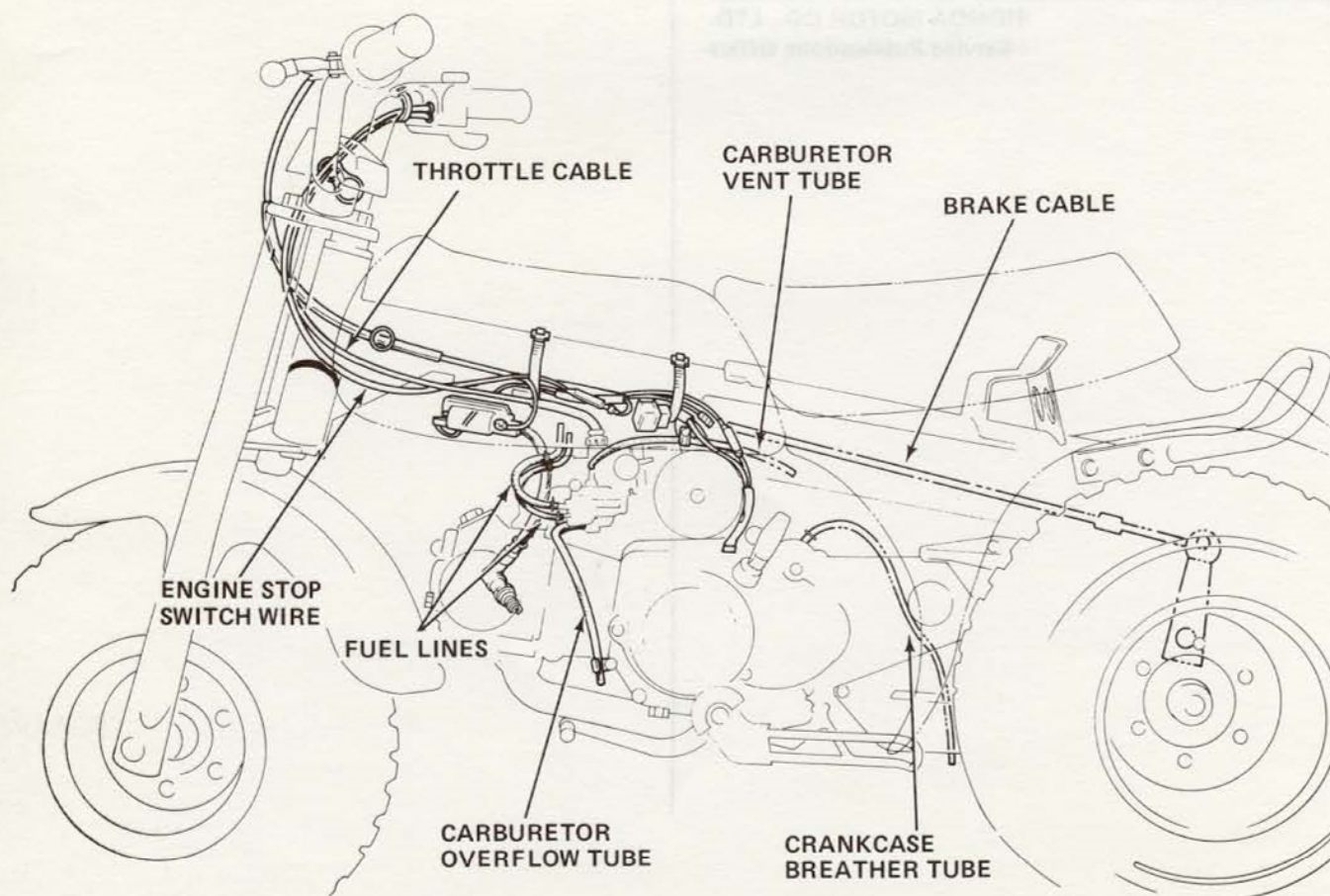
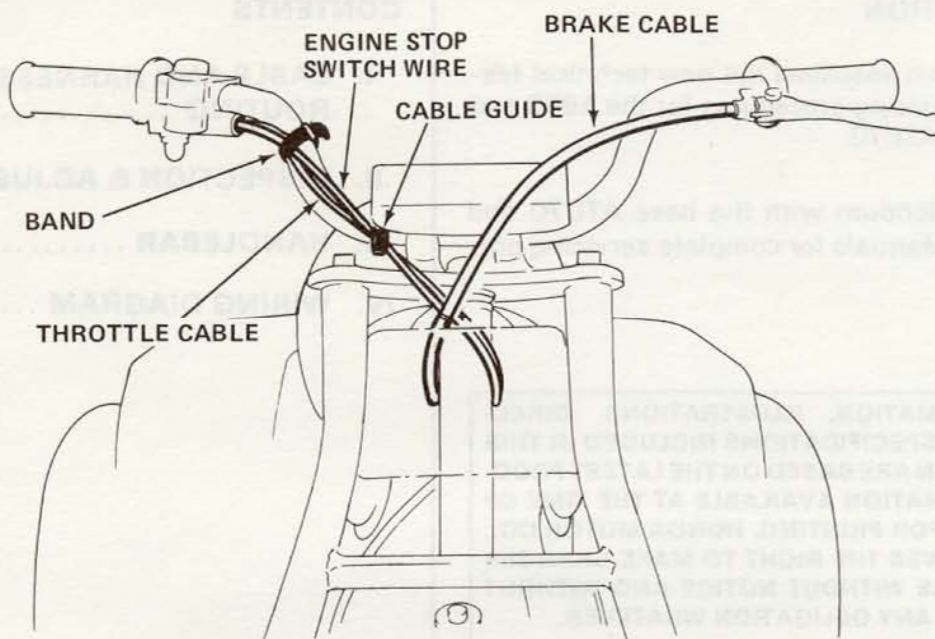
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Service Publications Office

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II. INSPECTION & ADJUSTMENT	63
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IV. WIRING DIAGRAM	66



I. CABLE AND HARNESS ROUTING



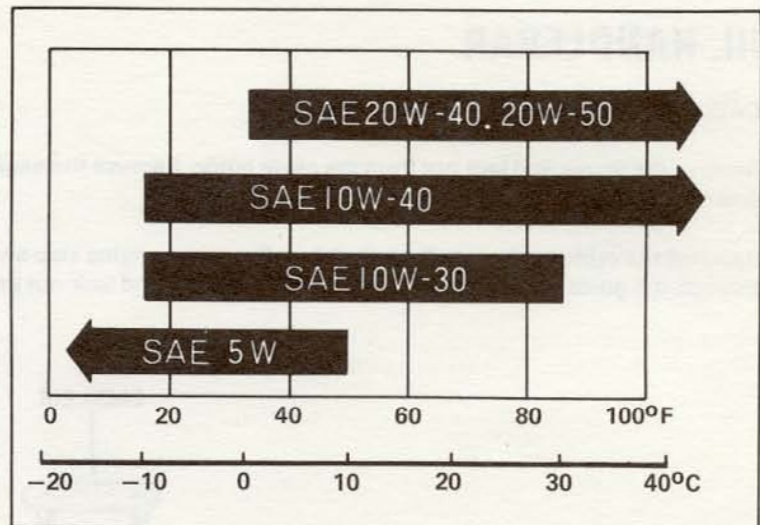


II. INSPECTION & ADJUSTMENT

OIL RECOMMENDATION

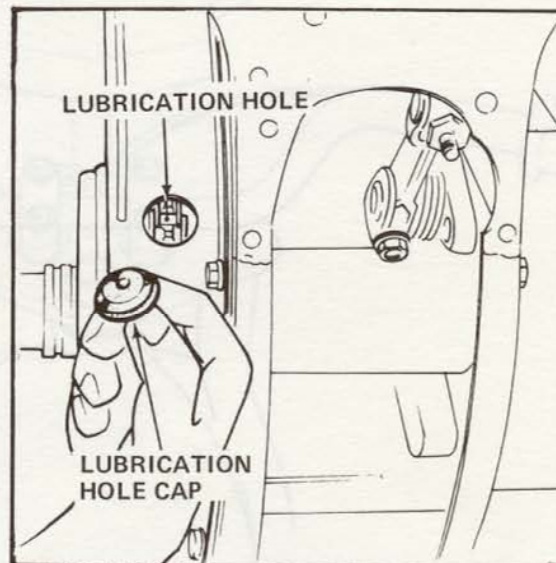
Use Honda 4-Stroke Oil or an equivalent
API SERVICE CLASSIFICATION: SE or SF
VISCOSITY: SAE 10W-40

Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range.



DRIVE CHAIN LUBRICATION

Remove the lubrication hole cap and lubricate the drive chain with a commercially prepared chain lubricant. Then reinstall the cap.



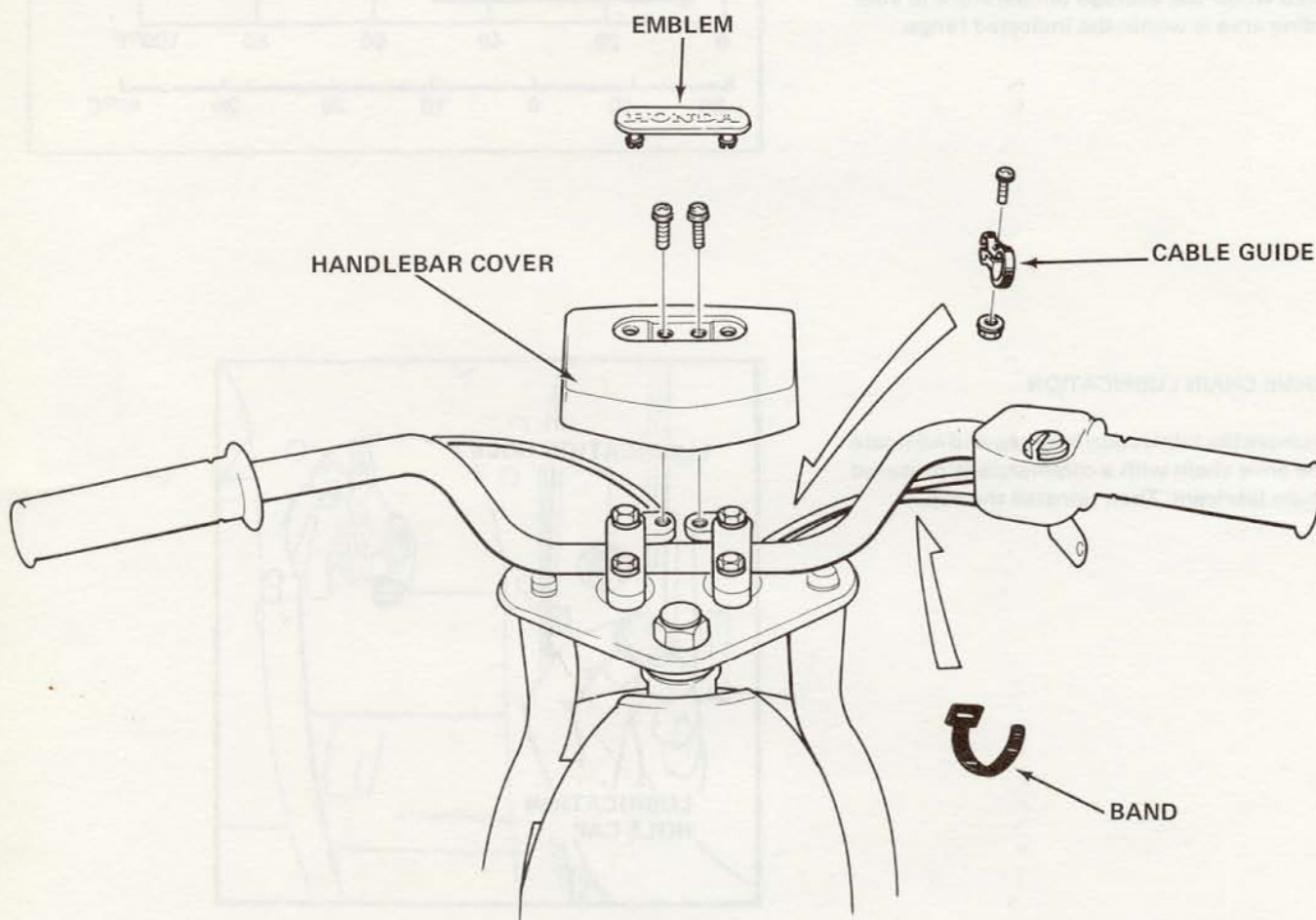


III. HANDLEBAR

CABLE GUIDE REMOVAL AND INSTALLATION

Remove the screw and lock nut from the cable guide. Remove the engine stop switch wire and throttle cable from the guide and remove the guide.

Reinstall the cable guide onto the handlebar. Route the engine stop switch wire and throttle cable along the handlebar and through the guide. Then tighten the cable guide screw and lock nut and install the band.





REAR BRAKE LEVER LOCK MECHANISM

1984 — :

DISASSEMBLY

Loosen the rear brake adjuster nut.

Remove the brake lock lever and spring.

Disconnect the brake cable.

Remove the brake lever.

ASSEMBLY

Install the brake lever.

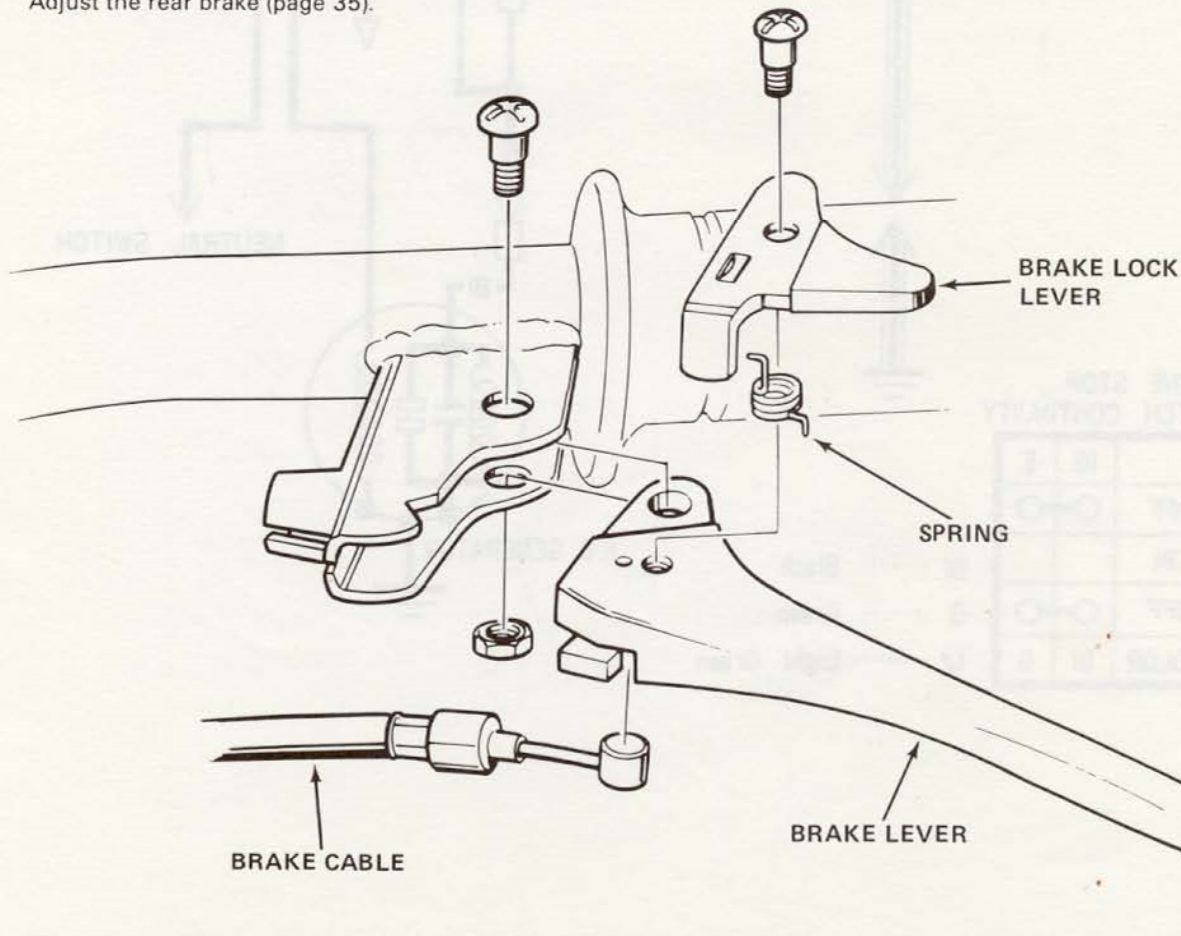
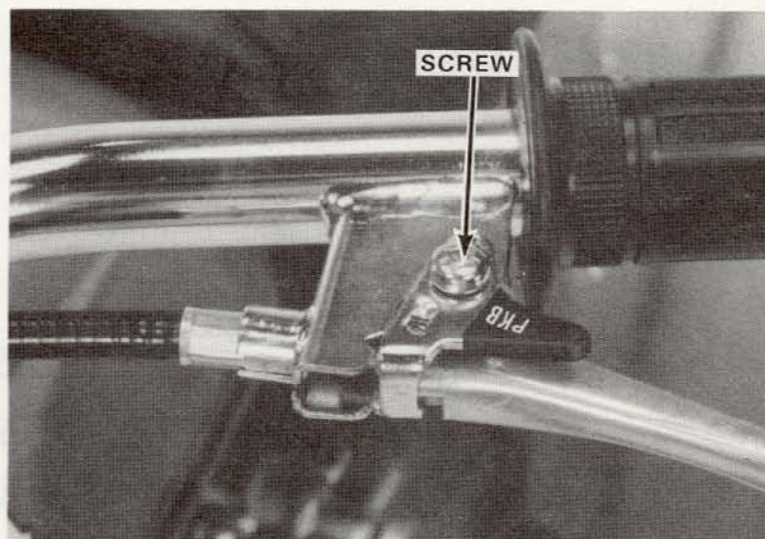
Connect the brake cable.

Install the brake lock lever while installing one end of the spring into the hole in the brake lever and the other end into the brake lock lever. Then tighten the screw.

TORQUE:

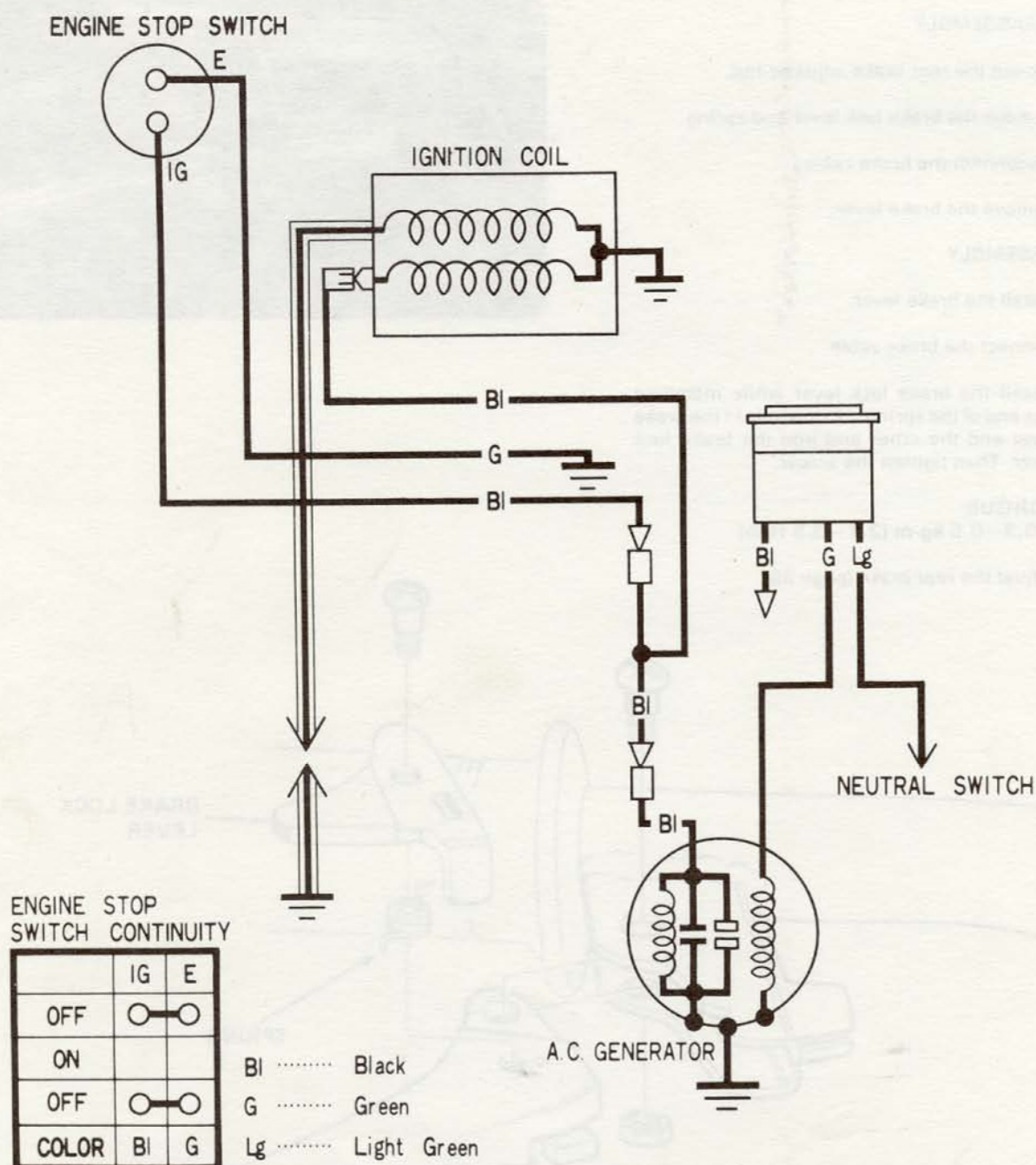
0.3—0.5 kg-m (2.1—3.5 ft-lb)

Adjust the rear brake (page 35).





IV. WIRING DIAGRAM





ATC70 #1
REV. AUGUST 1983

1973—1984 ATC70 REQUIRED SPECIAL TOOLS

(This newsletter supersedes ATC70 #1, dated August 1982)

The ATC70 requires no *new* special tools for 1984. The tools listed below have already been introduced as required special tools for earlier ATC110/90's or other models. If you don't already have these required tools, they can be ordered using normal ordering procedures. You must have these special tools or their approved equivalent in your dealership as per Article VI, Paragraph 5, of the Motorcycle Sales Agreement.

ENGINE TOOLS

INSPECTION/ADJUSTMENT

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0238923	07401-0010000	Carburetor Float Level Gauge	Float level inspection.
0034512	*089201-200-000 (07908-GB40000)	Valve Adjuster	Use to adjust/hold the 3 mm square driver valve adjustment screw. Use a commercially available off-set box end wrench for lock nut.

CYLINDER HEAD/PISTON

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0915637	07742-0010100	Valve Guide Driver	Valve guide removal. Supersedes 07942-3290100, which can still be used.
0688150	07757-0010000	Valve Spring Compressor	Valve removal/installation. Supersedes 07957-3290001, which can still be used.
0324186	07942-1180100	Valve Guide Driver	Valve guide installation.
0332049	07984-0980000	Valve Guide Reamer, 5.47 mm	Valve guide I.D. sizing.

CLUTCH

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0647578	07716-0020100	Lock Nut Wrench, 20 x 24 mm	Clutch nut removal/installation (torquing).
1049154	07725-0030000	Universal Holder	Assist clutch nut removal/installation (torquing). Replaces 07925-0010001, which can still be used.

GENERATOR

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1049154	07725-0030000	Universal Holder	Assist rotor nut removal/installation (torquing). Replaces 07925-0010001, which can still be used.
0060756	*07933-0010000 (07733-0010000)	Rotor Puller	Rotor removal.

* This tool is substituted for the tool in parenthesis. The tool in parenthesis is listed in the shop manual but is unavailable from American Honda Motor Co., Inc.

(over)

MST 1300-6060

ROUTING

Copy 1:

☐

GENERAL MANAGER

☐

PARTS MANAGER

☐

TOOL CATALOG BINDER

Copy 2:

☐

SERVICE MANAGER

☐

SERVICE TECHNICIANS

☐

SERVICE MANUAL BINDER

CHASSIS TOOLS

WHEEL/BRAKE

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1411941	GN-AH-958-BB1	Universal Bead Breaker	Front/rear tire bead dismounting.
0753509	07746-0010100	Attachment, 32 x 35 mm	Front wheel bearings #6202 installation.
0753483	07746-0010400	Attachment, 52 x 55 mm	Rear hub bearings installation: #6006 '78-'82 models, #6205 '73-'74 models.
0959882	07746-0040300	Pilot, 15 mm	Use with attachment 07746-0010100.
0959916	07746-0040600	Pilot, 25 mm	Use with attachment 07746-0010400 to install '73-'74 rear hub bearings.
0933242	07749-0010000	Driver	Use with attachments and pilots.

SUSPENSION/FRAME

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0917740	M9360-277-91774	Bearing Remover	Steering race (upper & lower) removal. Replaces 07944-1150001, which can still be used.
0997882	M9361-412-099788	Adjustable Pin Spanner Wrench	Steering stem top thread nut removal/adjustment. Replaces 07902-0010000, which can still be used.
0753491	07746-0010200	Attachment, 37 x 40 mm	Steering race (upper & lower) installation.
0933242	07749-0010000	Driver	Use with attachment 07746-0010200.

AMERICAN HONDA MOTOR CO., INC.
SERVICE DEPARTMENT

ATC70 #1
REV. JULY, 1984

ATC70—1973 AND AFTER REQUIRED SPECIAL TOOLS

(This supersedes ATC70 #1, dated August 1983)

One **NEW** Special Tool has been added to the required list to service and maintain this model. This tool will be shipped to you automatically when it becomes available. The other tools listed below have already been introduced for this model or other models. If you do not have these tools, they can be ordered using normal procedures. You must have all the required special tools or their approved equivalents in your dealership as per Paragraph 8.4 of the Honda Sales Agreement.

ENGINE TOOLS

INSPECTION/ADJUSTMENT			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0238923	07401-0010000	Carburetor Float Level Gauge	Float level inspection.
0034512	*089201-200-000 (07908-GB4000)	Valve Adjuster	Use to adjust/hold the 3 mm square driver valve adjustment screw. Use a commercially available off-set box end wrench for lock nut.

CYLINDER HEAD/PISTON			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0915637	07742-0010100	Valve Guide Driver	Valve guide removal. Supersedes 07942-3290100, which can still be used.
0688150	07757-0010000	Valve Spring Compressor	Valve removal/installation. Supersedes 07957-3290001 which can still be used.
0324186	07942-1180100	Valve Guide Driver	Valve guide installation.
0332049	07984-0980000	Valve Guide Reamer, 5.47 mm	Valve guide I.D. sizing.

CLUTCH			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0647578	07716-0020100	Lock Nut Wrench, 20 x 24 mm	Clutch nut removal/torquing.

ALTERNATOR			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1049154	07725-0030000	Universal Holder	Assist rotor nut removal/torquing. Replaces 07925-0010001, which can still be used.
0060756	*07933-0010000 (07733-0010000)	Rotor Puller	Rotor removal.

*This tool is substituted for the tool in parenthesis. The tool in parenthesis is listed in the shop manual but is unavailable from American Honda Motor Co., Inc.

(over)

MST 1300-7741 8407

ROUTING	Copy 1:	☐ GENERAL MANAGER	☐ PARTS MANAGER	☐ TOOL CATALOG BINDER
	Copy 2:	☐ SERVICE MANAGER	☐ SERVICE TECHNICIANS	☐ SERVICE MANUAL BINDER

ENGINE TOOLS (CONT'D)

TRANSMISSION/CRANKSHAFT

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0753491	07946-0010200	Attachment, 37 x 40 mm	Mainshaft, countershaft bearing #6203 installation. Use with 07746-0040400.
0959833	07746-0020100	Attachment, 20 mm I.D.	Crankshaft bearing installation. Use with 07746-0020400.
0959841	07746-0020400	Driver, 22 mm	Use with 07746-0020100.
0959890	07746-0040400	Pilot, 17 mm	Use with 07746-0010200 to install the mainshaft and countershaft bearings.
0933242	07749-0010000	Driver	Use with attachments and pilot.

CHASSIS TOOLS

WHEEL/BRAKE

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1411941	GN-AH-958-BB1	Universal Bead Breaker	To break tire bead from rim.
0753509	07746-0010100	Attachment, 32 x 35 mm	Front wheel bearing #6202 installation.
0753483	07746-0010400	Attachment, 52 x 55 mm	Rear hub bearings installation #6006 '78 and later models and #6205 '73-'77 models.
0959882	07746-0040300	Pilot, 15 mm	Use with attachment 07746-0010100
0959916	07746-0040600	Pilot, 25 mm	Use with attachment 07746-0010400 to install '73-'77 rear hub bearings.
1021252	07746-0040700	Pilot, 30 mm	Use with attachment 07746-0010400 to install rear hub bearings '78 and later models.
0933242	07749-0010000	Driver	Use with attachments and pilots.

SUSPENSION/FRAME

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0917740	M9360-277-91774	Bearing Remover	Upper and lower steering race removal. Replaces 07944-115001 which can still be used.
1174002	07716-0020203	Lock Nut Wrench, 26 x 30 mm	Steering stem adjustment removal/adjustment. Pin spanner wrench M9361-412-099788 may also be used.
0753491	07746-0010200	Attachment, 37 x 40 mm	Upper & lower steering race installation.
0933242	07749-0010000	Driver	Use with attachments.
NEW **N/A	07946-GC4000A	Attachment	Use with 07946-MB00000 or 07946-3710601 for lower steering stem race installation.
1418219	07946-MB00000	Steering Stem Driver	Use with 07946-GC4000A.

** Honda code not available at this time.

SPECIAL INFORMATION

The tool listed below is necessary to service and repair this model. However, it is not available from American Honda Motor Co., Inc. and must be purchased from other sources.

DESCRIPTION	APPLICABILITY
ATV Tire Repair Kit	See General STN #26 for ordering details.

AMERICAN HONDA MOTOR CO., INC.
SERVICE DEPARTMENT

ATC70 #1
REV. JULY, 1984

ATC70—1973 AND AFTER REQUIRED SPECIAL TOOLS

(This supersedes ATC70 #1, dated August 1983)

One **NEW** Special Tool has been added to the required list to service and maintain this model. This tool will be shipped to you automatically when it becomes available. The other tools listed below have already been introduced for this model or other models. If you do not have these tools, they can be ordered using normal procedures. You must have all the required special tools or their approved equivalents in your dealership as per Paragraph 8.4 of the Honda Sales Agreement.

ENGINE TOOLS

INSPECTION/ADJUSTMENT

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0238923	07401-0010000	Carburetor Float Level Gauge	Float level inspection.
0034512	*089201-200-000 (07908-GB4000)	Valve Adjuster	Use to adjust/hold the 3 mm square driver valve adjustment scrow. Use a commercially available off-set box end wrench for lock nut.

CYLINDER HEAD/PISTON

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0915637	07742-0010100	Valve Guide Driver	Valve guide removal. Supersedes 07942-3290100, which can still be used.
0688150	07757-0010000	Valve Spring Compressor	Valve removal/installation. Supersedes 07957-3290001 which can still be used.
0324186	07942-1180100	Valve Guide Driver	Valve guide installation.
0332049	07984-0980000	Valve Guide Reamer, 5.47 mm	Valve guide I.D. sizing.

CLUTCH

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0647578	07716-0020100	Lock Nut Wrench, 20 x 24 mm	Clutch nut removal/torquing.

ALTERNATOR

H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1049154	07725-0030000	Universal Holder	Assist rotor nut removal/torquing. Replaces 07925-0010001, which can still be used.
0060756	*07933-0010000 (07733-0010000)	Rotor Puller	Rotor removal.

*This tool is substituted for the tool in parenthesis. The tool in parenthesis is listed in the shop manual but is unavailable from American Honda Motor Co., Inc.

(over)

MST 1300-7741 8407

ROUTING

Copy 1:

☐ GENERAL MANAGER

☐ PARTS MANAGER

☐ TOOL CATALOG BINDER

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☐ SERVICE MANAGER

☐ SERVICE TECHNICIANS

☐ SERVICE MANUAL BINDER

ENGINE TOOLS (CONT'D)

TRANSMISSION/CRANKSHAFT			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0753491	07946-0010200	Attachment, 37 x 40 mm	Mainshaft, countershaft bearing #6203 installation. Use with 07746-0040400.
0959833	07746-0020100	Attachment, 20 mm I.D.	Crankshaft bearing installation. Use with 07746-0020400.
0959841	07746-0020400	Driver, 22 mm	Use with 07746-0020100.
0959890	07746-0040400	Pilot, 17 mm	Use with 07746-0010200 to install the mainshaft and countershaft bearings.
0933242	07749-0010000	Driver	Use with attachments and pilot.

CHASSIS TOOLS

WHEEL/BRAKE			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
1411941	GN-AH-958-BB1	Universal Bead Breaker	To break tire bead from rim.
0753509	07746-0010100	Attachment, 32 x 35 mm	Front wheel bearing #6202 installation.
0753483	07746-0010400	Attachment, 52 x 55 mm	Rear hub bearings installation #6006 '78 and later models and #6205 '73-'77 models.
0959882	07746-0040300	Pilot, 15 mm	Use with attachment 07746-0010100
0959916	07746-0040600	Pilot, 25 mm	Use with attachment 07746-0010400 to install '73-'77 rear hub bearings.
1021252	07746-0040700	Pilot, 30 mm	Use with attachment 07746-0010400 to install rear hub bearings '78 and later models.
0933242	07749-0010000	Driver	Use with attachments and pilots.

SUSPENSION/FRAME			
H/C	TOOL NUMBER	DESCRIPTION	APPLICABILITY
0917740	M9360-277-91774	Bearing Remover	Upper and lower steering race removal. Replaces 07944-115001 which can still be used.
1174002	07716-0020203	Lock Nut Wrench, 26 x 30 mm	Steering stem adjustment removal/adjustment. Pin spanner wrench M9361-412-099788 may also be used.
0753491	07746-0010200	Attachment, 37 x 40 mm	Upper & lower steering race installation.
0933242	07749-0010000	Driver	Use with attachments.
NEW **N/A	07946-GC4000A	Attachment	Use with 07946-MB00000 or 07946-3710601 for lower steering stem race installation.
1418219	07946-MB00000	Steering Stem Driver	Use with 07946-GC4000A.

** Honda code not available at this time.

SPECIAL INFORMATION

The tool listed below is necessary to service and repair this model. However, it is not available from American Honda Motor Co., Inc. and must be purchased from other sources.

DESCRIPTION	APPLICABILITY
ATV Tire Repair Kit	See General STN #26 for ordering details.

AMERICAN HONDA MOTOR CO., INC.
SERVICE DEPARTMENT



ATC-70 #1

4/23/73

SERVICE BULLETIN

AMERICAN HONDA MOTOR CO., INC.

MOTORCYCLE SERVICE DEPARTMENT

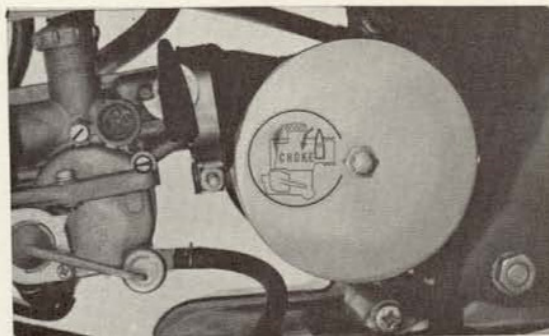
OWNER'S MANUAL AND CHOKE LABEL

The first 5,500 ATC-70s were shipped without owner's manuals and with no choke instruction labels on the air cleaner covers.

Owner's manuals and choke instruction labels will be sent to all dealers who are invoiced for affected units. If you do not receive the correct number of owner's manuals or choke labels, contact the Field Service Section of the Motorcycle Service Department.

INSTALLATION PROCEDURE FOR CHOKE INSTRUCTION LABEL:

1. Clean the surface of the left air cleaner cover to remove all oil and dirt.
2. Peel the paper backing from the choke label, and center the label between the forward edge of the cover and the cover attaching nut.



AMERICAN HONDA MOTOR CO., INC.
MOTORCYCLE SERVICE DEPARTMENT

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ROUTING:

COPY 1
COPY 2

☐ GENERAL MANAGER
☐ SERVICE MANAGER

☐ SALES DEPT
☐ MECHANICS

☐ OFFICE FILE
☐ SHOP FILE

RECEIVED MAY 17 1973



ATC70 #2

4/23/73

SERVICE BULLETIN

AMERICAN HONDA MOTOR CO., INC. MOTORCYCLE SERVICE DEPARTMENT

ATC-70 SPARK ARRESTOR

A U. S. D. A. approved spark arrestor will be available for this model in the near future. Details of availability and fitting instructions will be sent to you soon.

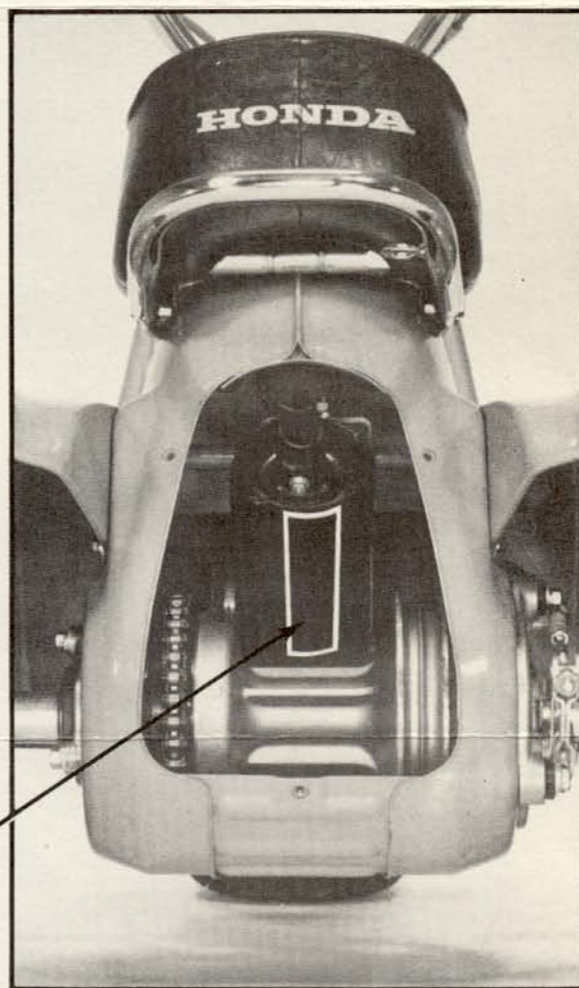
During the set-up of all ATC-70s, a tape must be placed on the muffler as shown here, and an information page for the owner must be inserted in the owner's manual. Tape and owner's manual page inserts will be sent to you for each ATC-70 which you order.

You may order additional tapes from Credit Department at no charge.

ATC-70 Muffler Tape A0905

Your cooperation in this matter is appreciated.

Words stamped on muffler must be covered with tape.



9-912

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MOTORCYCLE SERVICE DEPARTMENT

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ROUTING:

COPY 1
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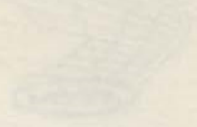
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HONDA



Service Bulletin

ATC TO SPARK ARRESTOR

It is recommended that spark arrestors will be installed for this model in the first future models of this model and future instructions will be sent to you as well.



Remove the top of the cylinder and
then place the plate on the mouth
to show how and in position
place the the screw into the
to the screw's manual. This will
remove's actual parts shown will be
sent to you for each ATC to ship.

You order.

You may order additional parts
from Honda's Department of the
large.

ATC to Spark Arrestor

Look for instructions in the letter to

Work changed on mouth and be
changed with the.

AMERICAN HONDA MOTOR CO., INC.
HONDA OF AMERICA, INC.

Washington Honda Motor Co., Inc. 1973

RECEIVED
MAY 1 1973

GENERAL HONDA
HONDA OF AMERICA, INC.

HONDA



ATC70 #3
REV. 9/12/74

SERVICE BULLETIN

AMERICAN HONDA MOTOR CO., INC. MOTORCYCLE SERVICE DEPARTMENT

RECEIVED OCT 19 1974

SPARK ARRESTER MODIFICATION

MODIFICATION TO PROVIDE APPROVED SPARK ARRESTER

The ATC-70 K1 (frame number 1100001 and subsequent) is factory equipped with an approved spark arrester and does not require modification.

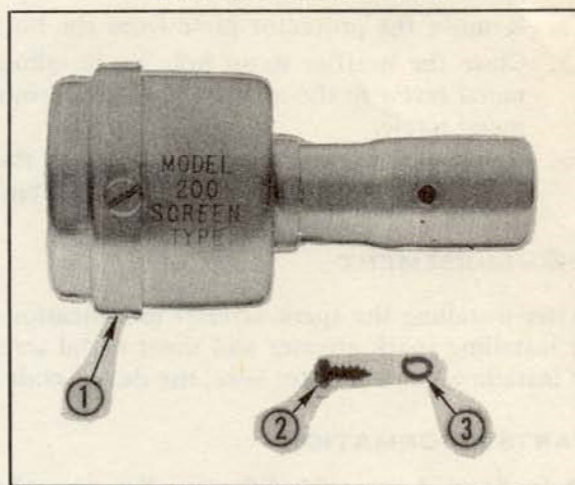
The ATC-70 (prior to frame number 1100001) was *not* factory equipped with an approved spark arrester. A modification kit is available from American Honda to provide these machines with an effective and approved spark arrester.

Until further notice, the spark arrester modification kit must be installed without charge, whenever an approved spark arrester is requested by the owner of an unmodified pre-K1 unit.

ATC-70s through frame serial number 1004074 require the muffler drain hole to be plugged with a sheet metal screw and lock washer, in addition to installation of the spark arrester. ATC-70s with frame serial number 1004075 and subsequent have no muffler drain hole.

After installation of the modification kit, submit a warranty claim for reimbursement.

SPARK ARRESTER MODIFICATION KIT



- ① Spark Arrester
- ② Sheet Metal Screw
- ③ Lock Washer

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COPY 1

COPY 2

☐ GENERAL MANAGER

☐ SERVICE MANAGER

☐ SALES DEPT.

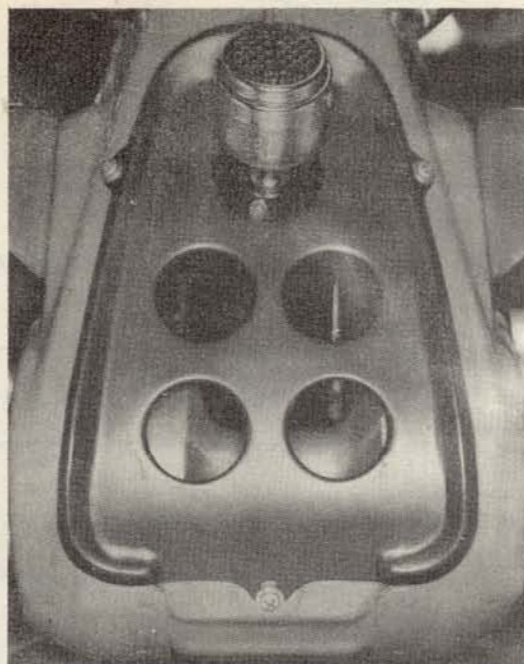
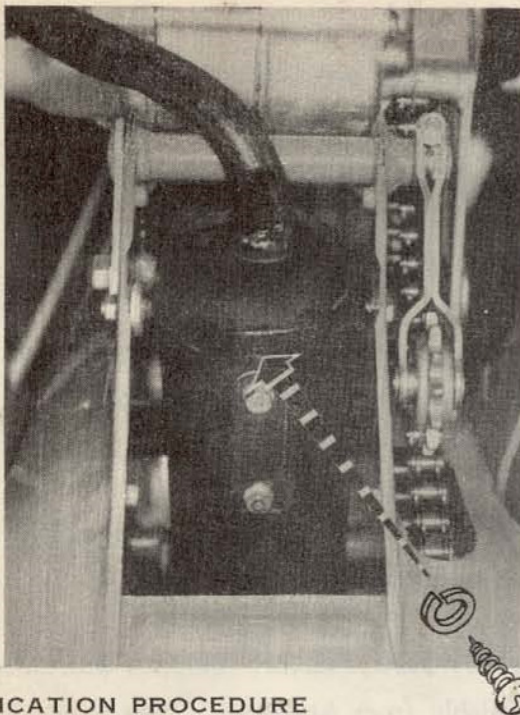
☐ MECHANICS

☐ OFFICE FILE

☐ SHOP MANUAL

1 OF 2

NEW



MODIFICATION PROCEDURE

1. Remove the retaining bolt from the diffuser tube at the rear of the muffler. Remove and discard the diffuser tube.
 2. Install the spark arrester in place of the diffuser tube. Secure the spark arrester with the retaining bolt from the diffuser tube.
 - *3. Raise the front end of the ATC-70 until the vehicle is upended, resting on its rear tires and guard rail.
 - *4. Remove the protector plate from the bottom of the frame.
 - *5. Close the muffler drain hole by installing a sheet metal screw with lock washer. If the sheet metal screw in the modification kit becomes lost, you may substitute a common hardware sheet metal screw.
 - *6. Reinstall the protector plate, and stand the vehicle in its normal upright position.
- *Steps 3 through 6 apply only to ATC-70s prior to frame serial number 1004075.

REIMBURSEMENT

After installing the spark arrester modification kit, submit a standard Warranty Claim Form (W.O.2). If installing spark arrester and sheet metal screw, use defect code 420 and a labor time of 0.3 hours. If installing spark arrester only, use defect code 418 and a labor time of 0.2 hours.

PARTS INFORMATION

Order Spark Arrester Modification Kits from American Honda Parts Department.

H/C	PART NUMBER	DESCRIPTION
34823	M718X-014-XXXXX	Spark Arrester Modification Kit (packaged two per box)

NOTE: If you order H/C 34823 qty. one, you will receive a box containing 2 spark arresters. If you order qty. two you will receive 4 spark arresters.

This revision supersedes Service Bulletin ATC-70 #3, dated 6/22/73, which should be removed and destroyed.



SL #100
REV. 6/14/78

SERVICE BULLETIN

AMERICAN HONDA MOTOR CO., INC. MOTORCYCLE SERVICE DEPARTMENT

CONFORMITY WITH MOTOR VEHICLE SAFETY STANDARDS

EQUIPMENT MODIFICATIONS MAY SUBJECT DEALERS TO HEAVY FINES

The National Traffic and Motor Vehicle Safety Act of 1966, Public Law 89-563, requires vehicles offered for sale in the United States to be in conformity with applicable Federal Motor Vehicle Safety Standards (FMVSS).

The act also makes it illegal for manufacturers, distributors, dealers, or motor vehicle repair businesses to knowingly modify or render inoperative, in whole or part, any device or element of design which is installed on a vehicle to comply with FMVSS. The penalty for such actions is a fine of up to \$1,000 per violation.

American Honda strongly recommends against modification of Honda products and cautions dealers that such modifications could affect the operational safety of the vehicle as well as its conformity with legal requirements.

AMERICAN HONDA MOTOR CO., INC.
MOTORCYCLE AND POWER PRODUCTS SERVICE DEPARTMENT

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SAFETY SERVICE BULLETIN

AMERICAN MOTOR CO. INC. MOTORCYCLE SAFETY SERVICE BULLETIN

CONFORMITY WITH MOTOR VEHICLE SAFETY STANDARDS

EQUIPMENT MODIFICATIONS MAY SUBJECT DEALERS TO HEAVY FINES

The National Traffic and Motor Vehicle Safety Act of 1966, Public Law 89-564, requires vehicles offered for sale in the United States to be in compliance with minimum Federal Motor Vehicle Safety Standards (FMVSS).

The act also states it is illegal for manufacturers, distributors, dealers, or motor vehicle repair businesses to knowingly modify or knowingly tamper with any vehicle or any component of design which is certified for a vehicle in compliance with FMVSS. The penalty for such violation is a fine of up to \$2,500 per violation.

Therefore, it is the policy of American Motor Co. Inc. to advise its dealers and distributors that any modification to any vehicle or any component of design which is certified for a vehicle in compliance with FMVSS is a violation of the act, as well as the company's policy of compliance.

AMERICAN MOTOR CO. INC.
MOTORCYCLE SAFETY SERVICE BULLETIN

SAFETY SERVICE BULLETIN, 10-100, 10-100

☐ OFFICE USE
☐ FIELD USE

☐ VEHICLE DATA
☐ VEHICLE DATA

☐ GENERAL INFORMATION
☐ SERVICE INFORMATION

10-100
10-100

85 SERVICE AND PARTS INFORMATION

July, 1984

ATC70

Enclosed is your ATC70 New Model Service and Parts Information Package. Use this checklist to make sure your mailing is complete; items preceded by check boxes (☐) should be in this package. If any of these items are missing, contact Service Publications at (213) 327-8280, Ext. 3000.

PARTS INFORMATION

Please forward this information to your Parts Manager.

- Parts Microfiche Catalog: Your complete subscription quantity is enclosed in the ATC250R Information envelope.
- Parts Prices: All available parts prices for this model are included in your current Motorcycle Dealer Parts Price List, or check your parts picking ticket.

WARRANTY INFORMATION

- Distributor's Limited Warranty for All-Terrain Vehicles: No Change - Use Existing Warranty (S0930). One copy should be posted in your showroom to inform potential customers of Honda's Warranty Coverage.

Please note: Each purchaser of a new Honda ATV must be given a copy of this warranty. Order additional copies using S0930 (pads of 50).

- Flat-Rate: A complete new ATC Flat Rate Manual, which will include the ATC70, will be sent to you shortly. Use the '84 ATC70 Flat Rate Manual in the meantime.

SERVICE & TOOL INFORMATION

- ☐ STN - ATC70 #1 (2): Required Special Tools. This Tool News supersedes ATC70 #1 dated August, 1983. One new tool is required for 1985.
- ☐ Shop Manual: Complete manual for the 1985 ATC70 — H/C 1813732, Dealer Net \$10.00.

Seven-ring S/M binders are also available, and can be ordered using the Dealer Promotional Order form and Order Code S0960.

The Dealer Net for the enclosed Shop Manual will be applied to your open account. Additional manuals may be ordered using normal parts ordering procedures. Should this manual not meet your needs, you may return it for full credit. If you decide to return it, you must have an equivalent on hand. To return it, follow the procedures in Parts News Bulletin No.M82080201, dated 8-2-82.

Note: This manual is for the 1985 ATC70 only.

- ☐ S/M Binder Tabs (1 set): To help organize your Service Bulletins, Tool Information and Set-ups. Order additional sets using S0959.

SET-UP & PDI INFORMATION

- ☐ Set-Up Instructions (2).

MCL 7680 8407

Set-up Instructions

1985 Model ATC70



MPD 7582 8407
AMERICAN HONDA MOTOR CO., INC.
100 WEST ALONDRA BOULEVARD, GARDENA, CALIFORNIA 90247

WARNING

WARNING

WARNING

WARNING

SET-UP AND PRE-DELIVERY SERVICE MUST BE PERFORMED BY AN AUTHORIZED HONDA ALL TERRAIN VEHICLE (ATV) DEALER. Proper set-up and pre-delivery service is essential to rider safety and reliability of the vehicle. When a customer takes delivery of his brand new vehicle he expects it to be in excellent running condition. There are few things that will cause greater customer dissatisfaction than poor preparation of a new vehicle. An error or oversight made by the mechanic assembling and servicing a new unit can easily result in faulty operation, damage to the vehicle, or even injury to the rider.



NOTE: Right and left are determined from the rider's view.

Date of Issue: 7/84

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1 of 14

SET-UP INSTRUCTION REVISED PAGES

Pages Affected

1 through 14

Orig. Issue Date

7/84

Rev. Date

Original

Remove and destroy superseded pages.



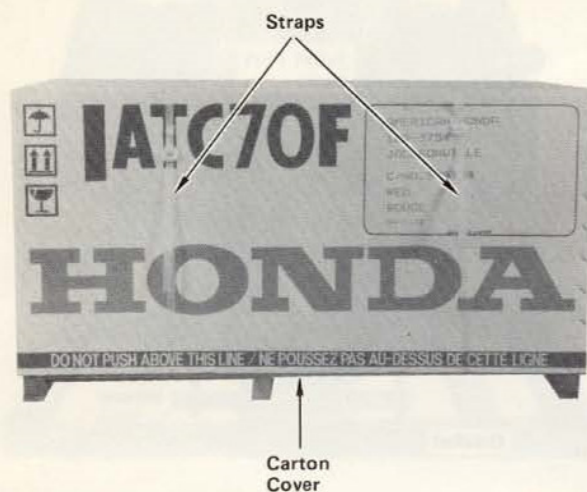
METRIC SCALE FOR DETERMINING BOLT LENGTHS/DIAMETERS

Pay special attention to warnings, cautions, and notes.

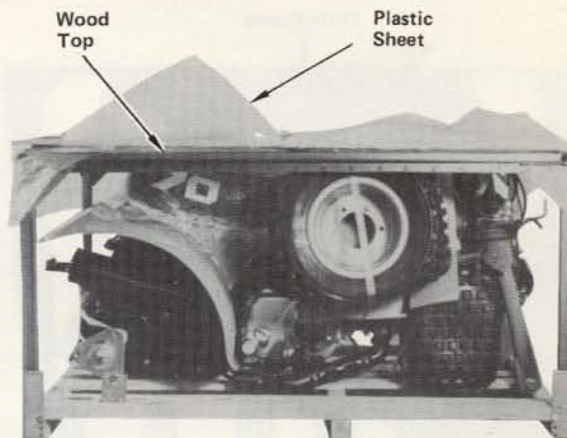
WARNING means hazards or unsafe practices which could cause severe personal injury or death.

CAUTION: means hazards or unsafe practices which could cause minor personal injury or product or property damage.

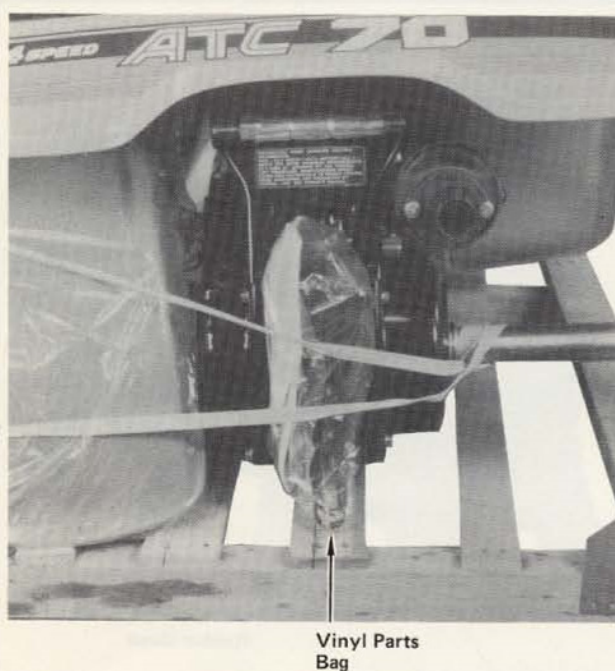
NOTE: gives helpful information.



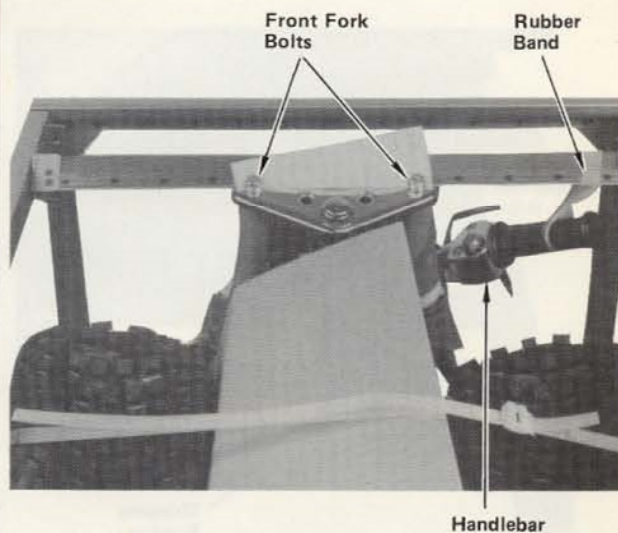
STEP 1—Cut straps and carefully lift off carton cover.



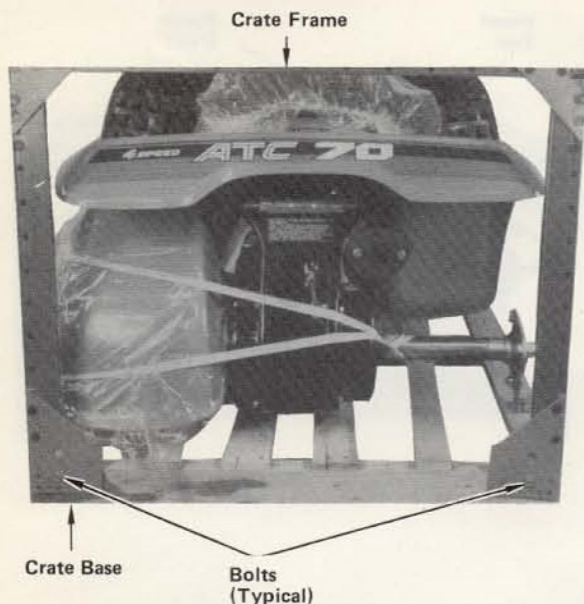
STEP 2—Remove crate wood top and plastic sheet.



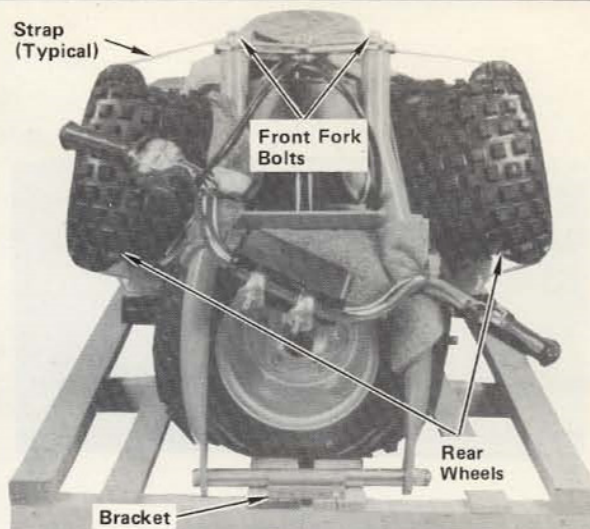
STEP 3—Remove vinyl parts bag.



STEP 4—Loosen two front fork bolts. Remove rubber band holding handlebar to the crate frame.



STEP 5—Remove four bolts (two on each end) attaching steel crate frame to crate base and carefully lift off frame.

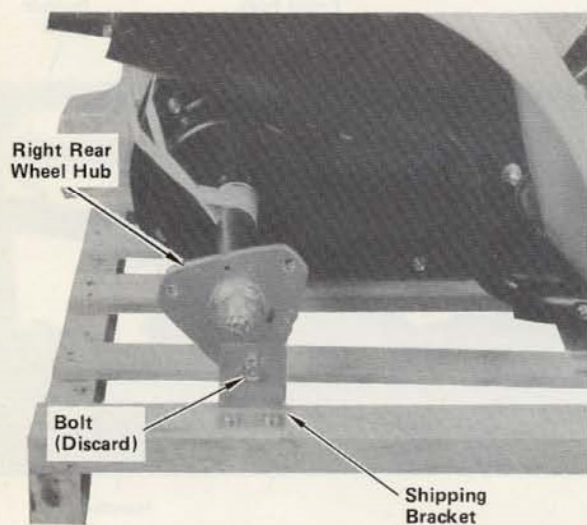


STEP 6—Cut strap holding rear wheels. Remove wheels. Retighten front fork bolts to specified torque.

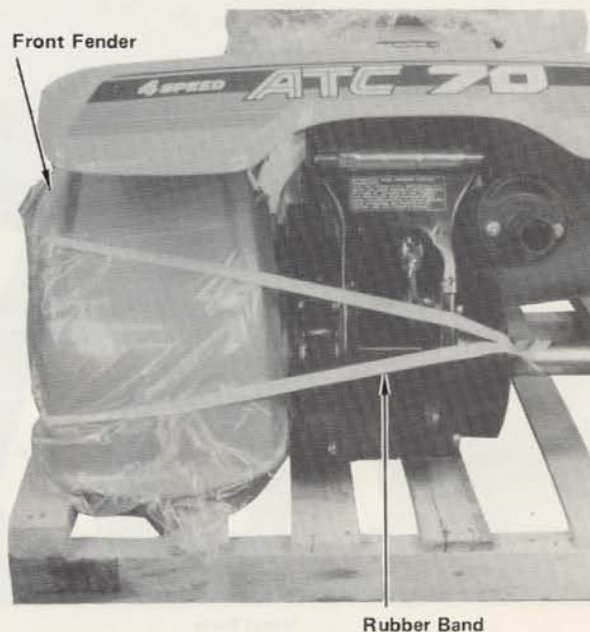
Torque specification:

4.5 kg-m (32 lb-ft)

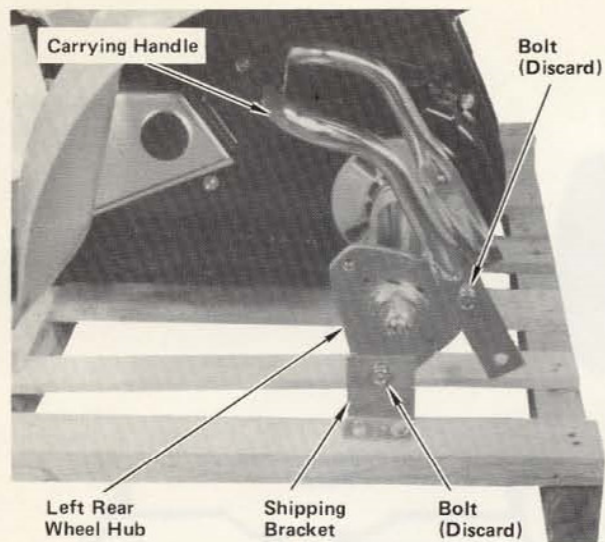
Remove bolts attaching front axle shipping bracket to crate base. Discard bolts and bracket.



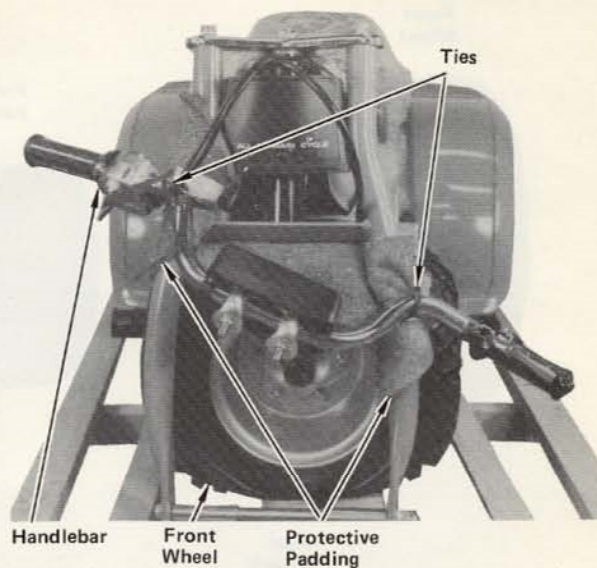
STEP 7—Remove bolt attaching right rear wheel hub to shipping bracket. Discard bolt.



STEP 8—Remove front fender from under rear fender by removing rubber band.

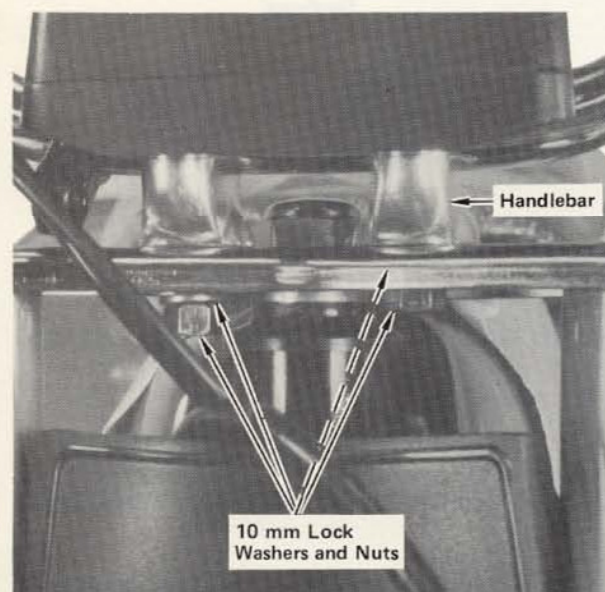


STEP 9—Remove bolt attaching carrying handle to wheel hub and remove carrying handle. Remove bolt attaching left rear wheel hub to shipping bracket. Discard bolts.



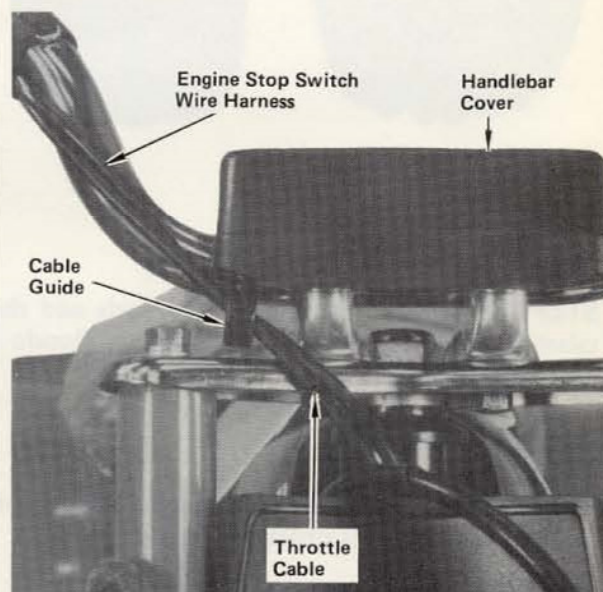
STEP 10—Remove ties holding handlebar to front fork legs. Remove protective padding from front forks. Remove front wheel from behind front forks.

NOTE: Do not let the handlebar hang from handlebar switch wires.



STEP 11—Install handlebar on upper fork bridge as shown using two 10 mm lock washers and nuts. Tighten nuts to specified torque.

Torque specification:
4.3 kg-m (31 lb-ft)



STEP 12—Route engine stop switch wire harness and throttle cable down through cable guide as shown. Tighten screw securely and push cable guide up to edge of handlebar cover.

Front
WheelFront
FenderCarrying
HandleRear
WheelsStep
GuardsOwner's
ManualAttaching
Hardware

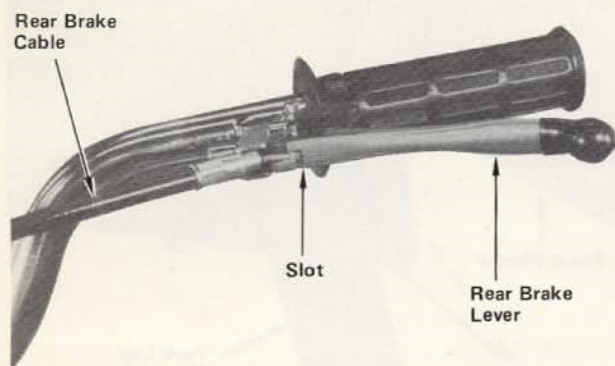
STEP 13—Unpack remaining loose parts and check against this illustration. Report any damaged or missing parts immediately to American Honda Motor Co., Inc., 100 West Alondra Blvd., Gardena, California 90247.

Damaged or Missing Parts

Identify missing parts by referring to the "Loose Parts List" at the end of the set-up. Order parts through normal parts ordering procedures.

It is necessary to differentiate between parts lost or damaged in transit, and parts left out by the factory.

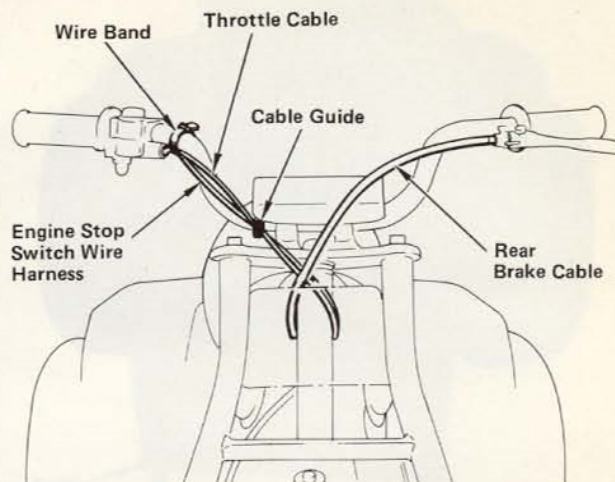
- For parts lost or damaged in transit, file a SHIPPING DAMAGE CLAIM.
- For parts left out by the factory, file a M/C WARRANTY CLAIM SO 908.



STEP 14—Route rear brake cable in front of throttle cable and insert end of rear brake cable into slot in brake lever. Pull cable back through slot in brake lever bracket.

CAUTION: Check that brake lever operates freely.

Adjust rear brake as described in Step 28.

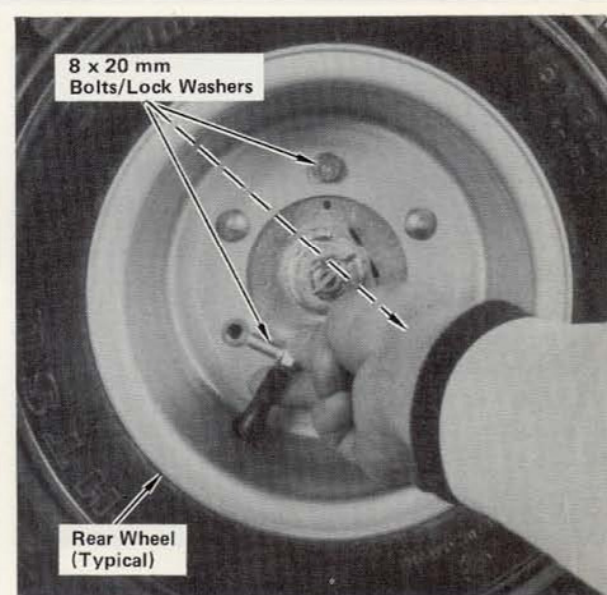


STEP 15—Check for proper routing of cables and wire harness as shown.



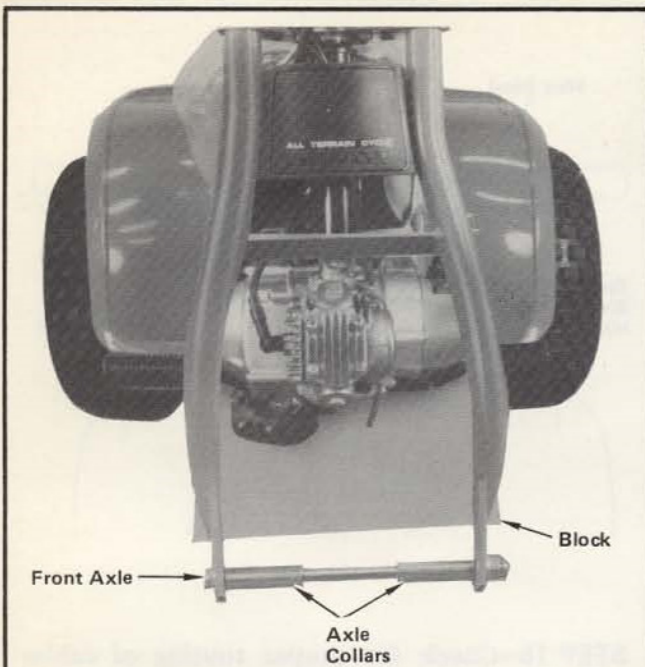
STEP 16—Install carrying handle on frame, with curved end up, using four 8 x 16 mm bolts and lock washers. Tighten bolts to specified torque.

Torque specification:
2.2 kg-m (16 lb-ft)

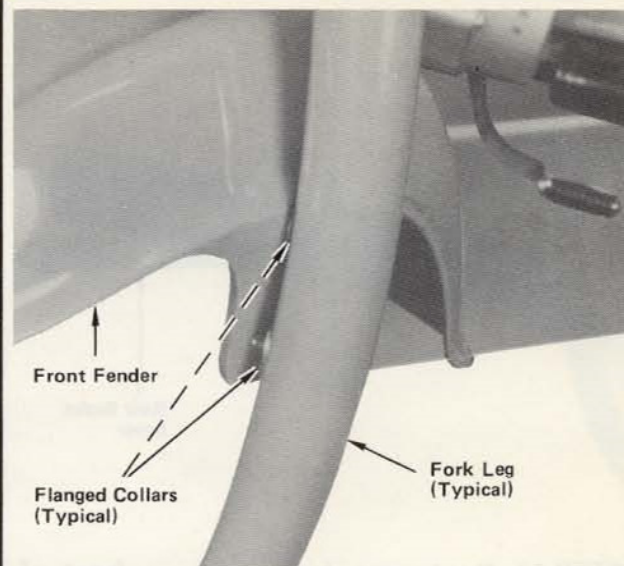


STEP 17—Inflate rear tires to 2.2 psi. Install rear wheels as shown using three 8 x 20 mm bolts/lock washers for each. Tighten bolts to specified torque.

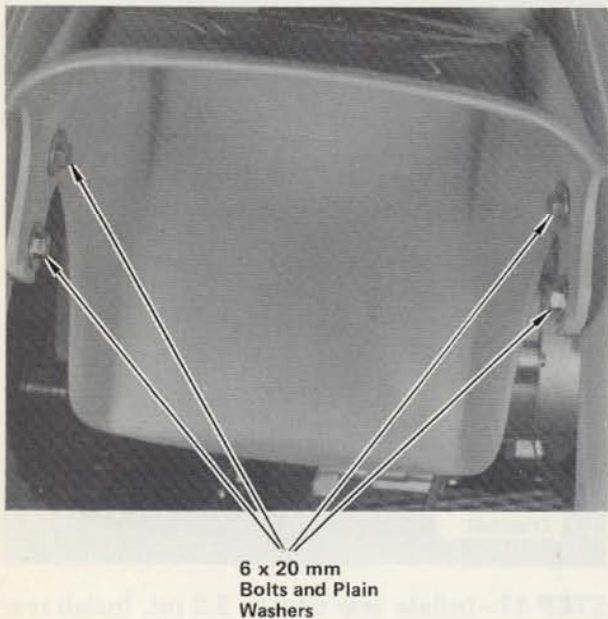
Torque specification:
2.2 kg-m (16 lb-ft)



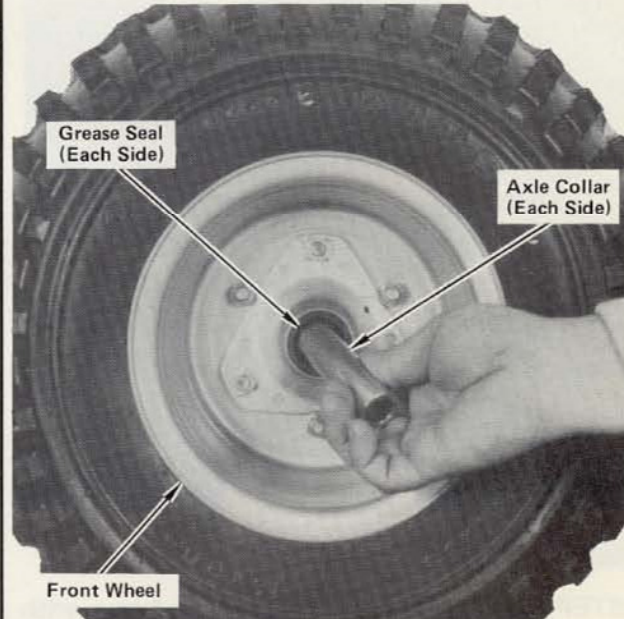
STEP 18—Remove and clean front axle and axle collars. Place a padded block under engine to raise front forks.



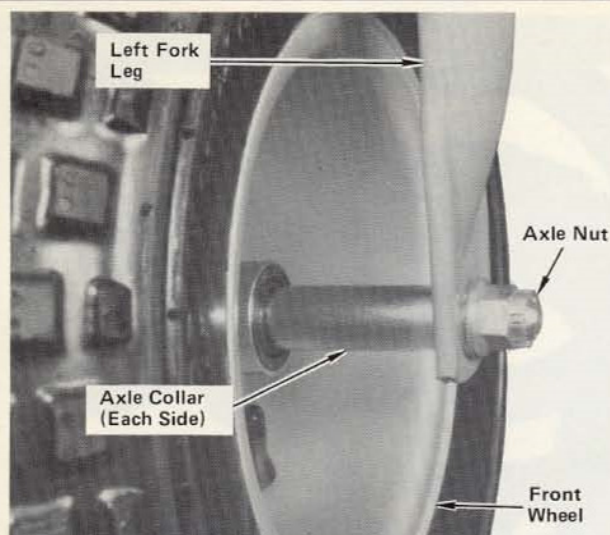
STEP 19—Position front fender between fork legs with short end forward. Position flanged collars between fork legs and front fender.



STEP 20—Install front fender using four 6 x 20 mm bolts and plain washers. Tighten bolts securely.

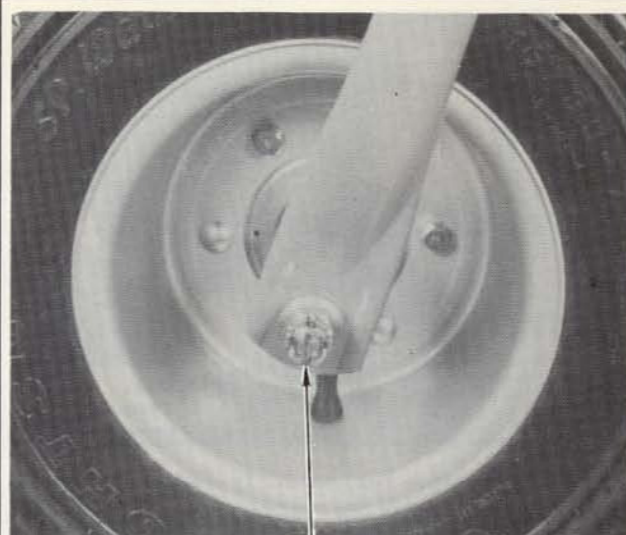


STEP 21—Insert an axle collar into front wheel grease seal on each side. Inflate front tire to 2.2 psi.

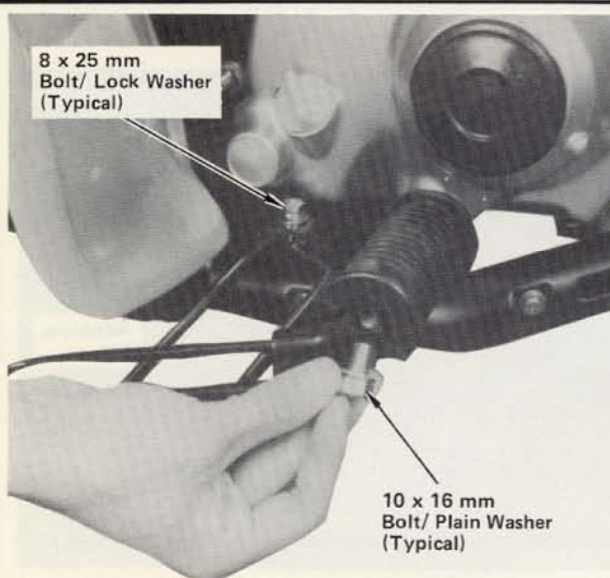


STEP 22—Position front wheel between fork legs with valve stem on left side. Insert axle from right side, through right fork leg, axle collar, wheel hub, axle collar, and left fork leg. Install axle nut and tighten nut to specified torque.

Torque specification:
7.5 kg-m (54 lb-ft)



STEP 23—Insert cotter pin through slots in nut and hole in axle. Spread cotter pin ends as shown.

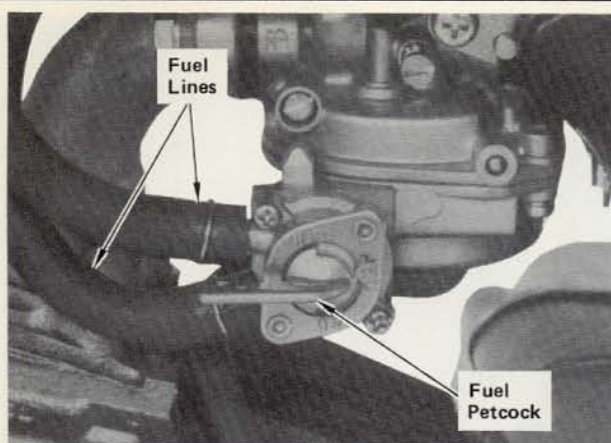


STEP 24—Install right and left step guards as shown using a 10 x 16 mm bolt/plain washer and an 8 x 25 mm bolt/lock washer for each. Tighten bolts to specified torque.

Torque specifications:
8 mm bolts: 2.2 kg-m (16 lb-ft)
10 mm bolts: 4.5 kb-m (32 lb-ft)

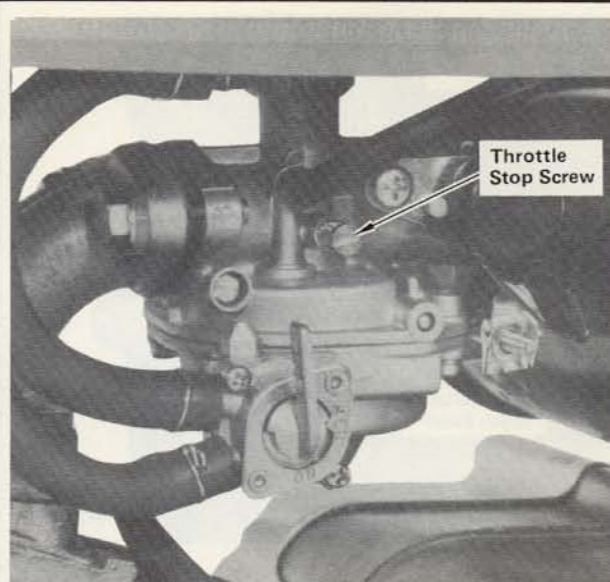


STEP 25—Remove oil filler cap/dipstick. Check engine oil level and if necessary add recommended oil as described in owner's manual or shop manual. Reinstall oil filler cap/dipstick.

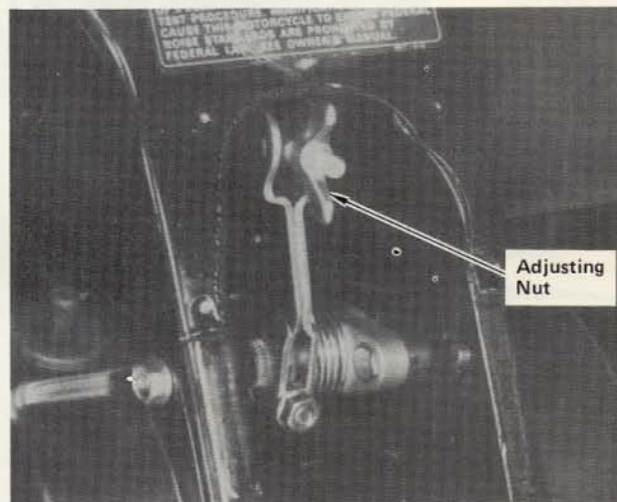
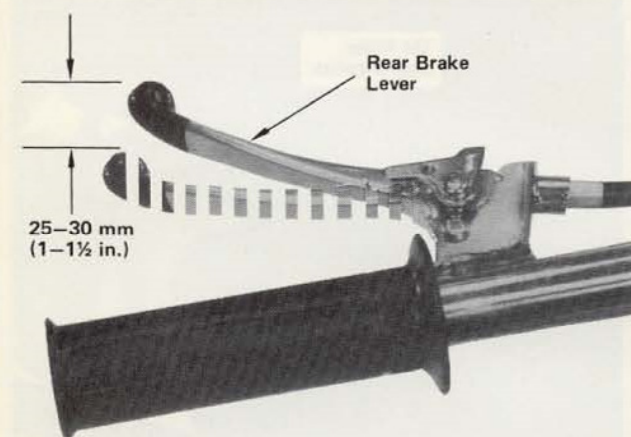


STEP 26—Inspect fuel tank. If necessary, drain and flush fuel tank by removing fuel lines. Reconnect fuel lines, fill tank, turn on fuel petcock and check for leaks. Drain residual fuel from carburetor.

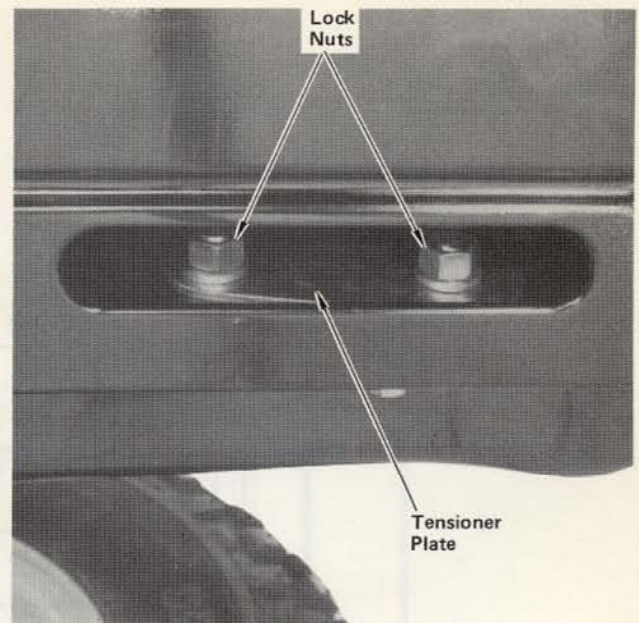
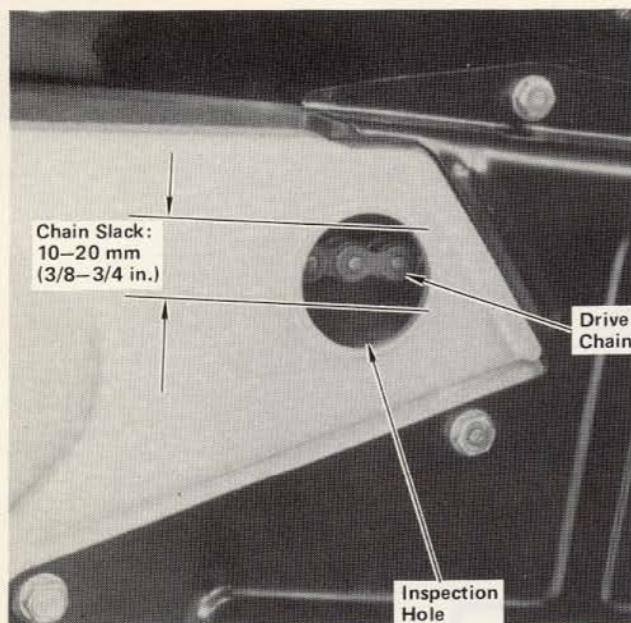
WARNING Fuel must be drained into a proper container. Gasoline is flammable and explosive under certain conditions. Do not smoke or allow flames or sparks near while draining fuel.



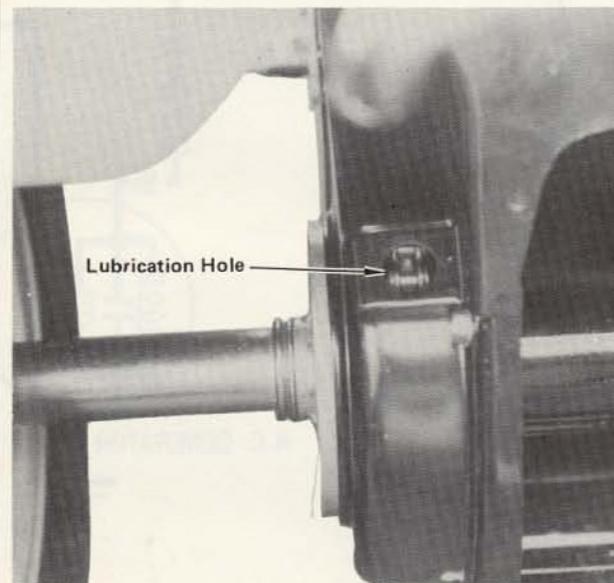
STEP 27—Adjust carburetor air screw, idle speed, and throttle free play as described in owner's manual or shop manual. Refer to owner's manual for use of speed limiter screw.



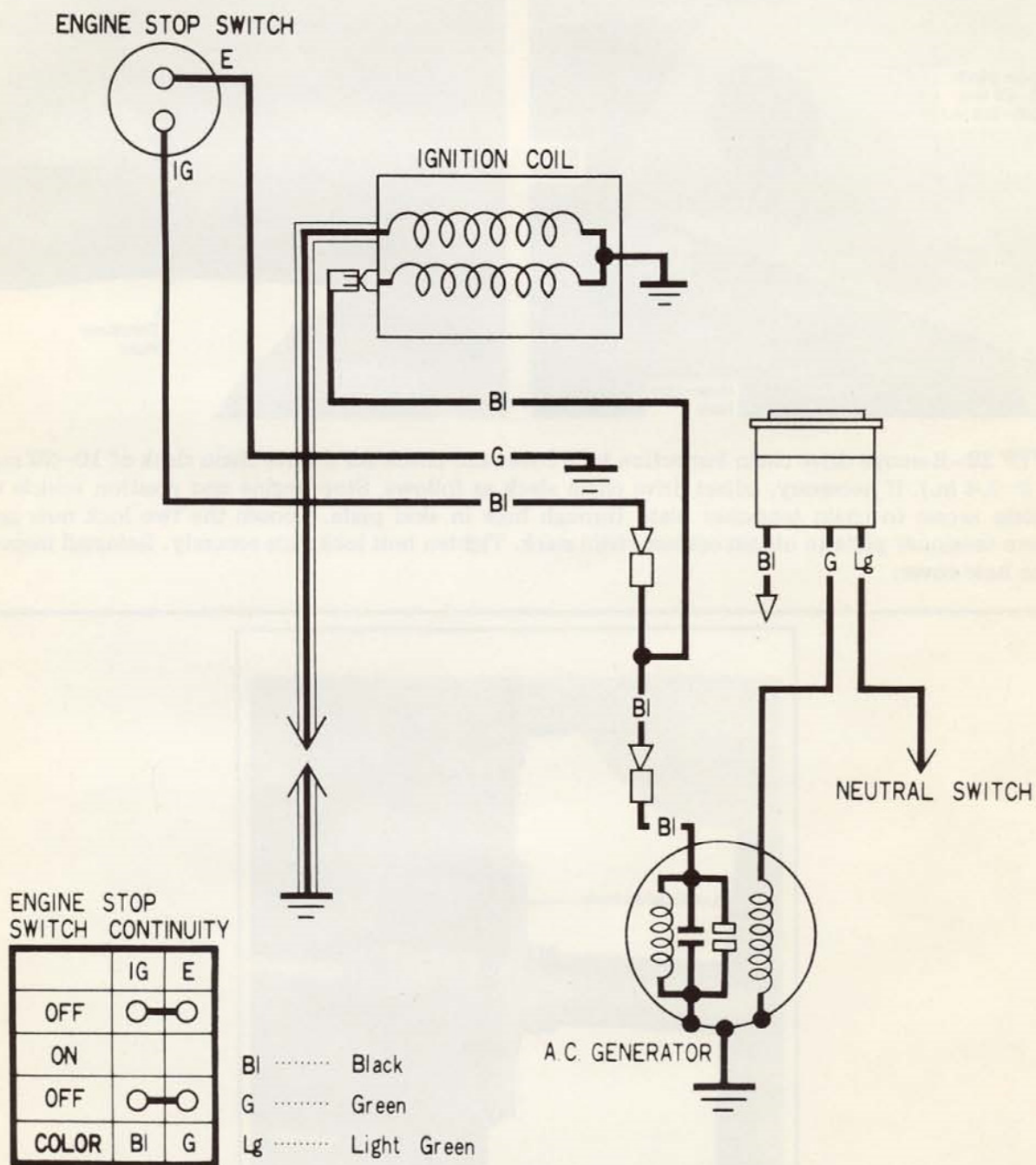
STEP 28—Place a block under ATC. Spin rear wheels by hand and measure free play of rear brake lever before brake starts to engage. Free play, measured at tip of rear brake lever, should be between 25–30 mm (1–1½ in.). Use adjusting nut on brake operating rod at rear of ATC to make adjustment. Remove block from under ATC.



STEP 29—Remove drive chain inspection hole cover and check for a drive chain slack of 10–20 mm (3/8–3/4 in.). If necessary, adjust drive chain slack as follows. Stop engine and position vehicle to obtain access to chain tensioner plate through hole in skid plate. Loosen the two lock nuts and move tensioner plate to obtain correct chain slack. Tighten bolt lock nuts securely. Reinstall inspection hole cover.



STEP 30—Remove lubrication hole cover and lubricate drive chain using a commercially prepared chain lubricant. Reinstall hole cover.



TORQUE TABLE

ITEM	SIZE	TORQUE
Front fork bolts	-----	4.5 kg-m (32 lb-ft)
Handlebar nuts	10 mm	4.3 kg-m (31 lb-ft)
Carrying handle bolts	8 x 16 mm	2.2 kg-m (16 lb-ft)
Rear wheel bolts	8 x 20 mm	2.2 kg-m (16 lb-ft)
Front axle nut	-----	7.5 kg-m (54 lb-ft)
Step guard bolts	8 x 25 mm	2.2 kg-m (16 lb-ft)
	10 x 16 mm	4.5 kg-m (32 lb-ft)

NOTE: Check all items listed on the following Pre-delivery Service Check List. Refer to owner's manual or shop manual for specifications and detailed procedures. Always test ride the unit to make sure that it is functioning properly.

PRE-DELIVERY SERVICE CHECK LIST

- | | |
|--|---|
| <ul style="list-style-type: none"> ☐ Adjust rear brake, check cable routing and check operation. ☐ Fill crankcase with recommended oil. ☐ Inspect fuel tank, drain and flush, if necessary. ☐ Drain residual fuel from carburetor. ☐ Check air cleaner. Clean and oil if necessary. ☐ Fill fuel tank, turn on petcock and check for leaks. ☐ Adjust carburetor. ☐ Check throttle lever free play, cable routing, and operation in all steering positions. ☐ Adjust and lubricate drive chain, if necessary. ☐ Check tire pressure. ☐ Inspect electrical component for proper operation. <ul style="list-style-type: none"> • Engine stop switch. | <ul style="list-style-type: none"> ☐ Check security of all nuts, bolts, and other fasteners. ☐ Check to ensure that all applicable recall and product update campaigns are complied with. ☐ TEST RIDE: Check performance, handling, and operation. <ul style="list-style-type: none"> • Transmission and clutch: Ease of shifting, clutch operation, etc. • Acceleration: Smoothness, etc. • Cruising: Smoothness, etc. • Handling: Stability and cornering. • Brake: Smoothness and stopping power. • Idling: Smoothness, throttle response, return to idle. • Recheck idle speed after 10 minutes of stop and go operation. • Upon completion of test ride, check for fuel and oil leaks. |
|--|---|

LOOSE PARTS

The following is a list of loose parts contained in the crate.

PART NAME	QTY	H/C	PART NUMBER
Washer, lock, 10 mm	2	0330928	94111-10800
Nut, hex head, 10 mm	2	0341370	94001-10080-0S
Step guard, right	1	0673954	50620-957-000
Step guard, left	1	0673962	50630-957-000
Bolt-washer, 10 x 16 mm	2	0674895	93492-10016-08
Bolt-washer, 8 x 25 mm	2	0674911	93493-08025-08
Front fender, R-109 passion red	1	-----	61100-957-670
Bolt, hex head, 6 x 20 mm	4	0442103	92000-06020-0H
Collar, front fender	4	1672393	90002-957-000
Washer, plain, front fender	4	0629824	94103-06800
Pin, cotter, 3 x 25 mm, front axle nut	1	0058420	94201-30250
Carrying handle	1	0674119	81200-957-000
Bolt-washer, 8 x 16 mm	4	0674903	93493-08016-08
Bolt-washer, 8 x 20 mm	6	0674887	93492-08020-00
Front wheel	1	-----	-----
Rear wheel	2	-----	-----
Owner's manual	1	1813724	31957620

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