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# EVO: Carburetor, Intake Manifold & Exhaust

## Overview - Basic Stock Carb Model Info

From 1986-1987, the stock Sportster carburetor was a Keihin 34mm, fixed-venturi “butterfly” model, as used on the Ironhead models from 1979 onward (BT models still used the 38mm version). Contrary to popular folklore, all Keihin non-CV carbs did come with accelerator pumps.

In 1988, the stock Sportster carburetor was upgraded to a Keihin 40mm, slide-type, constant-velocity model. It was quickly discovered that the lack of an accelerator pump was a shortcoming. To help that situation, a special needle, identified as 27094-88 or N65C, was used to help off-idle performance in the 1988 models, which still had no accelerator pump.

In 1989 and thru 2006, the Keihin CV40 carburetors were produced with an accelerator pump to smooth out initial throttle response.

## Keihin Butterfly (non-CV) Carburetor (Stock on L1976-1987 Sportsters)

See also in the Sportsterpedia:

- [Keihin Butterfly Carb Basic Information](#)
- [Rebuilding the Keihin Butterfly Carb](#)
- [Keihin Butterfly Carb Identificaton](#)
- [See TSB #694 for introduction information on the Keihin butterfly carb.](#)

Click the link to view the TSB page in the Sportsterpedia. Then click on the “Y” next to #694 to view / download the PDF.

- The Keihin non-CV carburetor is a horizontal type with a fuel bowl, single ring-shaped float, an accelerating pump, idle mixture adjusting needle and a throttle stop screw for speed adjustment. <sup>1)</sup>
- The throttle body casting contains an integral venturi and a fuel valve seat that is pressed into the body. The underside of the throttle body contains a boss. The main jet screws into the boss and holds the bleed tube in place. <sup>2)</sup>
  - **Operation:** Fuel from the gas tank passes through the fuel valve, onto float chamber. The fuel entering causes the float to rise until it shuts off the fuel valve, stopping the flow at a level predetermined by float level setting. <sup>3)</sup>

- **Idle or Slow System:** The slow system functions at idle, low and intermediate speeds when throttle valve is closed or only partially open. At idle, fuel enters the main jet and, after being metered there, enters the slow jet where it is metered again. Fuel from the slow jet enters the slow jet bleed tube where it mixes with air through the slow air passage. Fuel mixture is regulated by adjusting the idle (low speed) mixture screw. When the throttle valve is closed, fuel mixture flows into the venturi almost entirely through the idle port. As the throttle valve gradually opens, fuel mix discharge is transferred to the bypass. The slow jet bleed tube is actually a part of the slow jet. <sup>4)</sup>
  - **The Main System:** The main system functions at intermediate and high speeds as the throttle valve opens further. Fuel is metered by the main jet and enters the main jet air passage. The fuel/ air mixture then exits from the main nozzle and into the venturi. <sup>5)</sup>
  - **The Accelerating Pump System:** The accelerating pump system works with sudden throttle openings (rapid acceleration) to quickly inject fuel into the carb to provide extra fuel for the engine demand. Rapid throttle action pushes the pump rod down, flexing the diaphragm, which compresses fuel underneath the diaphragm, forcing it up past the check valve and out the pump nozzle into the venturi. The check valve prevents backflow while the pump nozzle meters the flow. Spring action then returns the diaphragm back to its original position. As the diaphragm returns, a new supply of fuel flows in and under it so the system will be ready to repeat the cycle with the next rapid throttle action detected. <sup>6)</sup>
  - **The Choke System:** The choke is manually set by pulling out on the choke button. Pulled all the way out is fully closed (for cold engine), partially open (for warm engine) or pushed all the way in, fully open (for warm engine). <sup>7)</sup>
- Dual throttle cables
  - Integral Float Chamber
  - Manual Choke
  - 3 different models
  - 1976L-1978 have 38mm Venturi
  - 1979-1987 have 34mm Venturi
  - Model Year Changes

## 1986-1987 Features <sup>8)</sup>

- 34mm Venturi
- Horizontal, gravity fed with a float operated inlet valve
- Throttle stop screw
- Fast idle cam
- Choke system with fast idle adjustment
- Accelerator pump
- Designed to control exhaust emissions
- Fixed jets
- Factory preset idle mixture
- VOES port
- Evaporative port

### **Note:**

For those sold for use in California (as part of the evaporative emissions kit) the fuel overflow fitting was capped and the overflow line was removed. <sup>9)</sup>

## Factory Keihin Butterfly (non-CV) 34mm Carb by Sportster Model/Year

Note: Carb B83H was also used on 1983 Sportster models.

See a full list of all known Harley Keihin butterfly carbs here [Sportster Keihin Butterfly Carburetors by Year Model](#) in the ironhead section of the Sportsterpedia.

Sportster Model	Year Carb Used	HD Part Number	Flange Number	Main Jet Size	Low Speed Jet Size	Initial Mixture screw setting	Accel Pump spring position
XL 883 (50 state)	1986-1987	27501-86A <sup>10)</sup>	B83H	155	52		
XL 1100 (50 state)	1986	27502-86A <sup>11)</sup>	B83H	155	52		
XL 1100 (50 state)	1987	27502-86B <sup>12)</sup>	B83H	150	52		

- Main & Slow jet sizes are the same (86-87) 883 & (86) 1100. BUT - Due to internal differences, the carbs are not interchangeable <sup>13)</sup>
- Main Jet
  - 27087-80 - 1.50mm
  - 27098-78 - 1.55mm (std)
- Slow Jet
  - 27329-83 - .52mm

Carb Idle Speed	900 RPM <sup>14)</sup>	
Torque Specs <sup>15)</sup>		
1986-1987	Carb to Intake Manifold Bolts	15-17 in/lbs (20-23 NM)
*	Intake Manifold Flange to Cylinder Head Bolts/Nuts	72-120 in/lbs (8-14 Nm)
*	Air Cleaner Backplate to Engine Bolts	120-144 in/lbs (14-16 Nm)
*	Air Cleaner to Carburetor Bolts	36-60 in/lbs (4-7 Nm)
*	Air Cleaner Cover Screws	36-60 in/lbs (4-7 Nm)

Interesting discussion here:

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/frame-mount-evo-sportster-talk-1986-2003-models/172520-stock-carb-size-on-1100-sportster?t=1847273>

## Keihin BD / Screaming Eagle Carb

*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.*

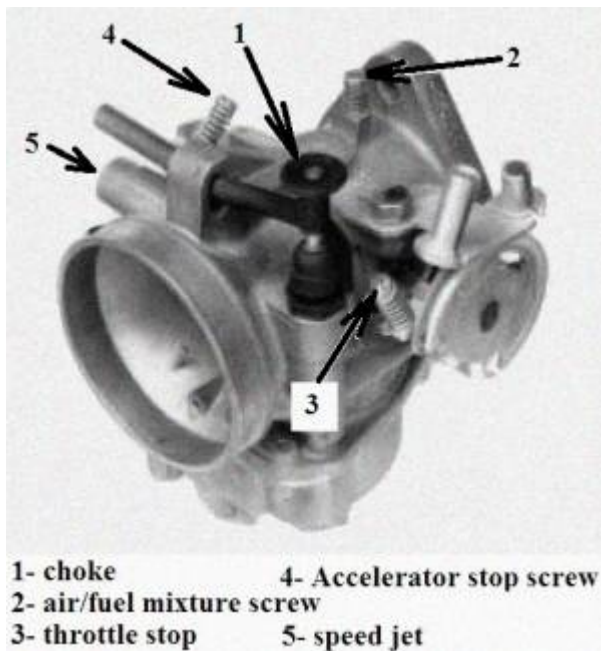
- Used in the Screaming Eagle Package line from HD as an Evolution XLH HI-FLO Carburetor & Air Cleaner. The carb was a (27001-88)
- The kit Number is 29081-90C for 86 and later Sportsters. Carb stamping is (27FA) plus a 4 character date code.
- Adjustable Accelerator Pump stroke
- Incorporated a special 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>16)</sup>
- Build kits and the bowl gasket are obsolete and hard to find.
  - The bowl gasket (27013-85) has been found at JW Boon.com but not the build kit. [Click here for a Link to their add.](#) However, they do not ship to the U.S.
  - Dennis Kirk sells a kit that looks to have the correct bowl O-ring included under Parts Unlimited branding. Kit (1003-1671). [Click here for the link.](#) However, according to the Q&A at the bottom of the page, the O-ring doesn't fit the SE carb. That needs to be verified.
  - Parts Unlimited shows kit# 175288 (1003-1671) as a replacement for the stock paper gasket on Yamahas, still a Keihin though and the gasket (O-ring) looks the same. [Click for the link](#)
  - Speed Supplies.com has a listing for the bowl O-ring (27013-85) although there is no pic of it. <sup>17)</sup> [Click here for the link](#)

<b>JET PART NUMBERS &amp; SIZES (IN MM) FOR KEIHIN BD CARBURETORS</b>					
<b>Slow Jet</b>	<b>Size</b>	<b>Int. Air/Fuel Jet</b>	<b>Size</b>	<b>Main Jet</b>	<b>Size</b>
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*
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				
* in carburetor					

<sup>18)</sup>

<b>XLH Hi-Flo Carburetor and Air Cleaner Kit (29081-90C) Parts List</b>
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Item Description	Part No.	Item Description	Part No.	Item Description	Part No.
VOES fitting	29190-85	Backplate	29075-91	Crankcase breather hose fitting	29034-85
Gasket	27022-88	Button head screw	927A	O-ring	11110
Manifold spacer	29275-88	Support spacer, small I.D.	6786	Hose clamp	9946
Carburetor assembly	27001-88	Support spacer, large I.D.	6785	Venturi	29148-90
Allen head bolts	3485A	Hex head bolt	3427	Air cleaner element	29025-88B
Washer	6702	Allen head bolt	3587A	Vacuum hose kit	26553-94
Lockwasher	7041	Washer	6333	Air cleaner trim	29024-88
Air cleaner adapter	27041-90	Washer	6738	Bowl O-ring	27013-85
Allen head bolt	885A	Gasket	27077-78	Rebuild Kit	91731-85A See <a href="#">TSB M-961</a>
Nut	7686	Lockwasher	7068		
Washer	6228W	Air cleaner cover spacer	31523-88		
Carburetor gasket	27044-90	Counter-sunk allen head screw	3795		





19)



20)

## Keihin CV 40mm Carb (1988-2006)

### Sub Documents

- [Keihin CV Carb Identification](#)
- [Rebuilding the Keihin CV Carb](#)
- [Keihin CV40 Carb Functions, Adjustments, Tuning](#)

- Constant velocity, gravity fed - has a float-operated inlet valve and a vacuum-operated variable venturi (movable slide).
- Both the CV40 and CVK carbs are made by Keihin in Japan. But only the CV is specific to a Harley and has the bar and shield and HD name on the side. <sup>21)</sup>  
CVK is for Kawasaki and various other makes that contracted Keihin for that carburetor. There is also a CV40 making the rounds that is distributed by a Florida company that looks identical but not all the specs match up. There is no guarantee that any part (original or CVP) will fit those knock-off carburetors. If your CV carb does not have the name Harley Davidson cast above the bowl on each side it is a knock-off.

Torque Specs		
1988-2001	Intake Manifold Flange to Cylinder Head Bolts/Nuts	72-120 in/lbs (8-14 Nm)
2002-Later	Intake Manifold Flange to Cylinder Head Bolts/Nuts	96-144 in/lbs (10.9-16.3 Nm)
All	Carb Clamp Screw	10-15 in/lbs (1.1-1.7 Nm)



**Operation:**

- The carburetor atomizes gas in proper proportions to the air pulled in through the air intake. The throttle plate controls the amount of air flow. At idle, a small amount of gas is siphoned through the pilot jet by the incoming air and fed thru the Idle Port on the engine side of the throttle plate. As the throttle plate is opened farther, the air begins siphoning gas through the transfer ports (which are fed by the Pilot Jet) and eventually pulls gas thru the needle jet (which is fed by the main jet). The tapered needle, which moves up and down thru the fixed diameter needle jet, increases the flow of fuel as it is lifted up since it's taper gets smaller inside the needle jet, thus allowing for more flow when lifted up and out. The vacuum, in the air filter side of the throttle plate, is used to lift the slide barrel & needle jet. At full throttle, the carburetor venturi is fully opened and the needle is lifted far enough to allow the main jet to flow at full jet capacity. The choke circuit is actually an enrichment valve system to allow more fuel at startup. With the choke knob pulled out, a separate jet opening sends a stream of gas into the carburetor's venturi, on the engine side of the throttle plate, thus enriching the gas/air mixture when the engine is cold. The accelerator pump circuit injects a fine spray of gas into the carburetor intake during sudden twisting of the throttle to aid acceleration & reduce engine hesitation.

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## Factory Keihin CV40 Carburetors by Sportster Model/Year

### Emissions Observations

by Almond farmer: <sup>22)</sup>

- There were no HC emissions changes from 1981-2003 @ 2.5 g/km .
  - 78-79 is 14 g/km
  - 80-81 is 5 g/km
- Any carburetor can meet those standards
- In 2004 CARB went to 1.4 g/km and EPA (49 states) in 2006, last year for XL carburetor.
- CA is the only state in the country with its own emissions standards which are currently the same as the EPA standards.
- In 2008 CARB mandated only .8 k/km HC and EPA with the same requirement, followed two years later in 2010.

The above #s are combined HC + NOX

- Noticed the Keihin 40mms CV used 160 main jet for the 883 up to 2003, then 2004-2006 went to 175 (1.75mm) for 49 state bikes, not CA bikes.
- This change makes the air/fuel mixture run richer, therefore, a richer mixture results in lower combustion temperature with resulting lower HC +NOX to meet more stringent emission standards.
- Notice the 49 state 1200 used 170 jet up to 2004, 180 main jet (MJ) in 2004, & 185 MJ in 2005-2006.

- CA 883 went from 170 MJ to 2003 then changed to 180 MJ in 2005-2006.
- Again making the air/fuel ratio richer.
- CA 1200 cc went from 160 MJ in 1989 to 185 MJ in 2006. So, the 2006, 1200 evo with Keihin 40mms CV with vertical needle used the same main jet (1.85mm)for all 50 states, since CARB & EPA had the same emission requirements on the MoCo in that time.
- Note that jets are selected for operation at below 4000 ft elevation.
- If installing CV to 1000cc IH would first select 170 main jet below 4000 ft elevation. This Keihin CV should return lower emissions than any of the Keihin Butterfly carburetors and even satisfied the tier 1 CARB emissions requirements.
- Unfortunately, CV could satisfy tier 2 emissions at only .8 g/km.

## U S A (Domestic) Sportster Models

- All CV models come equipped with accelerator pump unless noted.
- All data below is compiled from HD Parts Catalogs unless otherwise noted.
- Sportster models are divided into 3 categories: Domestic, California & HDI models
- See also:
  - [California models](#)
  - [HDI models](#)
- See [Discrepancies in the FSM\(s\) / Parts Catalog\(s\)](#) for further information on highlighted \* areas in the carburetor charts below
- See also [Pics of Keihin CV Carbs That Were Factory Installed on Sportsters](#)



Example Parts Shown Here >>

### All CV40 carbs use the following parts & P/N:

- 27100-88 - Needle Jet (.114" ID)<sup>23)</sup>
- 27101-88 - Emulsion Tube (Needle Jet Holder)
- 27585-88 - Vacuum Slide (Vacuum Piston)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>24)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>25)</sup>
<b>XL883</b> (Dom)	1988	27501-88 No Accel Pump	170 / 35	(27115-88) - (27117-88)	N65A (27091-88)
	1989-1990	27501-89	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1991	27501-89A	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1992	27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1993-1994	27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1995	27489-92A	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1996	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95) Listed for (Cal) only
	1997	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	1998	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	1999-2001	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	2002-2003	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	2004-2006	27490-04	175 / 42	(27090-89) - (27171-89)	N9EY (28027-04)
<b>XL883C</b> (Dom)	1998	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	1999-2001	27490-96	160 / 42	(27152-89) - (27271-89)	
	2002-2003	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	2004-2006	27490-04	175 / 42	(27090-89) - (27171-89)	N9EY (28027-04)
<b>XL883 Hug</b> (Dom)	1988	27501-88 No Accel Pump	170 / 35	(27115-88) - (27117-88)	N65A (27091-88)
	1989-1990	27501-89	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1991	27501-89A	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1992	27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1993-1994	27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1995	27489-92A	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	1996	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95) Listed for (Cal) only
	1997	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	1998	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	1999-2001	27490-96	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	2002-2003	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	<b>XL883 Deluxe</b> (Dom)	1988	27501-88 No Accel Pump	170 / 35	(27115-88) - (27117-88)
1989-1990		27501-89	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
1991		27501-89A	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
1992		27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
1993-1994		27489-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
1995		27489-92A	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>24)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>25)</sup>
<b>XL883L</b> (Dom)	2005-2006	27490-04	175 / 42	(27090-89) - (27171-89)	N9EY (28027-04)
<b>XL883R</b> (Dom)	2002-2003	27490-96A	160 / 42	(27152-89) - (27271-89)	NOKK (27241-95)
	2005-2006	27490-04	175 / 42	(27090-89) - (27171-89)	N9EY (28027-04)
<b>XL1200</b> (Dom)	1988	27502-88	200 / 35	(27105-88) - (27117-88)	N65C (27094-88)
	1989	27502-89	175 / 45	(27090-89) - (27170-89)	N72E (27168-89)
	1990	27501-89	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1991	27501-89A	175 / 45	(27090-89) - (27170-89)	N72A (27166-89)
	1992-1994	27487-92	170 / 40	(27115-88) - (27281-92)	N86P (27280-92)
	1995	27487-92A	160 / 40	(27152-89) - (27281-92)	N86P (27280-92)
	1996	27491-96	160 / 42	(27152-89) - (27171-89)	N86P (27280-92)
	1997	27480-97	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1998	27480-97A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1999-2001	27480-97	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2002-2003	27480-97A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
<b>XL1200C</b> (Dom)	1996	27491-96	160 / 42	(27152-89) - (27171-89)	N86P (27280-92)
	1997	27480-97	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1998	27480-97A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1999-2001	27480-97	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2002-2003	27480-97A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2004	27731-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
	2005-2006	27731-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
<b>XL1200R</b> (Dom)	2004	27731-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
	2005-2006	27731-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
<b>XL1200S</b> (Dom)	1996	27491-96	160 / 42	(27152-89) - (27171-89)	N86P (27280-92)
	1997	27480-97	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
<b>NOTE:</b> 1998-2003 1200S carbs have no float bowl overflow tube protection They also have no drain plug & hose to empty float chamber for off riding season or extended storage					
	1998	27731-98A	195 <sup>26)</sup> / 42	(27275-96Y) - (27171-89)	NOKK (27241-95)
	1999-2001	27731-98	195 / 42	(27275-96Y) - (27171-89)	(27656-98)
	2002-2003	27731-98A	195 / 42	(27275-96Y) - (27171-89)	(27656-98)

## U S A (California) Sportster Models

- All CV models come equipped with accelerator pump unless noted.

- All data below is compiled from HD Parts Catalogs unless otherwise noted.
- Sportster models are divided into 3 categories: Domestic, California & HDI models
- See also:
  - [Domestic models](#)
  - [HDI models](#)
- See [Discrepancies in the FSM\(s\) / Parts Catalog\(s\)](#) for further information on highlighted \* areas in the carburetor charts below
- See also [Pics of Keihin CV Carbs That Were Factory Installed on Sportsters](#)



Example Parts Shown Here >>

### All CV40 carbs use the following parts & P/N:

27100-88 - Needle Jet (.114" ID)<sup>27)</sup>

27101-88 - Emulsion Tube (Needle Jet Holder)

27585-88 - Vacuum Slide (Vacuum Piston)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>28)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>29)</sup>
<b>XL883</b> (Cal)	1988	27504-88 No Accel Pump	165 / 35	(27116-88) - (27117-88)	N65B (27092-88)
	1989	27504-88A	? / 42 155 / 42 <sup>30)</sup>	(27154-88) <sup>31)</sup> - (27171-89) (27154-89) <sup>32)</sup> - (27171-89)	N72B (27167-89)
	1990	27503-88A	? / 42 160 / 42 <sup>33)</sup>	(27152-88) <sup>34)</sup> - (27171-89) (27152-89) <sup>35)</sup> - (27171-89)	N72F (27169-89)
	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F (27169-89)
	1992- Early 1993	27488-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	Late 1993-1994	27488-92A	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
	1995	27488-92B	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
	1996-1997	27495-96	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1998	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1999-2001	27495-96	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2002-2003	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>28)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>29)</sup>
	2004	27495-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
	2005-2006	27495-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
<b>XL883C</b> (Cal)	<b>1998</b>	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1999-2001	27495-96	<b>170</b> / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2002-2003	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2004	27495-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
	2005-2006	27495-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
<b>XL883 Hug</b> (Cal)	1988	27504-88 No Accel Pump	165 / 35	(27116-88) - (27117-88)	N65B (27092-88)
	1989	27504-88A	<del>?</del> / 42 155 / 42 <sup>36)</sup>	<del>(27154-88)</del> <sup>37)</sup> - (27171-89) (27154-89) <sup>38)</sup> - (27171-89)	N72B (27167-89)
	1990	27503-88A	<del>?</del> / 42 160 / 42 <sup>39)</sup>	<del>(27152-88)</del> <sup>40)</sup> - (27171-89) (27152-89) - (27171-89)	N72F (27169-89)
	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F (27169-89)
	1992- Early 1993	27488-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	Late 1993-1994	27488-92A	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
	1995	27488-92B	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
	1996-1997	27495-96	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1998	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	1999-2001	27495-96	170 / 42	(27115-88) - (27171-89)	NOKK (27241-95)
	2002-2003	27495-96A	170 / 42	(27115-88) - (27171-89)	NOKK(27241-95)
<b>XL883 Deluxe</b> (Cal)	1988	27504-88 No Accel Pump	165 / 35	(27116-88) - (27117-88)	N65B (27092-88)
	1989	27504-88A	165 / 42	(27116-88) - (27171-89)	N72B (27167-89)
	1990	27503-88A	165 / 42	(27116-88) - (27171-89)	N72F (27169-89)
	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F (27169-89)
	1992- Early 1993	27488-92	160 / 40	(27152-89) - (27281-92)	N86Q (27183-92)
	Late 1993-1994	27488-92A	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
	1995	27488-92B	170 / 40	(27115-88) - (27281-92)	N86K (27278-93)
<b>XL883L</b> (Cal)	2005-2006	27495-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
<b>XL883R</b> (Cal)	2002-2003	27495-96A	<b>170 / 42</b>	<b>(27115-88) - (27171-89)</b>	<b>NOKK (27241-95)</b>
	2005-2006	27495-04	180 / 42	(27114-88) - (27171-89)	N4NN (28026-04)
<b>XL1200</b> (Cal)	1988	27503-88 No Accel Pump	180 / 35	( 27114-88) - (27117-88)	N65D (27099-88)
	1989-1990	27503-88A	<del>?</del> / 42 160 <sup>41)</sup> / 42	( <del>27152-88</del> ) <sup>42)</sup> (27152-89) - (27171-89)	N72F (27169-89)



Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>28)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>29)</sup>
	1991	27503-88B	160 / 42	( 27152-89) - (27171-89)	N72F (27169-89)
	1992-Early 1993	27486-92	170 <sup>43)</sup> / 40	(27115-88)- (27281-92)	N86P (27280-92)
	Late 1993-1994	27486-92A	185 / 40	(27185-90) - (27281-92)	N86J (27279-93)
	1995	27486-92B	185 / 40	(27185-90) - (27281-92)	N86J (27279-93)
	1996-1997	27498-96	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	1998	27498-96A	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	1999-2001	27498-96	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	2002-2003	27498-96A	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
<b>XL1200C</b> (Cal)	1996-1997	27498-96	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	1998	27498-96A	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	1999-2001	27498-96	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	2002-2003	27498-96A	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	2004-2006	27732-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
<b>XL1200R</b> (Cal)	2004-2006	27732-04	185 / 42	(27185-90) - (27171-89)	N4NN (28026-04)
<b>XL1200S</b> (Cal)	1996	27498-96	185 / 42	(27185-90) - (27171-89)	N86J (27279-93)
	1997	27498-96	195 / 42	(27275-96Y) - (27171-89)	N86J (27279-93)
<b>NOTE:</b> 1998-2003 1200S carbs have no float bowl overflow tube protection They also have no drain plug & hose to empty float chamber for off riding season or extended storage					
	1998	27732-98A	195 / 42	(27275-96Y) - (27171-89)	N86J (27279-93)
	1999-2001	27732-98	195 / 42	(27275-96Y) - (27171-89)	(27254-96)
	2002-2003	27732-98A	195 / 42	(27275-96Y) - (27171-89)	(27254-96)

## H D I Sportster Models

- All CV models come equipped with accelerator pump unless noted.
- All data below is compiled from HD Parts Catalogs unless otherwise noted.
- Sportster models are divided into 3 categories: Domestic, California & HDI models
- See also:
  - [Domestic models](#)
  - [California models](#)
- See [Discrepancies in the FSM\(s\) / Parts Catalog\(s\)](#) for further information on highlighted \* areas in the carburetor charts below
- See also [Pics of Keihin CV Carbs That Were Factory Installed on Sportsters](#)



Example Parts Shown Here >>

**All CV40 carbs use the following parts & P/N:**

- 27100-88 - Needle Jet (.114" ID)<sup>44)</sup>
- 27101-88 - Emulsion Tube (Needle Jet Holder)
- 27585-88 - Vacuum Slide (Vacuum Piston)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>45)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>46)</sup>
<b>XL883</b> Swiss All Models	1989-1990	27492-89 No Accel Pump	? / 35	(27104-89) - (27117-88)	? (27164-89?)
<b>XL883</b> HDI / Swiss	1989-1990	27501-88 No Accel Pump	? / 35	(27104-89) - (27117-88)	? (27164-89)
<b>XL883</b> Swiss	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1992	27503-92	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1993-1994	27503-92A	160 / 40	(27152-89) - (27281-92)	N65J(27187-93)
HDI	1995-1997	27031-95	190 / 42	(27243-95) - (27171-89)	N65J (27187-93) <sup>47)</sup>
HDI	1998	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI	1999-2000	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI/Eng/Japan	2001	27465-01	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
HDI Eng/Japan	2002-2003	27465-01A	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
Aust	2001	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
Aust	2002-2003	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)



Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>45)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>46)</sup>
HDI	2004-2006	27465-04	165 / 42	(27116-88) - (27171-89)	N9EY (28027-04)
<b>XL883C</b> HDI	1999-2000	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI/Eng/Japan	2001	27465-01	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
HDI/Eng/Japan	2002-2003	27465-01A	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
Aust	2001	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
Aust	2002-2003	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI	2004-2006	27465-04	165 / 42	(27116-88) - (27171-89)	N9EY(28027-04)
<b>XL883 Hug</b> Swiss	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1992	27503-92	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1993-1994	27503-92A	160 / 40	(27152-89) - (27281-92)	N65J(27187-93)
HDI	1995-1997	27031-95	190 / 42	(27243-95) - (27171-89)	N65J (27187-93) <sup>48)</sup>
HDI	1998	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI	1999-2000	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI/Eng/Japan	2001	27465-01	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
HDI/Eng/Japan	2002-2003	27465-01A	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
Aust	2001	27031-95	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
Aust	2002-2003	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
<b>XL883 Deluxe</b> Swiss	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1992	27503-92	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1993-1994	27503-92A	160 / 40	(27152-89) - (27281-92)	N65J(27187-93)
HDI	1995	27031-95	190 / 42	(27243-95) - (27171-89)	N65J (27187-93)
<b>XL883L</b> HDI	2005-2006	27465-04	165 / 42	(27116-88) - (27171-89)	N9EY(28027-04)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>45)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>46)</sup>
<b>XL883R</b> HDI/Eng/Japan	2002-2003	27465-01A	165 / 42	(27116-88) - (27171-89)	NOKL (28013-01)
Aust	2002-2003	27031-95A	190 / 42	(27243-95) - (27171-89)	NOKD (27242-95)
HDI	2005-2006	27465-04	165 / 42	(27116-88) - (27171-89)	N9EY (28027-04)
<b>XL1200</b> HDI / Swiss	1988-1990 No Accel Pump	27502-88	? / ?	(?) - (?)	? - (?)
Swiss	1989-1990 No Accel Pump	27491-89	? / 35	(27104-89) - (27117-88)	? (27165-89)
Swiss	1991	27503-88B	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1992	27503-92	160 / 42	(27152-89) - (27171-89)	N72F(27169-89)
HDI / Swiss	1993-1994	27503-92A	160 / 40	(27152-89) - (27281-92)	N65J(27187-93)
HDI	1995	27076-95	190 / 42	(27243-95) - (27171-89)	N65J(27187-93)
Swiss <sup>49)</sup>	1995	27503-92B	160 / 40	(27152-89) - (27281-92)	N65J(27187-93)
HDI	1998	27076-95A	190 / 42	(27243-95) - (27171-89)	NOKK (27241-95)
HDI	1999-2000	27076-95	190 / 42	(27243-95) - (27171-89)	NOKK (27241-95)
HDI/Aust/Eng/Japan	2001	27076-95	190 / 42	(27243-95) - (27171-89)	NOKK (27241-95)
HDI/Aust/Eng/Japan	2002-2003	27076-95A	190 / 42	(27243-95) - (27171-89)	NOKK (27241-95)
<b>XL1200C</b> HDI	1996-1997	27076-95	190 / 42	(27243-95) - (27171-89)	N65J(27187-93) <sup>50)</sup>
HDI	1998	27076-95A	190 / 42	(27243-95) - (27171-89)	NOKK (27241-95)
HDI	1999-2000	27076-95	190 / 42	(27243-95) - (27171-89)	NOKK(27241-95)
HDI/Aust/Eng/Japan	2001	27076-95	190 / 42	(27243-95) - (27171-89)	NOKK(27241-95)
HDI/Aust/Eng/Japan	2002-2003	27076-95A	190 / 42	(27243-95) - (27171-89)	NOKK(27241-95)
HDI	2004-2006	27749-04	160 / 42	(27152-89) - (27171-89) HDI, Japan	N9EY (28027-04)

Sportster Model	Year	Keihin CV 40mm Carb Serial #	Main / Slow Jet Size <sup>45)</sup>	Main / Slow Jet (Part #s)	Keihin Needle for Vac Slide <sup>46)</sup>
<b>XL1200R</b> HDI	2004-2006	27749-04	160 / 42	(27152-89) - (27171-89) HDI, Japan	N9EY (28027-04)
<b>XL1200S</b> HDI	1996-1997	27076-95	190 / 42	(27243-95) - (27171-89)	N65J(27187-93) <sup>51)</sup>
HDI	1998	27734-98	190 <sup>52)</sup> / 42	(27243-95) <sup>53)</sup> - (27171-89)	N86K (27278-93)
Swiss	1998	27733-98	195 <sup>54)</sup> / 42	(27275-96Y) <sup>55)</sup> - (27171-89)	<b>N86K (27278-93)</b>
HDI	1999-2000	27734-98	200 / 42	(27105-88) - (27171-89)	N86K (27278-93)
HDI/Aust/Eng/Japan	2001	27749-01	185 / 42	(27185-90) - (27171-89)	(27647-01)
HDI/Aust/Eng/Japan	2002-2003	27749-01A	185 / 42	(27185-90) - (27171-89)	(27647-01)

## Slow & Main Jets - P/N & Comparisons

Chart of Slow (Pilot) Jet Size Differences						
Number	HD Part #	MM	Dia Inches	Area Inch <sup>2</sup>	%+ of Prev Jet	%± of 42 Jet
Keihin 35	27117-88	0.35	0.013780	0.0001491	~~	-30.56
Keihin 40	27281-92	0.40	0.015748	0.0001947	30.61	-9.30
Keihin 42	27171-89	0.42	0.016535	0.0002146	10.25	-TYP-
Keihin 45	27170-89	0.45	0.017717	0.0002464	14.80	14.80
Keihin 48	27165-90	0.48	0.018898	0.0002803	13.78	30.61
Keihin 44	CV-Perf	0.44	0.017323	0.0002356		9.75
Keihin 46	CV-Perf	0.46	0.018110	0.0002575		19.95
Keihin 50	CV-Perf	0.50	0.019685	0.0003042		41.72
CV-Perf is for CV-Performance.com						
Keihin P/N for above listed jets is N424-25B-XX ←- where XX is the size						
The N424-25B-XX series jets have 0.8mm bleed (cross) holes						
Chart of Main Jet Size Differences						
Number	HD Part #	MM	Dia Inches	Area Inch <sup>2</sup>	%+ of Prev Jet	%± of 170 Jet
Keihin 160	27152-89	1.60	0.062992	0.0031149	~~	-11.42
Keihin 165	27116-88	1.65	0.064961	0.0033126	6.35	-5.80
Keihin 170	27115-88	1.70	0.066929	0.0035164	6.15	-TYP-
Keihin 175	27090-89	1.75	0.068898	0.0037263	5.97	5.97

Keihin 180	27114-88	1.80	0.070866	0.0039423	5.80	12.11
Keihin 185	27185-90	1.85	0.072835	0.0041643	5.63	18.43
Keihin 190	27243-95	1.90	0.074803	0.0043925	5.48	24.91
Keihin 195	27275-96Y	1.95	0.076772	0.0046267	5.33	31.57
Keihin 200	27105-88	2.00	0.078740	0.0048670	5.19	38.41

Keihin P/N for above listed jets is N424-27-XXX ←- where XXX is the size  
 Area Inch<sup>2</sup> = 3.14 \* Dialnches/2 \* Dialnches/2 = π\*r<sup>2</sup>

## Discrepancies in the FSM(s) / Parts Catalog(s)

Upon perusing 1986-2006 Parts Catalogs for carburetor information, it's clear that the MoCo was trying to save space in these books at the expense of legibility. Below is a chart showing the initial intentions on the top and the MoCo's mis-interpretations on the bottom. They give no notations (from year to year book) on any changes to the nomenclature. I.E. one way to display a year/ model number is displayed differently in other year books. This chart is not complete nor factual in numbering but as an example only. For instance:

Parts Book	Description	For Model(s)	Part fits model(s)	Notes
86-90	00000-86	88 - * XL1200	(88-90) XL1200	Easy to understand, * means to the last date the book covers
86-90	00000-86 (86-87 883)	90-XL1200	(86-87) XL883 & (90) XL1200	Little harder (more to think about)
86-90	00000-86	86-* all models	(86-90) XL883 all & (88-90) XL1200	Easy to understand, blankets all models 1200 first made in 1988 but it leads you to believe they were made from '86
86-90	00000-86 00000-86 (Cal)	89-* XL1200 88-* XL1200	(89-90) XL1200 - (49 state)except California (88-90) XL1200 - California only	No suffix after desc. means domestic models (Cal) after suffix is California models only
91-92	00000-86 (91-Cal)	91-* XL1200	(91-92) XI1200 (domestic) (91) XI1200 (California)	Both Cal and Dom models
93-94	00000-87 (93-Cal) 00000-86	93-* XL883 93-* XL883	(93-94) XI883 (California) only (93-94) XL883 all models	Reads it but doesn't mean for Domestic Domestic (49 state models)

**Found and documented discrepancies are in the chart below.** I'm sure I didn't list them all <sup>56)</sup>

Engine	XL883			XL1200		
<b>2004 FSM</b> (erroneous info) <sup>57)</sup>	49 State	California	HDI, Swiss	49 State	California	HDI, Swiss

Main Jet	<del>160</del>	<del>170</del>	<del>190</del>	<del>175/190</del>	<del>185-195</del>	<del>200</del>
Corrected Size <sup>58)</sup>	175	180	170	180	185	160
<b>2002, 2003 Parts Catalogs</b> show a Cali 883R carb but no jet sizes or other carb parts. Listed same year 883 (Cali) data. <sup>59)</sup>						
<b>1999, 2000 Parts Catalogs</b> do not list part number for a (Cali) main jet size for the 1200S. Listed same year (Dom) jet sizes. <sup>60)</sup>						
<b>1999, 2000 Parts Catalog</b> does not list part number for a (Cali) main jet size for the 883C. Listed same year (Cali) 883 jet sizes. <sup>61)</sup>						
1998 Parts Catalog shows a 170 and a 195 main jet for Dom 1200S. Verified with 1998 HD Sportster FSM to be a 195. <sup>62)</sup>						
<b>1998 Parts Catalog</b> pg 135 lists differences between the mid-year intro 883C and 883Std. Reads other than what's listed, use 883Std parts. No carb parts listed so Std 883 specs used. <sup>63)</sup>						
<b>1998 Parts Catalog</b> pg 23 shows Swiss 1200S with (27114-88) 180 main jet but no main jet for HDI. Also there is no jet needle specified for Swiss 1200S. Listed jet sizes from 1998 HD FSM pg 4-1 showing Swiss (195), HDI (190). Also listed Swiss 1200S jet needle as same year HDI 1200S <sup>64)</sup>						
<b>1998 Parts Catalog</b> shows 1200S (Dom) main jet as a 170 (27115-88). Corrected to a 195 main jet with the 1998 HD XLH FSM pg 4-1. <sup>65)</sup>						
<b>1993-1994 Parts Catalog</b> makes it impossible to verify a main jet without the FSM to translate;						
27115-88 Main Jet (Late 1992 and Later 883 Cal.) 93-94 All Models	Translates to Cal 883 (170) & Dom 1200 (170) <sup>66)</sup>					
27152-89 Main Jet (1200 HDI and Swiss) 93-94 All Models	Translates to Dom, HDI/Swiss 883 (160) & HDI/Swiss 1200 (160) <sup>67)</sup>					
27185-90 Main Jet (Cal only) L93-94 1200	Normal listing which is a Late 93-94 Cal 1200 (185) <sup>68)</sup>					
<b>1991-1992 Parts Catalog</b> is confusing to show (Cal)1200 main jet as: (170) 27115-88 - <b>main Jet (Dom)</b> - 92 and on * <b>-all models.</b> <sup>69)</sup>						
<b>1991-1992 Parts Catalog</b> is confusing to show (Cal)883 main jet as: (160) 27152-89 - main Jet (1991 Cal & Swiss; 1992 & later All 883, 1200 HDI & Swiss - 1991-1992 models. Doesn't seem to group (Cal)883 into the 92 models. Verified with 1991-1992 FSM pg 4-1 <sup>70)</sup>						
<b>1990 Parts Catalog</b> does not list a main jet for an XL1200 (Domestic) model. Verified with the 1986-1990 FSM pg 4-1. <sup>71)</sup>						
<b>1986-1990 Parts Catalog</b> has an errant main jet #27154-88 for (Cal) 883s. Confirmed as a 155 with the 1986-1990 Sportster FSM pg 4-1, cross referenced to serial #27154-89 <sup>72)73)</sup>						

**1986-1990 Parts Catalog** is very confusing on export model carb info. I.E.,

**The carb numbers are (all with no accel pump):**

27491-89 / (Swiss only) / 89-90 XLH1200

27492-89 / Swiss only / 89-90 XLH883 All Models

27501-88 / HDI only-1989 & later / 88-90 XL883 All Models

27502-88 / HDI only-1989 & later / 88-90 XLH1200

**These are the only main jets designated for export motors:**

27102-89 / Main Jet (Swiss only) / 89- XLH 883 All Models

27104-89 / Main jet (Swiss only) / 89-90 All Models

**These are the only slow jets designated for export motors:**

27117-88 / Slow jet (Swiss only-1989) / 88 & 89 All Models

**These are the only needle jets designated for export motors:**

27164-89 (Swiss only) / 89- XLH 883 All models

27165-89 (Swiss only) / 89- XL1200

**Everything else is either designated Domestic or California engines.** <sup>74)</sup>

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1970-1978 HD XL/XLH/XLCH/XLT 1000 FSM

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1986-1990 HD Sportster FSM

9)

HD Service Bulletin #M-905 dated August 26, 1985

10) 11) 12)

1986-1987 HD Sportster Parts Catalog pg 21

13)

1986-1990 HD XLH FSM pg 4-1

14)

Clymer Sportster Repair Manual 1959-1985

15)

1970-2010 Haynes Sportster Service and Repair Manual pgs 3.1-3.2

16) 18)

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/43694-keihin-carb-diagram-and-settings?t=132922>

17)

LenC of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/frame-mount-evo-sportster-talk-1986-2003-models/199949-can-t-find-a-bowl-gasket-anywhere-options/page3?t=2076892&page=3>

19) 20)

photo by 88hugger of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-intake-and-exhaust/sportster-motorcycle-air-intake-carburetor-efi-fuel-and-exhaust/72194-carb-questions#post1906502>

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CVPerformance of the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/frame-mount-evo-sportster-talk-1986-2003-models/161092-accelerator-pump-diaphragm-wrong-size/page2?t=1729649&page=2>

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<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/85814-best-carb-for-your-ironhead/page10?postid=5567479#post4106580>

23) 27)

Don Burton at <http://xlforum.net/forums/showthread.php?t=14949>

24) 45)

Cross-reference numbers by Folkie from the XLFORUM

<http://xlforum.net/forums/showthread.php?t=2006132&page=7>

25) 28) 72)

Cross-reference numbers by Folkie from the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-intake-and-exhaust/sportster-motorcycle-air-intake-carburetor-efi-fuel-and-exhaust/188380-cv-carb-clogged-tiny-main-air-jet/page7?t=2006132&page=7>

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29) 32) 35) 38) 41) 46) 53) 55)

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30) 33) 36) 39)

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'86-'90 parts catalog lists 27152-88. Corrected to 27152-89 by the '86-'90 FSM and ((Cross-reference numbers by Folkie from the XLFORUM

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-intake-and-exhaust/sportster-motorcycle-air-intake-carburetor-efi-fuel-and-exhaust/188380-cv-carb-clogged-tiny-main-air-jet/page7?t=2006132&page=7>

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1991-1992 HD Sportster FSM pg 4-1

44)

Don Burton at

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47) 48)

Not listed in 1997 Parts Catalog

49)

all models: 95-96 Parts Catalog doesn't say which models were shipped Swiss

50) 51)

Not listed in 2007 Parts Catalog

56)

Hippysmack

57)

Folkie

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-intake-and-exhaust/sportster-motorcycle-air-intake-carburetor-efi-fuel-and-exhaust/188380-cv-carb-clogged-tiny-main-air-jet/page7?t=2006132&page=7>

[tster-motorcycle-air-intake-carburetor-efi-fuel-and-exhaust/188380-cv-carb-clogged-tiny-main-air-jet/page7?t=2006132&page=7](https://sportsterpedia.com/doku.php/techtalk:evo:carb01)

58)

Verified with the 2004 HD Sportster Parts Catalog pgs 21,23

59) 60) 61) 62) 63) 64) 65) 66) 67) 68) 69) 70) 71) 73) 74)

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