



INSTRUCTIONS

-J02291

REV. 8-17-01

Kit Number 28024-02

CARBURETOR CALIBRATION KIT, BRAZIL

General

This kit fits all 2001 and later XL883 model motorcycles.

NOTE

A Service Manual for your model motorcycle is available from your Harley-Davidson Dealer.

Air Cleaner Removal

⚠WARNING

To protect against shock and accidental start-up of vehicle, disconnect the battery cables, negative cable first, before proceeding. Inadequate safety precautions could result in death or serious injury.

⚠WARNING

Always disconnect the negative battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion resulting in death or serious injury.

1. Disconnect battery cables, negative cable first.
2. See Figure 1. Remove the screw (1) and air cleaner cover (2).
3. Remove three TORX screws (3) and bracket (4) from the filter element (5).
4. Gently pull both rubber breather tubes (8) from the back of the element. Remove the filter element (5) and gasket (6).
5. Gently pull the breather tubes (8) from the breather bolts (9) on the backplate.
6. Alternately back out both breather bolts (9) (metric), a few turns at a time, while pulling backplate (7) away from the carburetor.
7. Continue with the previous step until breather bolts are clear. Remove backplate (7), O-rings (10) and gasket (11). Inspect the gasket for tears or damage, and replace if necessary.

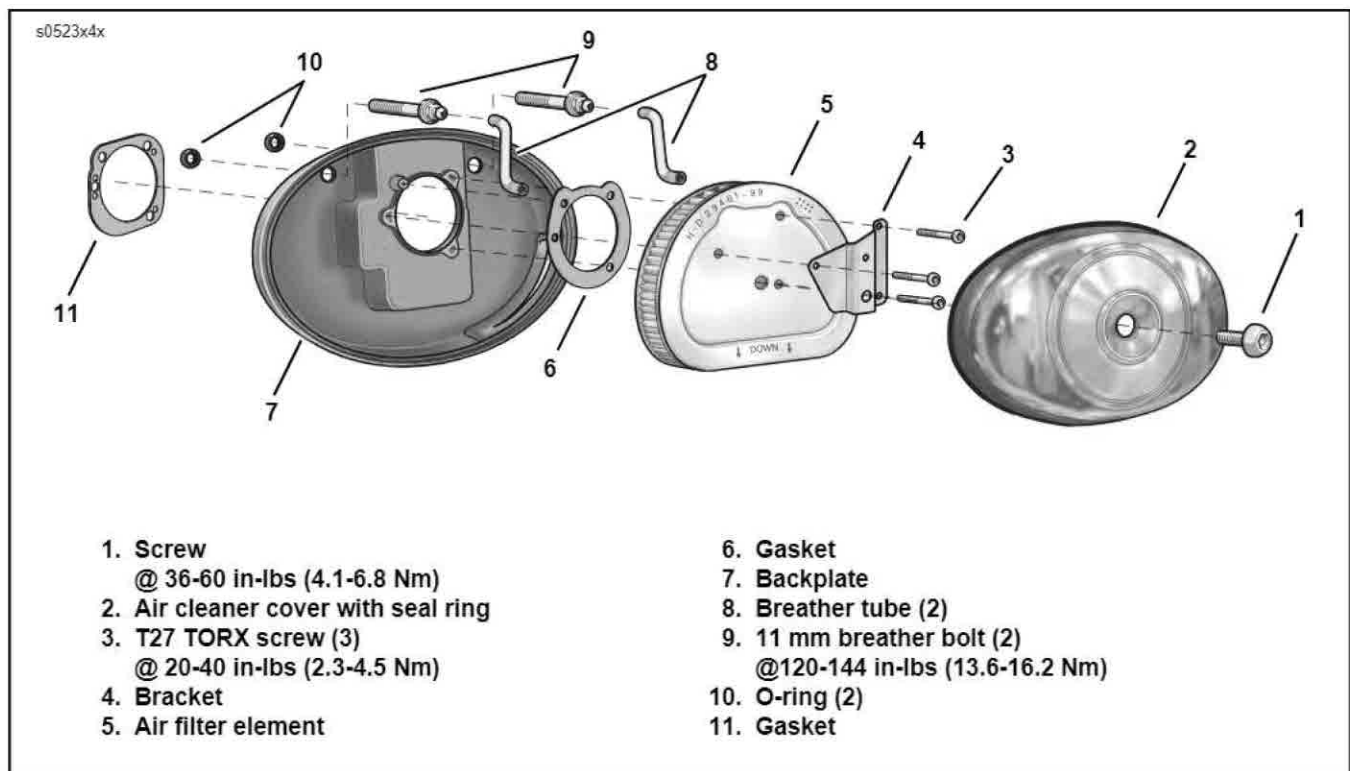


Figure 1. Air Cleaner Assembly

Carburetor Removal

WARNING

Gasoline is extremely flammable and highly explosive. Always stop the engine when refueling or servicing the fuel system. Do not smoke or allow open flame or sparks near the work site. Inadequate safety precautions could result in death or serious injury.

1. Turn the fuel supply valve OFF.

WARNING

A small amount of gasoline may drain from the fuel hose when disconnected from the carburetor. Thoroughly wipe up any spilled fuel immediately and dispose of rags in a suitable manner. Gasoline can be extremely flammable and highly explosive. Inadequate safety precautions may result in death or serious injury.

2. Disconnect fuel line from the carburetor.
3. See Figure 2. Detach enrichener knob (1) from bracket above horn by loosening the hex nut (4) at the backside of mounting bracket.
4. See Figure 3. Disconnect the throttle cables from the carburetor.
5. Remove vacuum hose from the carburetor. Pull the carburetor free of the seal ring and manifold.

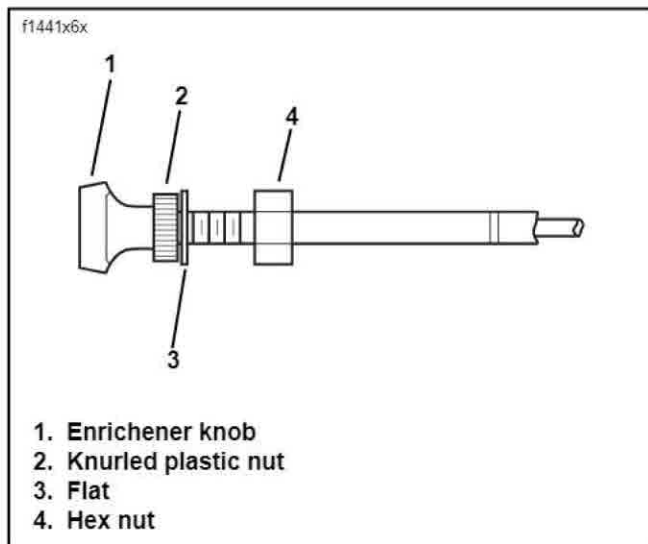


Figure 2. Enrichener Control

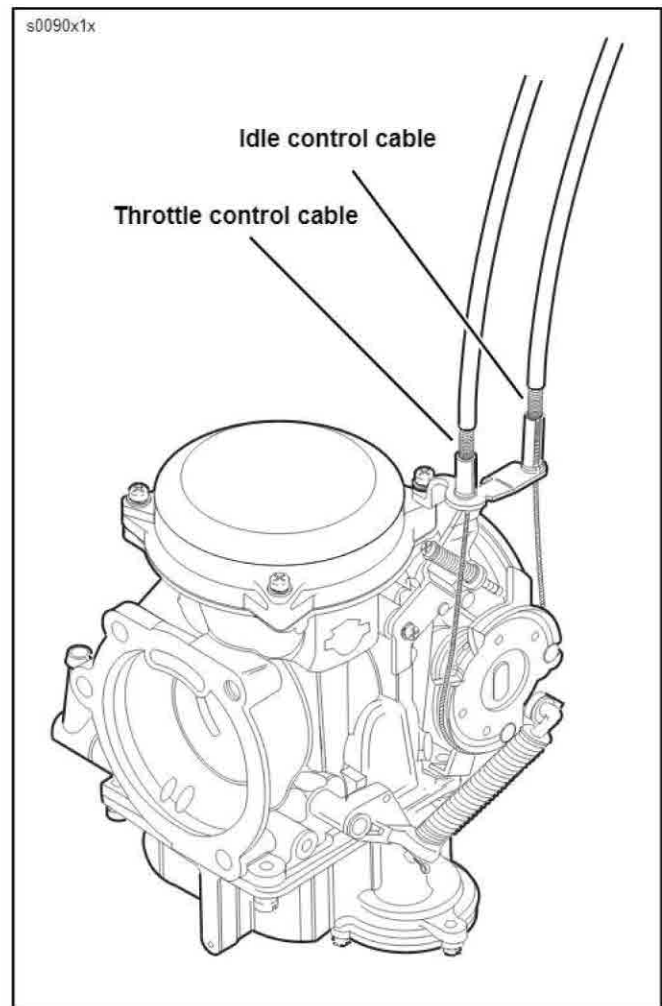


Figure 3. Throttle Cables

Main Jet/Slow Jet/Idle Mixture Adjustment

1. Support the carburetor upside down in a soft-jaw vise, using care not to damage the carburetor.
2. See Figure 4. Remove the four screws to detach the float bowl.
3. See Figure 5. Using a narrow blade screwdriver, remove the slow jet and replace it with the jet from the kit.
4. Using an 8 mm wrench, hold the needle jet holder, and remove the main jet with a wide blade screwdriver. Replace it with the main jet from kit.
5. Install the float bowl onto the carburetor body; install screws and tighten.
6. To remove the aluminum idle mixture plug, use a small drill bit with a drill stop set to no greater than 0.2 in. (5 mm) depth.

CAUTION

Care must be taken so that the drill does not contact idle mixture screw.

WARNING

Always wear approved safety glasses when using compressed air.

7. Drill through the aluminum idle mixture plug. Remove drill bit from drill, insert the shank end in plug hole and gently rock back and forth to remove the plug. Remove any chips caused by drilling with compressed air or vacuum.
8. Turn idle mixture screw one turn counterclockwise.
9. Install a new brass idle mixture plug (P/N 28015-01), with the smaller diameter end into the hole first. Use a small hammer to tap the plug in, until it is flush with the screw tower.

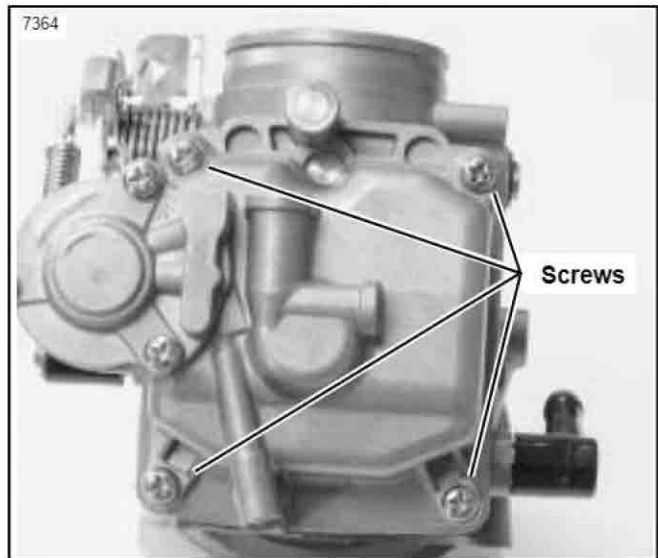


Figure 4. Float Bowl Screws

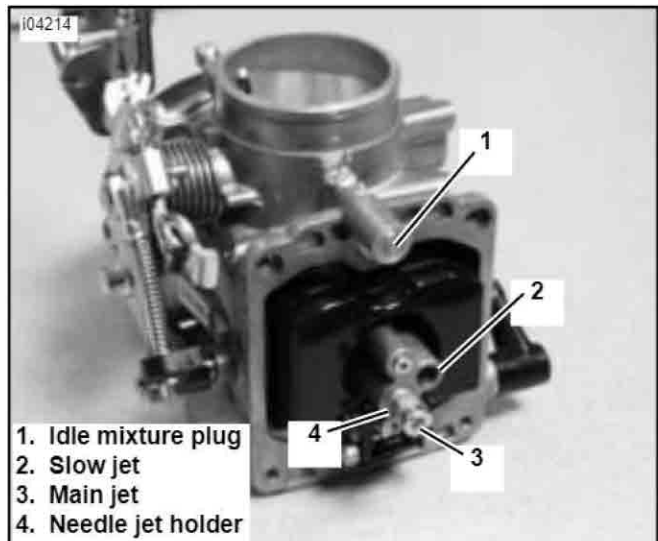


Figure 5. Jet Location

Jet Needle Replacement

1. Secure carburetor right side up in a soft-jaw vise.
2. See Figure 6. Remove four screws (1 and 10) from carburetor top (2), and remove throttle cable bracket (11) and spacer (3).

NOTE

Bracket screw (12) might need to be loosened with a pliers or vise-grips to prevent the screw head from stripping.

WARNING

When removing the carburetor top (2), use caution since the spring (4) is under tension and could suddenly release, causing eye injury.

3. Remove the carburetor top (2) and spring (4). Lift out vacuum piston (7) with jet needle (6) and spring seat (5). Remove the spring seat and needle from vacuum piston.
4. Place the new needle from kit through the center hole in vacuum piston. Place the spring seat over the top of jet needle (6).
5. Insert vacuum piston (7) into the carburetor body. The slides on the piston are off-center, therefore the piston will fit into the slide track grooves only one way. If the piston does not fit, rotate it 180 degrees.
6. Check to be sure that the diaphragm is seated evenly into the groove at the top of carburetor body.
7. Place the spring (4) over the spring seat (5), and carefully lower the carburetor top (2). Keep the spring straight while lowering the top.

NOTE

The spring (4) must fit around tower in the underside of the top.

8. After carburetor top is seated, hold it in place while lifting up on the vacuum piston (7) from the inside of the carburetor. The piston should rise to the top smoothly. If piston movement is restricted, the spring is cocked. Lift the carburetor top and lower it carefully, keeping coils straight.
9. Once the top is installed correctly, install three screws (1) and spacer (3). Place the throttle cable bracket (11) in position with the idle screw resting on top of throttle cam stop. Install the bracket screw (12) first, then the top screw (10), to prevent bending the bracket or throttle cam.
10. Install the label "BRZ-1" (13) from the kit next to, and below carburetor part number.

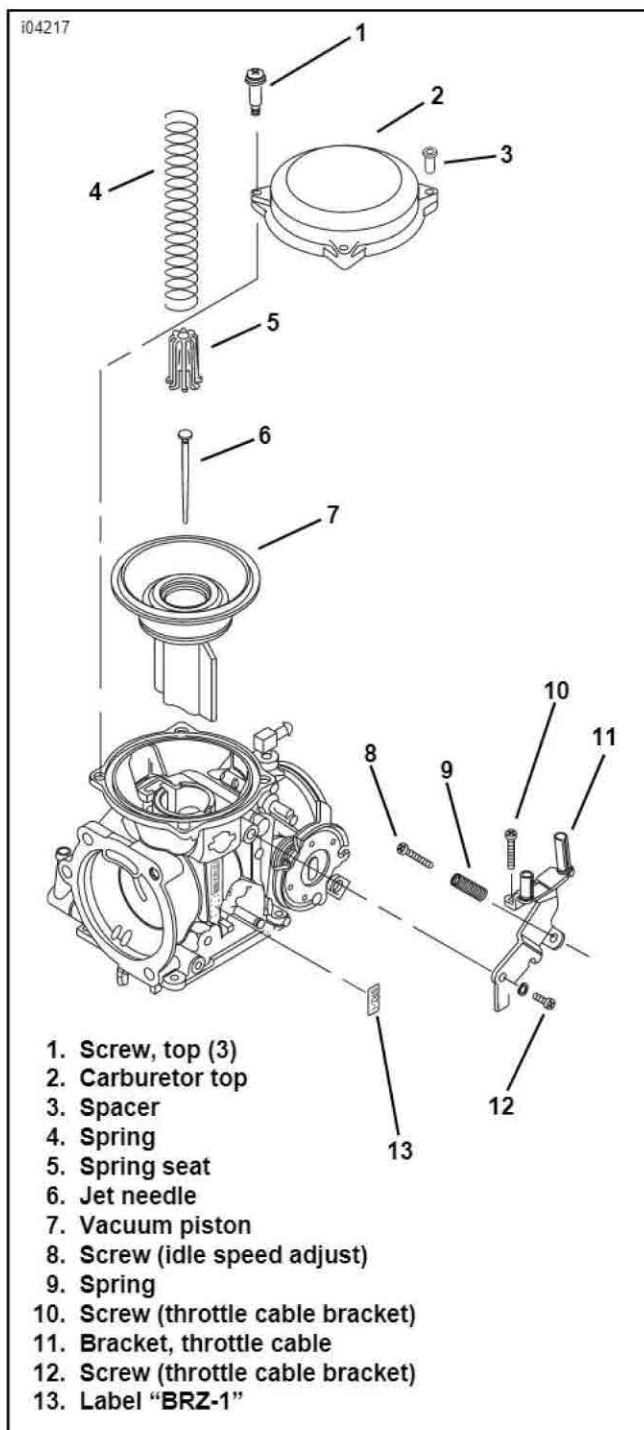


Figure 6. Carburetor

Carburetor Installation

NOTE

The fit between the carburetor and the seal ring is tight. For ease of installation, it is recommended that the mating surfaces, carburetor body and seal ring be lubricated prior to assembly to reduce surface friction. Use liquid dish soap or tire mounting lube for this purpose.

1. Lubricate only the inside surface of the seal ring that will be in contact with the carburetor. Also, apply a light coat of lubricant to the spigot of the carburetor body. Push carburetor body into the seal ring.
2. Connect the vacuum line; install the fuel hose.

CAUTION

Make certain that the fuel hose is all the way onto the carburetor inlet and securely clamped.

3. Install throttle cables.

Throttle Cable Adjustment

1. See Figure 7. Turn the cable adjusters (1 and 3) and jamnuts (2) as short as they will go. Both cables should have zero adjustment at the start of this procedure.
2. Point the front wheel straight ahead.
 - a. Turn the throttle grip wide open and hold it there.
 - b. See Figure 7. Turn the throttle cable adjuster (1), lengthening the sleeve, until the throttle cam (2) just touches the cam stop (5) in Figure 8.
 - c. See Figure 7. Tighten the adjuster jamnut, and release the throttle.
3. Turn the front wheel full right.
4. See Figure 7. Turn the idle cable adjuster (3), lengthening the sleeve until the cable housing just touches the spring (4) in the cable support sleeve in Figure 8.

WARNING

The throttle control must operate freely without binding. Irregular or sticking throttle response could cause a loss of control, leading to an accident which could result in death or serious injury.

5. Check the adjustment.
 - a. Work the throttle grip to be sure the cable returns to the idle position when released.
 - b. If the cable does not return to idle, turn the idle adjuster, shortening the sleeve until the correct adjustment is reached. Tighten the jamnut.

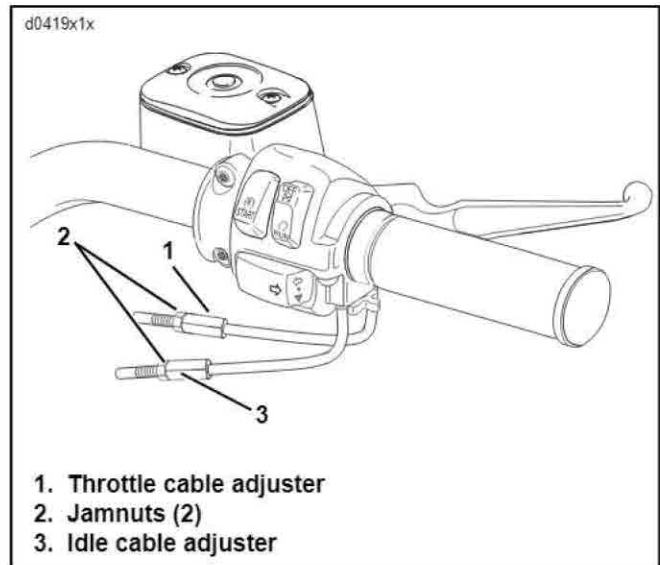


Figure 7. Throttle Cable Adjusters

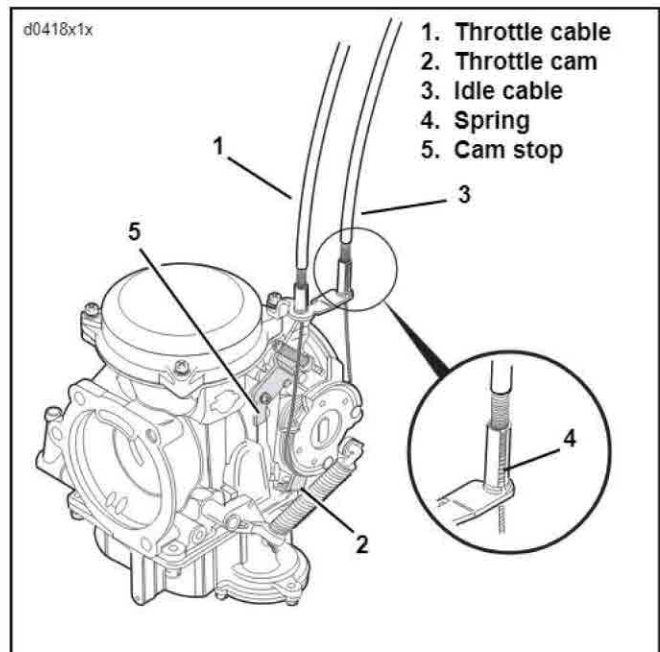


Figure 8. Idle Cable Connection

Enricher Adjustment

CAUTION

Do not lubricate the enricher cable or the inside of enricher cable conduit. The cable must have sliding resistance to work properly.

See Figure 9. Check fuel enricher operation. The fuel enricher knob (1) should open, remain open and then close without binding. The knurled plastic nut (2), next to the enricher knob, controls the ease or difficulty with which the cable slides within the cable conduit.

1. Loosen the hex nut (4) at the backside of the mounting bracket.
2. Move cable assembly free of the slot in the mounting bracket.
3. Hold cable assembly at flat (3) with an adjustable wrench. Turn knurled plastic nut (2) by hand to set sliding resistance.
 - a. Turn counterclockwise to reduce resistance, until the knob slides inward unaided.
 - b. Turn clockwise to increase resistance, until the knob remains fully out without holding, and it closes with relative ease.
4. Position cable assembly in the slot in the bracket. Tighten the hex nut (4) at the backside of the bracket.

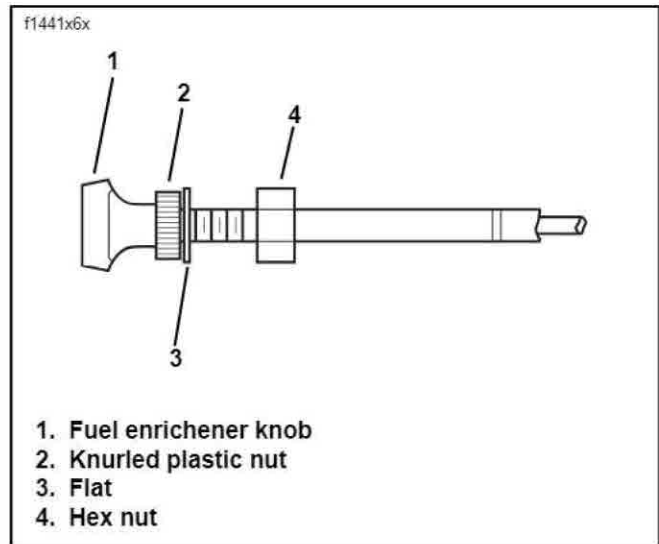


Figure 9. Enricher Control

Air Cleaner Installation

1. See Figure 10. Position gasket (11) and two O-rings (10) on the backplate.
2. Insert two breather bolts (9) (metric) into the backplate. Thread bolts loosely into each cylinder head. Final tighten bolts to 120-144 **in-lbs** (13.6-16.3 Nm).
3. Insert two breather tubes (8) into the holes in the back of the air filter element. Place the filter element back into position, and attach the breather tubes to the breather bolts.
4. Install the air filter element (5) and bracket (4).
 - a. Make sure gasket (6) holes are aligned with backplate holes.
 - b. Use three TORX screws (3) to secure bracket and filter element. Tighten to 20-40 **in-lbs** (2.3-4.5 Nm).
5. Install air cleaner cover (2).
 - a. Apply a drop of LOCTITE THREADLOCKER 243 (blue) to threads of the air cleaner cover screw (1).
 - b. Install screw to secure the air cleaner cover. Tighten to 36-60 **in-lbs** (4.1-6.8 Nm).

⚠ WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion resulting in death or serious injury.

6. Connect battery cables to battery, positive cable first.

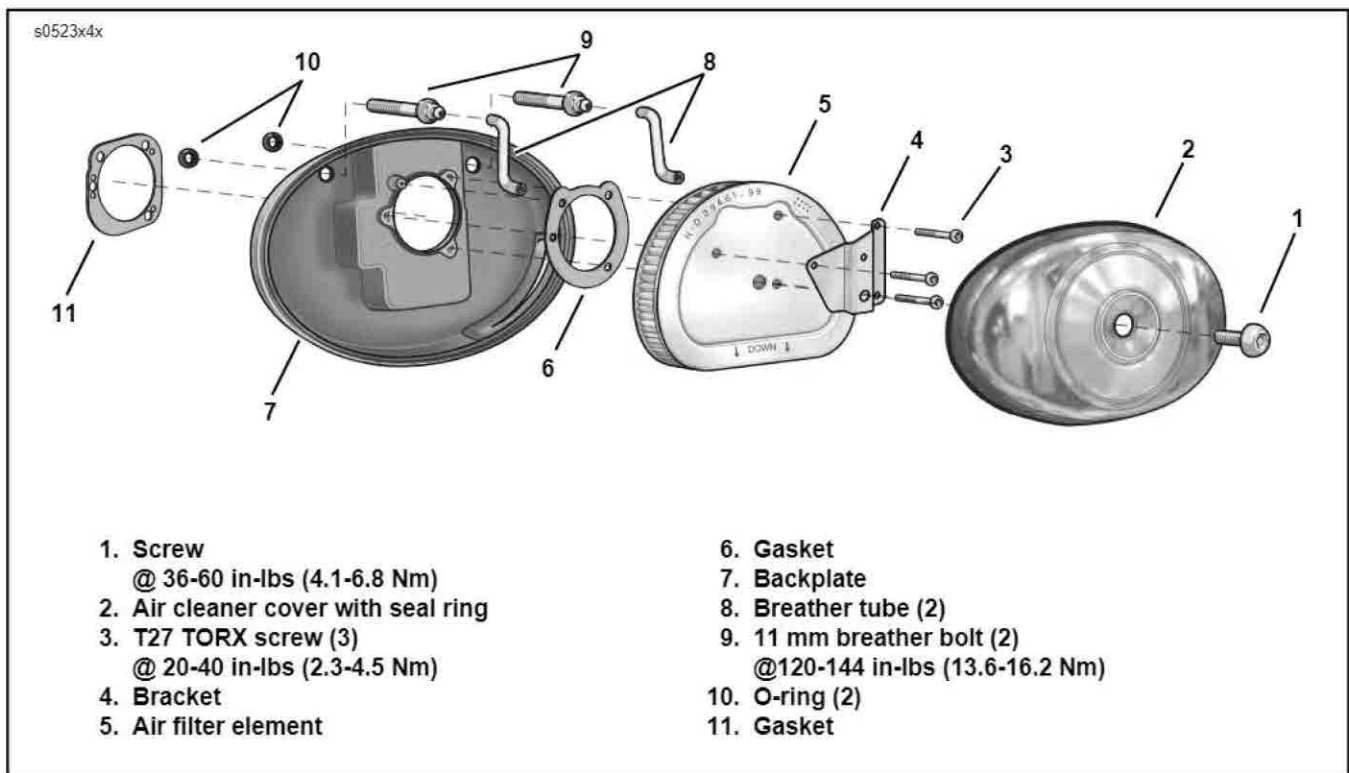


Figure 10. Air Cleaner Assembly



Service Parts

Part No. 28024-02

Date 8/01

Carburetor Calibration Kit, Brazil

Kit 28024-02

Kit Service Parts

	Part No.
Main Jet, #170	27115-88
Jet Needle, NOKD	27242-95
Slow Jet, #45	27170-89
Plug, Idle Mixture Screw	28015-01
Label, "BRZ-1" calibration	27075-02