## Carburetor Specifications

<table>
<thead>
<tr>
<th>ITEM</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Mikuni BSR36</td>
</tr>
<tr>
<td>Main Jet</td>
<td>130</td>
</tr>
<tr>
<td>Pilot Jet</td>
<td>22.5</td>
</tr>
<tr>
<td>Pilot Screw (turns)</td>
<td>2 1/4</td>
</tr>
<tr>
<td>Needle Jet</td>
<td>P-OM</td>
</tr>
<tr>
<td>Jet Needle</td>
<td>5E26-1</td>
</tr>
<tr>
<td>Idle RPM</td>
<td>1250-1350</td>
</tr>
<tr>
<td>Starter Jet</td>
<td>60</td>
</tr>
<tr>
<td>Float Arm Height</td>
<td>13 mm (0.5 in.)</td>
</tr>
<tr>
<td>Throttle Cable</td>
<td>3-6 mm (1/8-1/4 in.)</td>
</tr>
</tbody>
</table>

## Carburetor Schematic

![Carburetor Schematic](image)

**KEY**

1. Carburetor Assy
2. Washer
3. Ring
4. E-Ring
5. Spring
6. O-Ring
7. Holder
8. Diaphragm
9. Piston Valve
10. Ring
11. Spring
12. Washer
13. Jet Needle
14. O-Ring
15. Washer
16. Pilot Screw
17. Spring
18. Main Jet
19. Ring
20. Jet Holder
21. Jet
22. Pin
23. Needle Valve Assy
24. O-Ring
25. Needle Jet
26. Plunger Assy
27. Spring
28. O-Ring
29. Cap
30. Guide Holder
31. Diaphragm Cover
32. Primer Diaphragm Assy
33. Primer Housing
34. Spring
35. Screw
36. Screw
37. Screw
38. Screw
39. Screw
40. Screw
41. Float Assy
42. Pilot Jet
43. Pipe
44. Screw
45. O-Ring
46. Cover
47. Nut
48. Starter Jet
49. Hose
50. Spring
51. Washer
52. Idle Adjustment Screw
53. Screw
54. Cable Guide
55. O-Ring
56. Hose
57. Hose
58. Plug
59. Clamp

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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.

**NOTE:** The fuel valve is an automatic-off diaphragm style. Fuel will flow only when the engine is being started or when it is running; however, in the prime position, fuel will flow unrestricted to the carburetor.

**REMOVING**

1. Ensure the fuel valve is not in the PRI position.
2. Remove the seat.
3. Remove the air-intake snorkel.
4. Disconnect the hose from the carburetor to the gas tank at the fuel valve connection.
5. Loosen the flange clamps; then remove the carburetor from the two carburetor boots.
6. Remove the three screws securing the throttle actuator cover (5) to the carburetor; then remove the cover. Account for the O-ring (7).
7. Disconnect the throttle cable from the actuator arm; then loosen the outer jam nut (6) securing the throttle cable to the carburetor body and route the cable out of the way.
8. By unscrewing the choke cable end (4), disconnect the choke cable from the carburetor.
9. Disconnect the gas and vent hoses; then remove the carburetor.

**DISASSEMBLING**

1. Remove the two Phillips-head screws securing the diaphragm cover; then remove the cover, spring (1), O-ring (2), and the diaphragm (3).
2. Remove the needle holder assembly from the diaphragm. Account for a spring, spring washer, and the jet needle.
3. Remove the two screws securing the primer housing. Account for the primer diaphragm assembly (11) and spring.

4. Remove the Phillips-head screws securing the float chamber; then remove the chamber. Account for the O-ring (12).

5. Remove the float pin (13); then lift the float assembly (14) from the carburetor. Account for the needle valve (15).

6. Secure the needle jet holder with a wrench; then remove the main jet.

7. Remove the needle jet holder; then remove the pilot jet and the starter jet.

8. Remove and install the pilot air screw using the following procedure.

   A. Using a 1/8-in. drill bit with a drill-stop (1) set at 4 mm (0.16 in.) from the end, drill through the plug (2).

   B. Thread a self-tapping screw into the plug and use a pliers to pull the plug from the carburetor body (4).

   C. Turn the pilot screw (3) clockwise counting the turns until it is lightly seated; then remove the pilot screw accounting for a spring, washer, and O-ring.

   NOTE: Note the locations of the jets, pilot screw, and holder for disassembling procedures.
D. After cleaning, install the pilot screw (with a new O-ring) to the original position by turning in until it lightly seats; then turning it out the number of turns counted in step C.

E. Using an appropriate punch, tap a new plug into place.

9. Unscrew and remove the idle adjustment screw. Account for the spring and washer.

AT THIS POINT
Prior to assembling, the carburetor components should be cleaned and inspected (see Cleaning and Inspecting Carburetor sub-section).

ASSEMBLING

1. Screw the idle adjustment screw into the carburetor making sure the washer and spring are properly positioned.

2. Install the pilot jet (20). Tighten securely; then install the starter jet (19).

3. Install the main jet into the needle jet holder (17) and tighten securely; then install the needle jet holder assembly into the carburetor and tighten securely.

4. Place the float assembly (with needle valve) into position and secure to the carburetor with the float pin.

**NOTE:** Check float arm height (A) 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 13 mm (0.5 in.).

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

6. Position the spring and primer diaphragm assembly (lip toward the carburetor) onto the carburetor; then secure the assembly with the primer housing and two screws. Tighten securely.

7. Place the jet needle, spring seat, and spring into the piston valve; then place the assembly down into the carburetor.

8. Place the diaphragm cover into position; then secure with the Phillips-head screws. Tighten securely.
INSTALLING

1. Connect the gas and vent hoses onto the carburetor.

2. Connect the choke cable by screwing the choke cable end onto the carburetor.

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

4. Connect the throttle cable to the actuator arm.

5. Place the throttle actuator cover into position on the carburetor making sure the O-ring is properly positioned; then secure with three screws.

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

7. Connect the hose at the fuel valve connection.

8. Secure the air-intake snorkel.

9. Install the seat and make sure it locks in position.

Cleaning and Inspecting Carburetor

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

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 piston valve/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, pilot screw, and the needle valve for wear, damage, or distortion.

10. Inspect all jets for obstructions or damage.

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

11. 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.
Engine RPM (Idle)

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

To adjust idle RPM, use the following procedure.

**NOTE:** The idle adjustment screw is located on the right-hand side of the carburetor.

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 1250-1350 RPM.

**WARNING**

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

Gas Tank

**WARNING**

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

**NOTE:** The fuel valve is an automatic-off diaphragm style. Fuel will flow only when the engine is being started or when it is running; however, in the prime position, fuel will flow unrestricted to the carburetor.

**REMOVING**

1. Ensure that the fuel valve is not in the PRI position.
2. Remove the seat; then remove the gas tank.
3. Remove the body from the frame (see Section 8).
4. Disconnect the hose (1) from the carburetor to the gas tank at the tank connection; then disconnect the vacuum hose (2).
5. Remove the cap screws securing the gas tank to the frame; then remove the air-intake snorkel (4).
6. Remove the gas tank.