

# SECTION 8 - STEERING/FRAME

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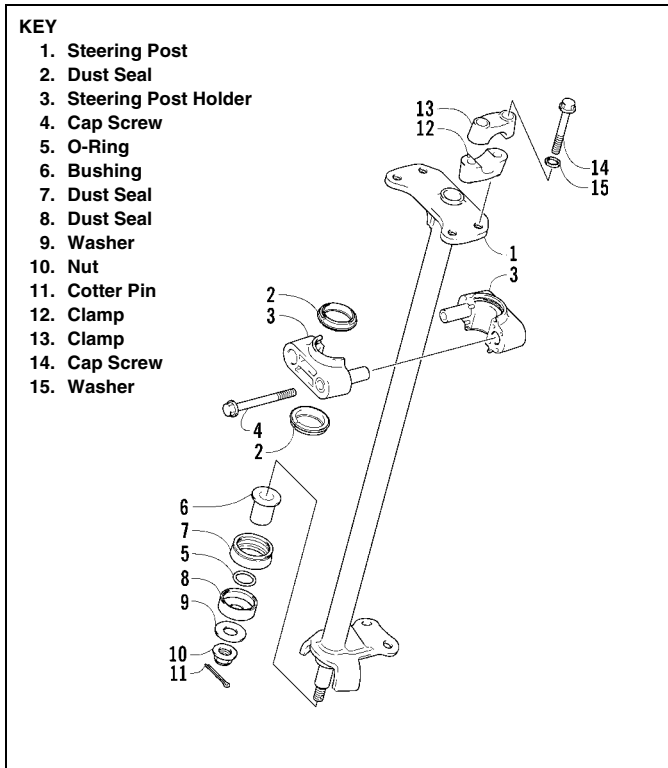
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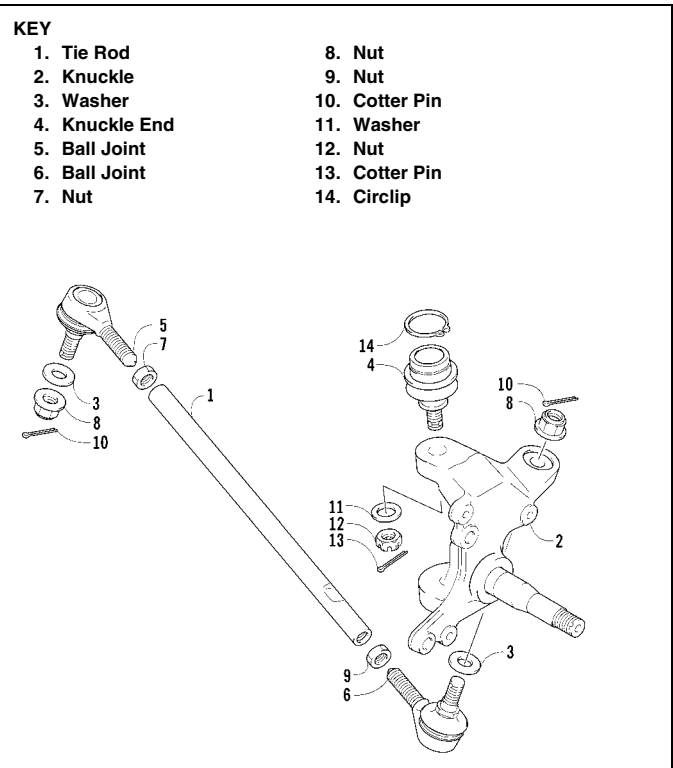
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# Steering Post/ Tie Rods



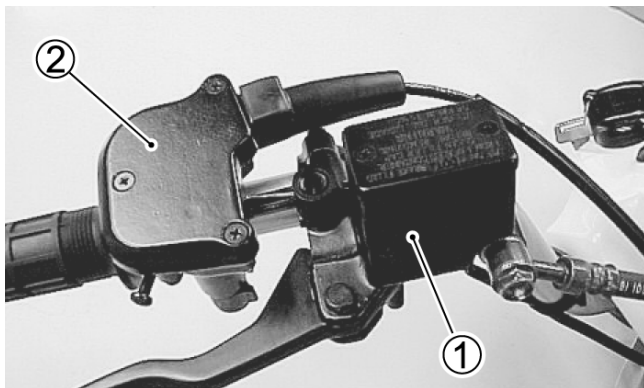
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0739-244

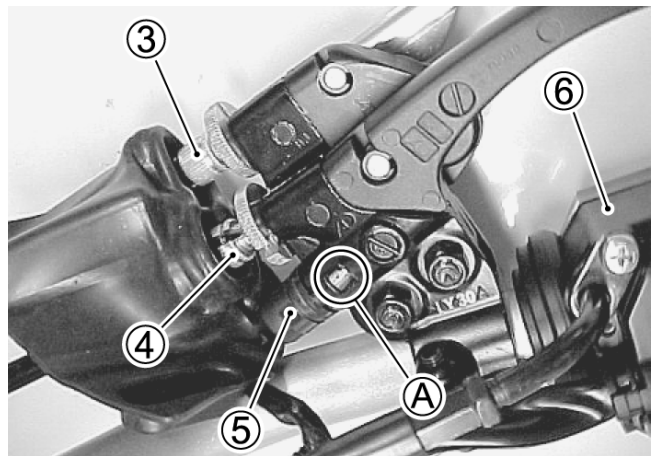
## REMOVING

1. Remove the seat, gas tank panel, and body (see Body in this section); then remove the brake master cylinder assembly (1).
2. Remove the throttle lever case (2).



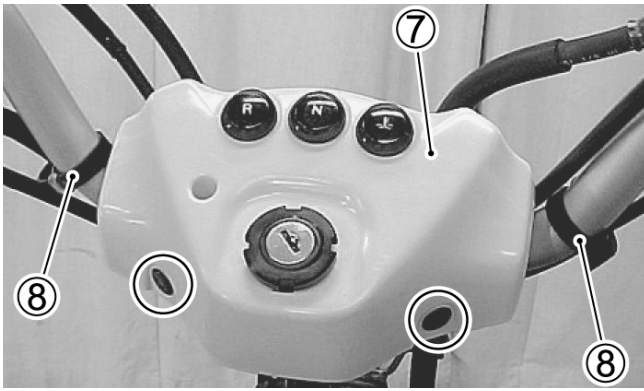
SP395

3. Disconnect the parking brake cable (3) and clutch lever cable (4); then remove the clutch position switch (5) with the parking brake engagement pin (A) depressed. Remove the handlebar switch assembly (6).



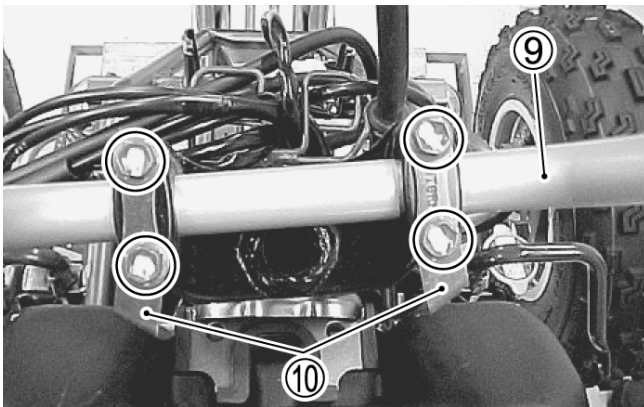
SP396

4. Remove the steering head cover (7); then remove the harness clamps (8).



SP397

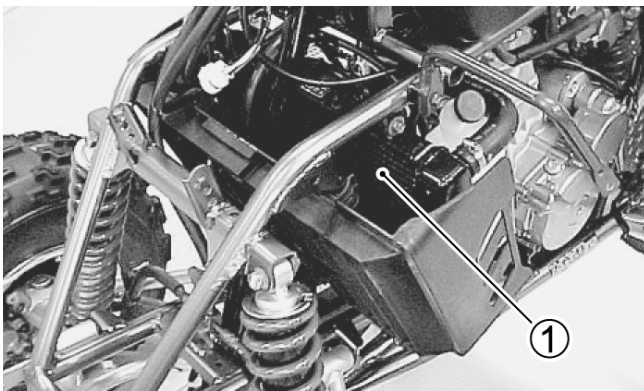
5. Remove the handlebar (9); then remove the steering head cover bracket (10).



SP398

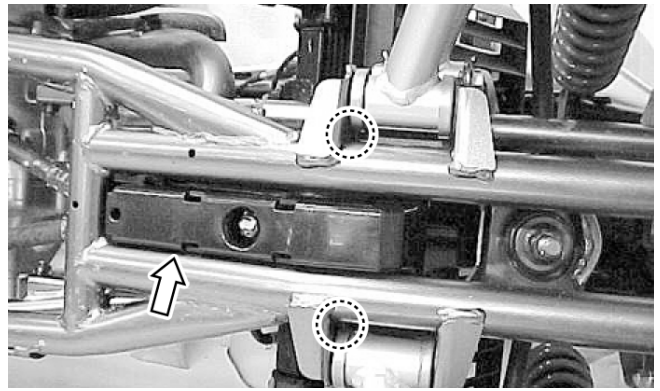
6. Drain the engine oil from the oil tank; then drain the coolant from the radiator.

7. Remove the radiator assembly (1). See Section 4.



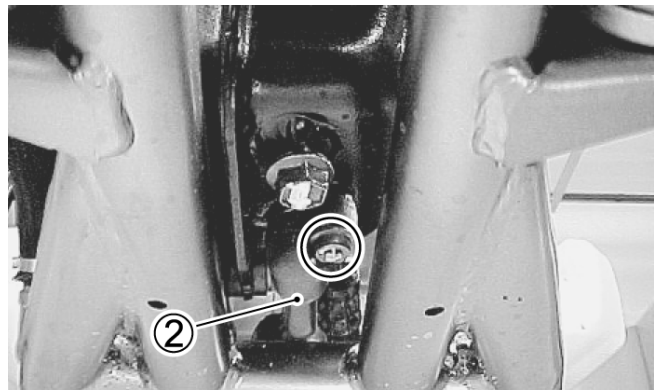
SP399

8. Remove the two fasteners; then remove the oil hose protector.

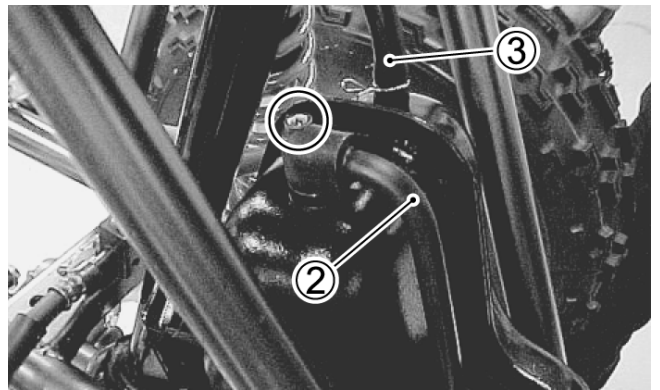


SP400

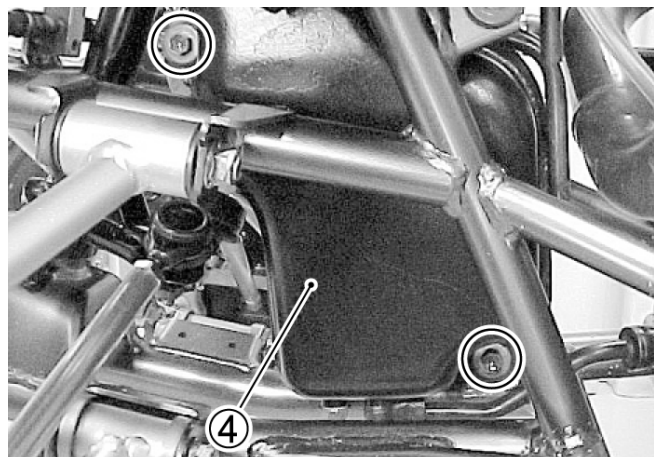
9. Disconnect the oil hoses (2) and the breather hose (3); then remove the oil tank (4).



SP401



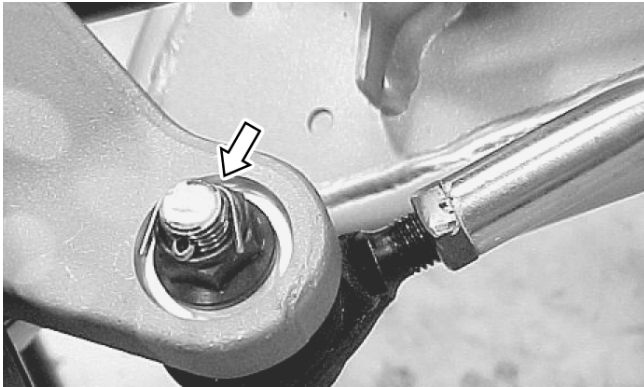
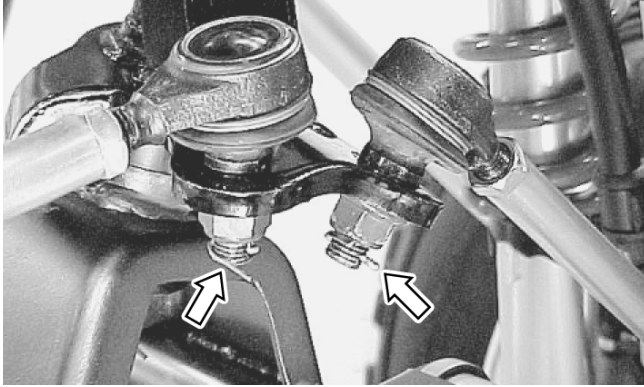
SP402



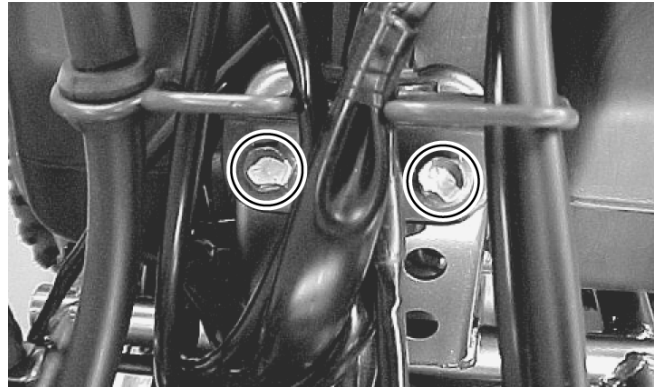
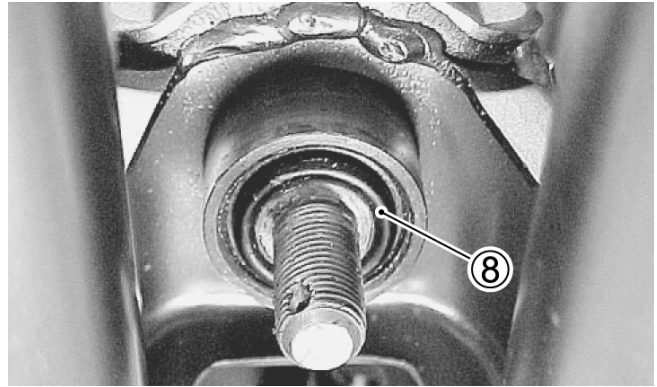
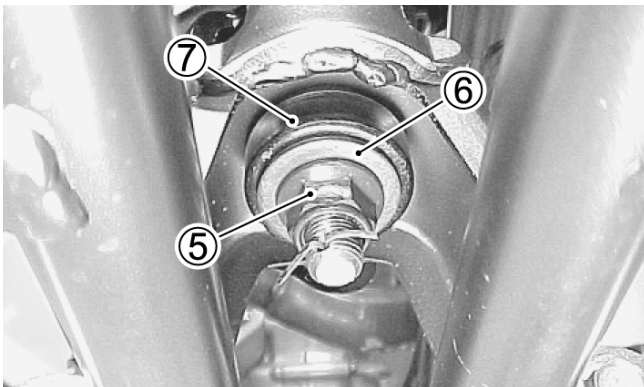
SP403



10. Remove the cotter pins and tie rod end nuts; then remove the tie rods.

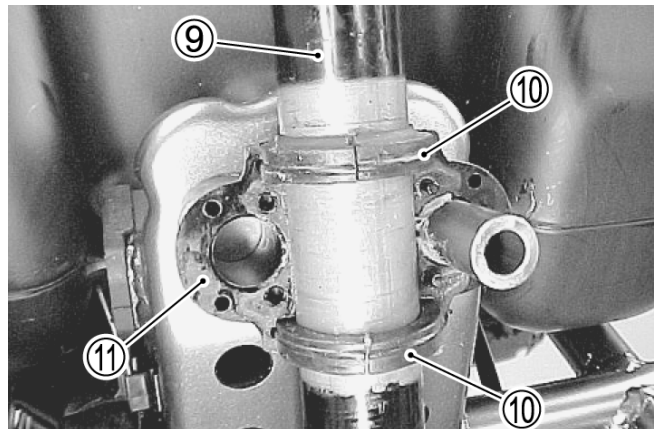


11. Remove the cotter pin, steering post nut (5), washer (6), and dust seal (7) accounting for the O-ring (8); then remove the steering post holder cap screws.

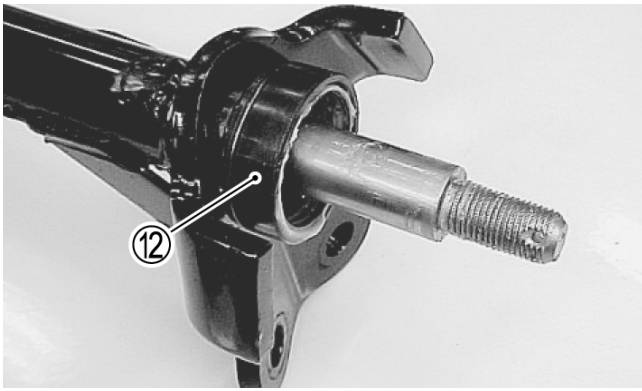


12. Remove the hose and cable guide; then remove the steering post holder.

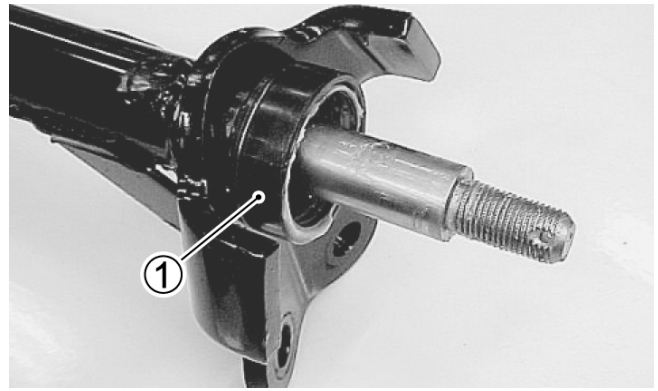
13. Remove the steering post (9); then remove the dust seals (10), and the steering post holder half (11).



14. Remove the dust seals (12) from the steering post; then clean all removed parts in parts-cleaning solvent.



SP410



SP411

## CLEANING AND INSPECTING

■ **NOTE:** Whenever a part is worn excessively, cracked, or damaged in any way, replacement is necessary.

1. Wash the tie rod ends in parts-cleaning solvent. Dry with compressed air. Inspect the pivot area for wear. Apply a low-temperature grease to the ends.

### **⚠ WARNING**

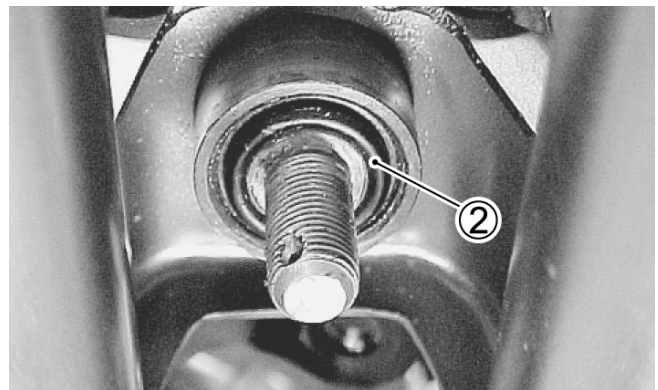
**Always wear safety glasses when using compressed air.**

2. Inspect the tie rods for damaged threads or wear.
3. Inspect the tie rods for cracks or unusual bends.
4. Inspect all welded areas for cracks or deterioration.
5. Inspect the steering post and steering-post holders for cracks, bends, or wear.
6. Inspect the handlebar clamps for cracks or wear.
7. Inspect the handlebar for cracks, wear, or unusual bends.
8. Inspect the handlebar grips for damage or wear.

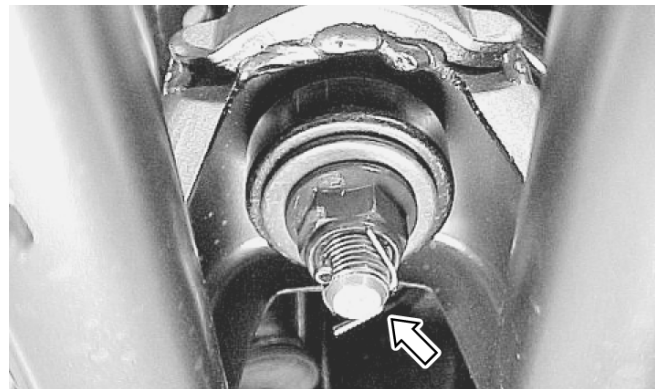
## INSTALLING

1. Apply multipurpose grease to the steering post and dust seal; then install the dust seal (1) to the steering post.

2. Install a new O-ring (2) and the dust seal into the steering housing; then install the washer and nut and tighten to specifications. Install a new cotter pin.



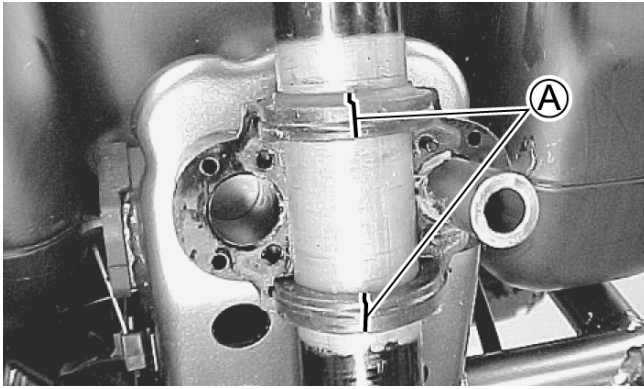
SP412



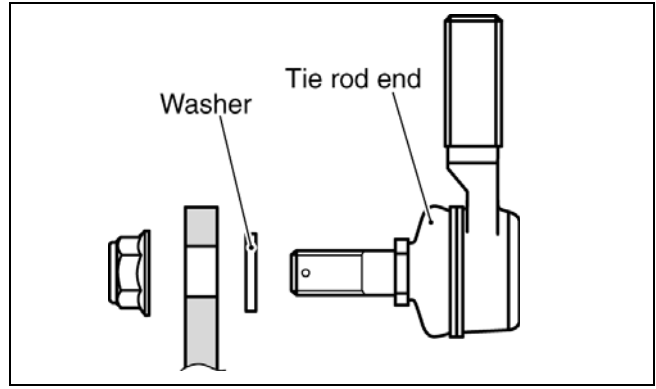
SP413

3. Apply multipurpose grease to the dust seal lips (A) and sliding surface of the steering post holders; then secure the holders with cap screws and tighten to specifications.



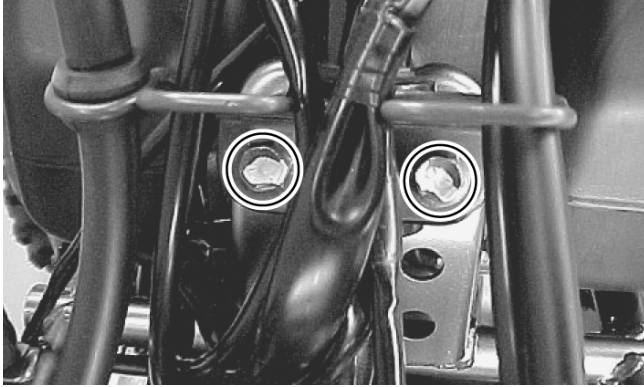


SP414

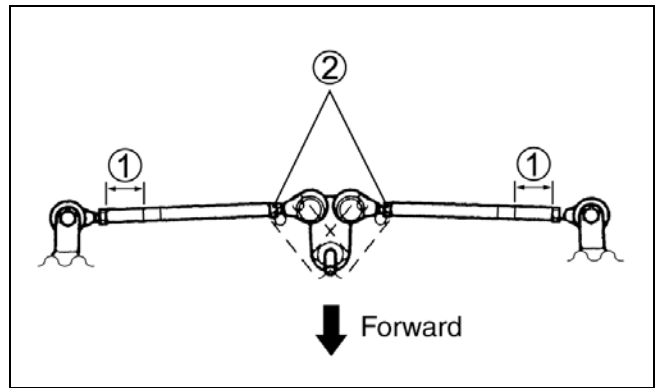


ATV2200

■ **NOTE:** When installing the tie rod, the shorter end of the tie rod (1) should be directed toward the steering knuckles. The yellow surfaced nuts (2) are left-hand threads.



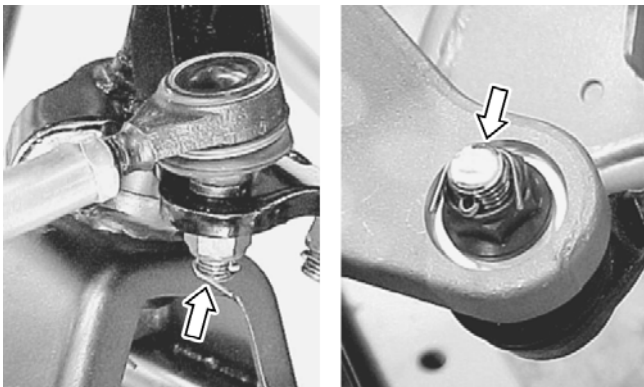
SP415



ATV2201

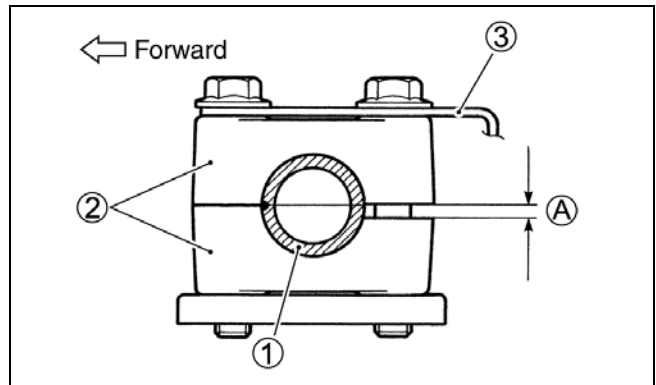
■ **NOTE:** Ensure that all wiring is properly routed and the brake hoses and control cables are not kinked or bound.

4. Install the tie rods to the steering post and knuckles; then tighten the nuts to specifications and install new cotter pins.



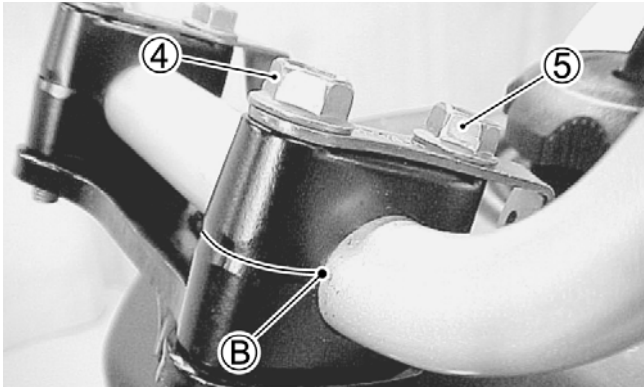
SP416A

5. Install the oil tank (see Section 4).
6. Install the radiator assembly (see Section 4).
7. Fill with oil and coolant; then bleed the cooling system (see Section 2).
8. Assemble the handlebar (1), handlebar holder (2), and steering head cover bracket (3) with the stepped end of the lower holder (A) directed rearward; then finger-tighten the cap screws.



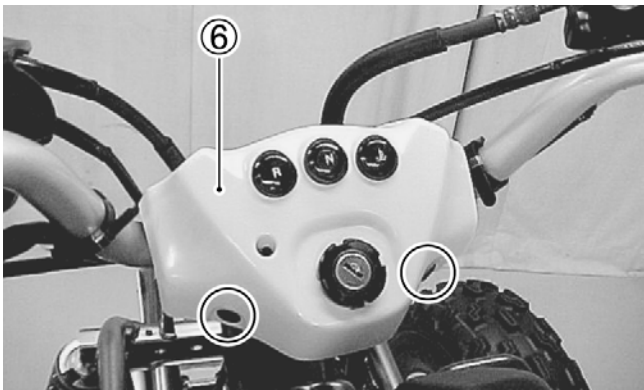
ATV2202

- Adjust the handlebar in the holders to align the punch mark (B) with the mating surface of the handlebar holders. Tighten first the forward cap screws (4) to specifications; then tighten the rearward cap screws (5) to specifications.



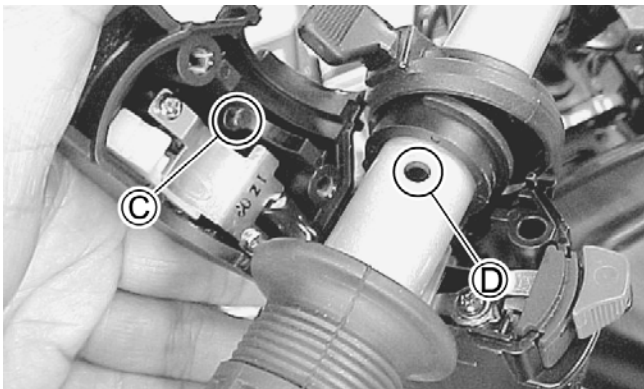
SP418

- Install the steering head cover (6).



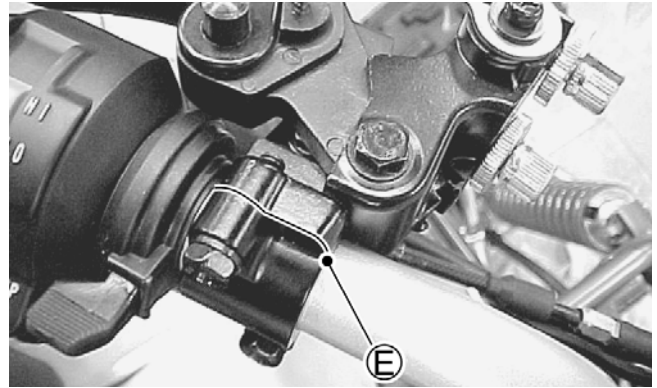
SP419

- Install the handlebar switch assembly engaging the locator lug (C) into the hole (D) in the handlebar.



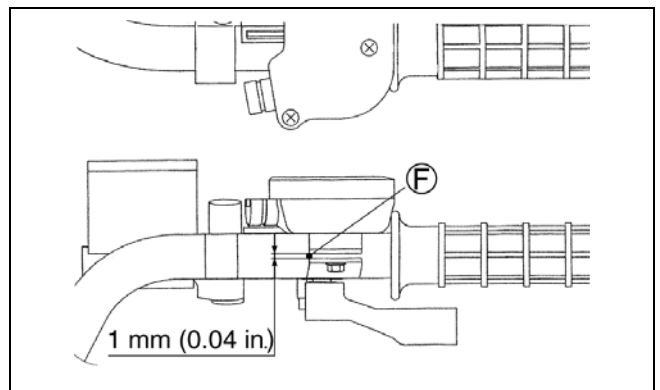
SP420

- Install the clutch lever assembly to the handlebar aligning the clutch lever holder mating surface with the punch mark on the handlebar; then connect and adjust the clutch lever cable and the clutch switch. For adjustment, see Section 2.



SP421

- Install the throttle lever case to the handlebar aligning the housing mating surface with the punch mark (F); then tighten the throttle case screws securely.

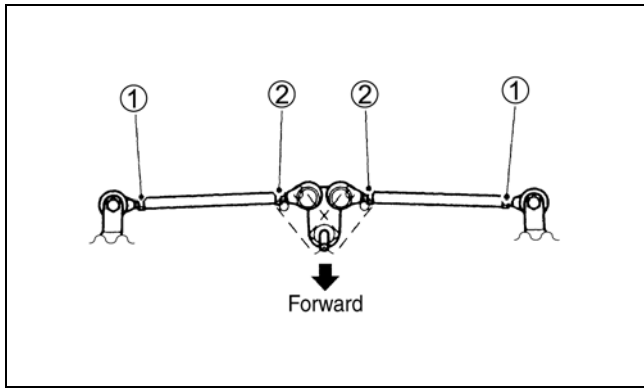


ATV2203

- Install the brake master cylinder and check for proper fluid level. See Section 2.

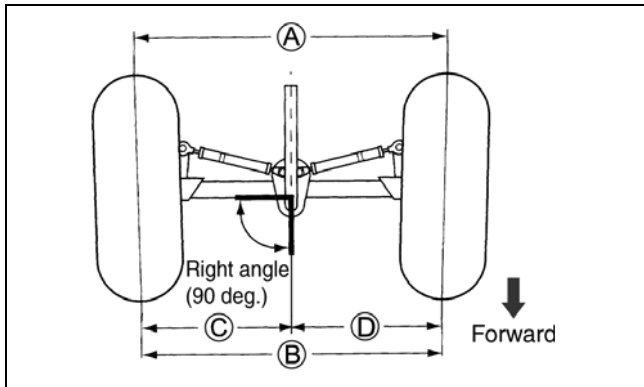
## Measuring/Adjusting Toe-In/Toe-Out

- With the ATV on a level surface, center the handlebar for straight ahead using a suitable means of measuring centering; then adjust tire pressure to specifications.
- Place suitable ballast of 75 kg (165 lb) of weight on the seat; then loosen the lock nuts (1 and 2) on each tie rod.



ATV2204

3. Measure the distance (A) and (B) between the front wheels; then subtract distance (B) from (A). Distance A - Distance B = Toe-In



ATV2205

4. Adjust toe-in to specifications; then measure distances (C) and (D). Distances (C) and (D) should be equal.
5. After all the adjustments are to specifications, tighten the tie-rod lock nuts to specifications.

■ **NOTE:** Prior to locking the jam nuts, make sure the ball joints are at the center of their normal range of motion and at the correct angle.

■ **NOTE:** The front wheels do not have to be removed to adjust the tie rod. Also, care should be taken not to disturb the handlebar position.

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## Body

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### REMOVING

1. Remove the seat; then remove the battery hold-down, battery, and starter relay. Lay the relay aside without disconnecting the wiring.



SP107

■ **NOTE:** Always remove the negative battery cable first; then the positive. Install the positive cable first; then the negative.

2. Remove the two forward underseat screws; then remove the rear fender support mounting nuts.



SP098

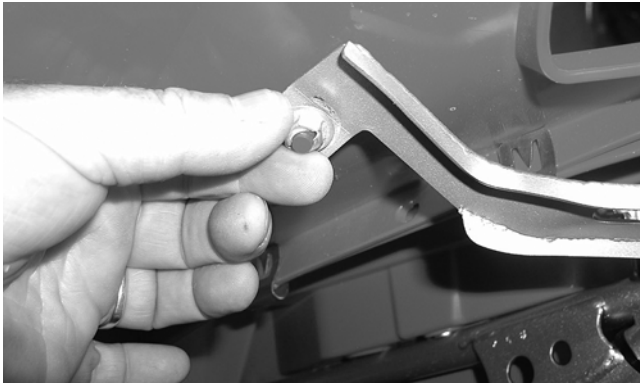
3. Remove the front fender support brackets from the frame leaving them attached to the body.



SP099

4. Remove the two nuts from the plastic studs on the upper forward support bracket.





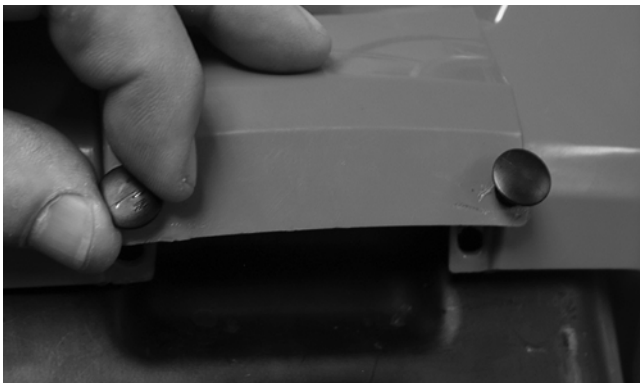
SP100

5. Remove the screw securing the front lip of the body to the headlight housing.



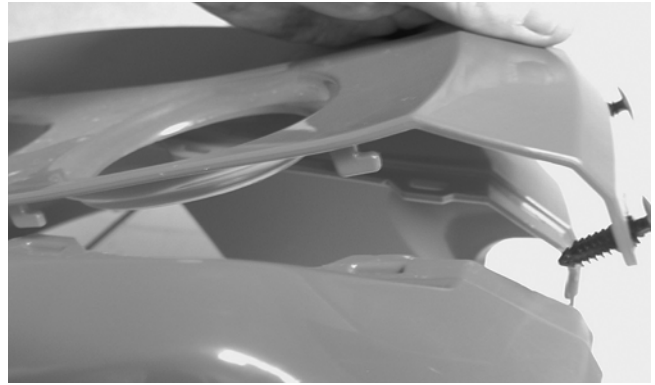
SP102

6. Pull rearward on the gas tank cover and dislodge the two barbed fasteners; then remove the gas tank cap.



SP101

7. Lift up the rear of the gas tank cover and push forward to disengage the "L" tabs; then lift the gas tank cover off. Install the gas tank cap.



SP105

8. Lift the body clear of all brackets and studs; then rotate clockwise and work handlebar through the center body openings.



SP104

9. Set body and tank panel to the side in a safe place.

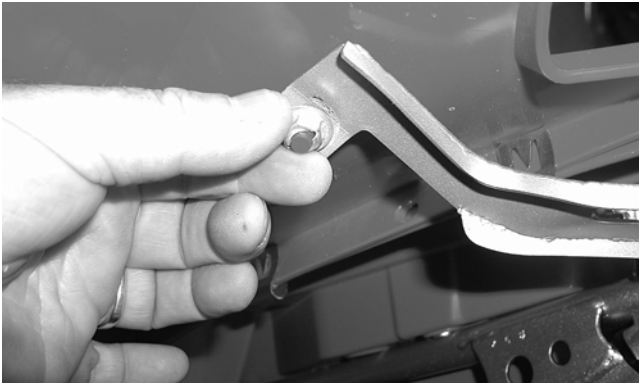
## CLEANING AND INSPECTING

■ **NOTE:** Whenever a part is worn excessively, cracked, or damaged in any way, replacement is necessary.

1. Clean all body components with soap and water.
2. Inspect the body and fenders for cracks.
3. Inspect threaded areas of all mounting studs for stripping.
4. Inspect for missing decals.

## INSTALLING

1. Fit the body over the handlebar and rotate into normal mounting position.
2. Seat the two upper forward support studs and the rear fender support studs into the brackets; then install the nuts and tighten securely. Take care not to over-tighten.

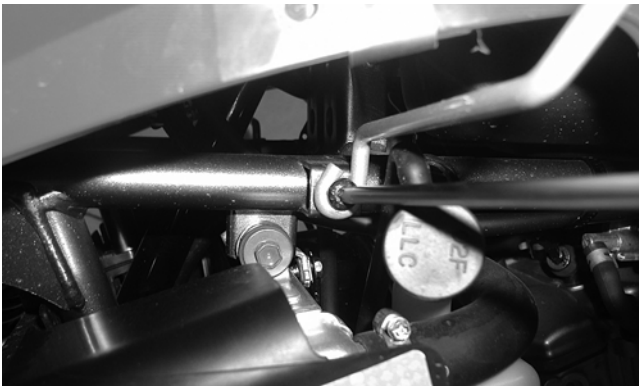


SP100

3. Install the front lip screw into the headlight housing; then install the screws securing the front fender supports to the frame.



SP102



SP099

4. Install the forward underseat fasteners and tighten the screws only until snug.
5. Install the battery connecting first the positive cable; then the negative cable.
6. Install the battery hold-down correctly noting that the front and rear are different; then secure with the two hold-down screws which are also through-body mount screws.



SP106



SP107

7. Install the starter relay; then install the seat making sure it is locked securely front and rear.