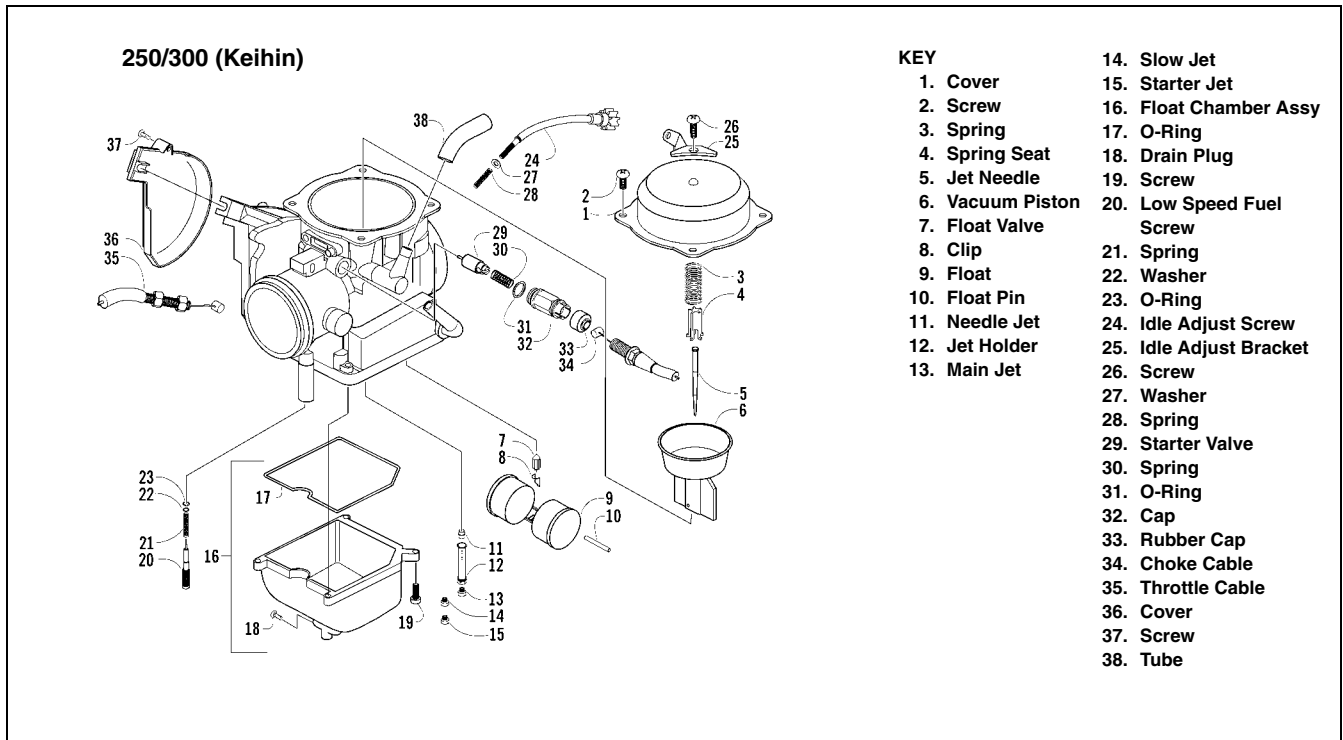


Carburetor Specifications

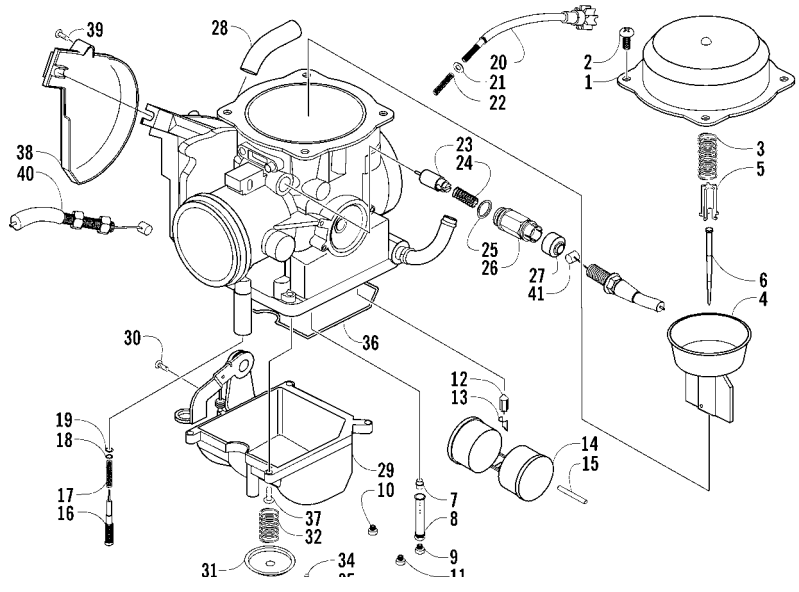
ITEM	250	300	400	500
	Keihin CVK32	Keihin CVK32	Keihin CVK34	Keihin CVK36
Main Jet	138	135	150	148
Slow Jet	38	38	38	75
Low Speed Fuel Screw Setting (turns)	1 3/4	2 1/4	2 1/8	1 7/8
Needle Jet	4.0/3.4	4.0/3.4	4.0/3.4	6.0/4.0
Jet Needle	N8TT	N8TT	N8TV	N3RS
Idle RPM	1300-1400	1300-1400	1250-1350	1250-1350
Starter Jet	60	65	60	90
Float Arm Height	17 mm (0.7 in.)	17 mm (0.7 in.)	17 mm (0.7 in.)	17 mm (0.7 in.)
Throttle Cable Free-Play (at lever)	3-6 mm (1/8-1/4 in.)	3-6 mm (1/8-1/4 in.)	3-6 mm (1/8-1/4 in.)	3-6 mm (1/8-1/4 in.)

Carburetor Schematics



0738-346

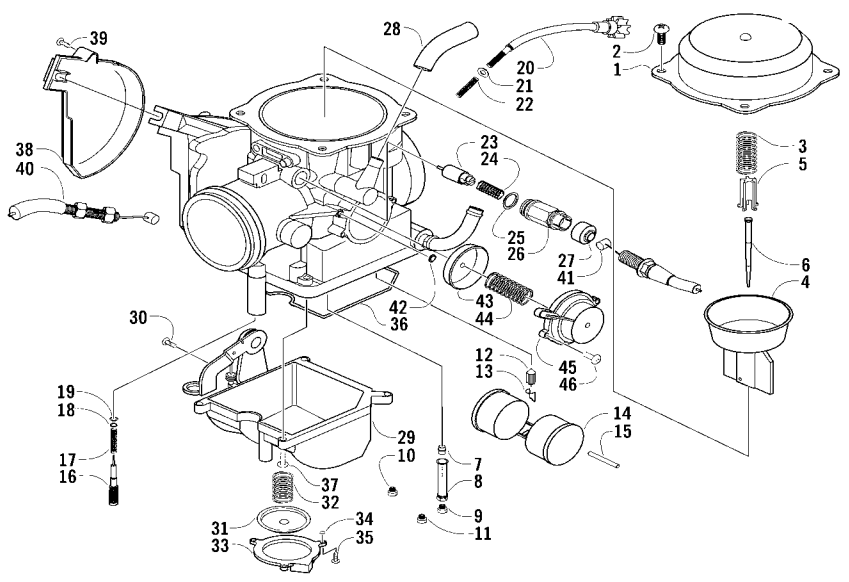
400 (Keihin)



- KEY**
- | | |
|--------------------------|------------------------|
| 1. Cover | 18. Washer |
| 2. Screw | 19. O-Ring |
| 3. Spring | 20. Idle Adjust Screw |
| 4. Vacuum Piston | 21. Washer |
| 5. Spring Seat | 22. Spring |
| 6. Jet Needle | 23. Starter Valve |
| 7. Needle Jet | 24. Spring |
| 8. Jet Holder | 25. O-Ring |
| 9. Main Jet | 26. Cap |
| 10. Slow Jet | 27. Rubber Cap |
| 11. Starter Jet | 28. Tube |
| 12. Float Valve | 29. Float Chamber Assy |
| 13. Clip | 30. Drain Plug |
| 14. Float | 31. Diaphragm Assy |
| 15. Float Pin | 32. Spring |
| 16. Low Speed Fuel Screw | 33. Pump Housing |
| 17. Spring | 34. U-Ring |
| | 35. Screw |
| | 36. O-Ring |
| | 37. Screw |
| | 38. Cover |
| | 39. Screw |
| | 40. Choke Cable |
| | 41. Throttle Cable |

0738-803

500 (Keihin)



- KEY**
- | | |
|--------------------------|------------------------|
| 1. Cover | 19. O-Ring |
| 2. Screw | 20. Idle Adjust Screw |
| 3. Spring | 21. Washer |
| 4. Vacuum Piston | 22. Spring |
| 5. Spring Seat | 23. Starter Valve |
| 6. Jet Needle | 24. Spring |
| 7. Needle Jet | 25. O-Ring |
| 8. Jet Holder | 26. Cap |
| 9. Main Jet | 27. Rubber Cap |
| 10. Slow Jet | 28. Tube |
| 11. Starter Jet | 29. Float Chamber Assy |
| 12. Float Valve | 30. Drain Plug |
| 13. Clip | 31. Diaphragm Assy |
| 14. Float Set | 32. Spring |
| 15. Float Pin | 33. Pump Housing |
| 16. Low Speed Fuel Screw | 34. U-Ring |
| 17. Spring | 35. Screw |
| 18. Washer | 36. O-Ring |
| | 37. Screw |
| | 38. Cover |
| | 39. Screw |
| | 40. Thottle Cable |
| | 41. Choke Cable |
| | 42. U-Ring |
| | 43. Diaphragm Assy |
| | 44. Spring |
| | 45. Cover |
| | 46. Screw |

0738-883

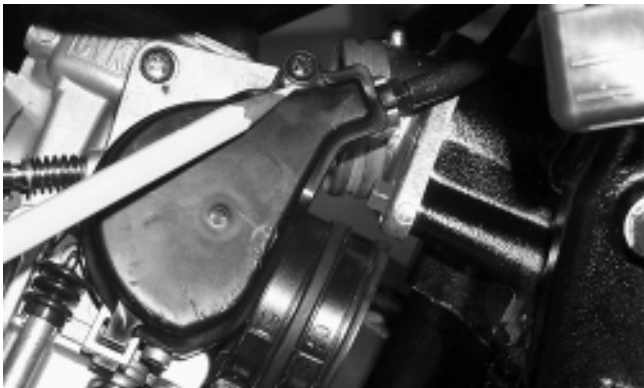
Carburetor

⚠ WARNING

Whenever any maintenance or inspection is performed on the fuel system during which there may be fuel leakage, there should be no welding, smoking, open flames, etc., in the area.

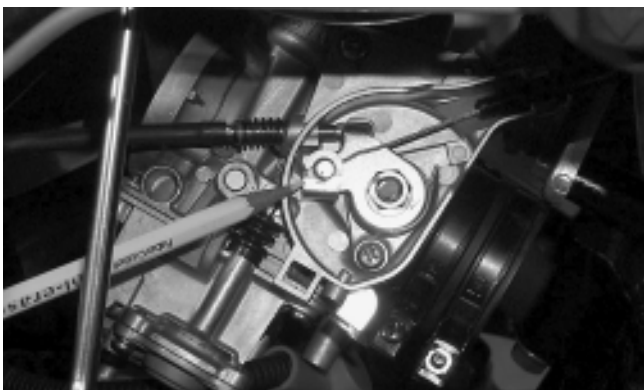
REMOVING

1. Turn the gas tank valve to the OFF position.
2. Remove the seat.
3. Remove the air-intake snorkel (250/300) or the air cleaner housing cover (400/500).
4. Disconnect the hose from the carburetor to the gas tank at the gas tank valve connection.
5. Loosen the flange clamps; then remove the carburetor from the two carburetor boots.
6. Remove the screw securing the throttle actuator cover to the carburetor; then remove the cover.



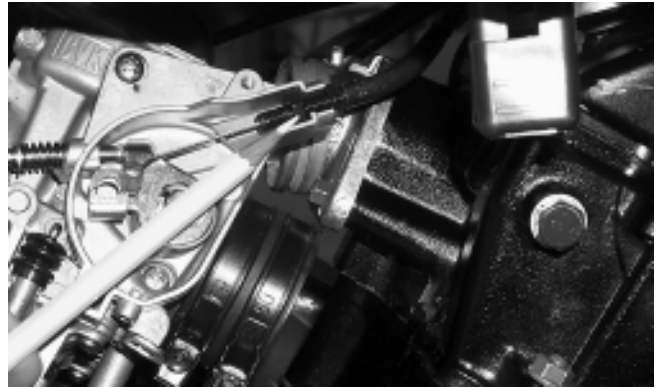
CC743

7. Remove the throttle cable from the actuator arm.



CC742

8. Loosen the outer jam nut securing the throttle cable to the carburetor body; then route the cable out of the way.



CC741

9. By unscrewing the plastic choke cable end, disconnect the choke cable from the carburetor.



CC740A

10. Disconnect the gas and vent hoses; then remove the carburetor.

DISASSEMBLING

1. Remove the four Phillips-head screws securing the top cover; then remove the cover.



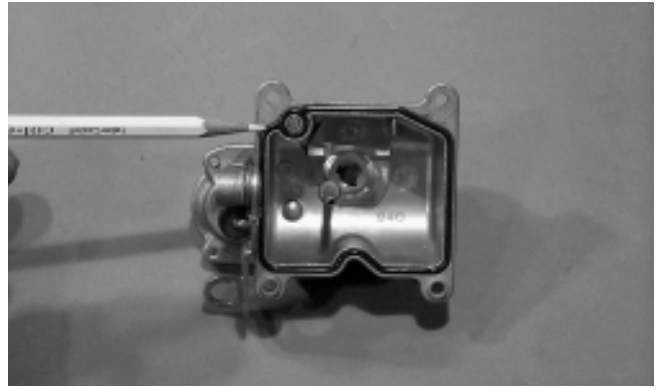
CH015D

2. Remove the vacuum piston assembly from the carburetor body. Account for a spring, spring seat, and the jet needle.



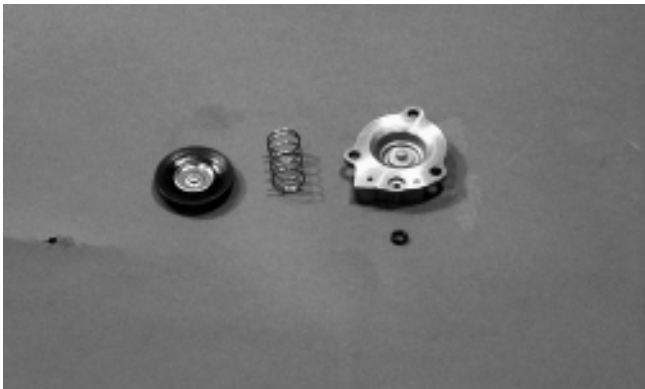
CC746

3. Remove the three screws securing the primer housing. Account for the diaphragm assembly, spring, and U-ring (in the housing).



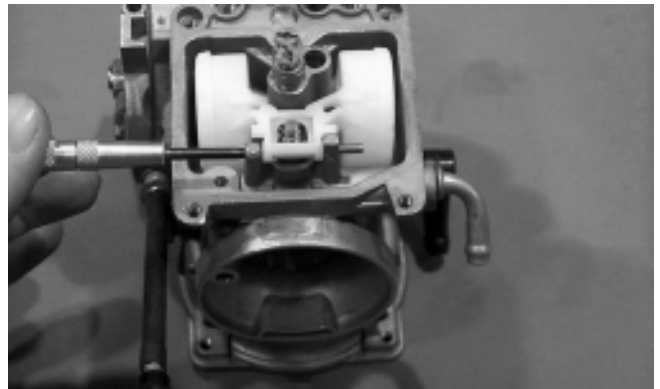
CC750

5. Remove the float pin.



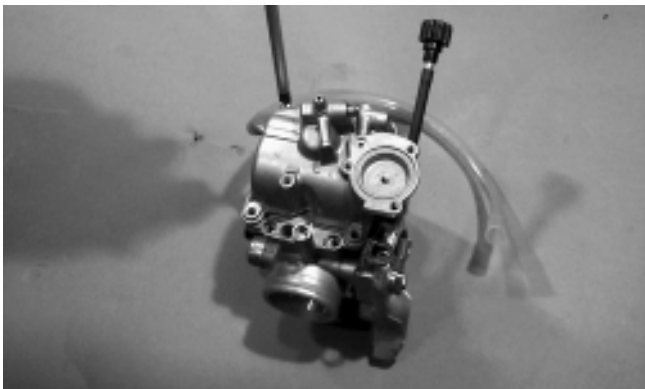
CC748

4. Remove the Phillips-head screws securing the float chamber; then remove the chamber. Account for the O-ring.

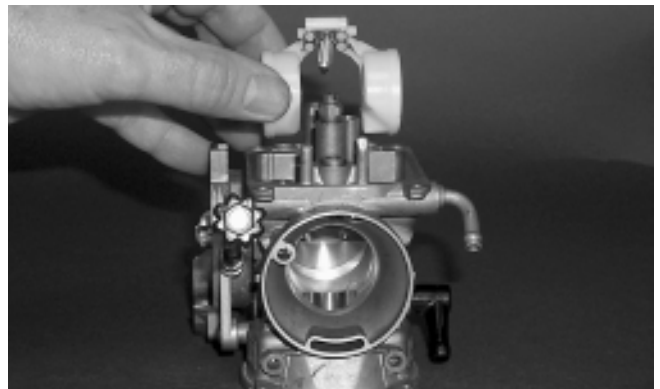


CC752

6. Lift the float assembly from the carburetor. Account for the float needle valve.



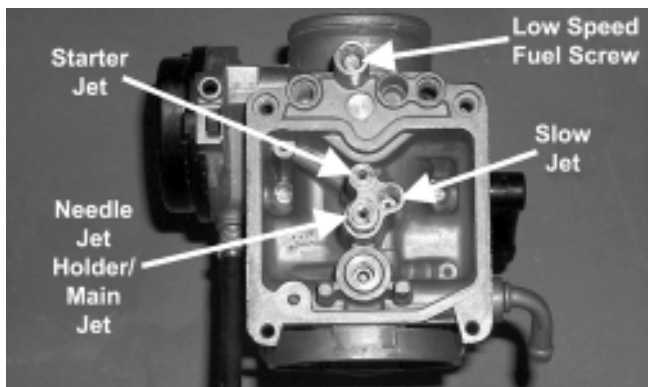
CC749



CC753

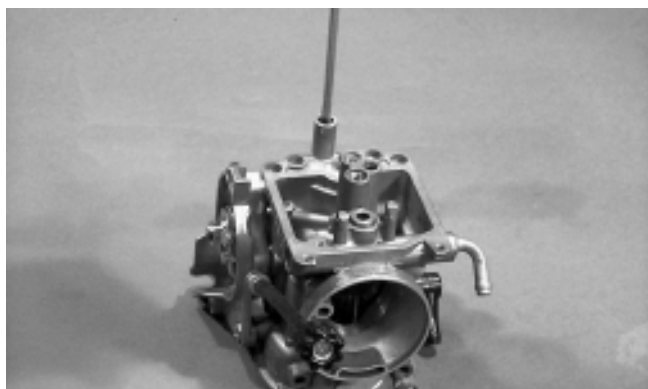
■ **NOTE:** Note the locations of the jets, air screw, and holder for disassembling procedures.

4



CC761A

7. Secure the needle jet holder with a wrench; then remove the main jet.
8. Remove the needle jet holder; then remove the slow jet and the starter jet.
9. Remove the low speed fuel screw.

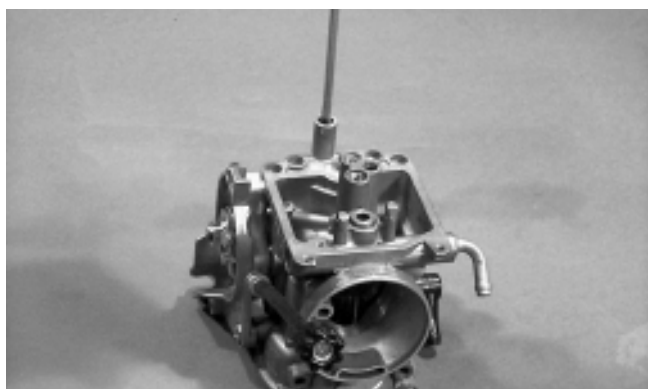


CC758

10. Unscrew and remove the idle speed adjuster assembly. Account for the spring and washer.

ASSEMBLING

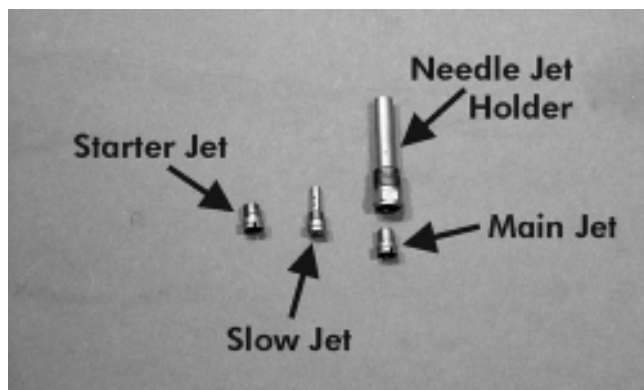
1. Screw the idle speed adjuster into the carburetor making sure the washer and spring are properly positioned.
2. Install the low speed fuel screw.



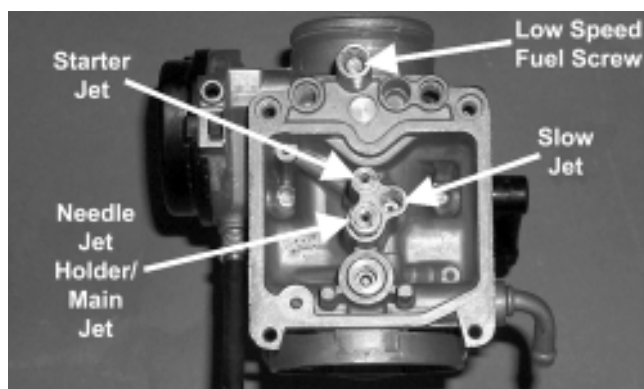
CC758

■ **NOTE:** Turn the low speed fuel screw clockwise until it is lightly seated; then turn it counterclockwise the recommended number of turns as an initial setting.

■ **NOTE:** Note the locations of the jets and holder during assembling procedures.



CC759A



CC761A

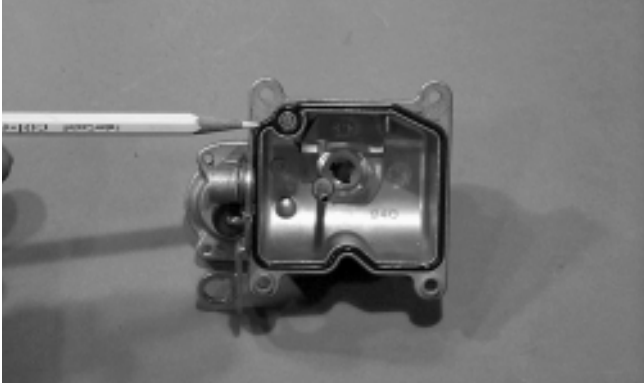
3. Install the slow jet. Tighten securely.
4. Install the main jet into the needle jet holder and tighten securely; then install the needle jet holder assembly into the carburetor and tighten securely.
5. Place the float assembly (with float needle valve) into position and secure to the carburetor with the float pin.



CC753

■ **NOTE:** Check float arm height by placing the carburetor on its side w/float contacting the needle; then measure with a caliper the height when the float arm is in contact with the needle valve. Float arm height should be 17 mm (0.7 in.).

- 6. Place the float chamber into position making sure the O-ring is properly positioned; then secure with the Phillips-head screws.

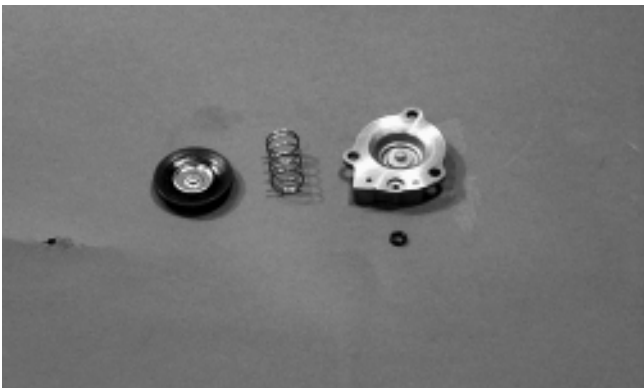


CC750



CC749

- 7. Place the U-ring into the primer housing. Position the spring and diaphragm assembly (lip toward the carburetor) onto the carburetor; then secure the assembly with the primer housing and three screws. Tighten securely.

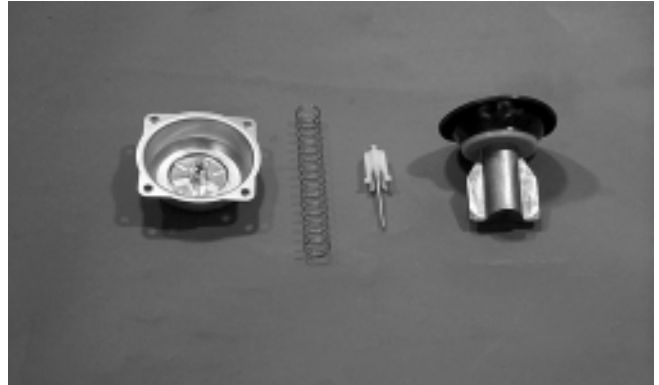


CC748

CAUTION

It is important to press down on the primer housing until it contacts the carburetor to make sure the diaphragm lip is properly seated in the groove in the carburetor. If the diaphragm is not properly seated, leakage will occur.

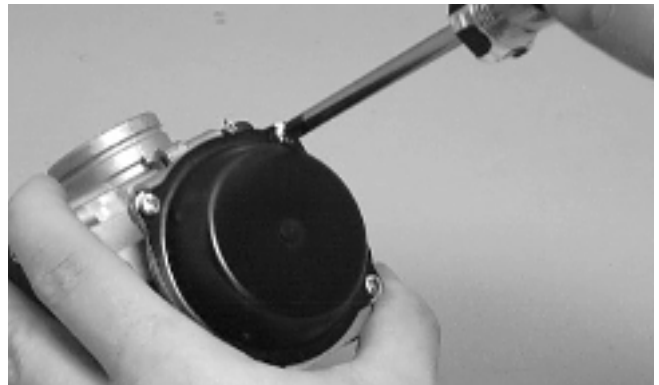
- 8. Place the jet needle, spring seat, and spring into the vacuum piston; then place the assembly down into the carburetor.



CC746

- 9. Place the top cover into position; then secure with the Phillips-head screws. Tighten securely.

4



CH015D

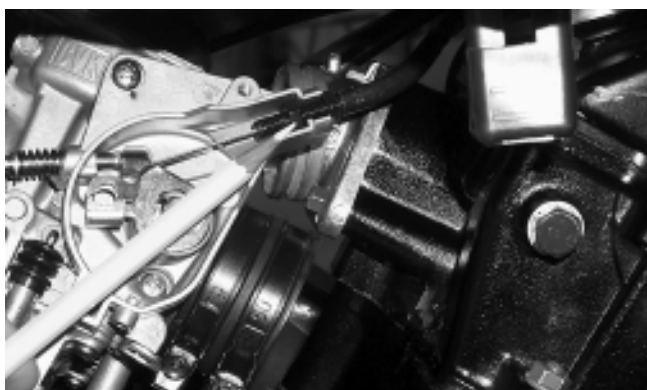
INSTALLING

- 1. Connect the gas and vent hoses onto the carburetor.
- 2. Connect the choke cable by screwing the plastic choke cable end onto the carburetor.



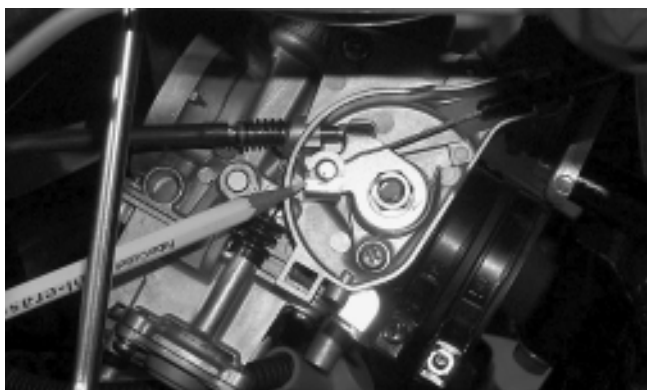
CC740A

3. Place the throttle cable into position and secure by tightening the outer jam nut.



CC741

4. Connect the throttle cable to the actuator arm.



CC742

5. Place the throttle actuator cover into position on the carburetor; then secure with the screw.



CC743

6. Position the carburetor in the air cleaner boot and intake pipe assembly; then secure with the clamps.

7. Connect the hose at the gas tank valve connection.

8. Secure the air-intake snorkel (250/300) or the air cleaner housing cover (400/500).

9. Install the seat; then turn the gas tank valve to the ON position.

Cleaning and Inspecting Carburetor

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

⚠ **WARNING**

When drying components with compressed air, always wear safety glasses.

⚠ **CAUTION**

DO NOT place any non-metallic components in parts-cleaning solvent because damage or deterioration will result.

1. Place all metallic components in a wire basket and submerge in carburetor cleaner.
2. Soak for 30 minutes; then rinse with fresh parts-cleaning solvent.
3. Wash all non-metallic components with soap and water. Rinse thoroughly.
4. Dry all components with compressed air only making sure all holes, orifices, and channels are unobstructed.
5. Inspect the carburetor body for cracks, nicks, stripped threads, and any other imperfections in the casting.

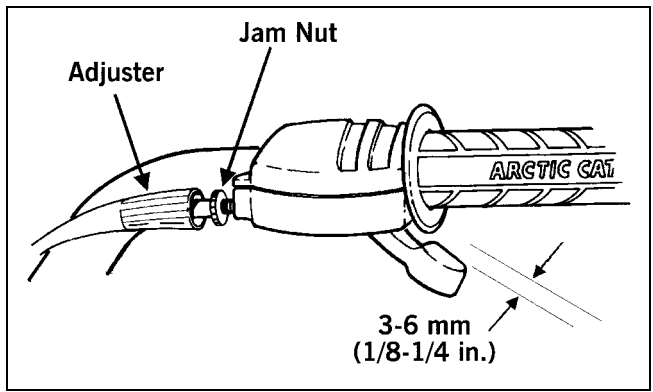
6. Inspect the vacuum piston/diaphragm for cracks, imperfections in the casting, or cracks and tears in the rubber.
7. Inspect float for damage.
8. Inspect gasket and O-rings for distortion, tears, or noticeable damage.
9. Inspect tips of the jet needle, low speed fuel screw, and the inlet needle valve for wear, damage, or distortion.
10. Inspect the slow jet and main jet for obstructions or damage.

NOTE: If the slow jet is obstructed, the mixture will be extremely lean at idle and part-throttle operation.

11. Inspect the plunger assembly/starter valve and seat for wear or damage.
12. Inspect the carburetor mounting flange for damage and tightness.

Throttle Cable Free-Play

1. Check throttle cable free-play at the lever; free-play should be 3-6 mm (1/8 - 1/4 in.).
2. To adjust, slide the rubber boot away from the adjuster located near the throttle lever. Loosen the jam nut and rotate the adjuster in the appropriate direction until proper free-play is attained. Tighten the jam nut against the adjuster; then slide the rubber boot over the adjuster.



ATV-0047

Engine RPM (Idle)

To properly adjust the idle RPM, a tachometer is necessary.

To adjust idle RPM, use the following procedure.

NOTE: To access the idle adjustment screw, it will be necessary to remove the seat on the 250/300 models. The idle adjustment screw is located on the right-hand side of the carburetor on the 400/500 models.

1. Start the engine and warm it up to operating temperature.
2. Turn the idle adjustment screw clockwise or counterclockwise until the engine idles at recommended RPM.

⚠ WARNING

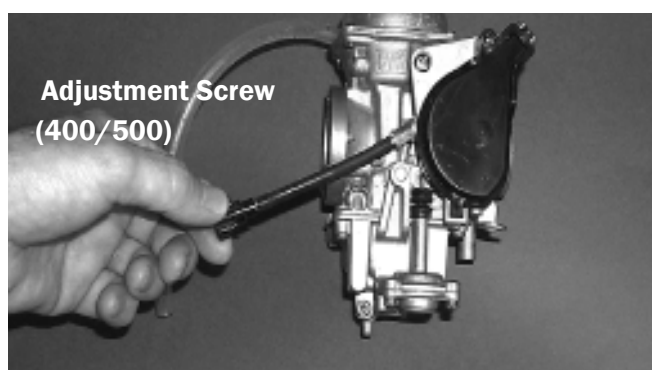
Adjust the idle to the correct RPM. Make sure the engine is fully warm before adjusting the idle RPM.

4

Engine Idle RPM	
250/300	1300-1400
400/500	1250-1350



CC795B



AF920C