



# INSTRUCTIONS

-J01771

REV. 9-1-99

Kit Number 27409-00

## BASIC JET KIT, 44 MM

### General

This kit is designed for use with Screamin' Eagle® 44mm Big Bore CV Carburetor Kit (P/N 27934-99). This kit contains a basic set of jets to tune the carburetor.

### Kit Contents

See Service Parts Illustration and list at the end of this sheet for kit contents.

#### NOTE

Refer to applicable Service Manual for detailed instructions to remove necessary components. Service Manuals are available from your Harley-Davidson Dealer.

#### CAUTION

Harley-Davidson® motorcycles equipped with some Screamin' Eagle® high-performance engine parts may not be used on public roads and in some cases must be restricted to closed course competition. This engine related performance part is intended for racing applications and is not legal for sale or use in California on pollution controlled motor vehicles. Engine related performance parts are intended for the experienced rider only.

#### WARNING

Gasoline is extremely flammable and highly explosive. Do not smoke or allow open flame or sparks anywhere in the area when servicing any part of the fuel system. Failure to follow instructions could result in death or serious injury.

### 44mm Carburetor Tuning Procedures

The 44mm Big Bore CV Carburetor, as shipped, is calibrated for use on modified Harley-Davidson Big Twin engines equipped with Screamin' Eagle®, bolt in, High Performance Cam, Air Cleaner, and Exhaust System. The Basic Jet Kit is used if you need to enrichen the carburetor calibration. For a more complete selection of jets, a Tuning Kit (part No. 27419-99) is available.

#### NOTE

All carburetor tuning should be performed with the engine warmed up to normal operating temperature.

#### NOTE

Prior to performing any jetting changes, ensure the carburetor and manifold are installed correctly and there are no intake leaks. Also make sure the float is adjusted correctly (Refer to the "Fuel System" section in a 1993 or later Service Manual covering Carbureted Evolution or Twin Cam model motorcycles for float adjustment procedures).

### Lean Conditions

If you experience lean running conditions such as the engine spitting back through the carburetor and/or hesitation upon acceleration, the carburetor may need to be jetted for a richer running condition. If this is the case, install the jets contained in this kit.

### Rich Conditions

If fuel economy drastically decreases, black smoke appears from the exhaust, acceleration is sluggish, and/or the spark plugs are black and sooty, the carburetor may need to be jetted for a leaner running condition.

### Idle and Off-Idle Adjustment

The Idle Mixture Screw is a fuel adjustment screw located on the bottom of the carburetor (outlet side) in a passageway. See Inset on Page 3. Turning the Idle Mixture Screw in (Clockwise) will lean the idle mixture and turning it out (Counterclockwise) will richen it. Adjusting the Idle Mixture Screw will adjust the idle and off-idle operating mixture.

If the idle mixture requires adjustment, start at the initial setting point of 1-1/2 turns out and an idle speed of 1000 rpm. Then adjust the screw 1/2 turn at a time, (in for leaner adjustment, out for a richer adjustment) After each adjustment, reset the idle speed back to 1000 rpm and check the engine for improvements as to its running operation.

#### NOTE

Do NOT turn the Idle Mixture Screw out more than 3-1/2 turns. If good operation is achieved at 3-1/2 turns, you may want to install one size smaller SLOW jet.

#### NOTE

Do NOT tightly bottom out the Idle Mixture Screw or damage to the screw and its seat may result. If 1/2 turn (out) corrects the rich idle condition, you may want to install one size larger SLOW jet.

### Off Idle to 1/4 Throttle Mixture

The SLOW jet affects the engine's mixture from off-idle to approximately 1/4 throttle. Changing the SLOW jet also affects the idle mixture adjustment, so the idle will need to be reset if the SLOW jet is changed.

### 1/4 to 3/4 Throttle Mixture

The JET NEEDLE mainly affects the engine's mixture from approximately 1/4 to 3/4 throttle position.

### 3/4 to WOT (Wide Open Throttle) Mixture

The MAIN JET affects engine mixture above 3/4 throttle position. The most effective method to tune this area is to perform timed runs between two fixed points. Begin by cruising at a steady speed of approximately 60 mph in high gear. When you pass the 1st point, open the throttle to WOT and have someone measure the time it takes to reach the 2nd point. Change MAIN jets and repeat this process until the fastest time is obtained.

## Installation of Basic Jets

### WARNING

To prevent accidental startup of the motorcycle and possible personal injury, always disconnect the negative battery cable when working on a motorcycle. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion which could result in death or serious injury.

1. Disconnect negative battery cable.
2. Remove air cleaner. Refer to the applicable Service Manual instructions.
3. Refer to Service Parts figure and applicable Service Manual. Remove float chamber assembly (20).
4. Replace slow jet (23) with larger slow jet from kit.
5. Replace main jet (1) with either of the larger main jets from the kit.
6. Reinstall float chamber assembly (20). If the original O-ring (40) is damaged, replace with a new one.
7. Refer to applicable Service Manual and replace air cleaner.
8. Reconnect negative battery cable.
9. Drive the vehicle to determine if jetting changes improve the engine's running condition, when using the tuning instructions given earlier.



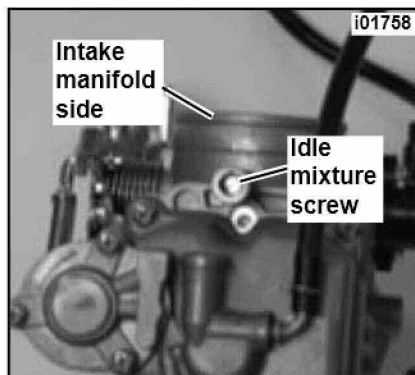
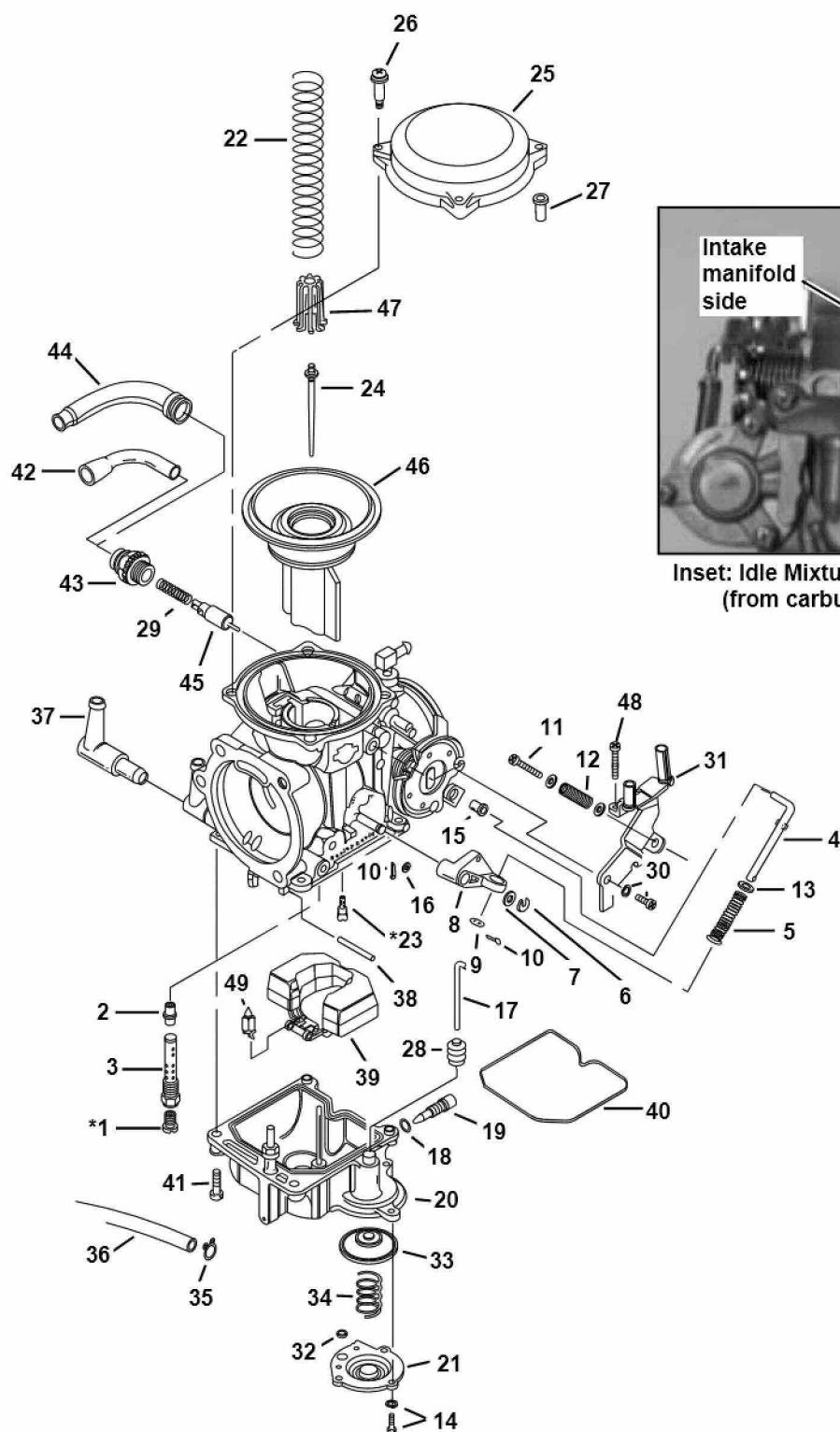
# Service Parts

Kit No. 27409-99

Date 8/99

44mm Carburetor Basic Jet Kit

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Inset: Idle Mixture Screw Location  
(from carburetor bottom)

## NOTE

Parts marked with an asterisk (\*) are part of this kit. See next page for index identification and description. Service Parts have a Harley-Davidson Part No. listed.



# Service Parts

Kit No. 27409-99

Date 8/99

## 44mm Carburetor Basic Jet Kit

Item	Description	Part No.	Item	Description	Part No.
1*	<b>Main Jet (2)</b>	<b>See Kit Breakdown</b>	26	Screw, Top (3)	27262-96
2	Needle jet	27725-99	27	Collar, Carburetor top	27263-96
3	Needle jet holder	27101-88	28	Boot, accelerator top	27311-76
4	Rod	27122-89	29	Spring	27315-88A
5	Spring	27123-89A	30	Screw	27317-88
6	E-clip	27124-89	31	Bracket, throttle cables	27339-90
7	Washer	27125-89	32	O-ring (2)	27360-76
8	Lever	27126-89	33	Diaphragm, accelerator pump	27361-76
9	Washer	27127-89	34	Spring, diaphragm	27362-76
10	Pin (2)	27128-89	35	Clip, overflow hose	27368-76
11	Idle screw	27130-90	36	Hose, overflow w/clip	27553-99
12	Spring	27136-90	37	Fitting, (L-joint)	27371-76
13	Washer	27137-81	38	Pin	27575-88A
14	Screw w/washer	27146-89	39	Float	27576-92
15	Collar	27147-89	40	O-ring, float chamber	27577-92
16	Washer	27148-89	41	Screw (4)	27579-88A
17	Rod	27156-89	42	Cable guide	27580-88
18	O-ring	27127-89	43	Starter cap	27581-88
19	Drain screw	27158-89	44	Cable sealing cap	27582-88
20	Float chamber assembly	27287-98	45	Starter valve	27583-88
21	Pump housing	27260-00	46	Vacuum piston	27552-99
22	Spring	27162-89	47	Spring seat	27586-88
23*	<b>Slow Jet (1)</b>	<b>See Kit Breakdown</b>	48	Screw	27587-88
24	Jet needle	27933-99	49	Valve w/clip	27886-78A
25	Top, carburetor	27261-96			

**NOTE:** Items marked with an asterisk (\*) and in "bold" are included in Basic Jet Kit (P/N 27409-99). See below for more detail on component breakdown. All other items are for illustrative purposes only.

## PARTS BREAKDOWN

### Basic Jet Kit (P/N 27409-99) Detailed Listing:

Item	Description	Part Number
1	Main Jets	
	#230	27776-99
	#240	27778-99
23	Slow Jet	
	#50	27724-99

### Jets Installed in the 44 mm Big Bore Carburetor

Item	Description	Part Number
1	Main Jet	
	#220	27775-99
23	Slow Jet	
	#48	27165-90