



INSTRUCTIONS

-J01295

REV. 02-09-2001

Kit Number 29504-98, 29505-98, and 29565-98

SCREAMIN' EAGLE® 42 mm FLATSLIDE CARB KITS

General

These kits are designed for use on 1990 and later 1340 Evolution engines and 1999 and later Twin Cam 88™ engines. SCREAMIN' EAGLE air cleaner kits must be used with these carburetors. See "Additional Kits Required" for Part No.

Part No. 29504-98 - Kit, Carburetor, polished

Part No. 29505-98 - Kit, Carburetor, unpolished

Part No. 29564-98 - Kit, Tuner-race

Part No. 29565-98 - Carburetor rebuild kit for SCREAMIN' EAGLE 42 mm flatslide carbs used in above kits

NOTE

This kit will not fit cruise control equipped vehicles and stock screws are too long for attaching stock backplate to adapter in kit. Do not use with stock backplate.

CAUTION

These Carb Kits are intended for high-performance racing (OFF ROAD USE) applications only. Use of these kits may reduce or void the Limited Warranty coverage. Motorcycles modified with some performance engine parts must not be used on public roads and in some cases may be restricted to closed-course competition. These kits are not legal for sale or use in California on any pollution-controlled motor vehicles. Alterations of emission related components constitutes tampering under USEPA guidelines and can lead to substantial fines and penalties.

Engine related performance parts are intended for the Experienced Rider only.

WARNING

A SERVICE MANUAL IS NEEDED TO INSTALL THIS KIT. The rider's safety depends upon the correct installation of this kit. If the procedure is not within your capabilities or you do not have the correct tools, have your Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury.

Kit Contents

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

Additional Kits Required

SCREAMIN' EAGLE air cleaner Part No. are as follows:

1990-1992 1340 Evolution engines - 29008-90A

1993 and later 1340 Evolution engines - 29543-99

1999 and later Twin Cam 88™ engines - 29440-99

Removal Of Stock Air Cleaner, Throttle Cables and Carburetor (All Models)

NOTE

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

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 battery 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 both battery cables.
2. Remove stock air cleaner assembly including backplate.

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 draining or servicing the fuel system. Drain gasoline into approved gasoline container only. Failure to follow these instructions 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. Remove fuel tank.
4. Disconnect the throttle cables at the carburetor.

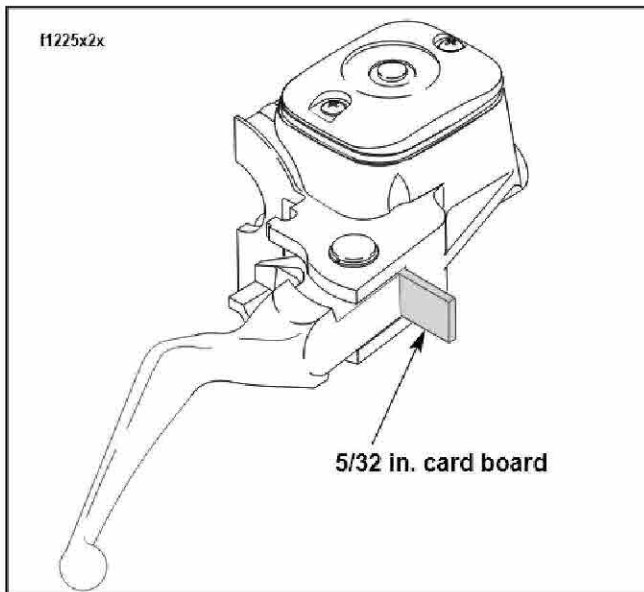


Figure 1. Install Cardboard Insert (1996 & Later)

5. Disconnect Vacuum Operated Electrical Switch (VOES), if present, and choke/enrichener cable. Remove carb.

CAUTION

See Figure 1. On 1996 and later models, do not remove the switch housing assembly without first placing the 5/32 inch cardboard insert between the brake lever and lever bracket. Removal without the insert may result in damage to the rubber boot and plunger of the Front Stoplight Switch.

6. See Figure 1. Refer to applicable Service Manual and remove stock throttle cables.
7. Retain the stock cable ferrules for use on the new cables.

Starter System (Choke)

The carb in this kit uses stock choke cable and stock black plastic nut, along with choke spring and plunger (items 21 & 22 in Service Parts illustration). Remove black plastic nut from kit carburetor and discard it. Remove spring and plunger and install them on the stock choke cable and attach to kit carb. Do not over tighten the plastic nut.

NOTE

Unless otherwise indicated, the following installation procedures apply to both 1340 Evolution and Twin Cam 88™ engines.

Throttle Cable Installation

WARNING

Because of differences in gas tanks and handlebars, check to make certain that new cable elbows clear the gas tank as the handlebars are turned from lock to lock. If contact occurs, refer to your service manual for adjustments if contact occurs. Contact of cable elbows with gas tank could lead to an accident resulting in death or serious injury.

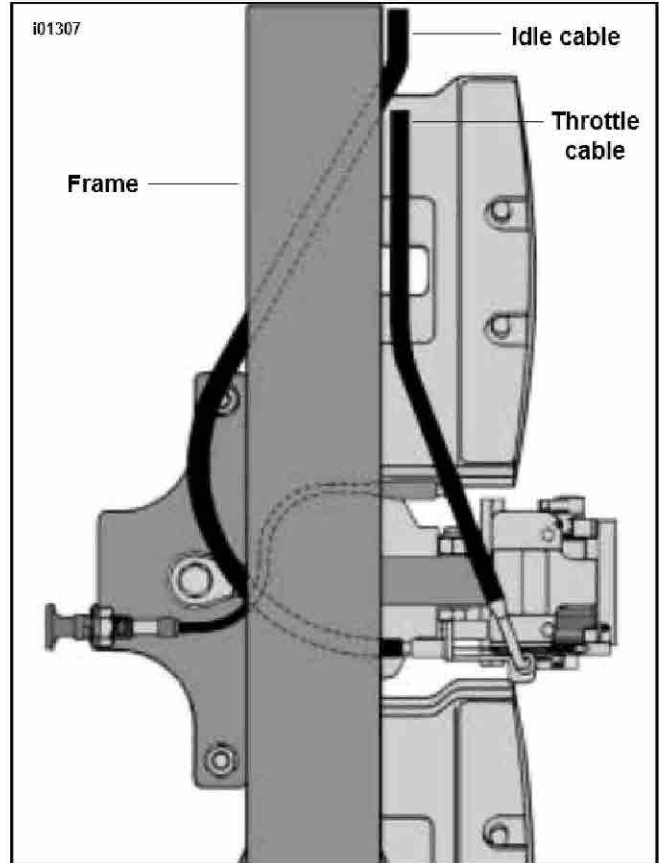


Figure 2. Cable Routing At Engine

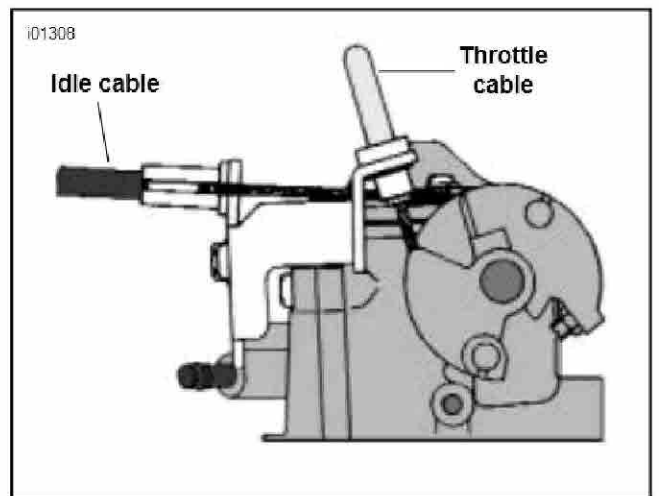


Figure 3. Cable Attachment At Carburetor

NOTE

If longer throttle cables are needed see cable matrix at end of this Instruction Sheet. Pre 1996 models have threaded cable elbows; 1996 and later cable elbows are secured with retaining rings.

1. Refer to applicable Service Manual, place stock ferrules on new cables and assemble them into lower switch housing.
2. See Figure 2. Route the cables along right side of frame identical with stock routing until idle cable reaches front cylinder head. Route idle cable as shown.

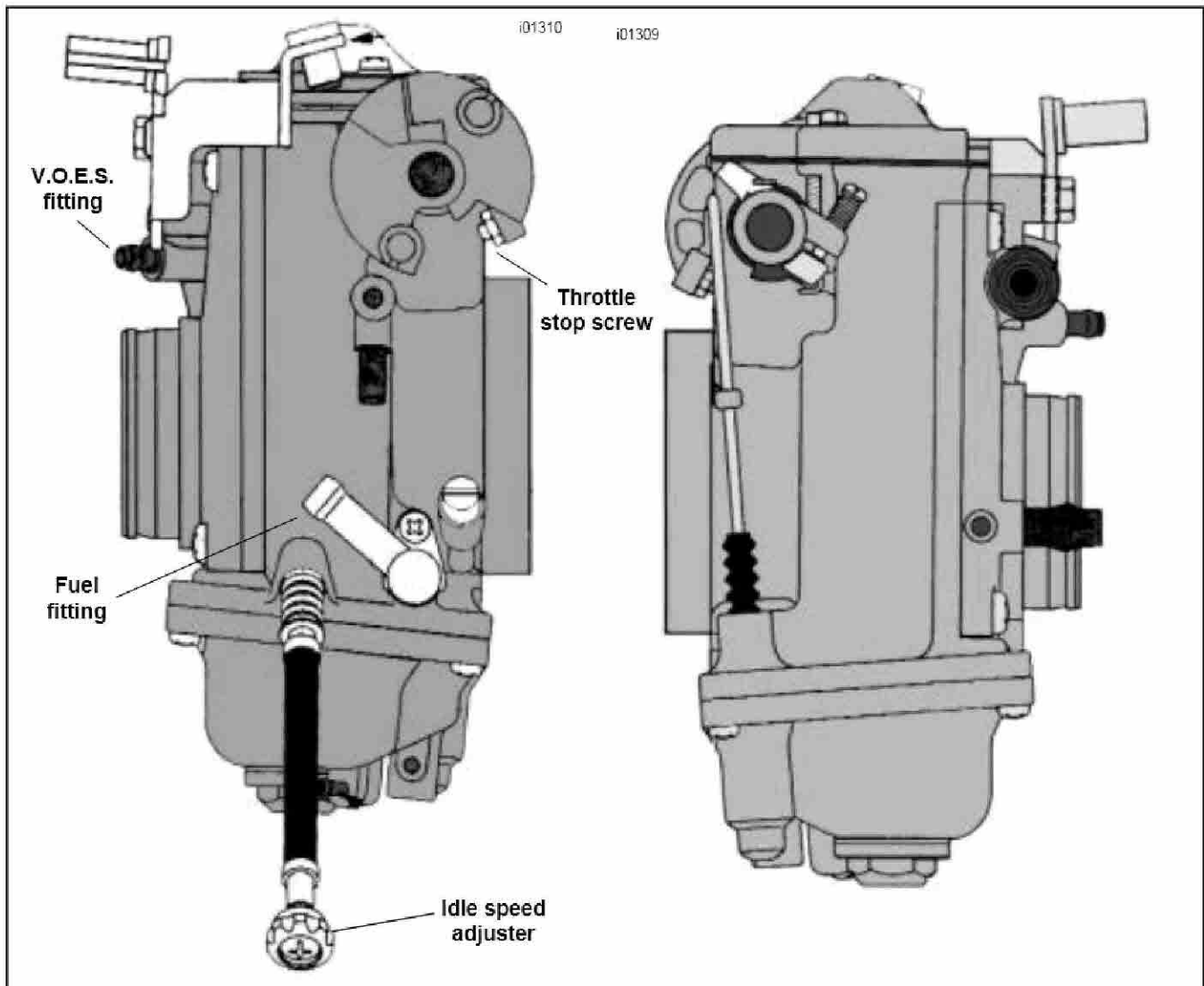


Figure 4. Side Views Of Carburetor

3. See Figure 3. First connect the idle cable to carburetor then the throttle or opening cable.

NOTE

The kit contains a cable guide clamp that may be attached at one of the tapped holes on the right front of the frame. Also three cable straps are in kit to secure throttle cables. Install clamp and cable straps after carburetor has been installed.

Carburetor Installation

NOTE

Before inserting the carburetor into the stock intake 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.

1. Insert the carburetor into the manifold. As the carb is being inserted, check that the choke cable is not being kinked.
2. See Figure 4. On 1340 Evolution engines, slip the V.O.E.S. vacuum hose on the carburetor fitting below idle cable bracket. (Twin Cam 88™ engines do not have V.O.E.S. so vacuum fitting must be plugged.)

3. Slip the fuel hose onto the carburetor fuel nipple and secure with hose clamp from kit.
4. Route float bowl overflow hose behind rear cylinder push rod tubes and down between crankcase and transmission.

NOTE

Continue at "Attaching Adapter To Backplate-1340 Evolution Engine" for 1340 Evolution Engines or "Attaching Adapter To Backplate-Twin Cam 88™ Engine" as applicable.

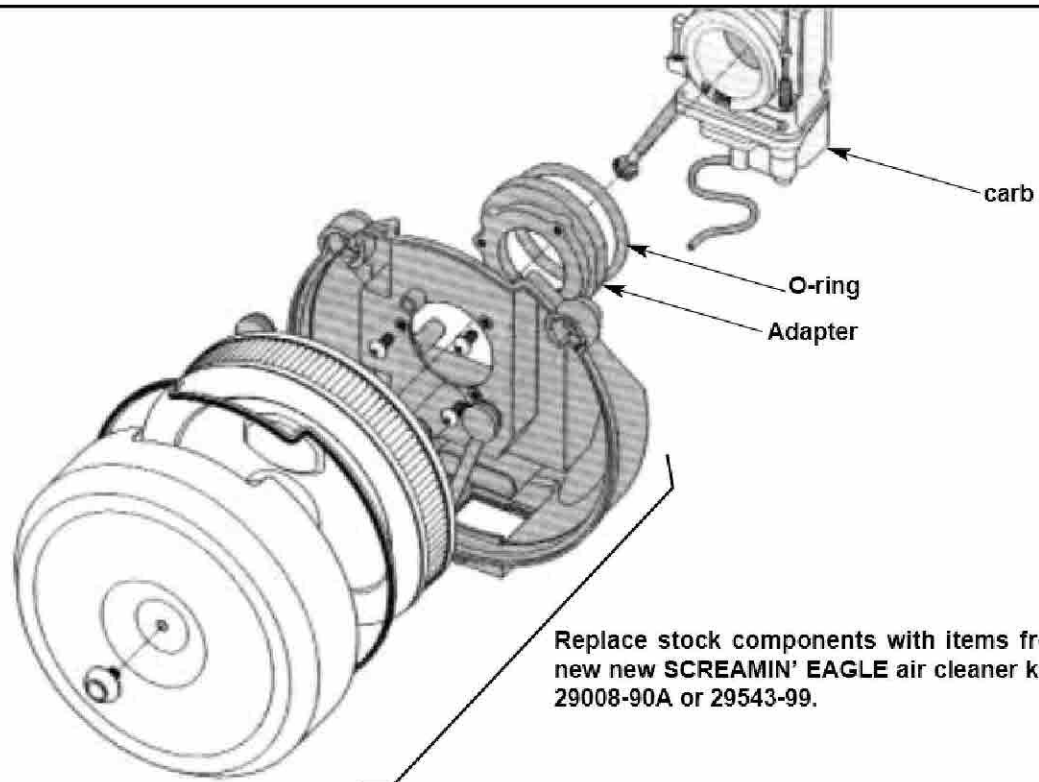
Attaching Adapter To Backplate-1340 Evolution Engine

CAUTION

In the next step, do not use the stock screws, they're too long and would prevent O-ring sealing interface between adapter and carb.

1. See Figure 5 on next page. Insert the large diameter o-ring into the adapter. Attach the adapter to the backplate with the screws from SCREAMIN' EAGLE air cleaner kit. Apply 1 or 2 drops of Loctite 243 (blue) on each of the screws.

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Replace stock components with items from new **SCREAMIN' EAGLE** air cleaner kits, 29008-90A or 29543-99.

Figure 5. Carb And Air Cleaner Assembly - 1340 Evolution

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.

- See Figure 6. Secure backplate to front and rear cylinder heads. Before tightening screws, align the carburetor so there is approximately 1/8 in. clearance between throttle lever and the corner of the backplate as shown in Figure 6.
- Tighten cylinder head socket screws to 10-12 ft-lbs.

Throttle Cable Adjustment

Refer to the applicable Service Manual and adjust throttle cables following the instructions given. Adjust throttle cable so throttle valve (slide) opens fully. See Figure 4. Lever stop screw should touch carb body.

Air Cleaner Installation - 1340 Evolution

- See Figure 5.
- Refer to Instruction Sheet covering applicable **SCREAMIN' EAGLE** air cleaner kit and following instructions given to install air cleaner.

Starting

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

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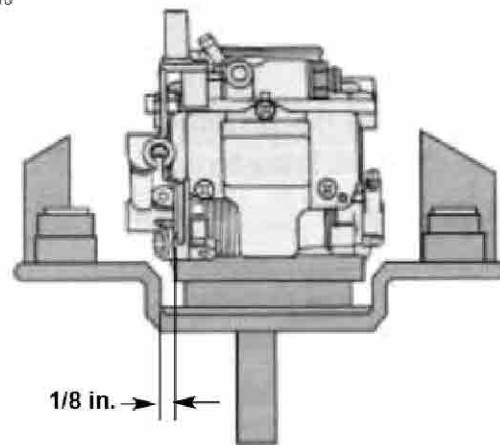


Figure 6. Aligning carb With Backplate

Attaching Adapter To Backplate-Twin Cam 88™ Engine

- See Figure 7 on next page. Insert the large diameter o-ring into the adapter. Attach the adapter to the **SCREAMIN' EAGLE** backplate with the three studs from air cleaner kit. The studs must be inserted through mounting holes in backplate and gasket on back side of backplate and finally threaded into adapter.

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 Figure 6. Secure backplate to front and rear cylinder heads with hollow cylinder head socket screws. Before tightening screws, align the carburetor so there is approximately 1/8 in. clearance between throttle lever and the corner of the backplate as shown in Figure 6.
3. Tighten hollow cylinder head socket screws to 10-12 ft-lbs.

Throttle Cable Adjustment

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.

Air Cleaner Cover Installation - Twin Cam 88™ Engine

1. See Figure 7. Install SCREAMIN' EAGLE air cleaner following the instruction given in the SCREAMIN' EAGLE air cleaner Instruction Sheet.
2. Install stock cover screw and tighten screw to 3-5 ft-lbs (4-7 Nm).

Starting And Tuning

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

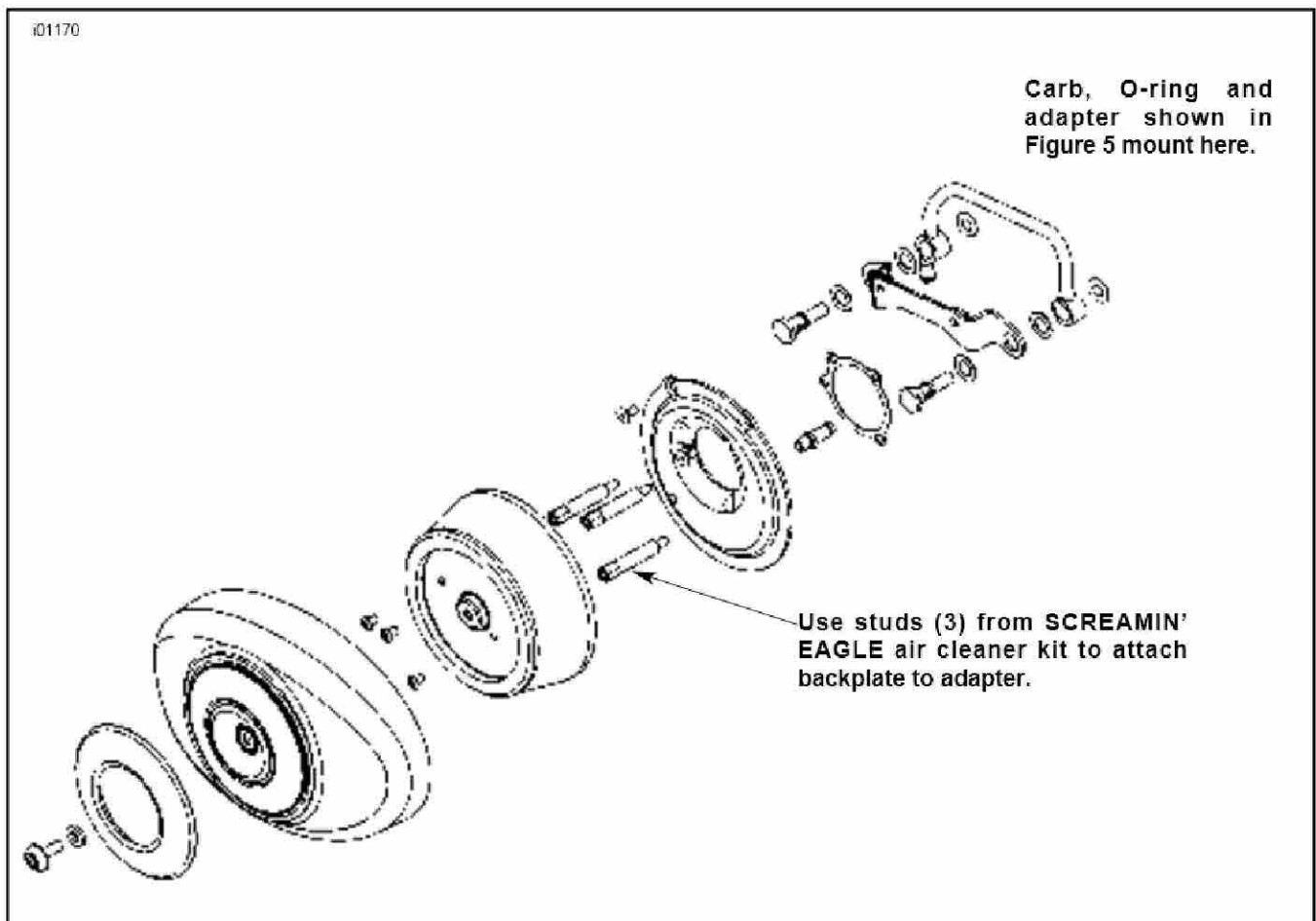


Figure 7. Twin Cam 88™ Carb. And Air Cleaner

Installing Carb Rebuild Kit (All Models)

See Carb Rebuild Kit Service Parts Illustration on second last page. Item numbers used in these procedures are the ones shown in the Service Parts Illustration.

CARB REMOVAL

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 draining or servicing the fuel system. Drain gasoline into approved gasoline container only. Failure to follow these instructions could result in death or serious injury.

1. Turn the fuel supply valve off.
2. Disconnect the fuel line.
3. See Figure 5 for Evolution. Remove the air cleaner and backplate.
4. Disconnect the throttle and idle control cables. Remove choke cable from it's bracket.
5. Remove V.O.E.S. vacuum hose from the carburetor. Pull carburetor free of seal ring and manifold .

NEEDLE VALVE ASSEMBLY REPLACEMENT

1. See Carb Rebuild Kit Service Parts Illustration on second last page. Remove drain plug (73) and drain any gasoline into a suitable container.
2. Remove four screws (74) and remove float chamber body (70).
3. Remove float pin screw (88) and gently lift float assembly (66) and needle valve from needle valve assembly (65).

NOTE

There are four sizes of needle valve assemblies available.

4. Remove needle valve retaining screw (64) and slide needle valve seat with O-ring from carb.

NOTE

Before installing needle valve assembly, clean all internal fuel/air passages and jets with carb cleaner. Check that all passages are open and free of obstruction.

5. Install needle valve assembly by reversing the removal procedure.
6. Before installing float chamber body (70), reach in bore of carburetor and with finger press accelerator pump nozzle (58) downward and remove. Replace O-ring (59) with new one from kit. Replace accelerator pump rod boot (76) with new one from kit.
7. See Figure 11. Check float level with carb in position shown. The actuator tab should just begin to contact the needle valve assembly when the bottom of the float is 0.709 in.(18mm) from bottom surface of carb.
8. If adjustment is needed, adjust by bending the actuator tab.
9. Install new float bowl packing (gasket) in float chamber body (70). Align holes in float chamber body with pins on carb body and secure with four new screws (74) from kit.
10. Tighten screws to 18 in-lbs (2.0 Nm).

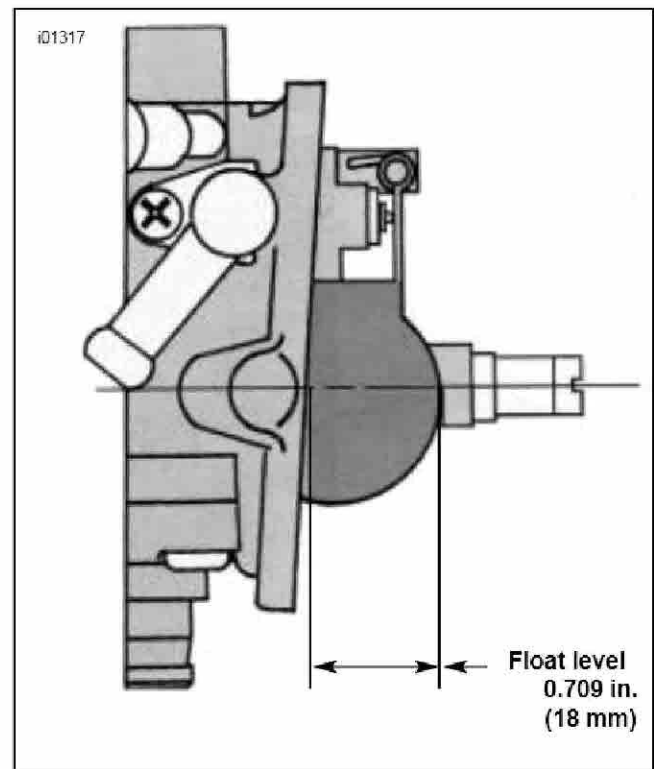


Figure 11. Checking Float Level

11. Install drain plug O-ring (72) on drain plug (73) and tighten plug to 73 in-lbs (8.2 Nm).

TOP COVER GASKET AND FUEL FITTING O-RINGS

1. See Carb Rebuild Kit Service Parts Illustration. Remove screws (1 & 2). Remove the top cover and replace top cover gasket being careful to position gasket on alignment pins on carb body.
2. Install top cover and align holes in cover with alignment pins on carb body. Install and tighten screws (1 & 2).
3. Remove fuel fitting retainer screw (44) and retainer (43). Remove old O-rings from fitting and install new O-rings from kit. Reassemble retainer and retainer screw .

CABLE MATRIX

Model& Year	Description	Part No.
FLHT 90-95	Cable kit (47 in long)	56439-98
	Throttle cable	56582-98
	Idle cable	56583-98
FXD, FXST 90-95	Cable kit (38 in long)	56438-98
	Throttle cable	56580-98
	Idle cable	56581-98
FLHT 96 & later	Cable kit (47 in long)	56588-98
	Throttle cable	56576-98
	Idle cable	56577-98
FXD, FXST 96 & later	Cable kit (38 in long)	56587-98
	Throttle cable	56584-98
	Idle cable	56586-98



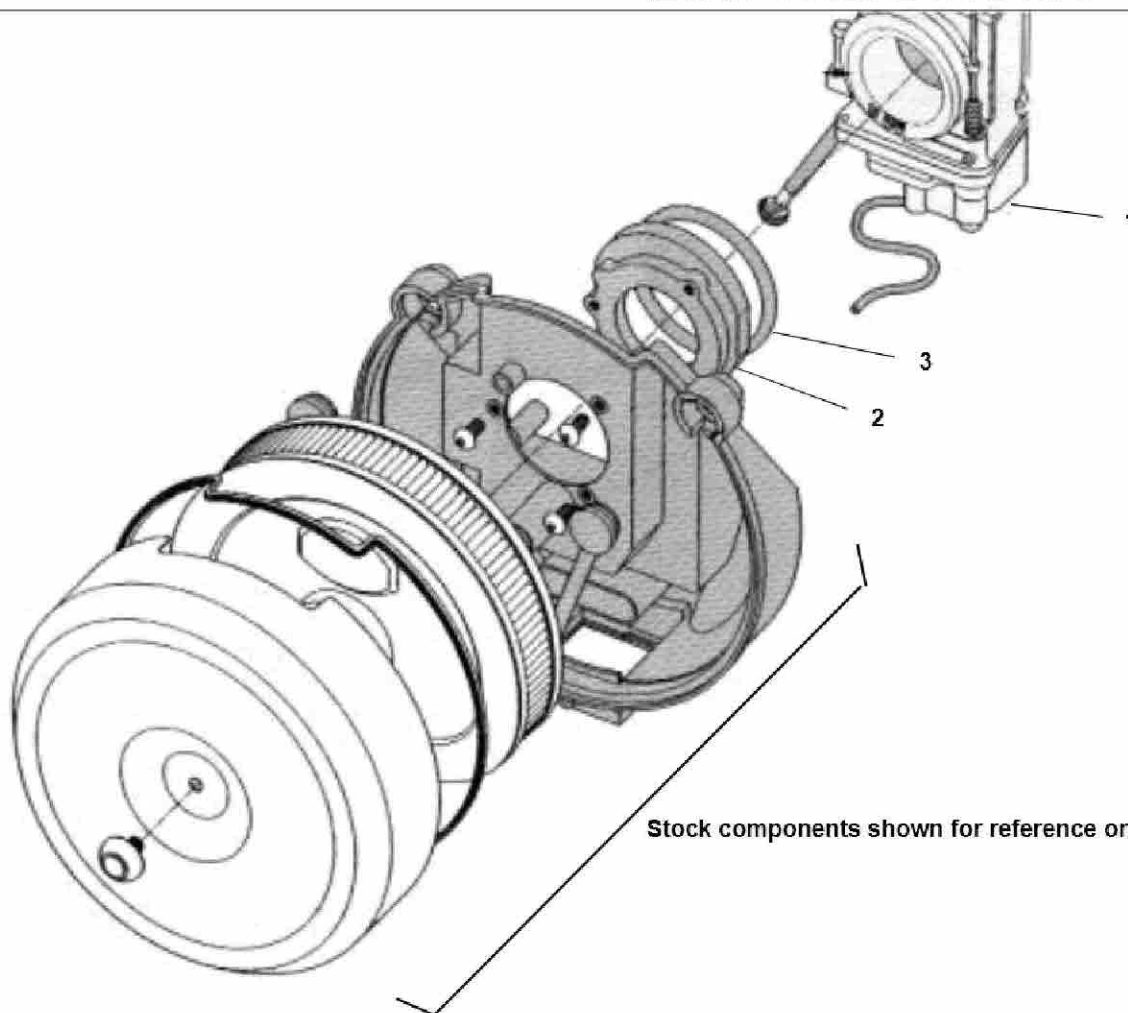
Service Parts

Part No. 29504 & 5-98

Date 7/98

42 mm FLATSLIDE CARB KITS

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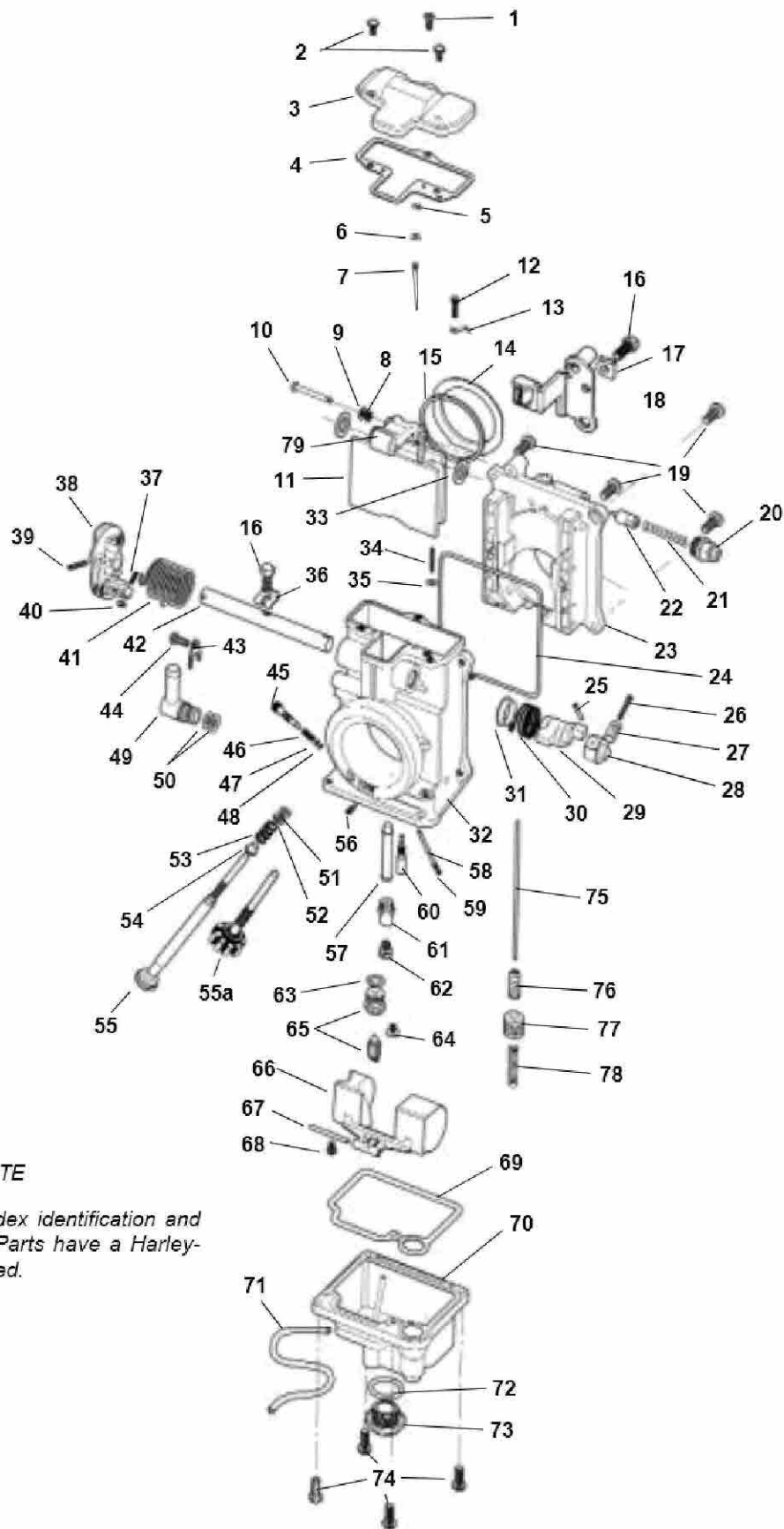
Kit Number 29504-98

Item	Description	Qty.	Part Number
1	Carb assembly	1	Not sold
2	Adapter	1	27756-98
3	O-Ring	1	27754-98
4	Main jet #155 (not shown)	1	27910-98
5	Main jet #165 (not shown)	1	27914-98
6	Hose clamp (not shown)	3	Not sold
7	Cable holder (not shown)	1	27753-98
8	Cable straps (not shown)	3	Not sold

Kit Number 29505-98

Item	Description	Qty.	Part Number
1	Carb assembly	1	Not sold

All other items same as kit, 29504-98, listed in left column.



NOTE

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



Service Parts

Part No. 29565-98

Date 1/01

Carb Rebuild Kit

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

Kit, Tuner-race, Part Number 29564-98

Item	Description	Qty.	Part No.
1	Jet, box		27767-98
2	Packing, float bowl	3	27758-98
3	Screws, float bowl	4	27763-98
4	O-ring, accel.pump nozzle		27764-98
5	Nozzle, accel.pump		27930-98
6	Jet, slow (20.0)		27901-98
7	Jet, slow (30.0)		27905-98
8	Jet, needle 95		27921-98
9	Jet, needle 96		27922-98
10	Jet, needle 98		27924-98
11	Jet, main (170.0)		27916-98
12	Jet, main (172.5)		27917-98
13	Jet, main (175.0)		27918-98
14	Jet, main (177.5)		27919-98
15	Jet, main (180.0)		27920-98