



# INSTRUCTIONS

-J03087

REV. 12-10-2003

Kit Number 27454-01A

## S.E FLATSLIDE CARB KIT FOR SPORTSTER AND BUELL

### General

This kit is designed for use on 1995 and later XL 1200's and all Twin Cylinder Carbureted Buells.

#### NOTE

On XL Models, you must use A SCREAMIN' EAGLE Air Cleaner Kit (Part Number 29041-88B or 29042-04) with this carburetor.

On Buell Models, you must use either AIR CLEANER RACE KIT (Part Number 91421-99Y) or AIR CLEANER RACE KIT (Part Number 29460-96Y) with this carburetor.

The additional kits available for use with this kit are:

Part Number. 29564-98 - Carburetor tuner-race kit for SCREAMIN' EAGLE 42 mm Flatslide carburetor.

Part Number. 29565-98 - Carburetor rebuild kit for SCREAMIN' EAGLE 42 mm Flatslide carburetor.

See Service Parts Page Illustrations for kit contents.

#### CAUTION

Harley-Davidson motorcycles equipped with some Screamin' Eagle high-performance 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

A Service Manual is necessary for installation of this kit. The rider's safety depends upon the correct installation of this kit. We recommend that this kit be installed by a factory-trained technician at your Harley-Davidson dealership. Improper installation of this kit could result in death or serious injury.

### REMOVAL OF STOCK AIR CLEANER AND CARBURETOR (ALL MODELS)

#### NOTE

Refer to the applicable Service Manual for more detailed instructions when removing the components referenced in Steps 1 through 6. Service Manuals are available from any Harley-Davidson Dealer.

#### WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative cable first) before proceeding.

#### WARNING

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

1. Refer to the Service Manual and follow the instructions given to remove the seat and disconnect the battery cables, negative cable first.
2. Remove stock air cleaner assembly including back-plate.

#### WARNING

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

3. Turn fuel valve to OFF position. Disconnect fuel line at carb and drain any remaining gas into proper container.
4. On XL Models: Follow instructions in applicable Service Manual and remove fuel tank.

#### WARNING

Use red fuel storage container only. Storing gas in unapproved container could create a dangerous situation such as leakage, leading to explosion or fire hazard which could result in death or serious injury.

5. Disconnect choke/enrichener cable from mounting bracket on left side of bike.
6. Remove carburetor from manifold.
7. Disconnect throttle (Open and Close) cables at carburetor.

#### NOTE

This carburetor is designed to work with stock throttle cables, so complete removal of stock cables is NOT required.

8. Disconnect Vacuum hose from carburetor.
9. Follow instructions in applicable Service Manual and finish removing carburetor.
10. Remove choke/enrichener cable from the carburetor and discard carburetor.

## Choke

The carb in this kit uses stock choke cable and stock black plastic nut. Obtain the new carburetor from kit. Remove black plastic nut from kit carburetor and discard it. Remove spring and plunger from carburetor kit and install them on the stock choke cable and attach to kit carb. Discard stock choke spring and plunger. Do not over tighten the plastic nut. Choke adjustment procedures are covered at the end of these instructions.

### NOTE

If your installation is for Buell, proceed to Page 4. If your installation is for a 2004 or later XL model see below. If your installation is for 1995 to 2003 XL models proceed to page 5.

## Carburetor Installation ( 2004 and Later XL Models)

1. Unplug the four connectors, remove and discard the plastic backbone clip while pulling out the two wire bundles which were secured to the backbone frame.
2. Plug the four connectors back together.
3. See Figure 1. Remove a cable tie from the kit and secure the ignition wire bundle and one of the hand control connectors, head lamp connector, and the front turn signal connector to the right side of the frame as shown. Wrap the cable tie around the hand control connector and tight to the right side of the backbone frame.
4. See Figure 2. Remove a second cable tie from the kit and secure the instrument wire bundle and a hand control connector to the left side of the frame as shown. Wrap the cable tie around the hand control connector and tight to the left side of the backbone frame.

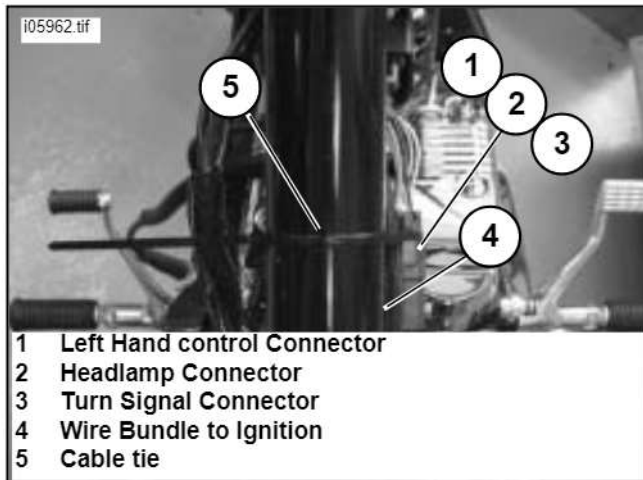


Figure 1. (Securing Right Hand Control Connector W/Cable Tie)

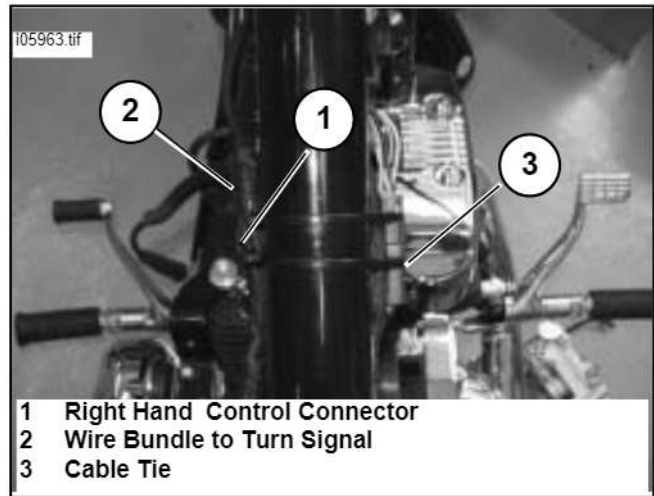


Figure 2. (Securing Left Hand Control Connector W/Cable tie)

5. See Figure 3. Remove a third cable tie from the kit and secure the two wire bundles and the all the wires to the connectors to the backbone frame. This will eliminate any movement of the wires.
6. Refer to **Cable Routing (2004 and Later XL Models)** on Page 3, and perform Step 1.
7. Screw the cable adjusters together to make them as short as possible.
8. Connect the "close" cable first, then install the "open" cable. See Figure 4 for close-up of cable installation.

### NOTE

Before inserting the carburetor into the stock manifold, check the condition of the rubber seal. If the seal is damaged, it must be replaced to prevent air leakage. 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.

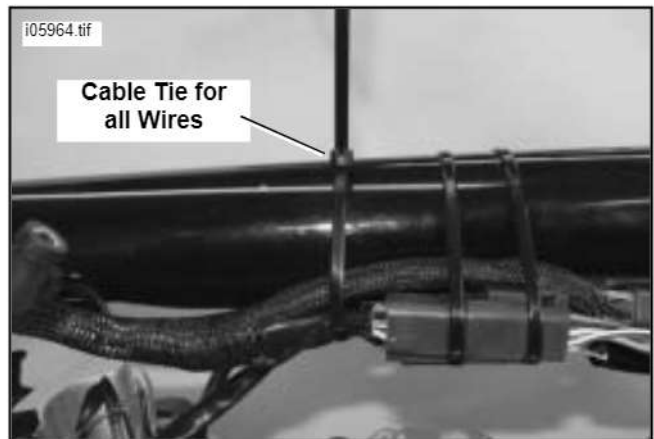
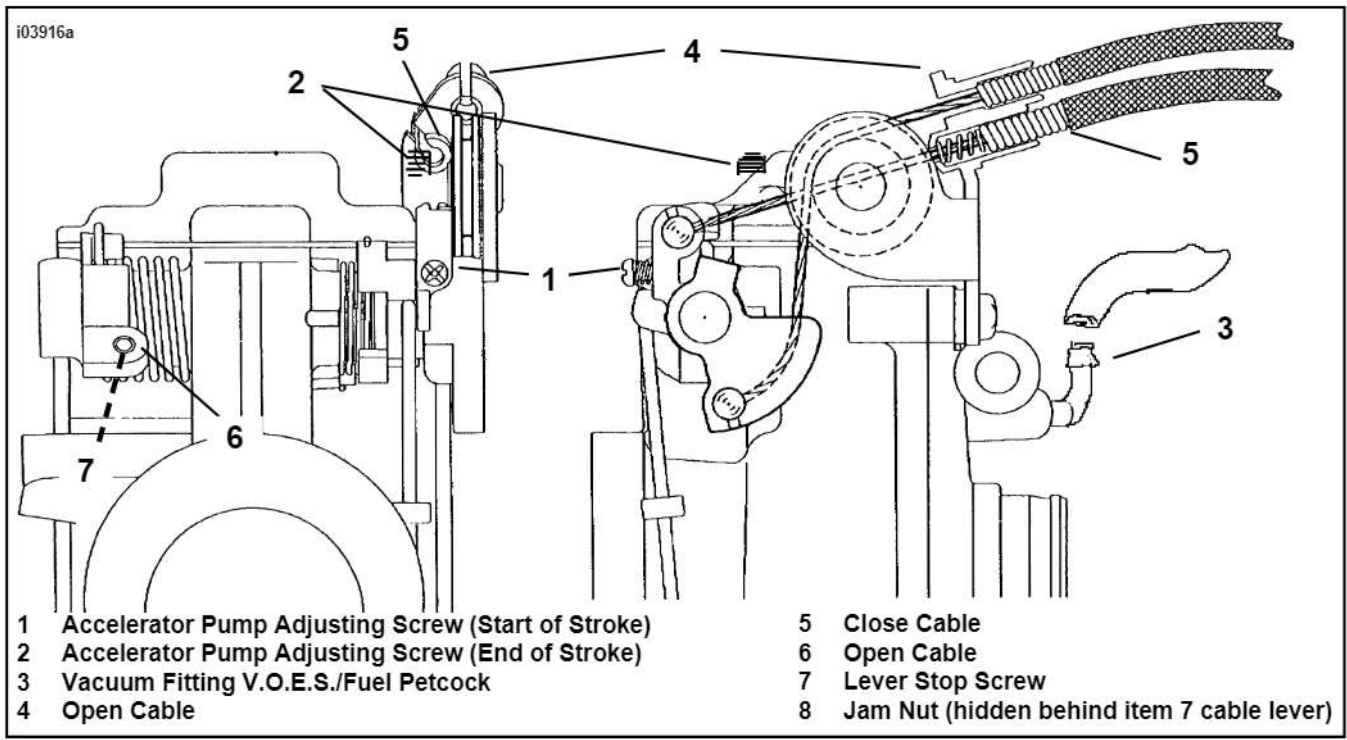


Figure 3. (Securing Wires Bundles with Cable Tie)



**Figure 4. Cable Installation**

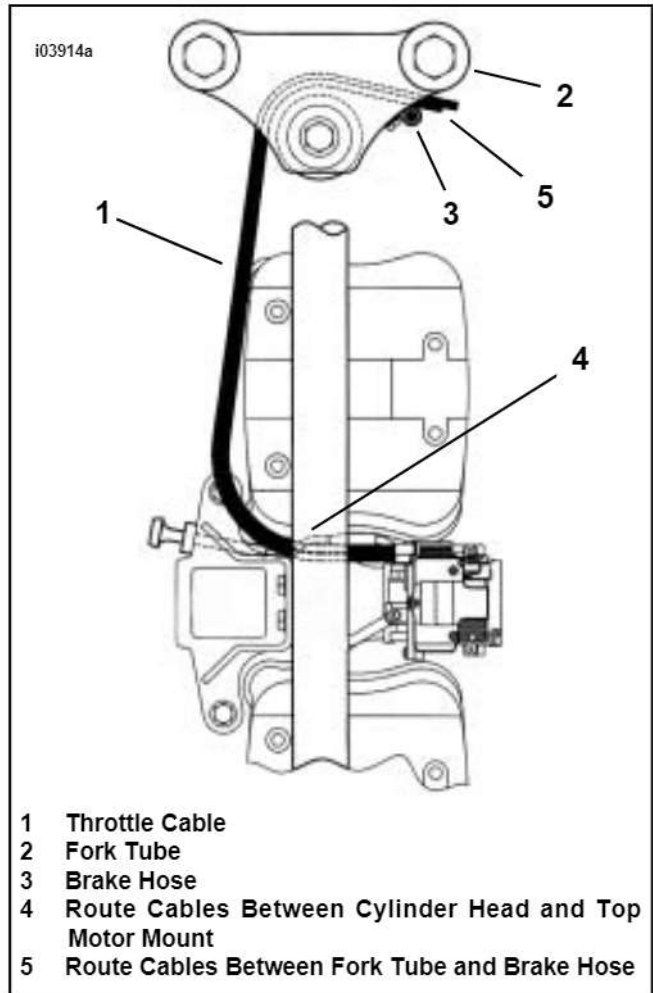
9. See Figure 4. Slip the fuel petcock vacuum hose on the carburetor fitting below throttle cable bracket.
10. Lubricate only the inside surface of the seal ring that will be in contact with the carburetor. Insert the carburetor into the manifold.
11. Connect fuel hose to the carburetor using the clamp supplied in the kit.
12. See Figure 4. Refer to the applicable Harley-Davidson Service Manual and adjust throttle cables following the instructions given. Adjust throttle cable so throttle valve (slide) opens fully. Lever stop screw should touch carb body at wide open throttle. To adjust lever stop screw, loosen jam nut and turn screw in (clockwise) or out (counterclockwise), respectively.
13. Adjust the opening cable until the slide can be opened fully. Snug the adjuster lock nut.
14. Install the choke to the horn mounting bracket. Perform Backplate Installation procedures on Page 5.
15. Reinstall the fuel tank and connect fuel hose and vacuum hose to fuel petcock using remaining new clamp supplied in kit.

**Cable Routing ( 2004 and Later XL)**

**WARNING**

When installing cables to the new carburetor make certain that cables are well lubricated and do not bind when handlebars are turned from lock to lock. Improperly installed throttle cables can affect vehicle operation which could result in death or serious injury.

1. See Figure 5 and 6. Route the throttle cables with large radius curves so that they do not interfere with other components.



**Figure 5. Throttle Cable Routing ( 2004 and Later XL Models)**



Figure 6. Throttle Cable Routing  
(2004 and Later XL models).

### 1995 through 2003 XL Models Only Fuel and Vacuum Hose Modification

**NOTE**

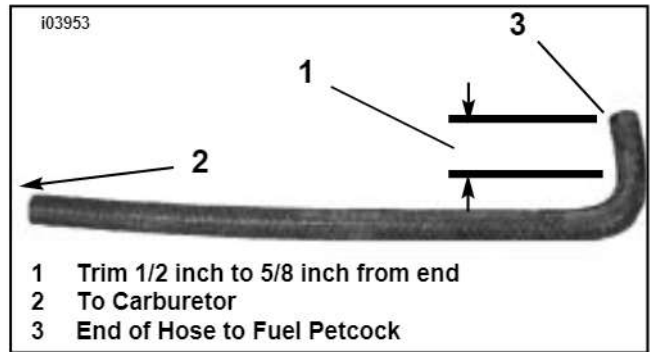
On XL Models, the Fuel hose and Vacuum Hose must be modified prior to installing to the new carburetor. Perform the following procedures.

1. See Figure 7. Locate and remove the fuel hose from the fuel petcock. Lay the hose on a flat surface and trim 1/2 inch to 5/8 inch of the hose from the end of the bend.
2. Obtain one of the Hose Clamps from kit and using clamp, reinstall end of hose trimmed in previous Step to fuel petcock. Tighten securely.
3. See Figure 8. Note that Figure 6 represents the current Vacuum hose configuration. The heat shield is installed to Fuel Petcock hose, the short hose routes to V.O.E.S., and the long hose routes to carburetor.
4. See Figure 9. This is the Modified Hose Configuration.  
**Note the following:**

The heat shield from the petcock hose has been removed and petcock hose has been shortened by 2 inches.

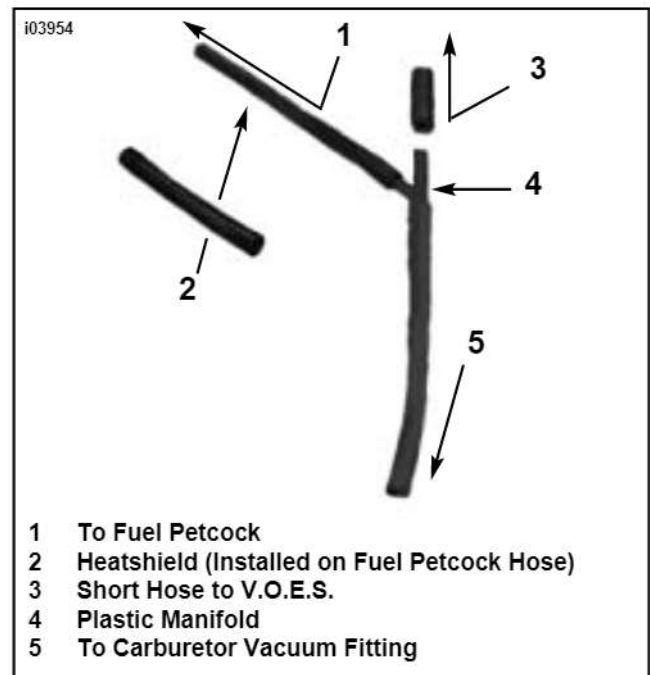
See Figure 9. Obtain heat shield for V.O.E.S. (provided in kit) and install. The V.O.E.S. hose will route behind horn on the left side to the V.O.E.S. vacuum fitting.

The Short hose (old V.O.E.S.) has been removed and replaced by a longer (5-1/4 inch) hose cut from 9 inch hose supplied with new carb. Heat Shield from kit is then installed. This hose will route to the vacuum fitting on carburetor.



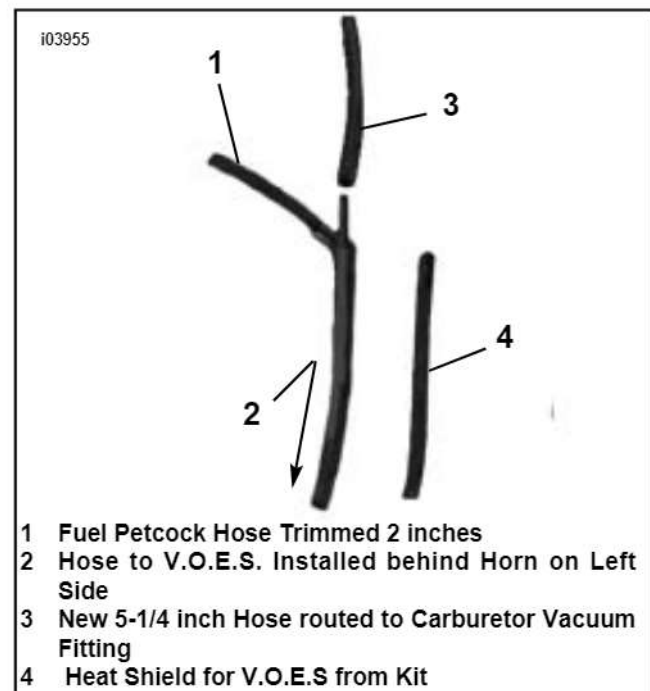
- 1 Trim 1/2 inch to 5/8 inch from end
- 2 To Carburetor
- 3 End of Hose to Fuel Petcock

Figure 7. Trim Fuel Hose At Petcock End



- 1 To Fuel Petcock
- 2 Heatshield (Installed on Fuel Petcock Hose)
- 3 Short Hose to V.O.E.S.
- 4 Plastic Manifold
- 5 To Carburetor Vacuum Fitting

Figure 8. Original Vacuum Hose Configuration



- 1 Fuel Petcock Hose Trimmed 2 inches
- 2 Hose to V.O.E.S. Installed behind Horn on Left Side
- 3 New 5-1/4 inch Hose routed to Carburetor Vacuum Fitting
- 4 Heat Shield for V.O.E.S from Kit

Figure 9. Modified Vacuum Hose Configuration

## Carburetor Installation (1995 to 2003 XL Models)

### NOTE

Prior to installing carb, perform initial cable routing as described in Step 1 on Page 8. This will allow the cables to be in position during carburetor installation.

1. Refer to Cable Routing (1995- 2003 XL Models) on Page 7, and perform Step 1.
2. Screw the cable adjusters together to make them as short as possible.
3. Connect the "close" cable first, then install the "open" cable. See Figure 4 on page 3, for close-up of cable installation.

### NOTE

Before inserting the carburetor into the stock manifold, check the condition of the rubber seal. If the seal is damaged, it must be replaced to prevent air leakage. 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.

4. See Figures 4 and 9. Slip the new V.O.E.S./fuel petcock vacuum hose on the carburetor fitting below throttle cable bracket.
5. Lubricate only the inside surface of the seal ring that will be in contact with the carburetor. Insert the carburetor into the manifold.
6. Connect fuel hose to the carburetor using the clamp supplied in the kit.
7. Use a pick or small screwdriver to carefully pry the special retaining washer off the V.O.E.S. Discard retaining washer.
8. See Figure 10. Rotate the V.O.E.S. so that the vacuum line points downward. Note V.O.E.S. and its mounting bracket have indexing bumps and notches that must be aligned.
9. Obtain the new retention washer from kit and install to retain V.O.E.S. in this position.

10. Connect hose shown in Figure 7 to the V.O.E.S.
11. Sandwich the V.O.E.S. assembly between the horn and the top motor mount as shown.
12. Refer to Figure 4 on Page 3. Refer to the applicable Harley-Davidson Service Manual and adjust throttle cables following the instructions given. Adjust throttle cable so throttle valve (slide) opens fully. Lever stop screw should touch carb body at wide open throttle. To adjust lever stop screw, loosen jam nut and turn screw in (clockwise) or out (counterclockwise), respectively.
13. Adjust the opening cable until the slide can be opened fully. Snug the adjuster lock nut.
14. Install the choke to the horn mounting bracket. Perform Backplate Installation procedures on Page 8.
15. Reinstall the fuel tank and connect fuel hose to fuel petcock using remaining new clamp supplied in kit.
16. Connect vacuum hose to fuel petcock.

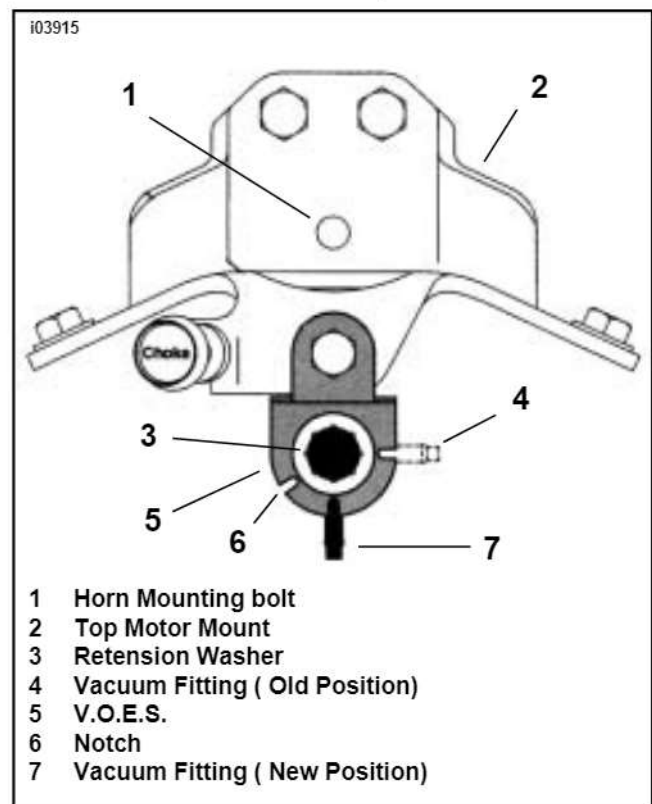


Figure 10. V.O.E.S. Installation

## Carburetor Installation (Buell Models)

### NOTE

Prior to installing carb, perform initial cable routing as described under Cable Routing (Buell Models) Step 1 on Page 8. This will allow the cables to be in position during carburetor installation.

1. Refer to **Cable Routing (Buell Models)** on Page 7, and perform Step 1.
2. Screw the cable adjusters together to make them as short as possible.
3. See Figure 11. Remove throttle cable clamps and discard.

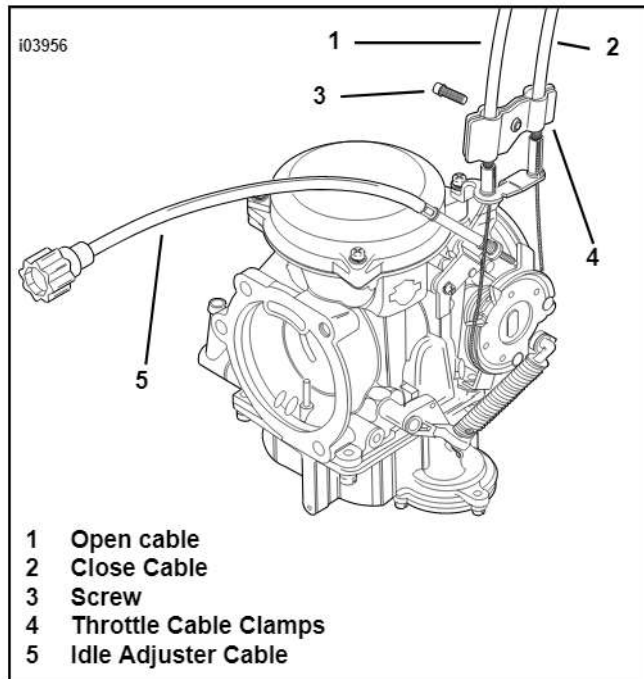


Figure 11. Throttle Cable Installation (Buell)

4. Connect the "close" cable first, then install the "open" cable. See Figure 4 for close-up of cable installation.
5. Connect V.O.E.S. hose.

### NOTE

Before inserting the carburetor into the stock manifold, check the condition of the rubber seal. If the seal is damaged, it must be replaced to prevent air leakage. 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.

6. Lubricate only the inside surface of 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 into seal ring.
7. Connect fuel hose to carburetor using new clamp from kit.
8. Refer to Figure 4 on Page 3. Refer to the applicable Buell Service Manual and adjust throttle cables following the instructions given. Adjust throttle cable so throttle valve (slide) opens fully. Lever stop screw should touch carb body at wide open throttle. To adjust lever stop screw, loosen jam nut and turn screw in (clockwise) or out (counterclockwise), respectively.

### NOTE

Turn the handlebar to the right and adjust the throttle free-play with the closing cable adjuster to approximately 1/8 inch.

9. Use cable strap and secure the remote idle adjuster cable to the frame tube.
10. See Figure 12. Route drain hose downward from drain fitting and continue towards rear wheel through the space between the engine rear cylinder and both rear cylinder push rod covers. Continue route downward between gearcase cover and engine crankcase.

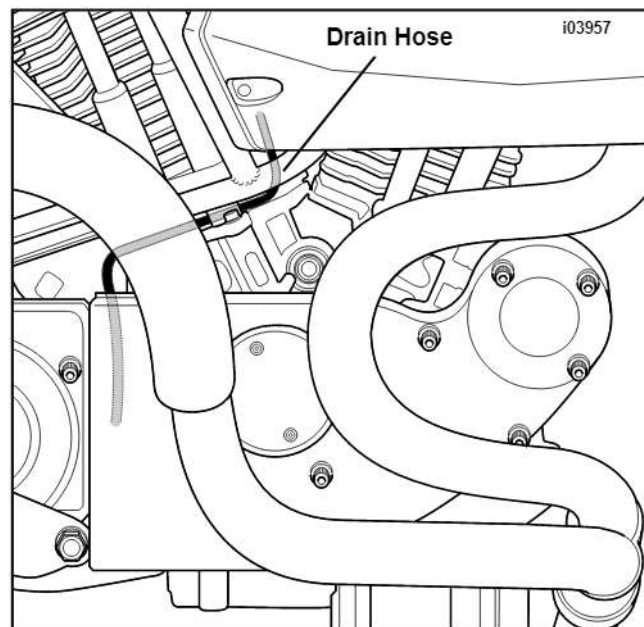


Figure 12. Routing Drain Hose (Buell)

11. Install the choke to choke mounting bracket and perform Backplate Installation procedures on Page 6.

## Cable Routing ( 1995 to 2003 XL Models)

When installing cables to the new carburetor make certain that cables are well lubricated and do not bind when handlebars are turned from lock to lock. Improperly installed throttle cables can affect vehicle operation which could result in death or serious injury.

1. See Figure 13. Route the throttle cables with large radius curves so that they do not interfere with other components.

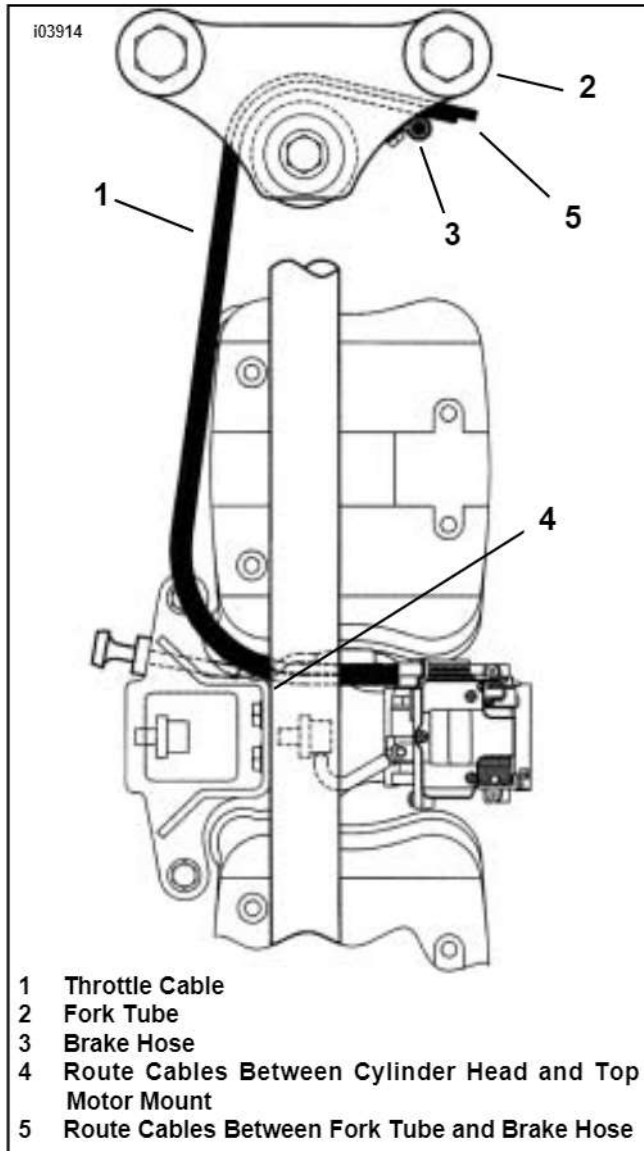


Figure 13. Throttle Cable Routing (1995 to 2003 XL Models)

## Cable Routing (Buell Models)

### **⚠ WARNING**

When installing cables to the new carburetor make certain that cables are well lubricated and do not bind when handlebars are turned from lock to lock. Improperly installed throttle cables can affect vehicle operation which could result in death or serious injury.

1. See Figure 14. Route the throttle cables with large radius curves so that they do not interfere with other components.

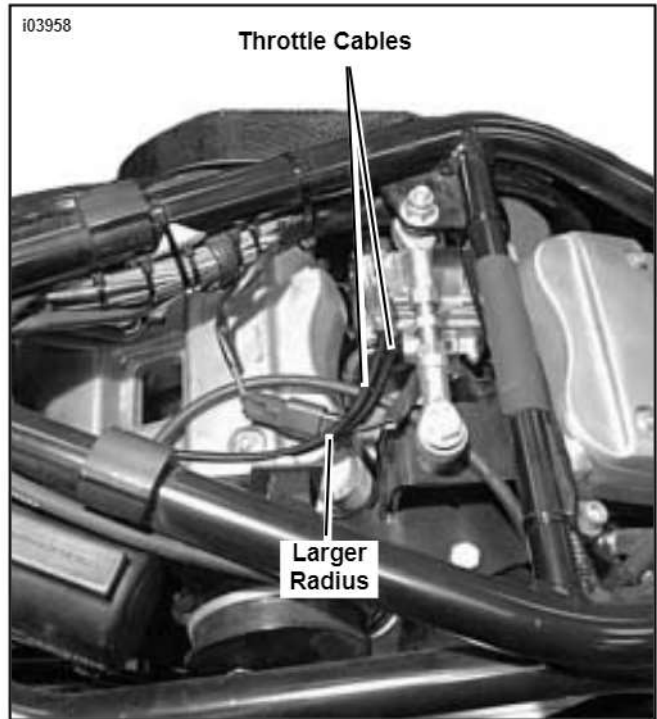


Figure 14. Throttle Cable Routing (Buell Models)

## Attaching Adapter To Backplate

(ALL XL Models)

### CAUTION

In the next step, do not use the stock screws from backplate assembly. The screws are too long and will prevent O-ring sealing interface between adapter and carb.

1. See Service Parts Illustration on Page 10. Insert the large diameter O-ring into the adapter. While "sandwiching" the gasket between the adapter and backplate assembly, attach the adapter to the backplate assembly with the screws from SCREAMIN' EAGLE air cleaner kit. Apply 1 or 2 drops of Loctite® 243 (blue) on each of the screws.

### CAUTION

Before attaching backplate to cylinder heads, check that carb is fully inserted into the manifold. If the carb is not fully seated, air leaks might result.

2. See Service Parts Illustration on Page 10. Refer to Instruction Sheet covering SCREAMIN' EAGLE air cleaner kit and follow instructions given to install air cleaner assembly.

## Attaching Adapter To Backplate

(Buell Models)

### CAUTION

In the next step, Do NOT use the screws from Race Air Cleaner Kits (Part Numbers 91421-99Y and 29460-96Y) to install the adapter. The screws are too long and will prevent O-ring sealing interface between adapter and carb.

### CAUTION

Check that carb is fully inserted into the manifold. If the carb is not fully seated, air leaks might result.

1. See Service Parts Illustration on Page 10. Insert the large diameter O-ring into the adapter and install the adapter onto the front of the carburetor.
2. Install the Air Cleaner support bracket to the cylinder heads.
3. Attach the backplate assembly to the adapter using 1/4-20x1/4 inch screws or the stock (original) backplate assembly screws.
4. See Service Parts Illustration on Page 10. Refer to Instruction Sheet covering Buell AIR CLEANER RACE KITS and follow instructions given to install air cleaner assembly.

## Choke Adjustment

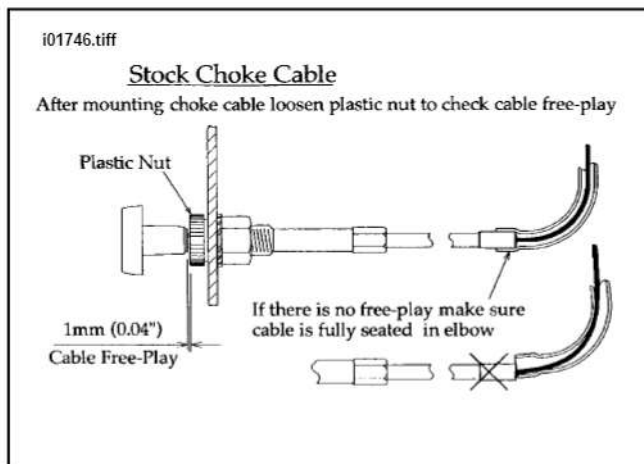


Figure 15. Proper Choke Cable Free Play

## Starting

See Figure 15. Pull choke out fully, leave throttle closed and crank engine with starter. Push choke knob in as engine warms up and engine runs smoothly.

## RECOMMENDED TUNING PROCEDURES

This carburetor is tuned to run well on a majority of Harley-Davidson/Buell engine configurations however, if fine tuning is required for a particular engine configuration, follow the procedures in the tuning instructions supplied with this kit.

## Stock Carburetor Configuration:

Accelerator Pump Nozzle: 60	Part number 27930-98
Jet Needle (clip position 2): 97	Part number 27923-98
Pilot Jet: 20	Part number 27901-98
Main Jet: 160	Part number 27912-98

### WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

5. Connect the battery cables, positive cable first.
6. Refer to the Service Manual, and follow instructions to install the seat.

### WARNING

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)





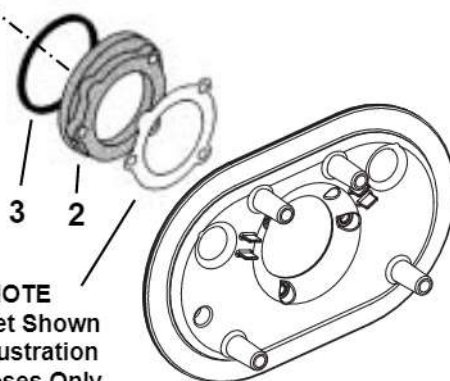
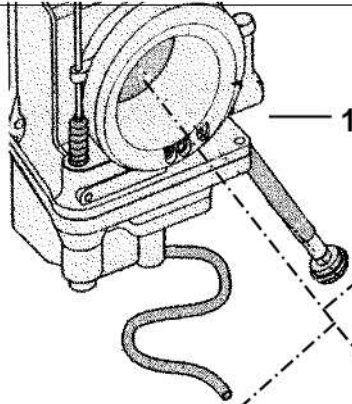
# Service Parts

Kit No. 27454-01

Date 12/03

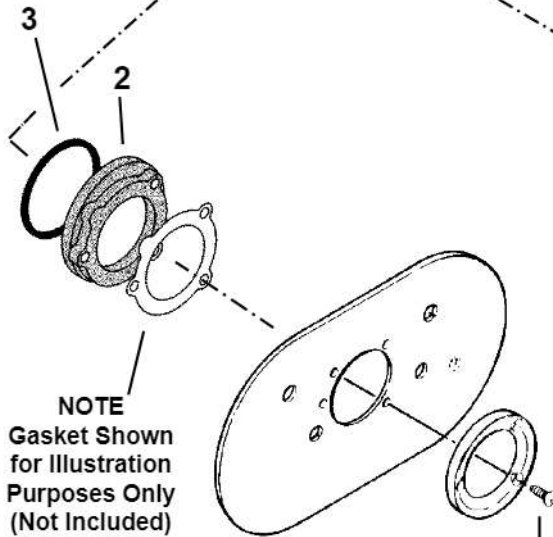
## 42mm Flatslide Carb Kit

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i03918a  
i03952  
i00614b



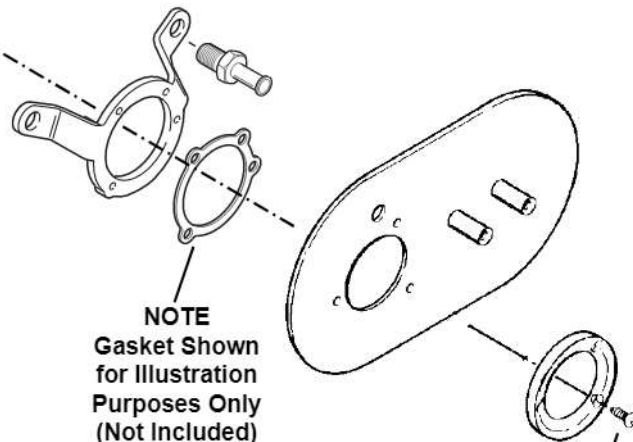
**NOTE**  
Gasket Shown  
for Illustration  
Purposes Only  
(Not Included)

### 2004 XL Fitment



**NOTE**  
Gasket Shown  
for Illustration  
Purposes Only  
(Not Included)

### 1995 - 2003 XL Fitment



**NOTE**  
Gasket Shown  
for Illustration  
Purposes Only  
(Not Included)

### Buell Fitment

Screws From Screamin'  
Eagle Air Cleaner Kit  
(Part Number 29041-88B)

Use 1/4-20x1-1/4 inch or  
stock (original) Backplate  
Assembly Screws.  
Do Not use screws from  
Race Air Cleaner Kits  
(Part Numbers 91421-99Y  
and 29461-96Y)

#### Kit Number 27454-01

Item	Description	Part Number	Item	Description	Part Number
1	Carb Assembly	not sold	6	Hose clamp (2) (not shown)	not sold
2	Adapter	27756-98	7	Cable tie (3)(not shown)	27753-98
3	O-ring	27754-98	8	Washer, retention (not shown)	11192
4	Main jet #155(not shown)	27910-98	9	Hose, vacuum (3/16x5-1/4 inch)	(not shown)
5	Main jet #165(not shown)	27914-98			not sold



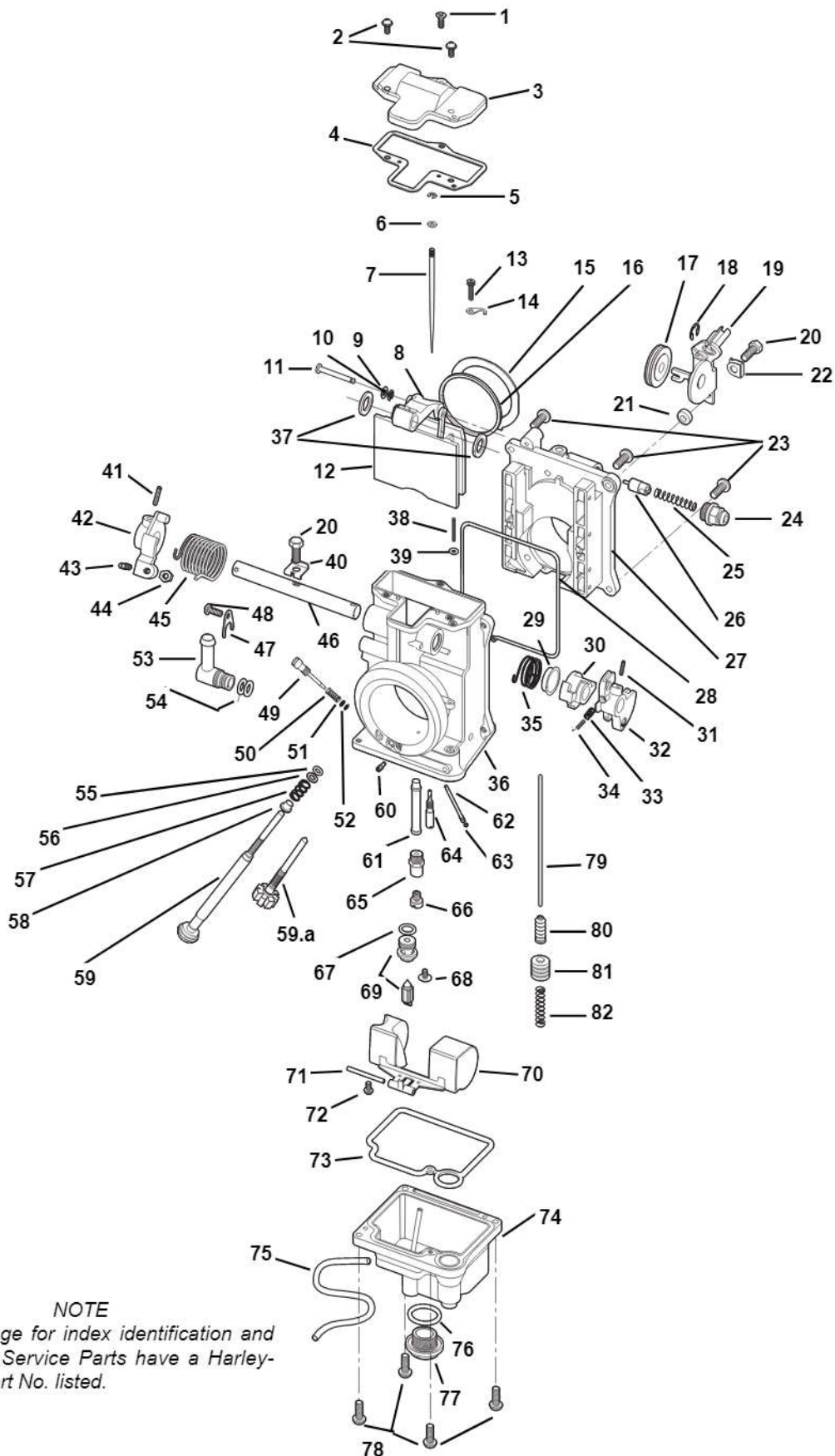
# Service Parts

Kit No. 29565-98

Date 12/03

42mm Carb Rebuild Kit

i01749.tiff



**NOTE**

See next page for index identification and description. Service Parts have a Harley-Davidson Part No. listed.



# Service Parts

Kit No. 27454-01

Date 12/03

42mm Carb Rebuild kit

Item	Description	Part No.	Item	Description	Part No.
1	Screw, top cover (flat head)		44	Nut, throttle stop	
2	Screw, top cover		45	Spring, throttle return	
3	Top cover		46	Shaft, throttle	
<b>4*</b>	<b>Gasket, top cover</b>	<b>27768-98</b>	47	Plate, fuel joint retainer	
<b>5*</b>	<b>E-ring, jet needle</b>	<b>27761-98</b>	48	Screw, fuel joint retainer	
<b>6*</b>	<b>Washer, needle clip</b>	<b>27760-98</b>	49	Screw, pilot air adjusting	
7	Jet needle (4 sizes available)		50	Spring, pilot air screw	
8	Lever, throttle valve		51	Washer, pilot air screw	
9	E-ring		<b>52*</b>	<b>O-ring, pilot air screw</b>	<b>27765-98</b>
10	Packing link lever		53	Fuel joint	
11	Pin, link lever		<b>54*</b>	<b>O-ring, fuel joint</b>	<b>27771-98</b>
12	Throttle valve		55	Packing, idle adjuster	
13	Screw, needle retaining clip		56	Washer, idle adjuster (Steel)	
14	Clip, needle retainer		57	Spring, idle adjuster	
15	Sealing ring, throttle valve		58	Ring, idle adjuster (Brass)	
16	Seal, throttle valve		59	Idle adjuster assembly (Long)	
17	Pulley, cable bracket		59a	Idle adjuster screw (Short)	
18	E-ring, cable bracket		60	Air jet (Blank)	
19	Bracket ass'y. cable		61	Needle jet (723 Series)	
20	Bolt		62	Nozzle, accelerator pump	
21	Spacer		<b>63*</b>	<b>O-ring, accelerator pump</b>	<b>27764-98</b>
22	Plate, lock tab		64	Pilot jet	
23	Screw		65	Extender, main jet	
24	Guide holder, starter		66	Main jet	
25	Spring, starter plunger		<b>67*</b>	<b>O-ring, needle valve</b>	<b>27757-98</b>
26	Starter plunger		<b>68*</b>	<b>Screw w/washer, needle valve retainer</b>	<b>27769-98</b>
27	Body ass'y, bearing and spigot (N/A)		<b>69*</b>	<b>Needle valve ass'y w/O-ring</b>	<b>27759-98</b>
28	Seal, spigot body		70	Float assembly	
29	Ring (Steel)		71	Pin, float	
30	Lever, accelerator pump		72	Screw, float pin	
31	Pin, throttle lever		<b>73*</b>	<b>Packing, float bowl</b>	<b>27758-98</b>
32	Lever, throttle		74	Float chamber body	
33	Spring, accelerator pump adjuster		75	Hose, overflow	
34	Screw, accelerator pump adjuster		<b>76*</b>	<b>O-ring, drain plug</b>	<b>27770-98</b>
35	Spring, accelerator pump return		77	Drain plug	
36	Mixing body ass'y (N/A)		<b>78*</b>	<b>Screw, float bowl (4)</b>	<b>27763-98</b>
37	Packing, shaft (plastic)		79	Rod, accelerator pump	
38	Adjusting screw, accelerator pump		<b>80*</b>	<b>Boot, accelerator pump rod</b>	<b>27766-98</b>
39	O-ring, accelerator pump screw		81	Plunger, accelerator pump	
40	Plate, lock tab for shaft		82	Spring, accelerator pump	
41	Pin, throttle stop lever				
42	Lever, throttle stop				
43	Adjusting screw, throttle				

## NOTE

Items shown in "bold" and with asterisk (\*) are included in Carburetor Rebuild Kit P/N 29565-98.