

Set-up Instructions

1987 Model ATC 250SX



MPD 529 8607
AMERICAN HONDA MOTOR CO., INC.
100 WEST ALONDRA BOULEVARD, GARDENA, CALIFORNIA 90247

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. 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.

SET-UP INSTRUCTION REVISED PAGES

Pages Affected

Rev. Date

Remove and destroy superseded pages.

Pay special attention to warnings, cautions, and notes.

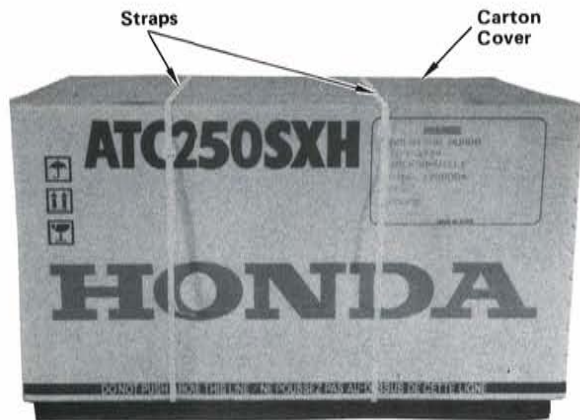
WARNING means hazards or unsafe practices which could cause severe personal injury or death.

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

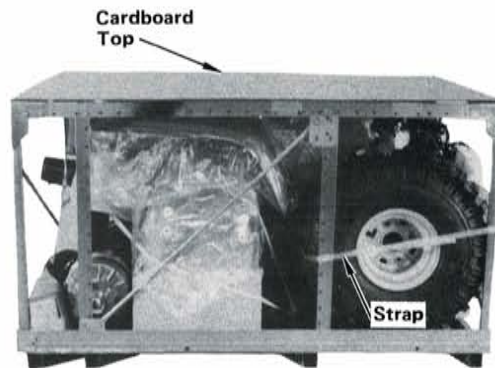
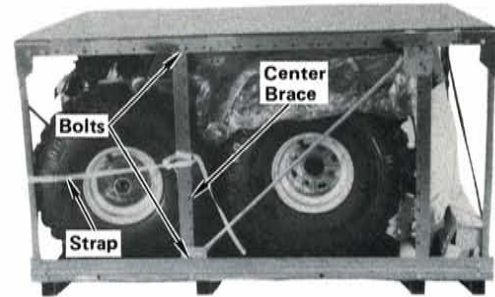
NOTE: gives helpful information.

TORQUE TABLE

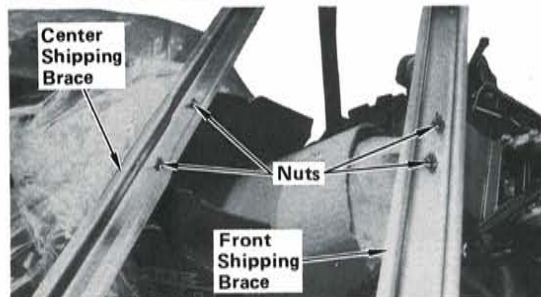
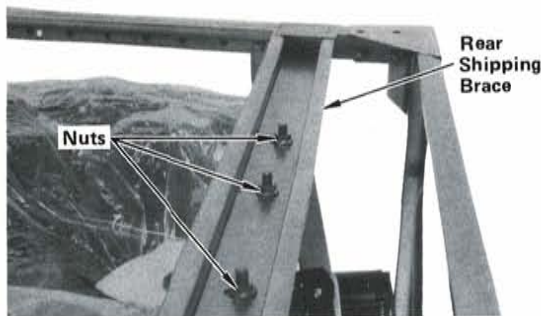
ITEM	SIZE	TORQUE
Handlebar upper holder bolts	-----	2.4 kg-m (18 lb-ft)
Front fork bolts	8mm	3.2 kg-m (23 lb-ft)
Front axle	-----	9.0 kg-m (65 lb-ft)
Axle holder nuts	-----	1.2 kg-m (9 lb-ft)
Rear wheel hub nuts	10 mm	6.5 kg-m (45 lb-ft)
Front fender bolts	6 mm	1.0 kg-m (8 lb-ft)
Headlight nuts	6 mm	1.2 kg-m (9 lb-ft)
Taillight nuts	-----	0.15 kg-m (1.1 lb-ft)
Carrying handle bolts	8 mm	2.7 kg-m (20 lb-ft)
Skid plate and gear case protector bolts	8 mm	2.7 kg-m (19 lb-ft)
Luggage box bolts	6 mm	1.0 kg-m (8 lb-ft)
Fuel filter cup	-----	0.4 kg-m (3 lb-ft)



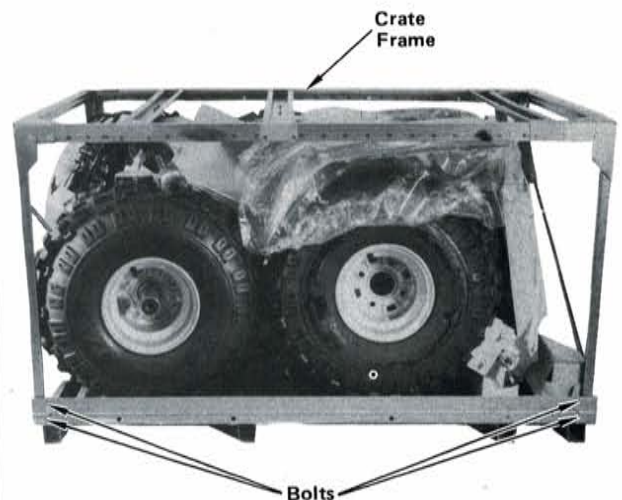
STEP 1—Cut the straps and remove the carton cover.



STEP 2—Remove the cardboard from the crate top. Cut and discard the straps holding the wheels. Remove the bolts attaching the center braces. Discard the bolts and braces.

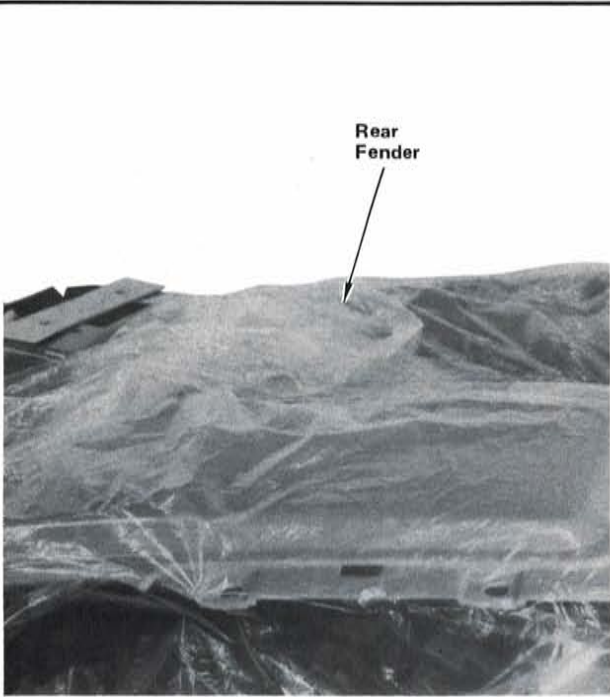


STEP 3—Remove the three nuts and the rear shipping brace. Remove the four nuts and the center and front shipping braces.

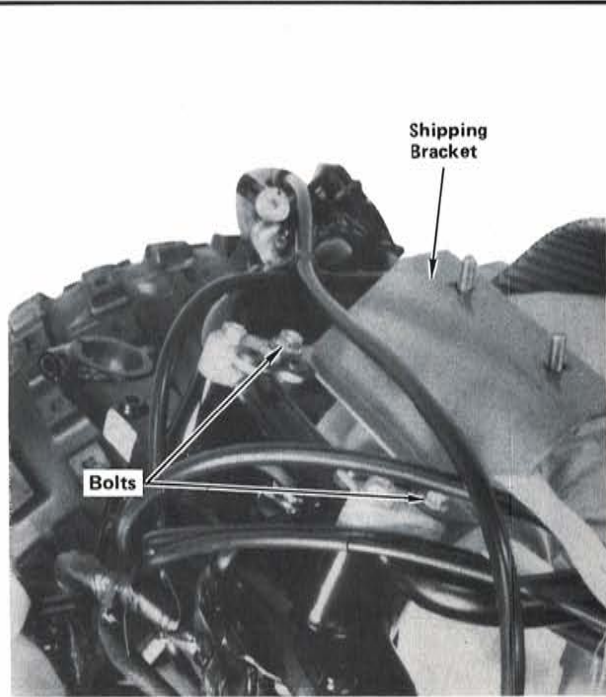


STEP 4—Remove and discard the bolts attaching the crate end frames to the crate base. Carefully lift off crate frame using two people.

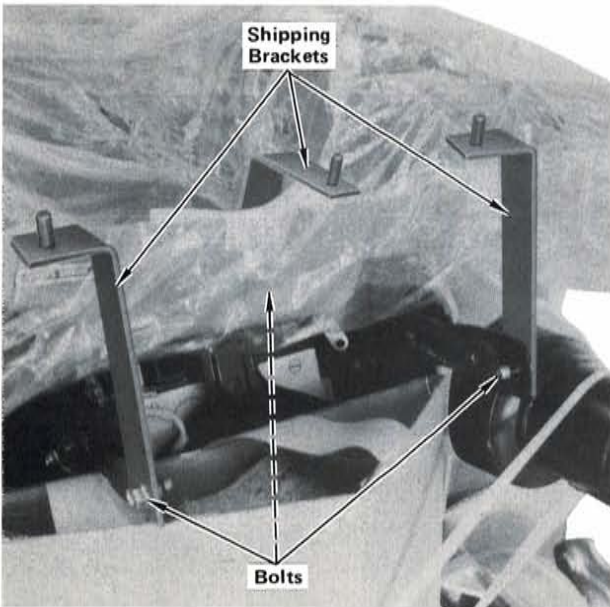
CAUTION: Use extreme care not to damage vehicle with crate frame.



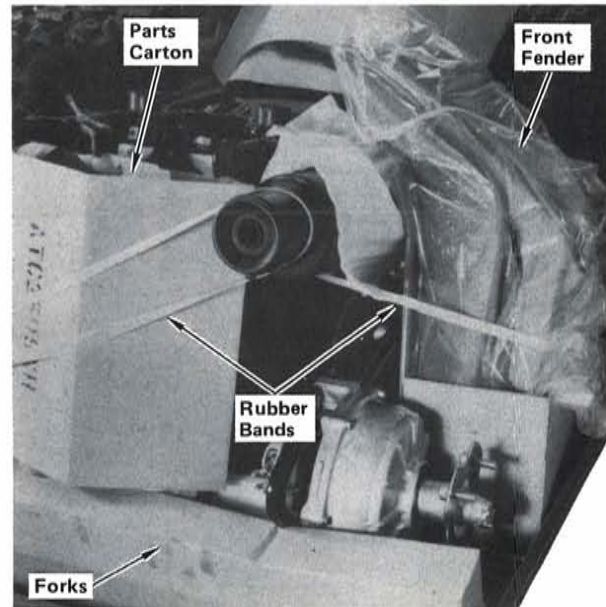
STEP 5—Remove the rear fender from top of the vehicle. Remove protective covering.



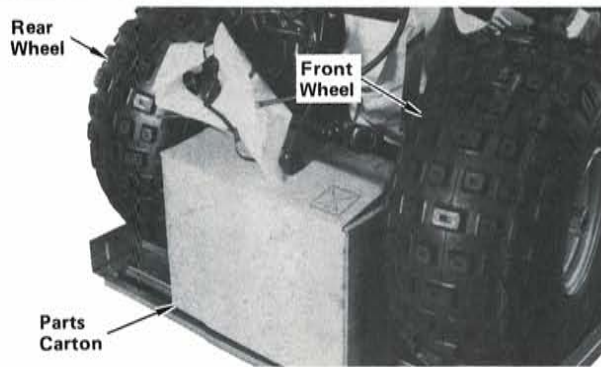
STEP 6—Remove the two bolts and shipping bracket from handlebar holders. Discard bracket.



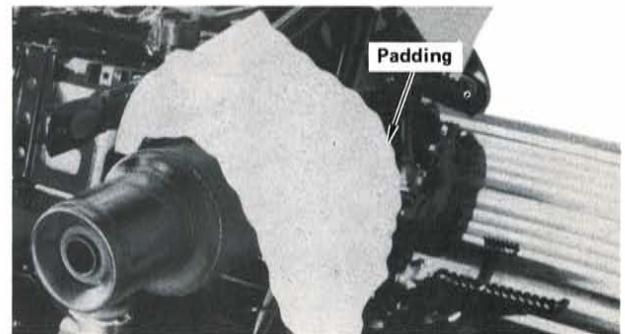
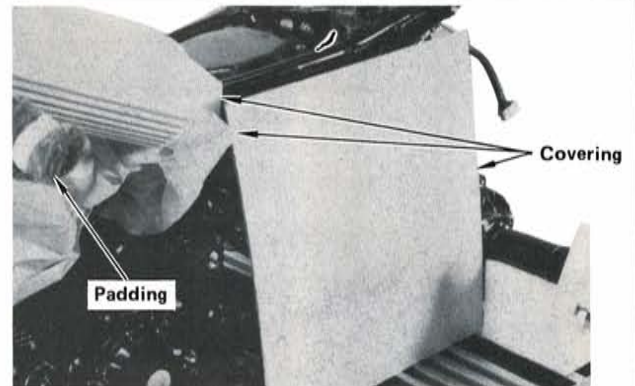
STEP 7—Remove the rear shipping brackets by removing three bolts. Discard brackets and bolts.



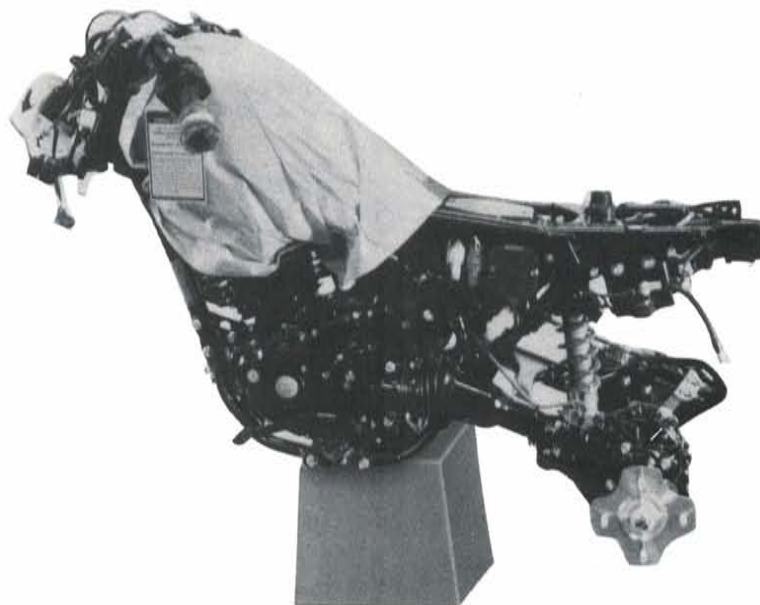
STEP 8—Remove the front fender, forks and the first parts carton by removing the rubber bands.



STEP 9—Remove the last parts carton, the front wheel and both rear wheels.



STEP 10—Remove all protective padding or covering.



STEP 11—Remove vehicle from the crate base using a hoist and support it on a padded block centered under the engine as shown.

CAUTION: The ATC may be easily knocked over until it is resting on its wheels. Use extreme care until the wheels are installed.



STEP 12—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 90248-2702.

Damaged or Missing Parts

Identify missing parts by referring to the “Loose Parts List” on the following page. 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 SO908.

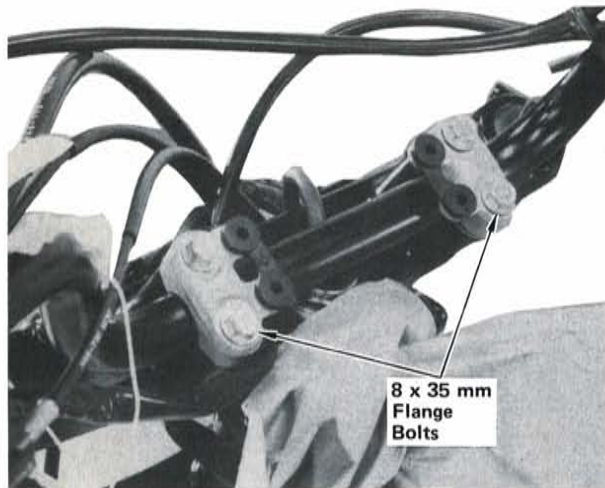
LOOSE PARTS LIST

PART NAME	QTY	PART NUMBER
1. Rear wheel	2	-----
2. Front wheel	1	-----
3. Front fender	1	-----
4. Seat	1	77100-HA6-680
5. Rear fender	1	80100-HA6-7708B
6. Owner's manual bag	1	83642-HA0-681
7. Owner's manual	1	-----
8. Rear luggage box	1	-----
9. Rear fender mud flap, R	1	80111-HA6-003
Rear fender mud flap, L	1	80112-HA6-003
10. Seat front prong	1	80101-HA6-680
11. Rear fender brace	1	80116-HA6-680
12. Seat lock lever	1	77105-HA6-000
13. Rear fender stay, R	1	80121-HA6-020
Rear fender stay, L	1	80122-HA6-020
14. Taillight assembly	1	33700-HA6-003
15. Front axle	1	44301-HA6-680
16. Rear carrying handle	1	81200-HA6-681
17. Engine guard	1	50360-HA0-000
18. Headlight case	1	-----
19. Tool box	1	-----
20. Front fork, R	1	51400-HA6-680
Front fork, L	1	-----
21. Battery electrolyte container	1	-----
22. Tool kit	1	89010-HA0-772
23. Attaching hardware		
Axle collar	1	44312-HA0-000
Brake cable guide B	1	45468-KA2-680
Brake cable guide	1	45467-HA6-000
Cable guide inner	2	45466-329-000
Front brake spring	1	45455-HA6-000
Brake adjusting nut	1	43459-434-000
Brake arm joint	1	45454-HA0-000
Wire band	2	32161-404-000
Handlebar cover, R	1	53205-HA6-000
Handlebar cover, L	1	53215-HA6-000
Fender washer	4	90404-680-000
6 x 25 mm flange bolt	4	95700-06025-00

STEP 12—(Continued)

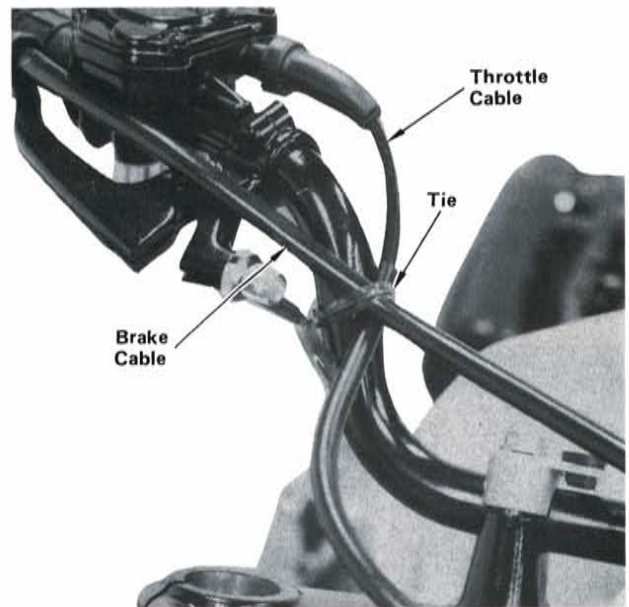
PART NAME	QTY	PART NUMBER
Drain tube	1	17358-VM4-000
6 mm flange nut	9	94050-06000
Lock lever bracket, R	1	77108-HA6-000
Lock lever bracket, L	1	77109-HA6-000
Lock spring	1	77107-HA6-000
Seat rubber cushion A	4	77204-286-020
Fender nut	3	80104-KJ2-000
6 x 10 mm flange bolt	3	95700-06010-08
6 x 7 mm special nut	8	90303-HA0-680
Screw	8	90120-HA7-670
8 x 22 mm flange bolt	1	95700-08022-00
8 x 25 mm flange bolt	1	95700-08025-00
8 x 16 mm flange bolt	2	95700-08016-00
Taillight pin	2	33716-HA6-680
Engine guard rubber	1	50362-HA0-000
Retaining strap	1	80214-HA8-680
6 x 20 mm pan head screw	1	93500-06020-0G
Wheel nut	8	90314-VM0-771
Helmet holder	1	50715-HA6-771
8 x 40 mm flange bolt, fork bridge	6	90118-965-000

STEP 12—(Continued)

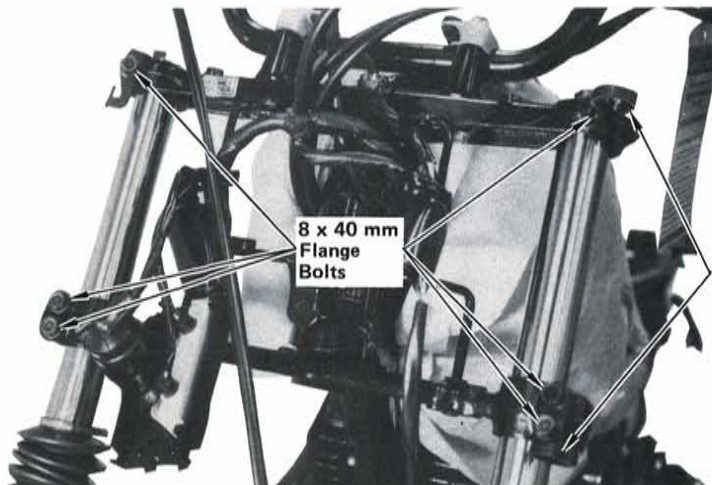


STEP 13—Raise handlebar grips until punch mark on handlebar is aligned with top of lower holder, and align serrations on handlebar with lower holders. Insert two 8 x 35 mm flange bolts through rear holes of upper holders. Tighten forward bolts to specified torque first, then tighten rear bolts to same torque.

Torque specification:
2.4 kg-m (18 lb-ft)



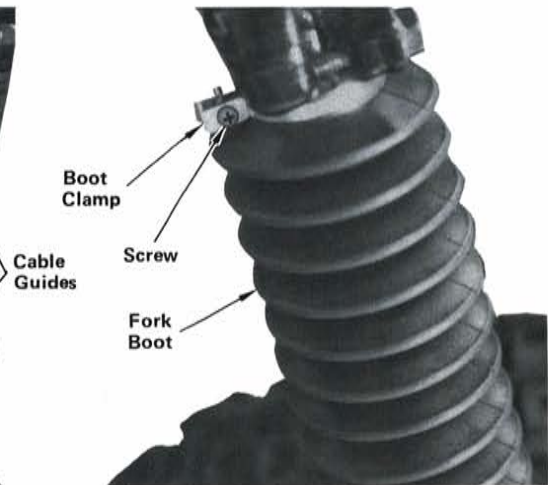
STEP 14—Remove the tie from the throttle and brake cables.

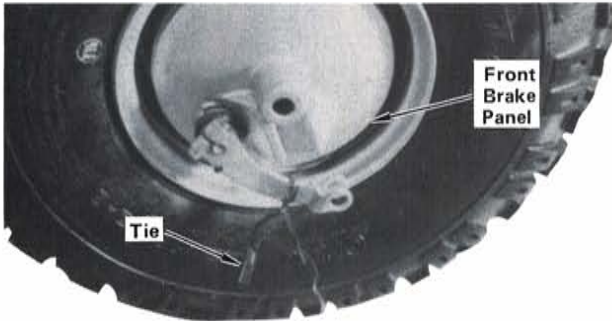
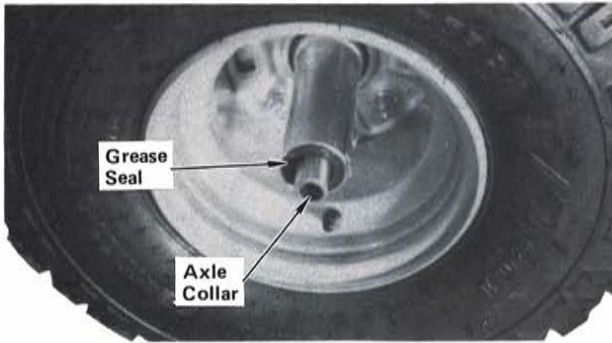


STEP 15—Insert the fork legs into the fork bridges. (The fork with the axle holder goes on the right side.) Secure the forks in the bridges using six 8 x 40 mm black flange bolts. Note that two cable guides are also attached to the right side (one on the upper and one on the lower fork bridge), using the 8 x 40 mm bolts. Align the top of the fork leg (not the cap), with the upper surface of the upper fork bridge. Tighten the six bolts to the specified torque.

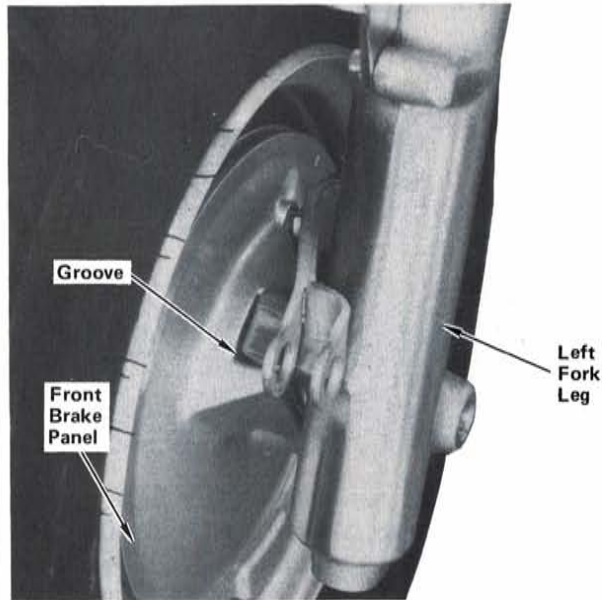
Torque specification:
3.2 kg-m, (23 lb-ft)

Move the fork boot up to the bottom of the lower fork bridge and secure the boot using the clamp.

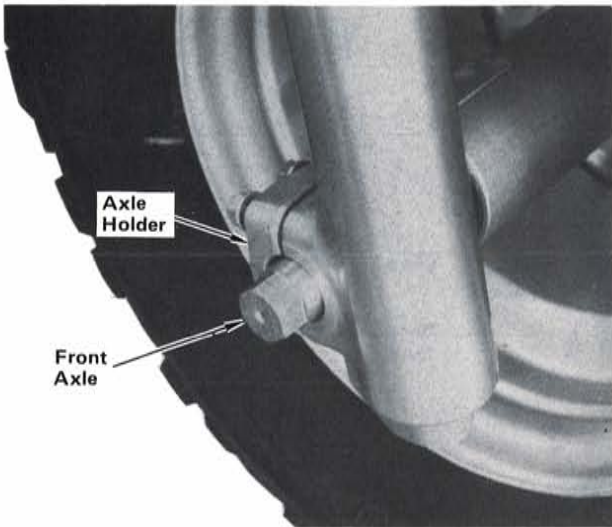




STEP 16—Remove the tie and lift out the front brake panel. Check that brake drum and shoes are clean; clean if required and reinstall panel.

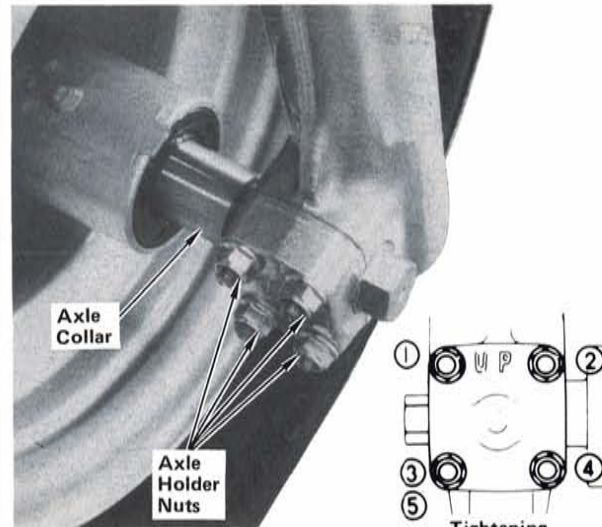


STEP 17—Position front wheel between fork legs with brake panel on left, and insert fork tongue into groove in brake panel.



STEP 18—Rotate right fork leg slider so axle holder faces the rear. Insert front axle through axle holder, wheel hub, brake panel, and screw into left fork leg. Tighten axle to specified torque.

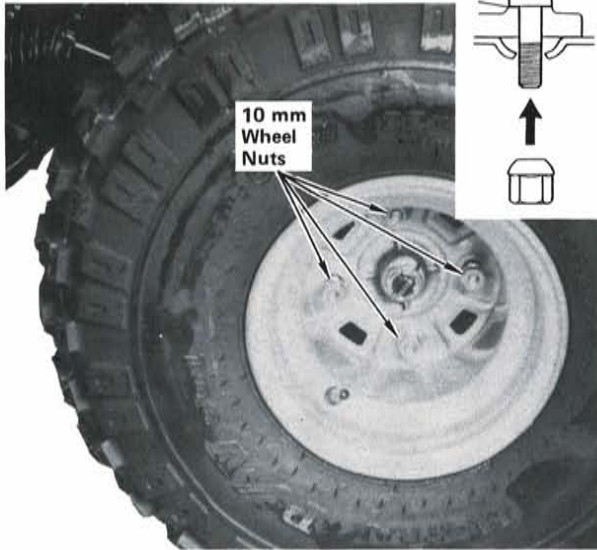
Torque specification:
9.0 kg-m (65 lb-ft)



STEP 19—Tighten axle holder nuts to specified torque in sequence shown.

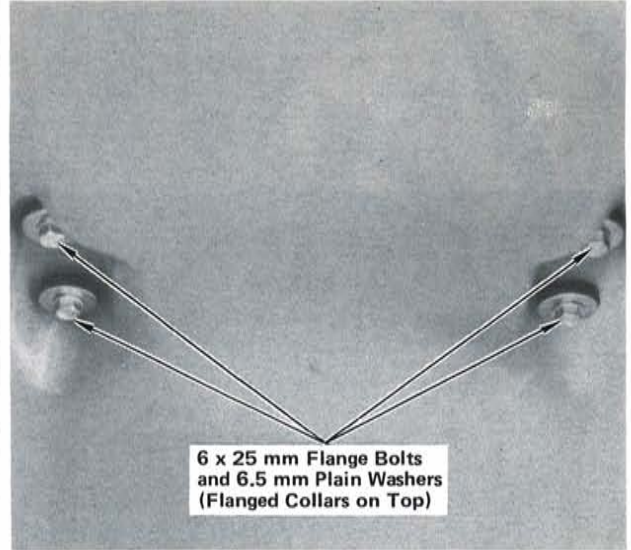
NOTE: Be sure to retighten #3 nut after tightening #4 nut.

Torque specification:
1.2 kg-m (9 lb-ft)



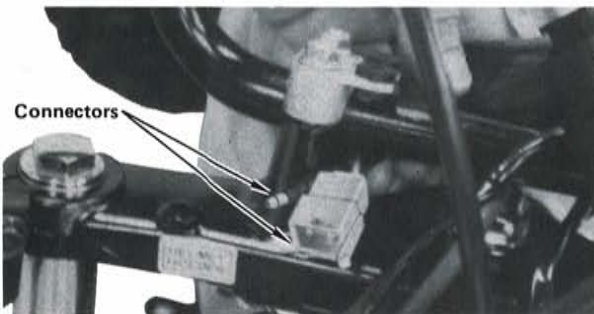
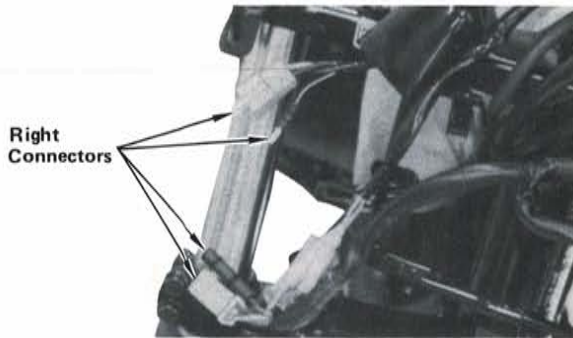
STEP 20—Insert studs of rear wheel hubs through rear wheels as shown. Install each hub using four 10 mm nuts. Tighten nuts to specified torque. Remove lifting sling.

Torque specification:
6.5 kg-m (47 lb-ft)

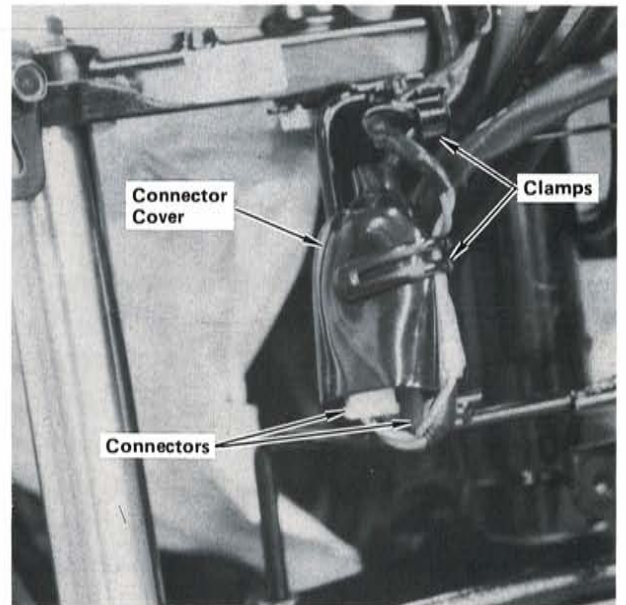


STEP 21—Position front fender between fork legs, with mud flap towards the rear, and install using four 6 x 25 mm flange bolts and 6.5 mm plain washers. Be sure flanged collars are in place. Tighten bolts to specified torque.

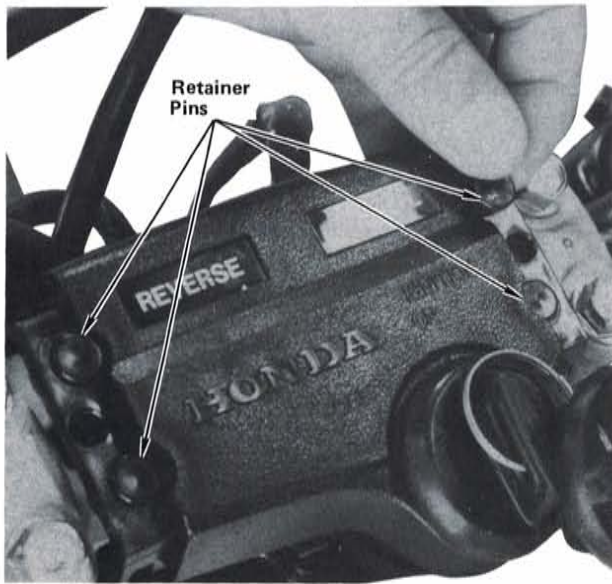
Torque specification:
1.0 kg-m (8 lb-ft)



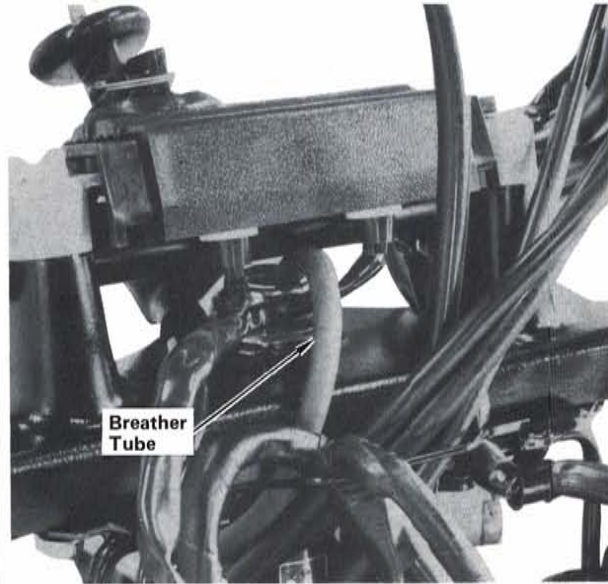
STEP 22—Disconnect the right connectors; route the wires between the handlebars and upper bridge and reconnect the wires.



STEP 23—Secure connector cover and wire harness connector to right side of headlight case bracket using wire clamp as shown.



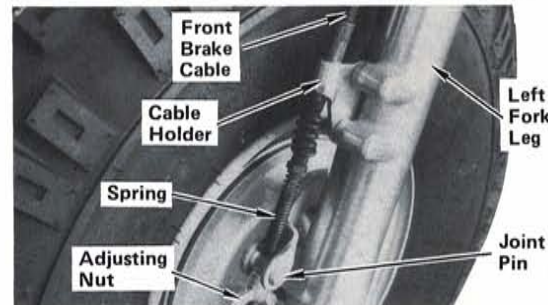
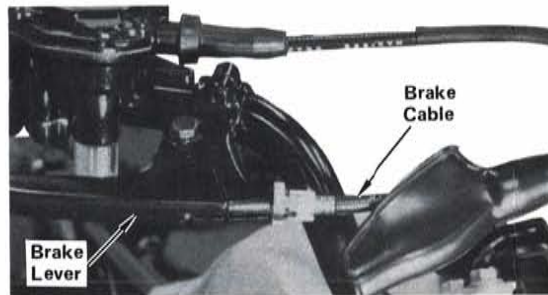
STEP 24—Position indicator light panel over handlebar as shown and align holes of cover with holes in grommets on upper holders. Press four retaining pins down through holes and grommets to secure panel as shown.



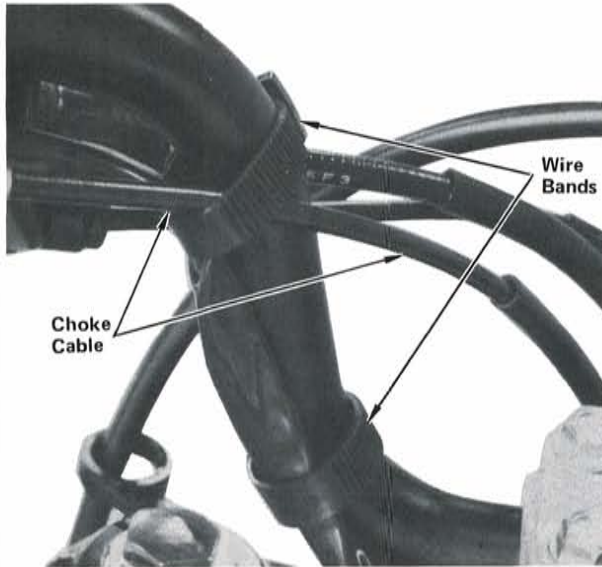
STEP 25—Route end of rear brake breather tube under handlebar brace and through hole in steering stem nut as shown.



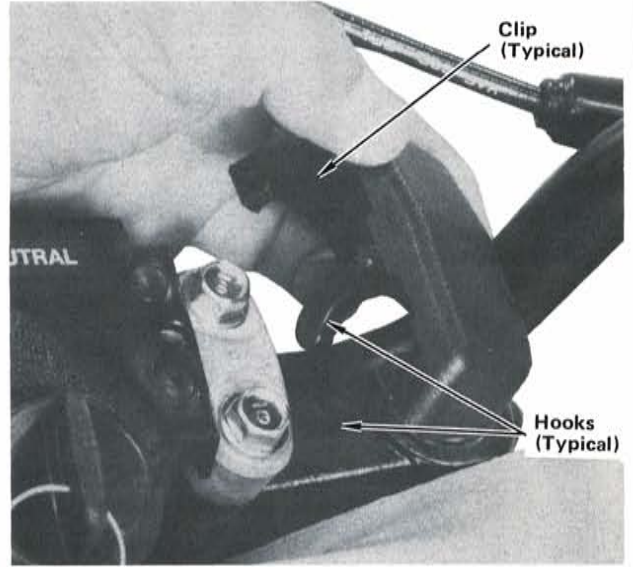
STEP 26—Remove tie holding end of front bracket cable to wire harness.



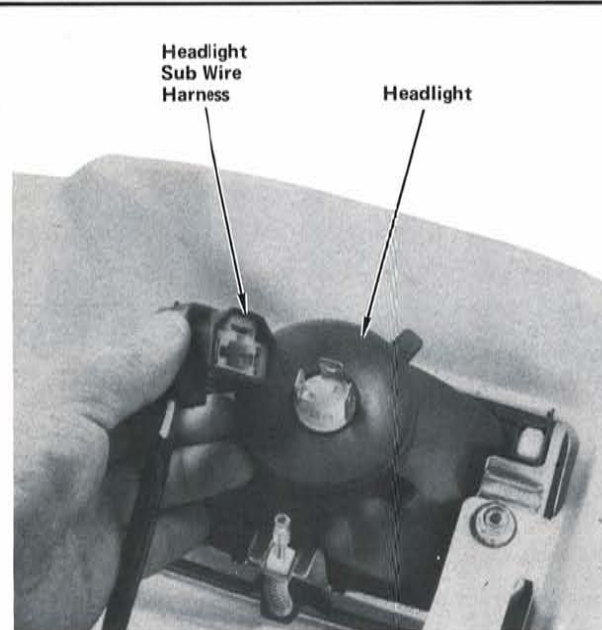
STEP 27—Install brake cable end into brake lever and pull cable through the knurled adjuster. Route cable down through the two cable guides and the holder on the fork leg. Slip the spring over the cable end and connect the cable to the brake arm using the joint pin and adjusting nut as shown.



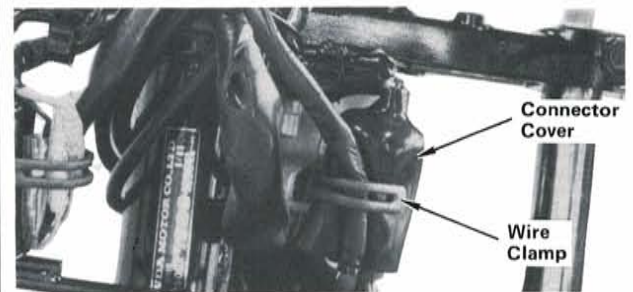
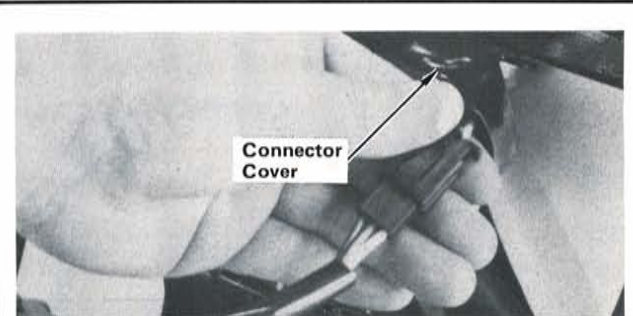
STEP 28—Attach left handlebar switch wires and choke cable to handlebar using two wire bands positioned where shown.



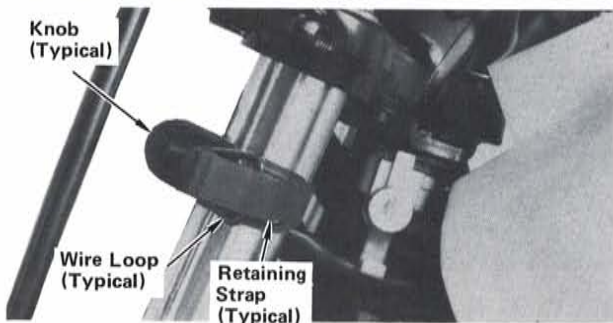
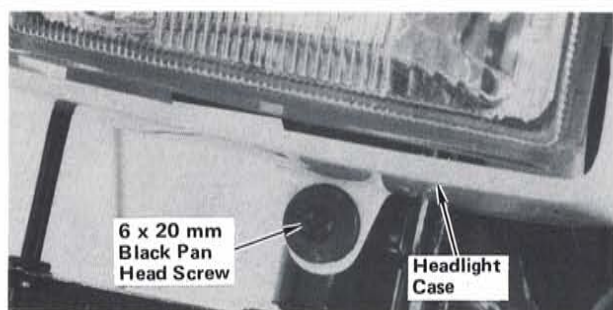
STEP 29—Install right and left handlebar holder covers on each side of indicator light panel by clipping onto handlebar, inserting prong into hole in indicator light panel, then engaging front and rear hooks onto indicator light panel. Be sure front and rear hooks are completely engaged.



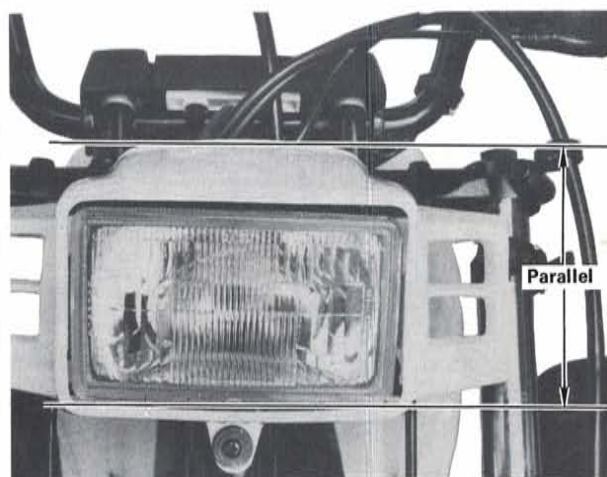
STEP 30—Connect headlight sub wire harness to headlight as shown.



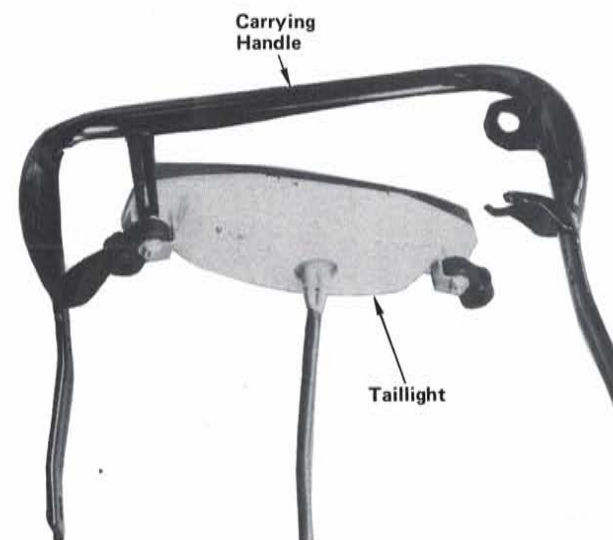
STEP 31—Open wire clamp holding connector cover and turn cover inside out as shown. Connect headlight wire harness connector to black connector and pull connector cover over connectors. Secure connector cover with wire clamp as shown.



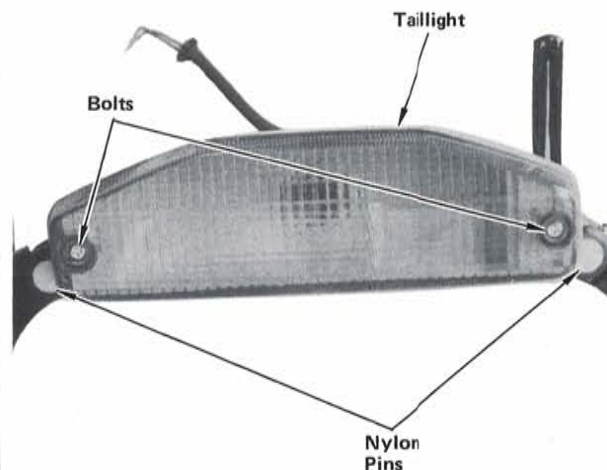
STEP 32—Install headlight case at bottom using a black 6 x 20 mm pan head screw. Tighten screw securely. Wrap headlight case retaining straps around fork legs as shown, and hook wire loops onto knobs on straps as shown.



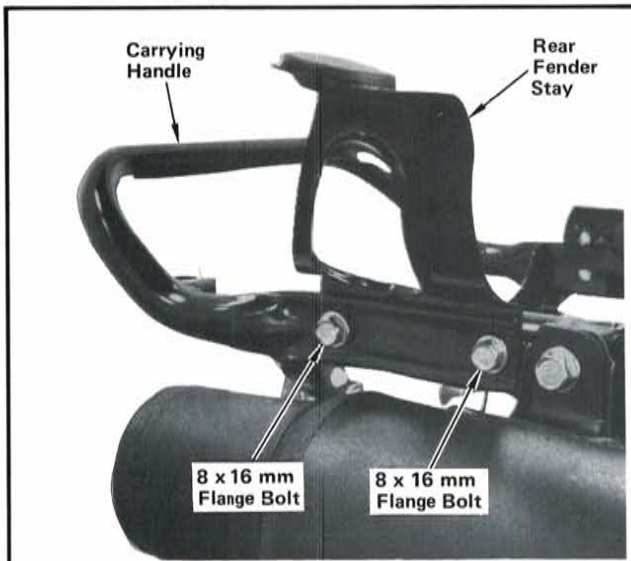
STEP 33—Check that headlight is parallel to handlebar.



STEP 34—Position taillight on rear carrying handle as shown with curved side of taillight facing away from carrying handle as shown. Press rubber mounts into slots of brackets as shown.

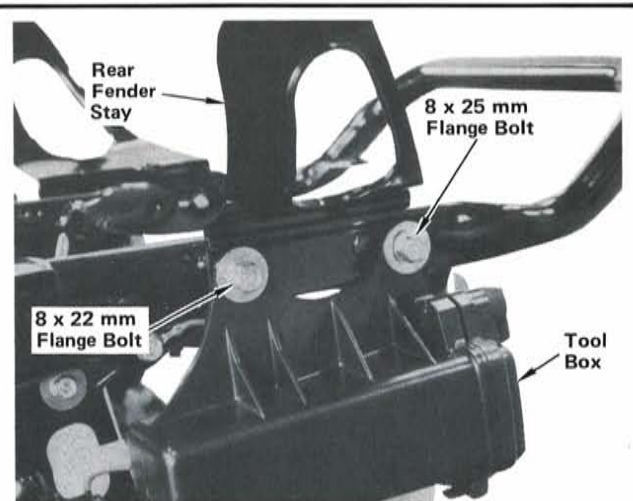


STEP 35—Install taillight by pressing two nylon pins into rubber mounts from taillight lens side as shown.



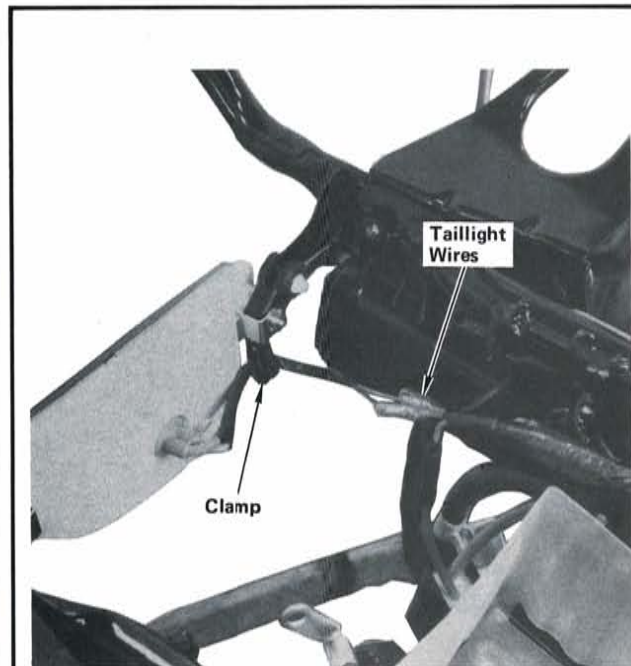
STEP 36—Sandwich right rear fender mount bracket between rear carrying handle and frame as shown. Install right side of carrying handle and bracket using 8 x 16 mm flange bolts. Do not tighten bolts at this time.

NOTE: Bracket will bend away from the frame.

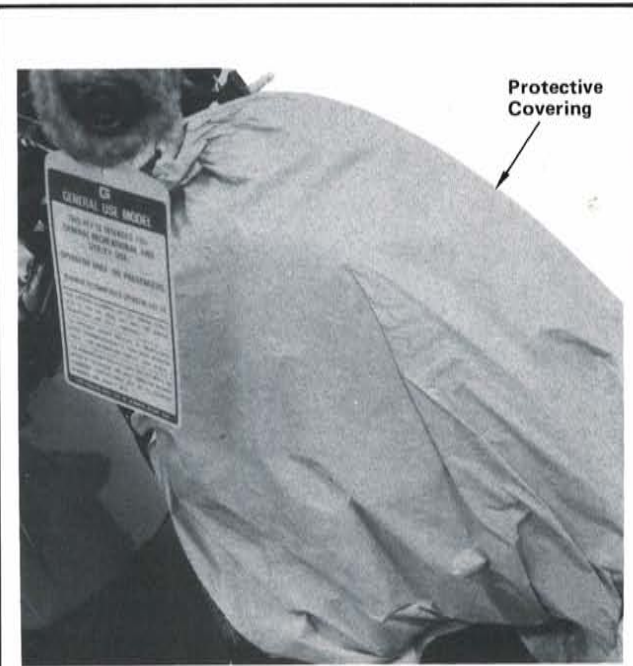


STEP 37—Sandwich left rear fender mount bracket between rear carrying handle and frame. Align holes in tool box with holes in carrying handle, bracket, and frame and install using an 8 x 22 mm flange bolt through forward hole, and an 8 x 25 mm flange bolt through rear hole. Tighten all four carrying handle bolts to specified torque.

Torque specification:
2.7 kg-m (20 lb-ft)



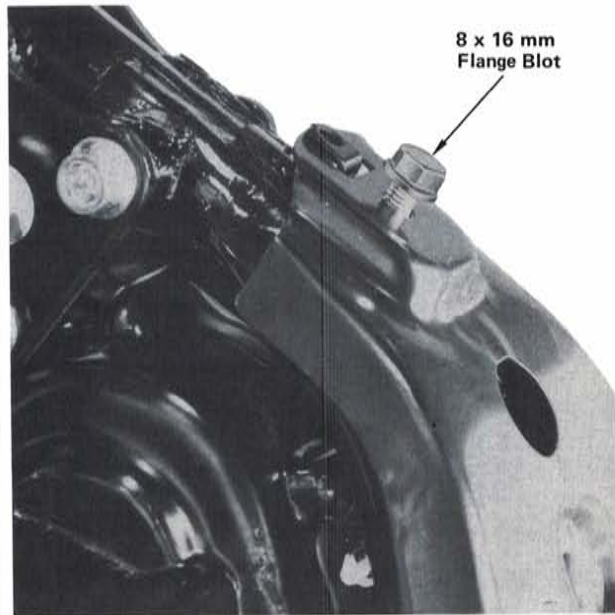
STEP 38—Connect taillight wires to wire harness color-to-color and secure taillight wires using wire clamp.



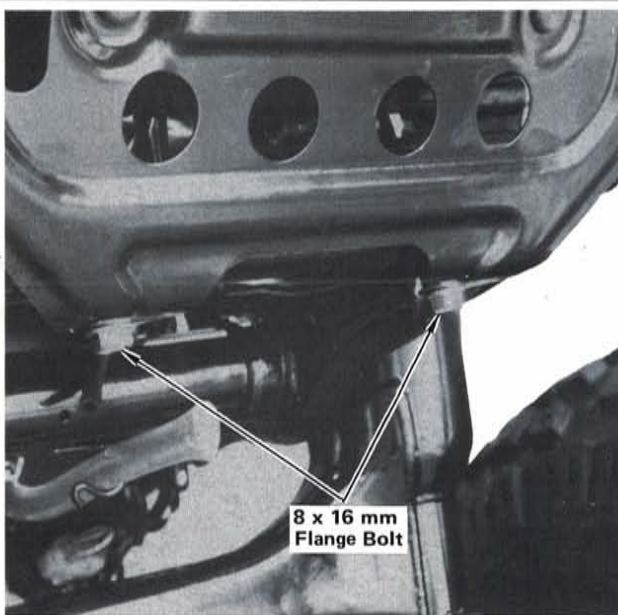
STEP 39—Remove protective covering from fuel tank.



STEP 40—Position rubber spacer over drain plug hole as shown.

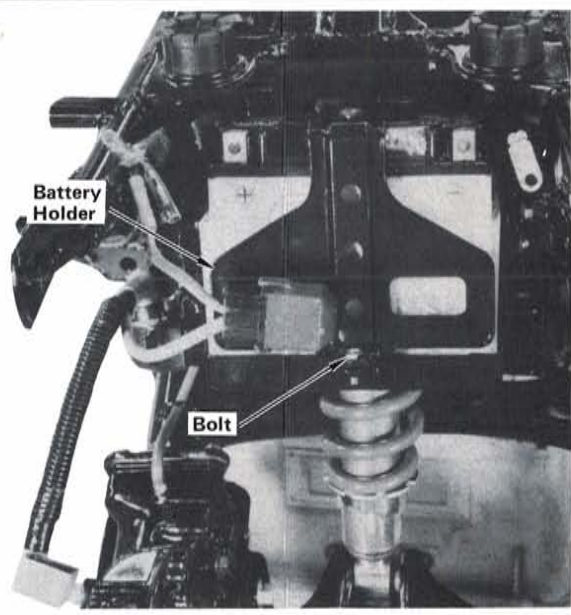


STEP 41—Insert tab on frame into slot in engine guard as shown. Attach front of engine guard to frame using an 8 x 16 mm flange bolt. Do not tighten bolt at this time.



STEP 42—Attach rear of engine guard to frame using two 8 x 16 mm flange bolts. Tighten all three engine guard bolts to specified torque.

Torque specification:
2.7 kg-m (19 lb-ft)



STEP 43—Remove the 6 x 12 mm battery holder bolt. Remove the battery holder and the battery.

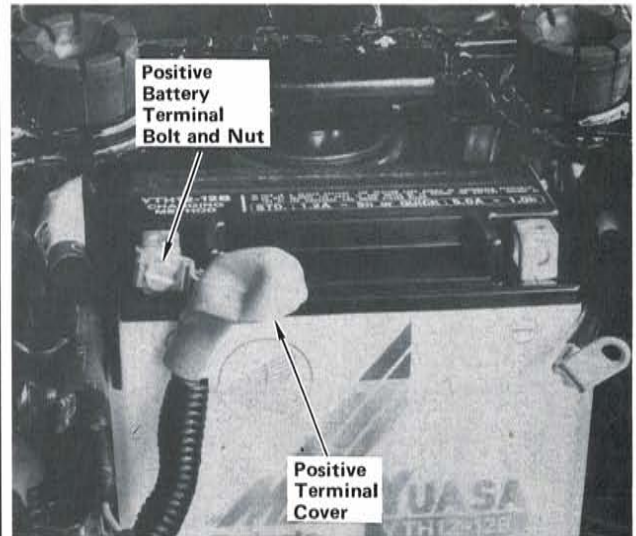
STEP 44—Service battery in accordance with the instructions on the electrolyte container.

WARNING

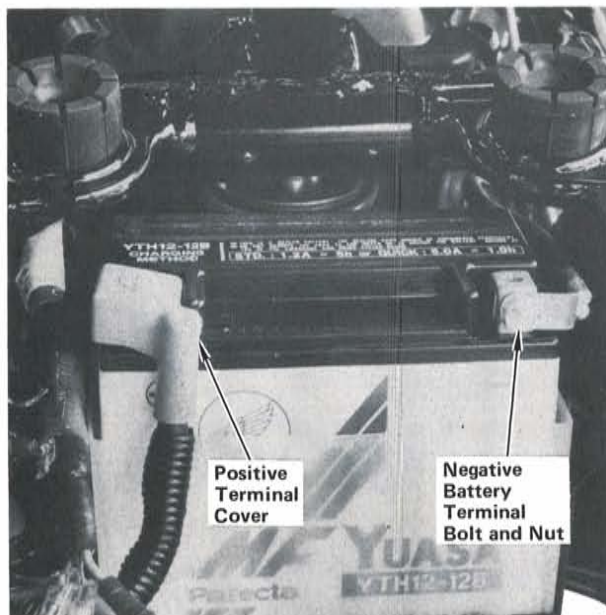
- * The battery electrolyte contains sulfuric acid. Protect your eyes, skin and clothing. In case of contact, flush thoroughly with water.
- * If electrolyte gets in your eyes, flush them thoroughly with water and get prompt medical attention.
- * The battery generates hydrogen gas which can be highly explosive. Do not smoke or allow flames near the battery especially while charging it.

CAUTION:

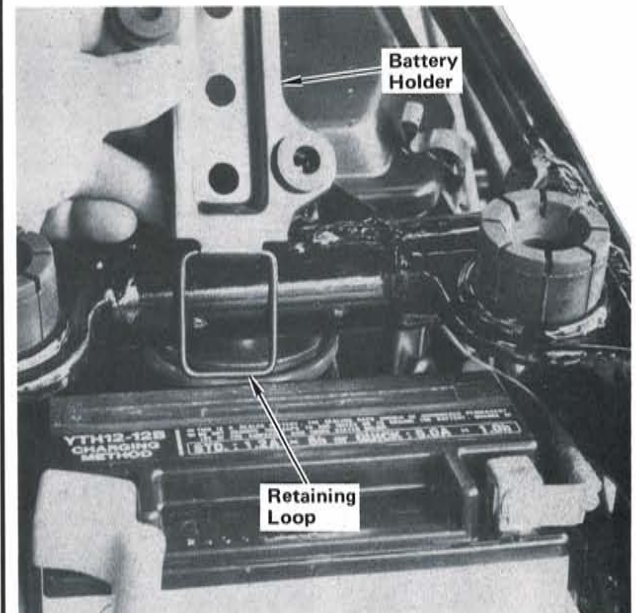
- * Remove the battery and maintain it in a fully charged condition if the motorcycle is not for immediate delivery. Refer to **SERVICE LETTER SL #48**.
- * Do not use the electric starter immediately after installation of the battery, allow some time for the battery to attain a full charge.
- * Remove the battery from the vehicle whenever filling it with electrolyte.
- * Do not use any liquids other than those furnished with the battery.
- * After filling the battery be sure there is no electrolyte left in the container.
- * Dispose of the container properly.
- * Add only distilled water. Tap water will shorten the service life of the battery.
- * Check that the battery breather hose is not kinked, twisted or pinched. Otherwise the battery may be damaged.



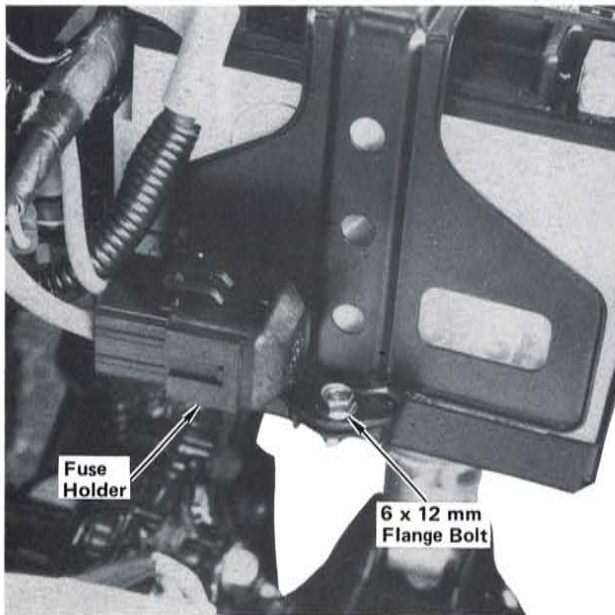
STEP 45—Check that ignition switch is off. Place battery in battery cover and slide into battery compartment with terminals facing the rear. Connect positive battery cable (cable with terminal cover) to battery positive (+) terminal using a battery terminal bolt and nut as shown. Tighten bolt securely and coat terminal with clean grease.



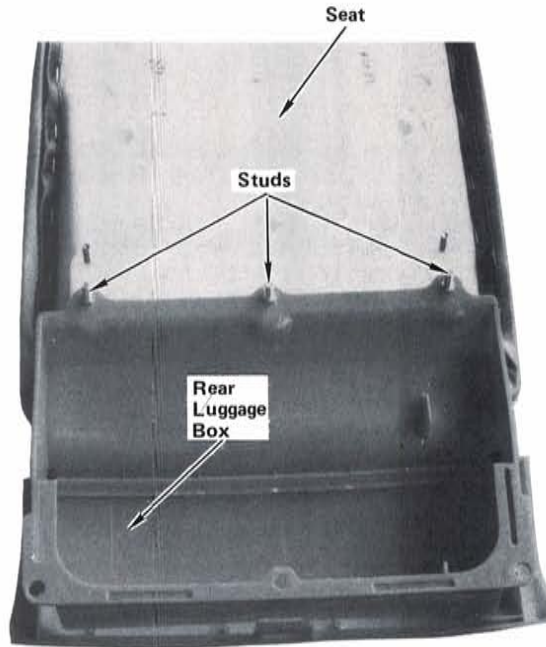
STEP 46—Slip terminal cover over positive terminal. Connect ground cable to battery negative (-) terminal using a battery terminal bolt and nut as shown. Tighten bolt securely and coat terminal with clean grease.



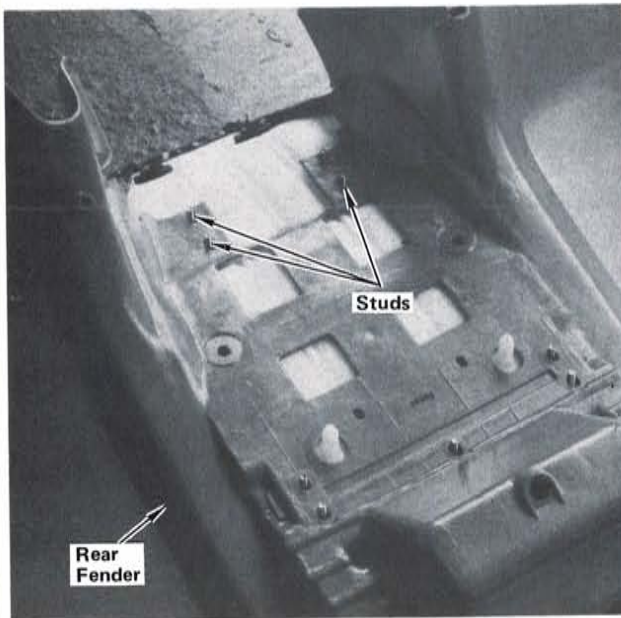
STEP 47—Hook retaining loop of battery holder onto tab on forward side of battery compartment.



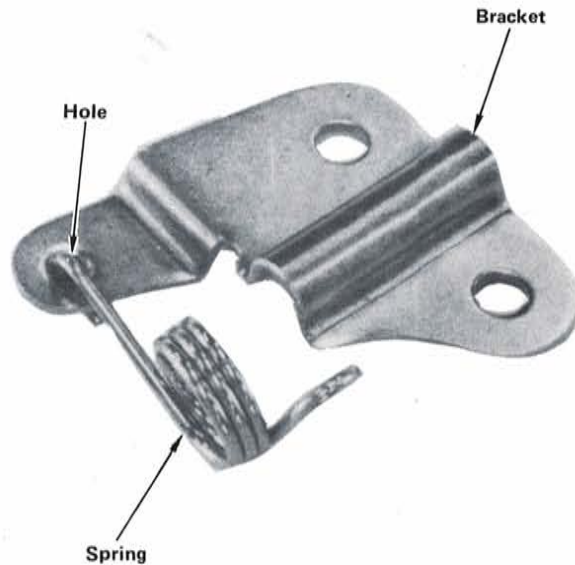
STEP 48—Install battery holder using a 6 x 12 mm flange bolt. Tighten bolt securely. Slip slot of fuse holder over tab on battery holder as shown.



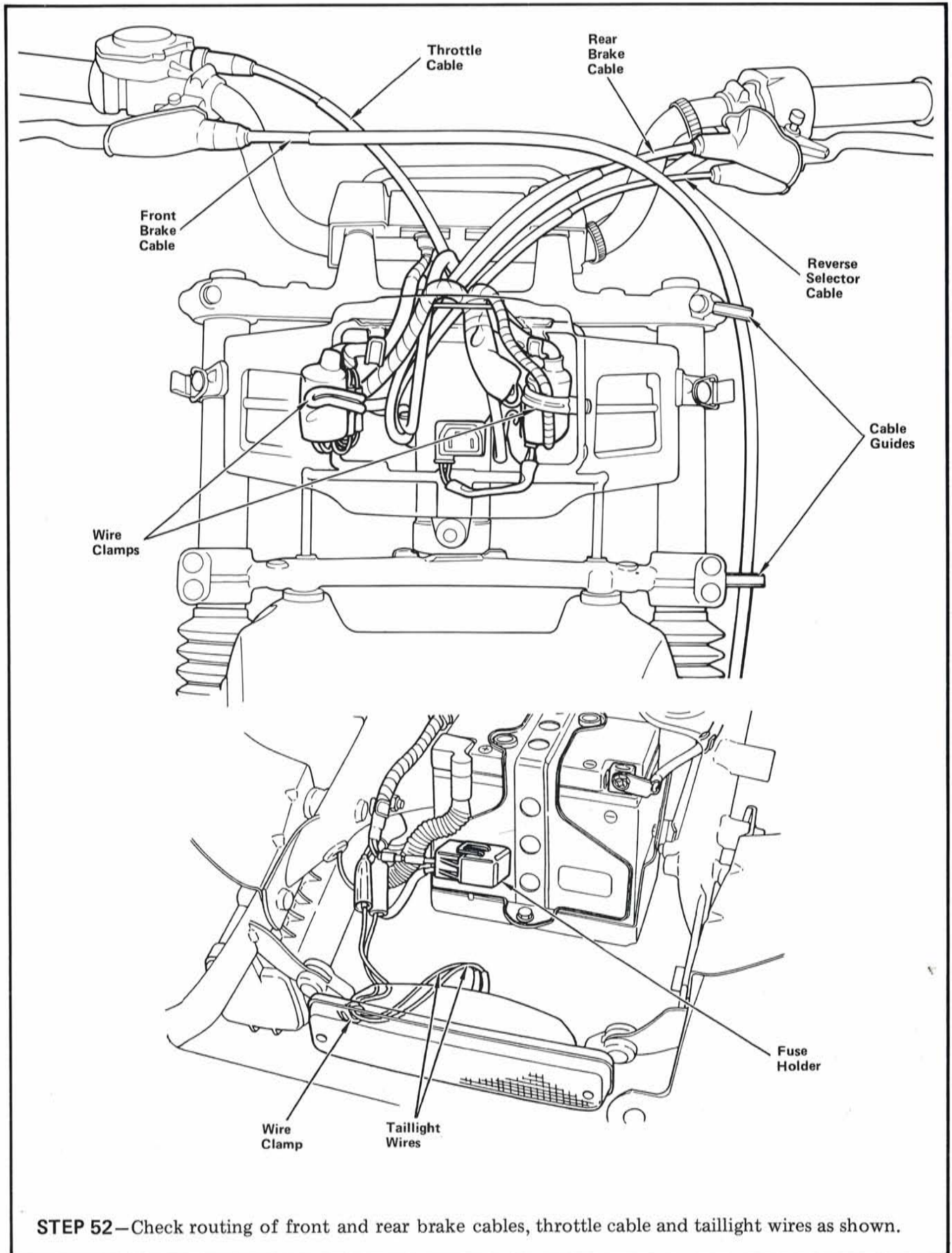
STEP 49—Position rear luggage box on the three studs at the rear of the seat as shown.



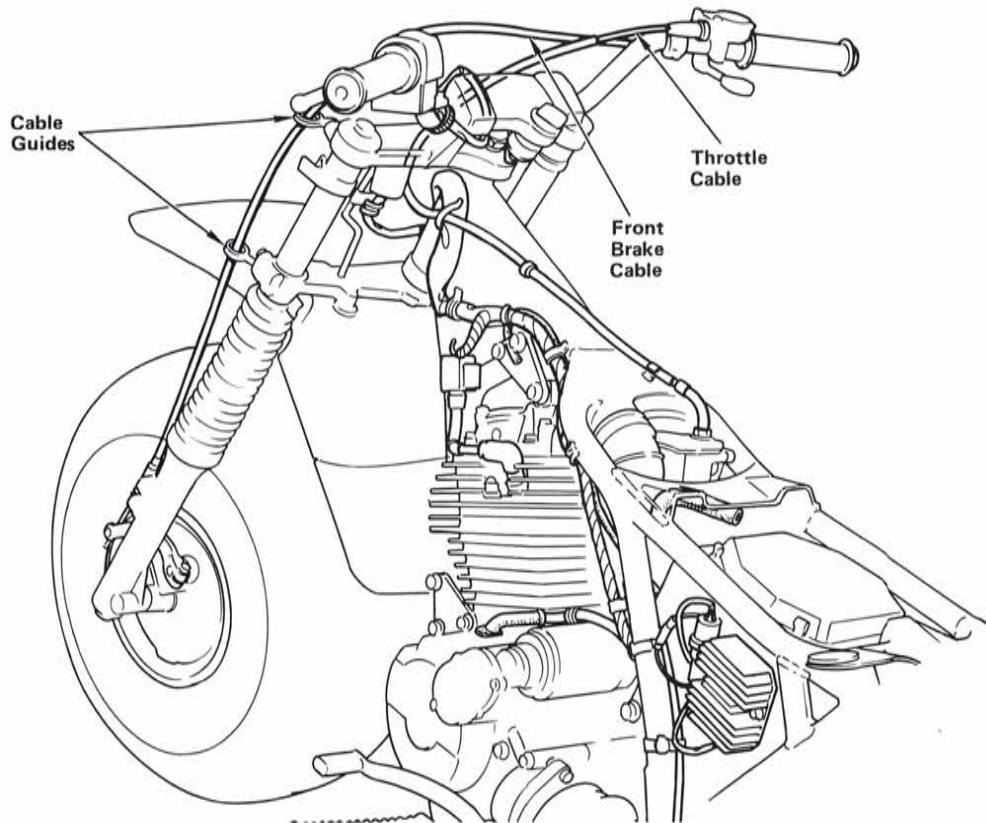
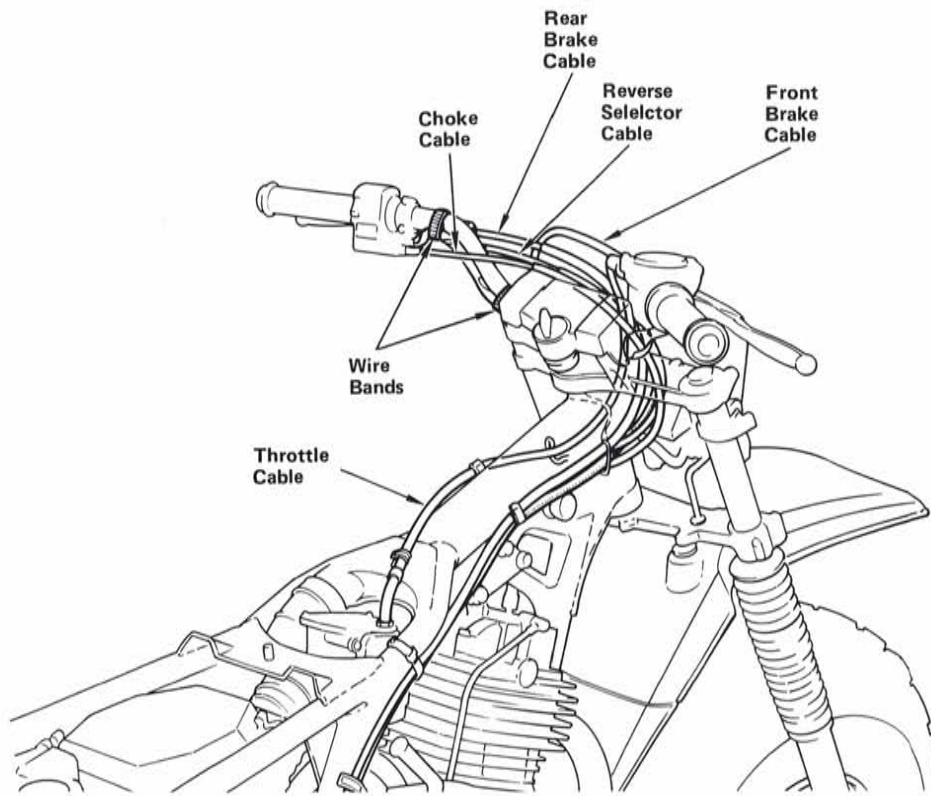
STEP 50—Position rear fender on the studs on the bottom of the seat as shown.



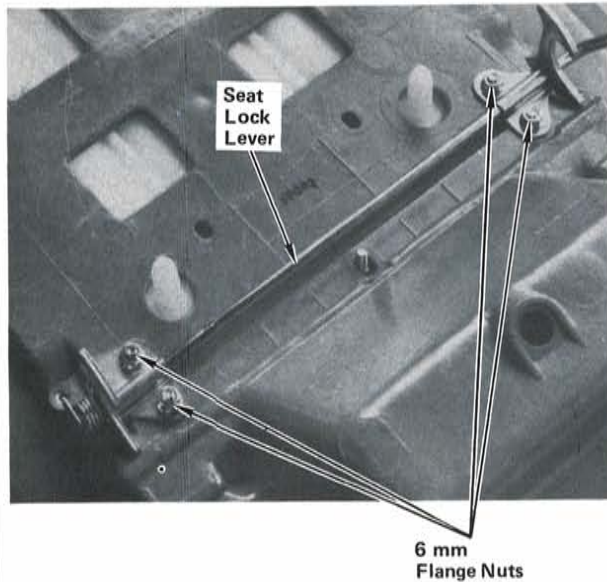
STEP 51—Insert long end of seat lock lever spring in outer hole of seat lock lever bracket as shown.



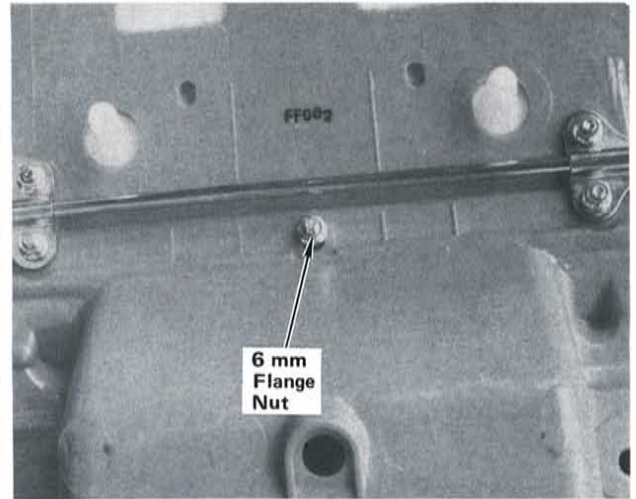
STEP 52—Check routing of front and rear brake cables, throttle cable and taillight wires as shown.



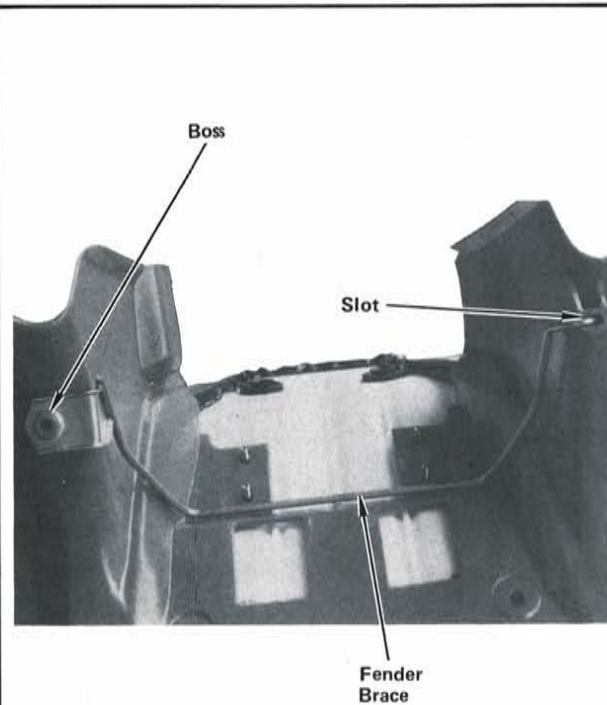
STEP 52—(Continued)



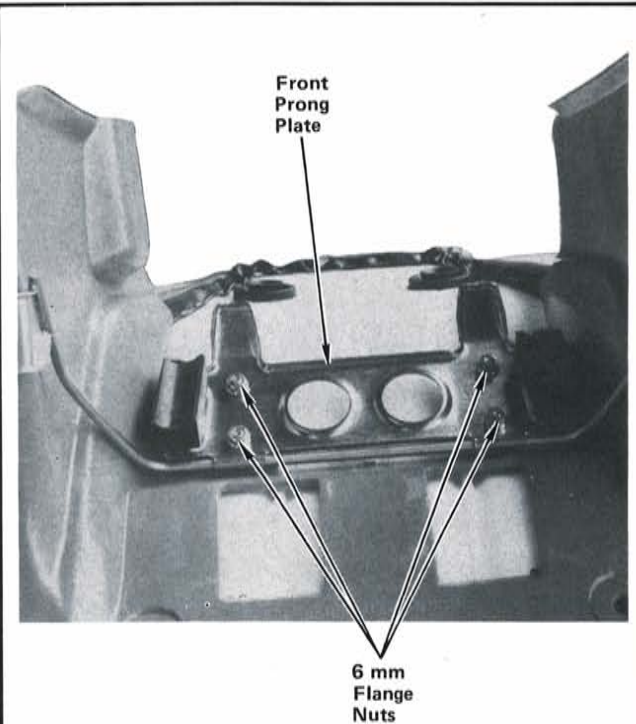
STEP 53—Position seat lock lever on bottom of rear fender as shown, with lock lever handle on left side. Install lock lever bracket with spring on right side and bracket without spring on left side, using two 6 mm flange nuts for each. Tighten nuts securely. Hook short end of spring onto seat hook as shown.



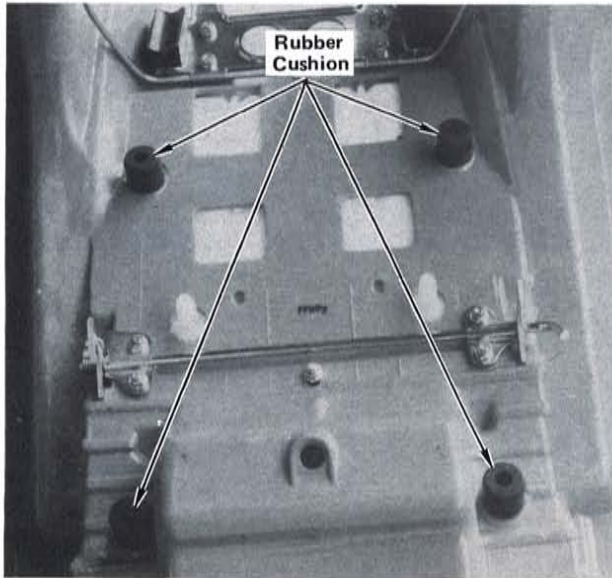
STEP 54—Install seat using a 6 mm flange nut.



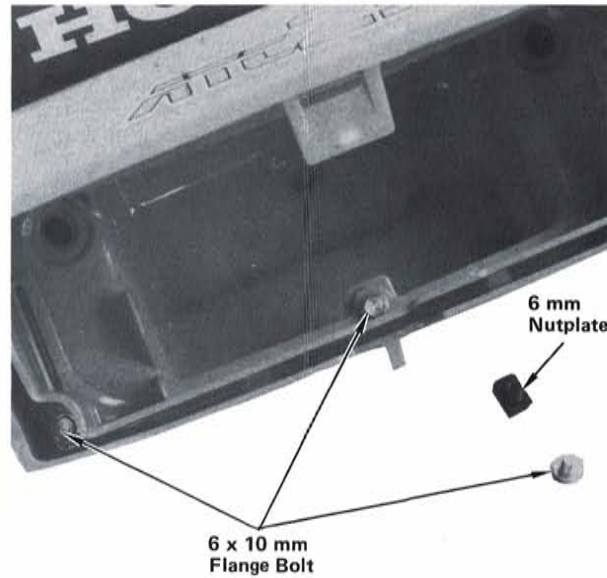
STEP 55—Insert left end of fender brace into slot in rear fender as shown, and place right end of fender brace over boss on fender as shown.



STEP 56—Position seat front prong plate over fender brace and studs as shown and install using four 6 mm flange nuts. Tighten nut securely.

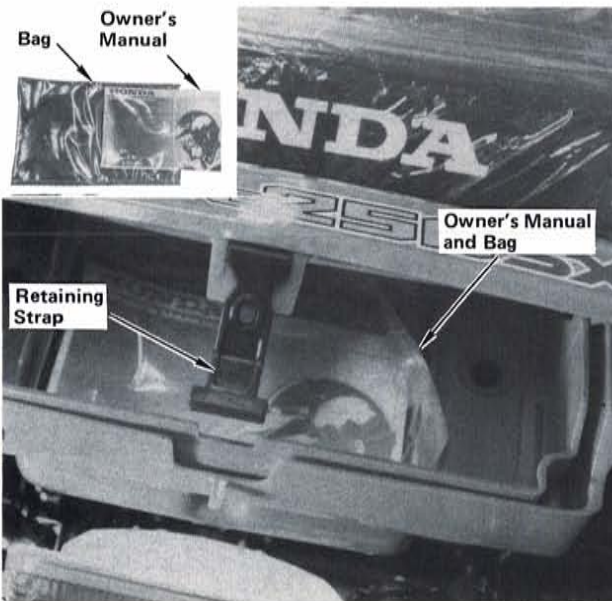


STEP 57—Press four rubber cushions into indicated holes in rear fender. Be sure ends of cushions are properly inserted all the way.

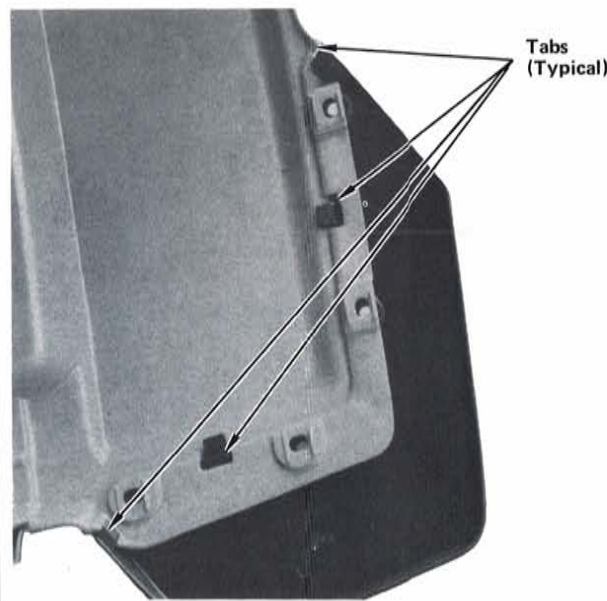


STEP 58—Attach rear of luggage box to fender using three 6 x 10 mm flange bolts inserted from the top, and three nutplates under the fender. Tighten bolts to specified torque.

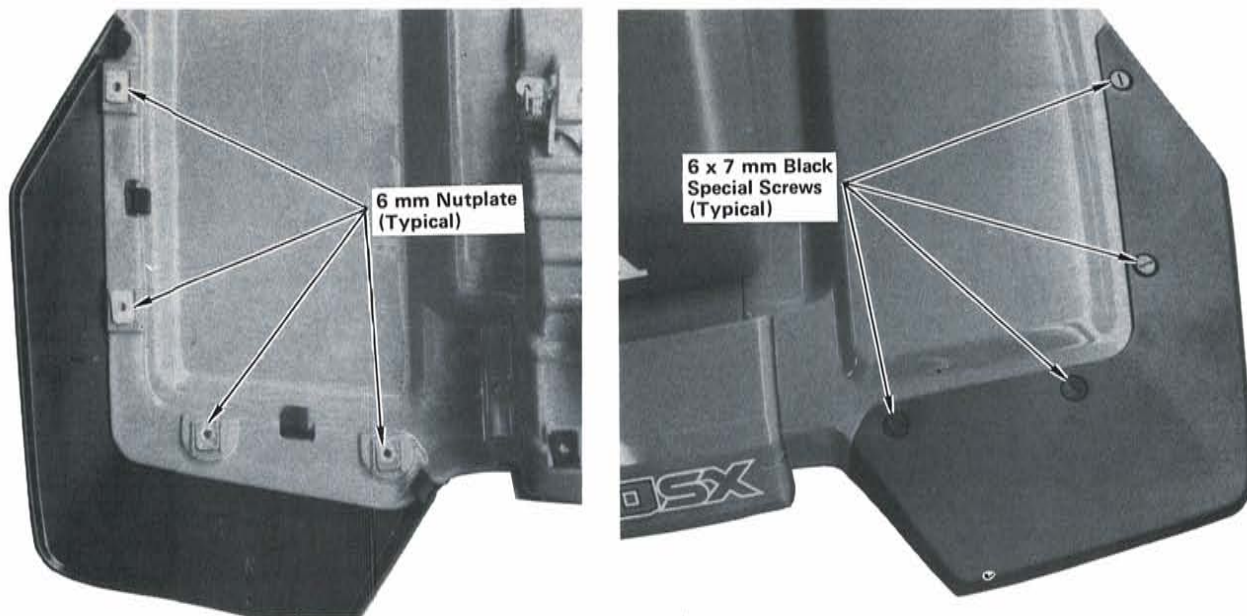
Torque specification:
1.0 kg-m (8 lb-ft)



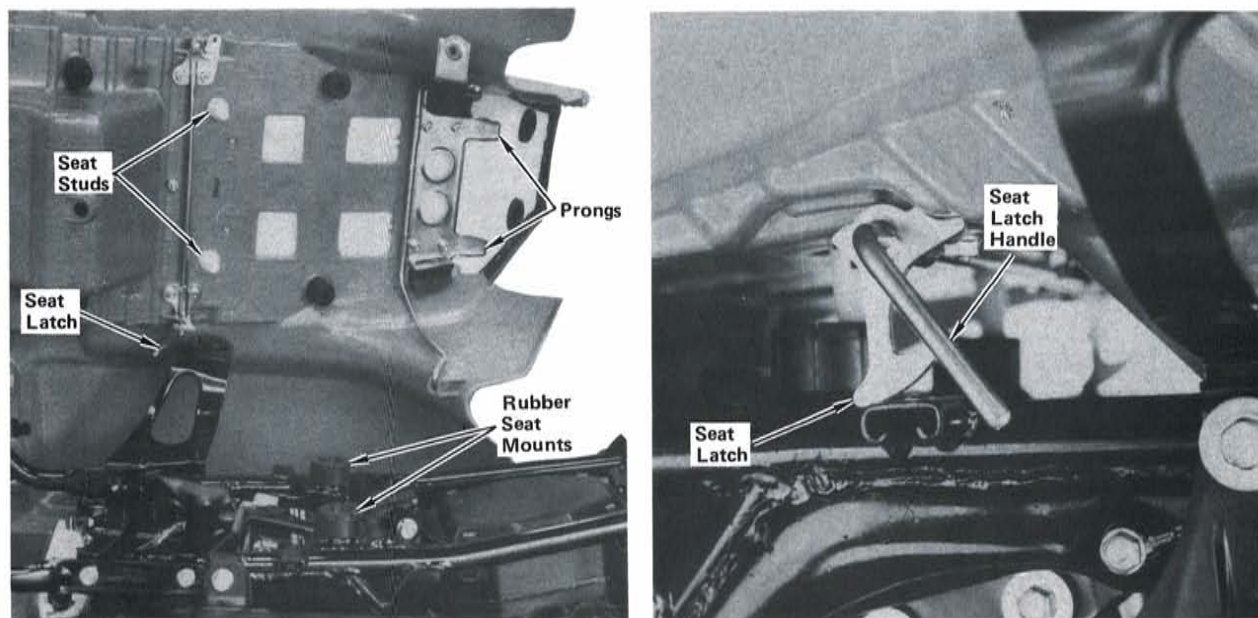
STEP 59—Place the owner's manual into the bag and stow in the rear luggage box. Attach the retaining strap in the slot of the box lid as shown.



STEP 60—Insert tabs of rear mud flaps down through slots in right and left rear fenders as shown.

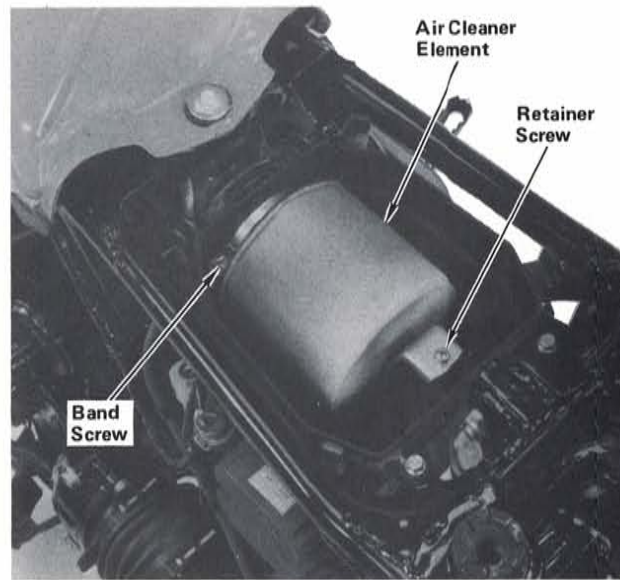
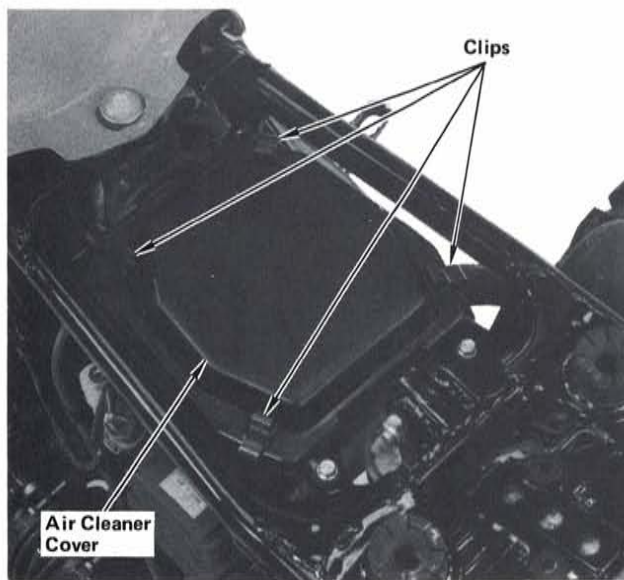


STEP 61—Align holes and install rear mud flaps using four 6 x 7 mm black special screws and nutplates for each as shown. Tighten screws securely.

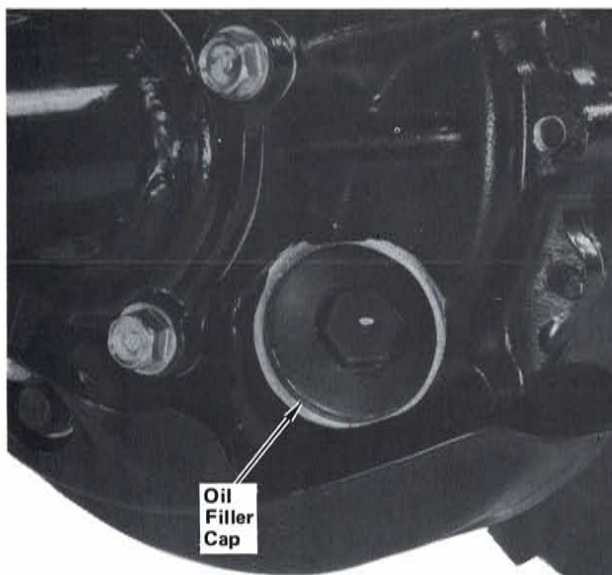


STEP 62—Pull kick starter out of the way. Install and latch seat by inserting front prongs into recesses behind fuel tank and inserting seat studs into rubber seat mounts in frame. Press down on rear of seat to engage seat latches.

CAUTION: To prevent damage to rear fender, be sure seat is pushed forward all the way so seat latches will engage smoothly when pressing down on rear of seat.



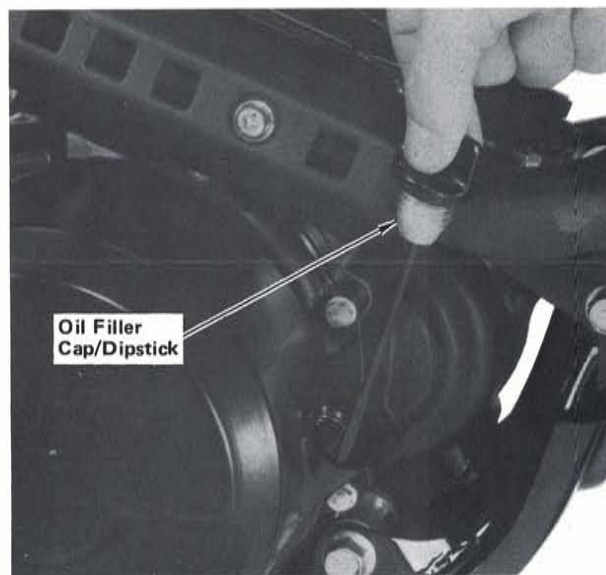
STEP 63—Unlatch and remove the seat/rear fender. Release four clips attaching air cleaner cover and remove cover. Loosen band screw and remove retainer screw. Remove air cleaner element. Check condition of element. If necessary, clean and oil element as described in owner's manual or shop manual. Reinstall element. Tighten retainer screw and band screw securely. Reinstall cover. Make sure clips are secure. Replace the seat/rear fender.



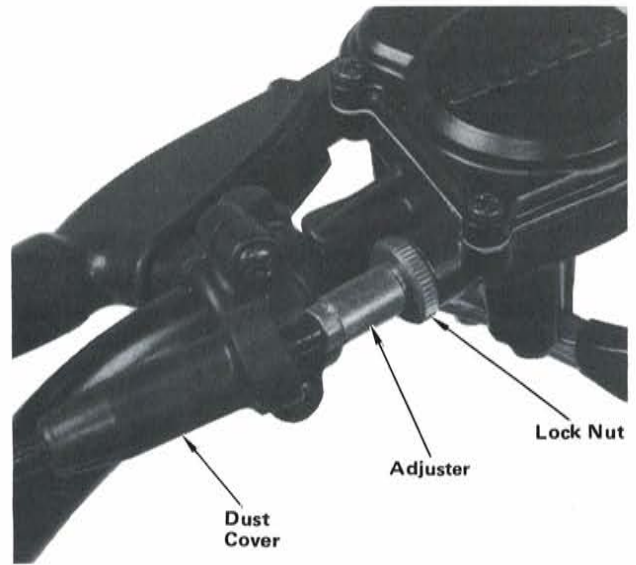
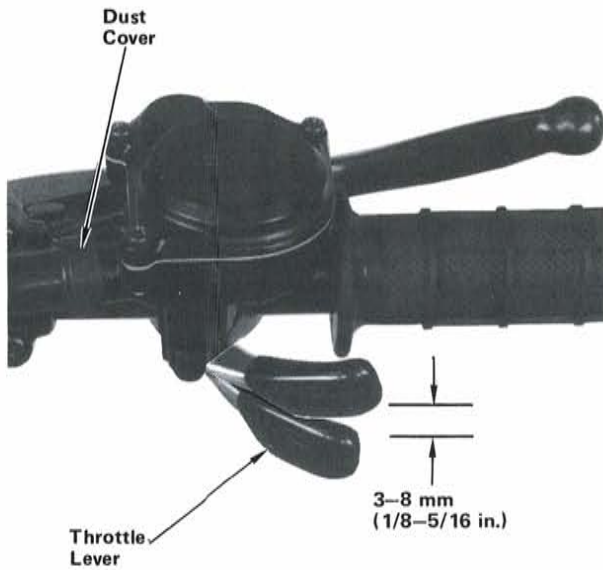
STEP 64—Remove oil filler cap from final drive gear case. Check that oil level is even with lower edge of oil filler hole. If necessary, add recommended oil. Reinstall and tighten oil filler cap.

Recommended oil:

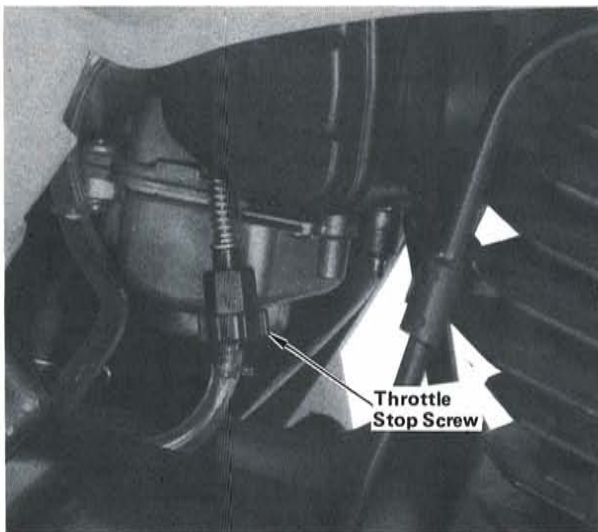
Hypoid Gear Oil SAE 80



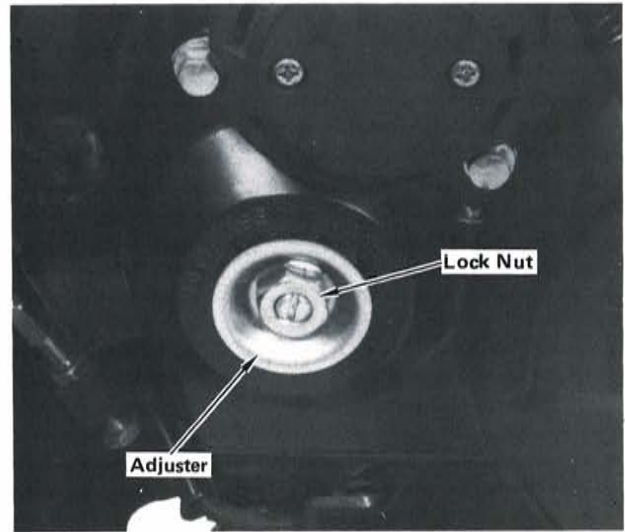
STEP 65—Remove oil filler cap/dipstick and fill crankcase with recommended oil as described in owner's manual. Reinstall and tighten oil filler cap/dipstick.



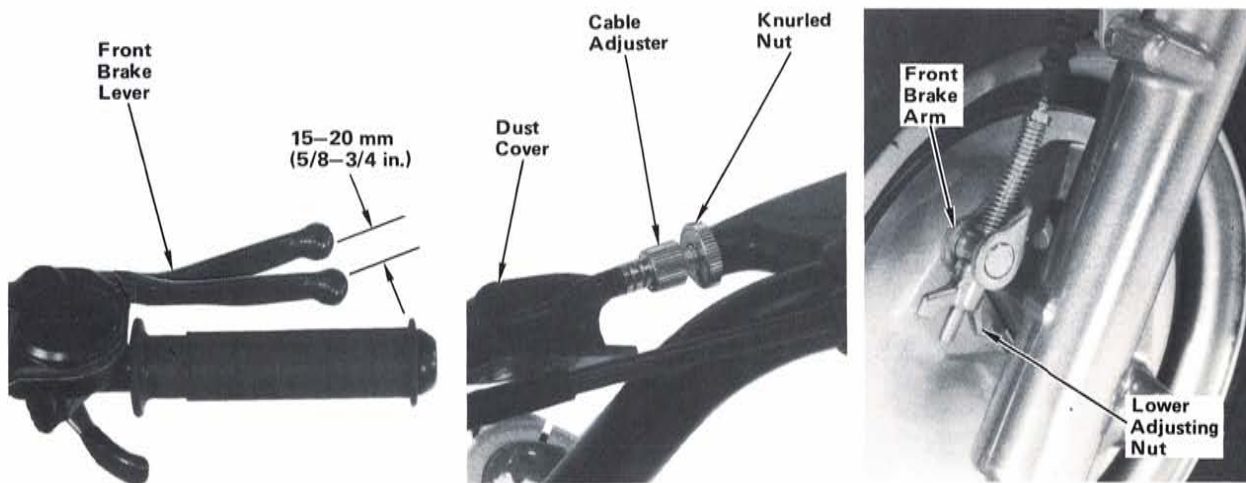
STEP 66—Check throttle cable for condition. Check that throttle lever free play is within 3–8 mm (1/8–5/16 in.) at tip of throttle lever. Check for smooth operation of throttle lever from fully closed to fully open in all steering positions and that throttle lever automatically returns from fully open to fully closed when released. If necessary to adjust free play, slide dust cover back to expose adjuster. Loosen lock nut and turn adjuster to obtain correct free play. After adjustment, tighten lock nut and reinstall dust cover.



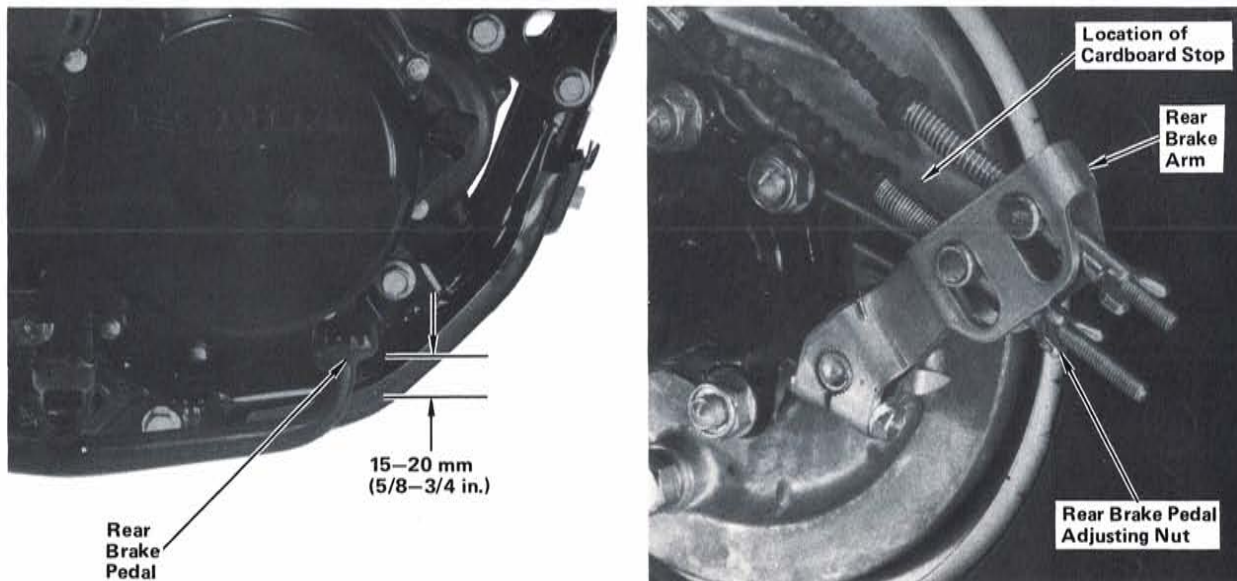
STEP 67—Connect a tachometer and check transmission in neutral. Start engine and allow it to warm up to operating temperature and check idle speed at $1,400 \pm 100$ rpm. If necessary, adjust idle speed using throttle stop screw. Remove tachometer.



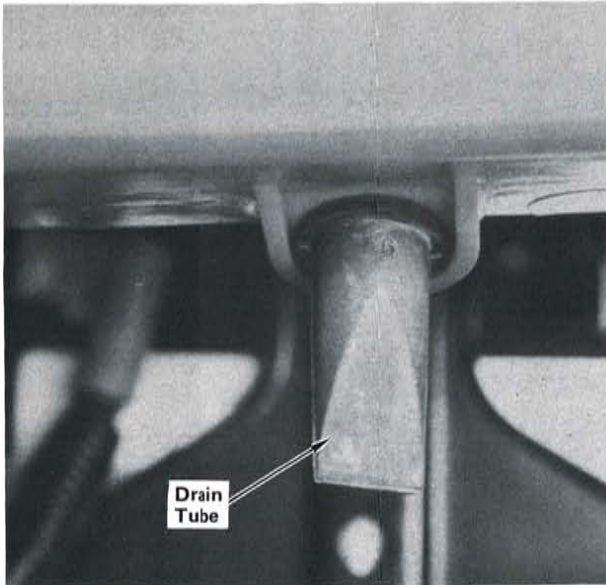
STEP 68—Check clutch operation. If adjustment is necessary, use the following procedure. Remove rubber cap over adjuster. Loosen lock nut and turn clutch adjuster counterclockwise until resistance is felt, then turn clutch adjuster 1/4 turn clockwise and tighten lock nut. Re-check clutch operation. Reinstall rubber cap.



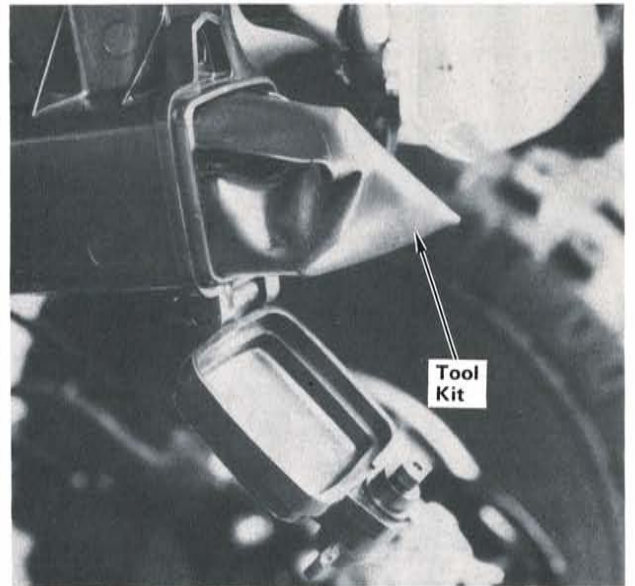
STEP 69—Raise front wheel off ground using a support block under engine. Spin front wheel by hand and measure free play of front brake lever before brake starts to engage. Free play, measured at tip of brake lever should be between 15 and 20 mm (5/8-3/4 in.). Use lower adjusting nut to make large adjustments. Small adjustments are made at front brake lever by sliding back dust cover, loosening knurled nut, and turning cable adjuster. After adjustment, tighten knurled nut and reinstall dust cover. Remove support block under engine.



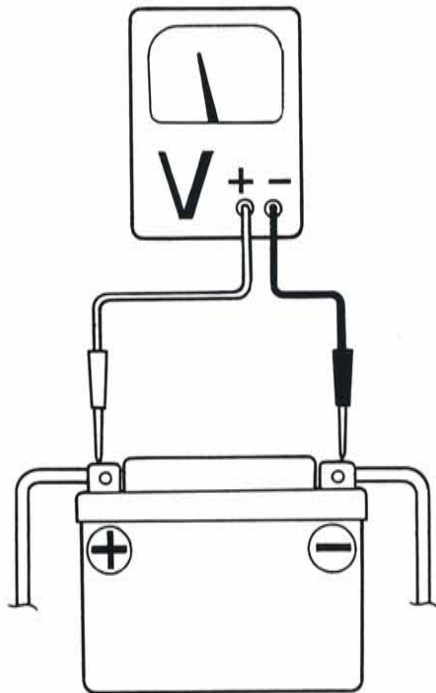
STEP 70—Raise rear wheels off ground using a support block under vehicle. Remove cardboard stop in front of rear brake arm. Rotate rear wheels by hand and measure free play before brake starts to engage. Free play, measured at tip of brake pedal, should be maintained between 15 and 20 mm (5/8-3/4 in.). To adjust free play, turn adjusting nut. Turning adjusting nut clockwise will decrease free play.



STEP 71—Insert drain tube into hole in bottom of rear luggage box.



STEP 72—Open tool box cover and insert tool kit. Close and lock tool box cover.

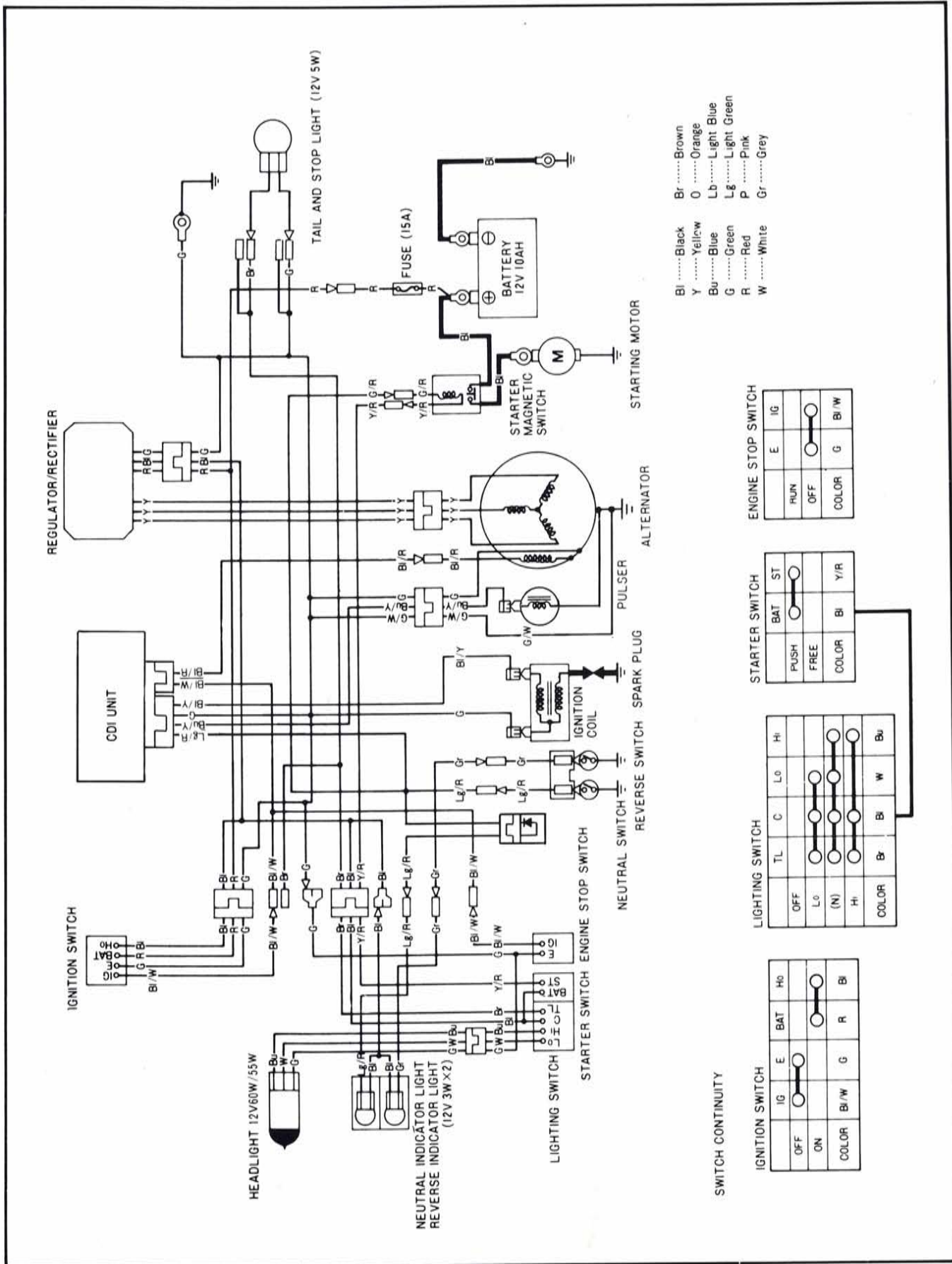


STEP 73—Check battery charging system (volts and amperes) at battery, as described on shop manual.



STEP 74—Check tire pressures, front and rear.

Tire pressure: 2.5 psi.



NOTE: Check all items 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

- Adjust front and rear brakes, check cable routing and check operation.
- Fill crankcase with recommended oil.
- Inspect fuel tank, drain, and flush. Clean fuel filter. Fill tank, turn on petcock and check for leaks. Check flow through fuel filter.
- Drain residual fuel from carburetor.
- Check air cleaner element. Clean and oil if necessary.
- Fill final drive case with recommended oil.
- Adjust idle speed.
- Check throttle lever free play, cable routing, and operation in all steering positions.
- Check tire pressure.
- Inspect electrical components for proper operation and adjustment.
 - Headlight switch.
 - Headlight: Adjust high beam aim.
 - Neutral and reverse indicator lights.
 - Taillight.
 - Engine stop switch.
 - Starter.
 - Battery charging system.
- 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.
 - Be sure that the proper consumer tag is attached to the left handlebar. (U.S.A. only)
 - Transmission, high-low-reverse gear range selector, and clutch: Ease of shifting, clutch operations, etc.
 - Acceleration: Smoothness, etc.
 - Cruising: Smoothness, etc.
 - Handling: Stability and cornering.
 - Brakes: Smoothness and stopping power.
 - Idling: Smoothness, throttle response, return to idle.
 - Recheck idle speed after 10 minutes of stop and go driving.
 - Upon completion of test ride, check for fuel and oil leaks.

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