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# REF: Carburetor, Intake Manifold & Exhaust - Sub-01W

## Basic Keihin BD (Screaming Eagle or Flowmaster) Information

- Used in the Screaming Eagle Package line from HD as an Evolution XLH HI-FLO Carburetor & Air Cleaner.
- It came in flange mount and spigot mount styles. <sup>1)</sup>
  - The first ones were called Andrews Flowmasters. They used a rubber adapter flange and a hose clamp to hold the carb on to the manifold and a K&N air cleaner held on by a hose clamp.
  - Later issues of this carb (called Screaming Eagle) were cast with a flange to allow the carb to bolt to the manifold. <sup>2)</sup>
    - The spigot mount looks a lot like the original Lectron mount from H-D. <sup>3)</sup>
- Adjustable Accelerator Pump stroke
- Markings include:
  - Screaming Eagle (27FA ED17) <sup>4)</sup>

## Screaming Eagle High Flow Carb and Air Cleaner Kit (91731-88)

Marketing information on the Screaming Eagle High Flow Carb and Air Cleaner Kit (91731-88):

Harleys equipped with high performance engine parts may not be used on public roads and in some cases must be restricted to closed course competition.

Engine related performance parts are intended for the experienced rider only.

One piece die cast aluminum carb body, with integral mounting flange, bolts directly to the manifold eliminating the need for a rubber adapter.

The addition of the intermediate fuel circuit (adjustable by changing jets) eliminates a potential lean condition (or surging) at 2500-3500 cruise RPM.

Features:

- Large radius inlet and 40mm venturi for high air flow and increased HP throughout the RPM range

- Dual throttle cable linkage
- Accelerator pump
- Improved fuel delivery system
- Redesigned slow speed transfer port system
- Features a slow jet, main jet and 'new' intermediate jet
- Intermediate fuel port
- Enricher circuit for cold starts
- High flow (low restriction) reusable paper air filter element by K&N, designed by Harley Davidson  
Reduces turbulence and offers excellent filtration
- Chrome air cleaner cover with logo
- Requires a support bracket adapter kit for installation

## Screaming Eagle EVO XLH Hi-Flo Carb and Air Cleaner Kit (29081-90C)

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.

On 1988 and later models, you must replace the intake manifold.

Use a stock replacement 1987-style manifold for proper installation of the carburetor and air cleaner kit.

Kit Includes:

- Carburetor assembly
- Bowl Gasket  
There is no bowl gasket listed in the kit and these are now obsolete from HD. However, many other motorcycles use Keihin carbs. You may have to do some research.  
Yamaha OEM (8g6-14984-00) is a direct fit. <sup>5)</sup>
- Float  
Yamaha OEM (8G6-14985-01) is a direct fit. <sup>6)</sup>
- 2 Gaskets
- 1 Manifold spacer
- 2 Allen head bolt, 5/16"-18 x 2"
- 2 (ea) Washers and lockwashers, all 5/16"
- 1 Air cleaner adapter assembly
- 2 Allen head bolts, 1/4"-20 x 2-3/4"
- 2 Nuts, 1/4"-20
- 4 Washers, 1/4"-20
- 1 Carburetor gasket
- 1 Back plate
- 4 Button head screws, 1/4"-20 x 3/4"

- 2 Support spacers, 5/16" ID
  - 2 Support spacers, 17/32" ID
  - 2 Hex head bolts, 5/16-18" x 3-1/2"
  - 2 Allen head bolts, 1/2"-13 x 3-1/2"
  - 2 Washers, 5/16" ID
  - 2 Washers, 17/32" ID
  - 2 Lockwashers, 5/16" ID
  - 2 Lockwashers, 17/32" ID
  - 2 Air cleaner cover spacers
  - 2 Counter-sunk allen head screws, 5/16"-18 x 5/8"
  - 1 Crankcase breather hose fitting
  - 1 O-ring
  - 1 Hose clamp
  - 1 Venturi
  - 1 Air cleaner element
  - 1 Vacuum hose kit
- Incorporated a special intake manifold to carb spacer that had to be drilled and tapped (1/4 x 28) in the side for included Voes connection adapter
  - Required a 1987 replacement style intake manifold for 1988 and up models
  - Required possible grinding of the right rear corner of the front cylinder head, due to interference with the carburetor throttle pulley and cable guides, for proper clearance <sup>7)</sup>

#### Alternative Replacement Parts:



8)



9)

#### Jet Chart

(Carb #27001-88) (Kit Number 29081-90C)					
Slow Jet Part No.	Size (mm)	Intermediate Air / Fuel Part No.	Size	Main Jet	Size
27383-88	42	27113-87	Blank*	27106-85	1.30
27302-84	50	27109-87	55	27107-85	1.35
27329-83	52	27172-89	60*	27149-85	1.40
27284-85	55	27110-87	80	27151-85	1.45
27310-85	58	27111-87	1.00	27150-85	1.50
27318-85	60	27112-87	1.20	27108-87	1.60*

<b>(Carb #27001-88) (Kit Number 29081-90C)</b>					
<b>Slow Jet Part No.</b>	<b>Size (mm)</b>	<b>Intermediate Air / Fuel Part No.</b>	<b>Size</b>	<b>Main Jet</b>	<b>Size</b>
27283-85	62	27173-89	1.70	27119-88	1.65
27896-79	65			27134-89	1.70
27894-78	68*				
27895-87	70				
27897-78	72				

<sup>10)</sup> \*in carburetor

## Starting

### Choke:

The carburetor choke knob (enrichenor) should be pulled up for initial or cold starting. Push the knob down as soon as the engine is warm enough to run without stumbling. You can ride with the knob up for the first few blocks.

## Tuning

### Air / fuel mixture:

The air/fuel mixture screw is set initially at one full turn outward from the full in position. Do not set idle speed or smoothness with this screw. The screw must be set within 1/8 turn of the one full turn position for optimum performance.

### Engine Idle Speed:

Idle speed is set with the throttle stop screw. Set engine idle speed at 1000 - 1150 RPM with engine at normal operating temperature.

### Accelerator pump:

If your engine has an off-idle hesitation, you may have to adjust the accelerator pump stroke. Do this by adjusting the accelerator pump screw after all other adjustments have been made. Off-idle hesitation can be caused by either a too lean or too rich pump stroke. So you will have to determine which way to turn the screw by experimenting. Turn the screw 1/4 turn at a time.

### Jetting:

If your engine is relatively unmodified, it will run well with the jets that come in the carburetor. Depending on the level of performance modifications, it may run better with different size jets. See the jet chart above.

### NOTE:

All the carburetor jets are slightly rich. If the engine runs too rich just off idle, use a #65 slow speed. If the engine is rough or jerky at 55-65 mph, remove the blank intermediate speed jet and install a #80.

### Flanged model

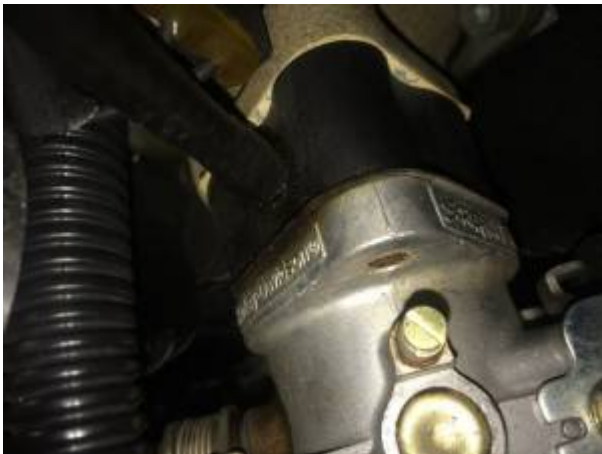
Markings on the one below include: Keihin, 27F8, HG13, Harley Davidson and Screaming Eagle. <sup>11)</sup>



12)



13)



14)



15)

**Spigot model:**

Markings on this one include: PA40C and CE16. <sup>16)</sup>



17)



18)





19)



20)

## Accelerator Pump

- **Accelerator pump rod length:** A number of Screaming Eagle carb kits (91731-85A), packaged during March of 1988 (3/88 date code), contained carburetors with accelerator pump rods that were too short. The incorrect pump rods were only 2.35" long, end to end, and completely disabled the accelerator pump and caused the engine to stumble upon fast acceleration. The correct length pump rod (27374-88) is 2.55".<sup>21)</sup>
- Dealers were to check their parts stock and replace any pump rods that measured short and also check the pump rod length on any motorcycles that exhibited a stumble upon acceleration.

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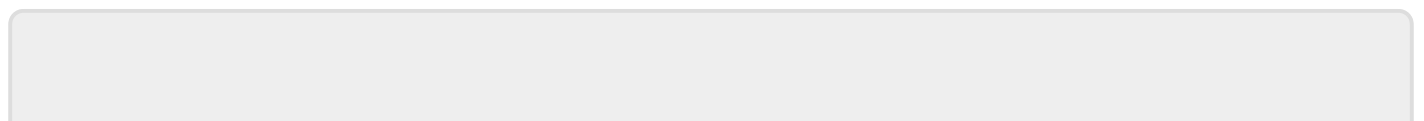
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21)

HD Service Bulletin #M-961 dated April 8, 1988



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