



**FEULING® VENTED DIPSTICK INSTALLATION INSTRUCTIONS FOR MILWAUKEE EIGHT SOFTTAILS**



**PART # 3085 & 3086**



**IMPORTANT NOTICE**

This installation should be done by an experienced mechanic who has access to a factory service manual and all required tools.

**CAUTION**

Incorrect installation can cause engine damage not covered under warranty. Failure to install components correctly can cause engine seizure. Engine seizure may result in serious injury to motorcycle, operator, passenger, and/or others. This dipstick will get HOT use gloves when checking oil level.

**CAUTION**

This dipstick will get hot, use a glove to remove dipstick when checking oil level

**WARRANTY NOTE**

Feuling offers an additional 12 month warranty for a total of 2 years if product is installed by a professional V-Twin installer, oil tank is dropped and cleaned at time of install and the WARRANTY REGISTRATION form is filled out - form can be found on [www.Feulingparts.com](http://www.Feulingparts.com)

**THIS DIPSTICK WILL GET HOT, USE GLOVES WHEN CHECKING OIL LEVEL**

\*The Softtail model sends more oil up the dipstick area than the baggers, our Softtail dipstick has an oil separator built into the dipstick. We do prefer the vent option with the line and quick disconnect fitting on Softtail models.

- 1.) The dipstick screws into the oil fill spout just like the stock dipstick. Make sure the main dipstick O-ring is lubed with O-ring lube or engine oil
- 2.) The oil separator inserts into the inner dipstick housing bore, alternating the 3/4" OD perforated screens and spacers then the large perf screen, filter, aluminum perforated disc then umbrella valve. The smaller diameter spacer is the 2<sup>nd</sup> from bottom, the umbrella valve sits on top.



- INTERNAL STACK UP**  
**from bottom and working up:**
- 1.) 3/4" OD mesh screen
  - 2.) 3/4" Spacer
  - 3.) 3/4" OD mesh screen
  - 4.) Smaller .630" OD spacer
  - 5.) 3/4" OD mesh screen
  - 6.) 3/4" Spacer
  - 7.) 3/4" OD mesh screen
  - 8.) 3/4" Spacer
  - 4.) 1 1/4" OD mesh screen
  - 5.) Filter element
  - 6.) Perforated disc
  - 7.) Umbrella valve

- 3.) Install the desired vent fitting into the dipstick cap, using Loctite 545 on threads: We provide 2 venting styles to choose from:  
**OPTION 1.)** 1/8 NPT breather vent fitting with internal porous filter element. This option gives a clean look however it can produce an oil misting/residue out of the element on engines with excessive leakdown/blow by.



- OPTION 2.)** Quick disconnect fitting with rubber hose and filter element. This option will run any excessive oil misting/residue through the line and into the filter element. However this option does require disconnecting the fitting in order to check the oil.  
\*This is Feuling's preferred method

For option 2, we recommend routing the line up under the side cover and up under the seat area in a looping manner then back down the back side along the right side frame rail and the filter element can fit cleanly between the engine/trans matting area on the inside of the lower right frame rail.

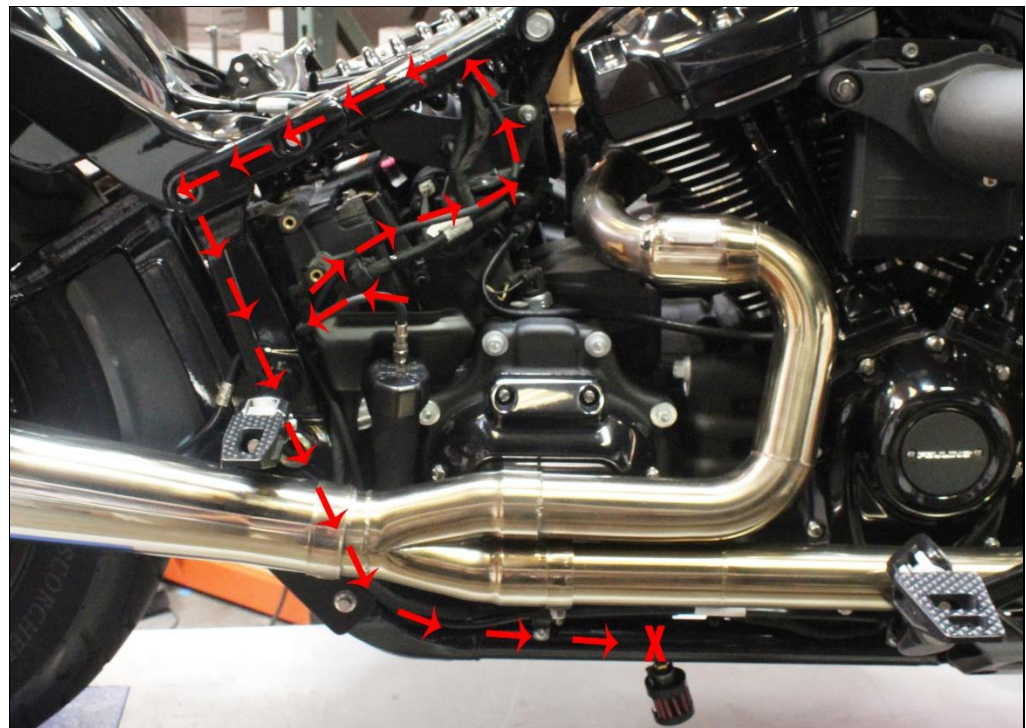


Route the breather line up under the seat, looping to follow the side cover profile hiding on the inside of frame rail, up under the seat then back down along the right side frame rail, follow inside the right frame rail and the filter element can fit cleanly between the engine/trans matting area on the inside of the lower right frame rail. Use zip ties to fasten the line and element to your frame rail.

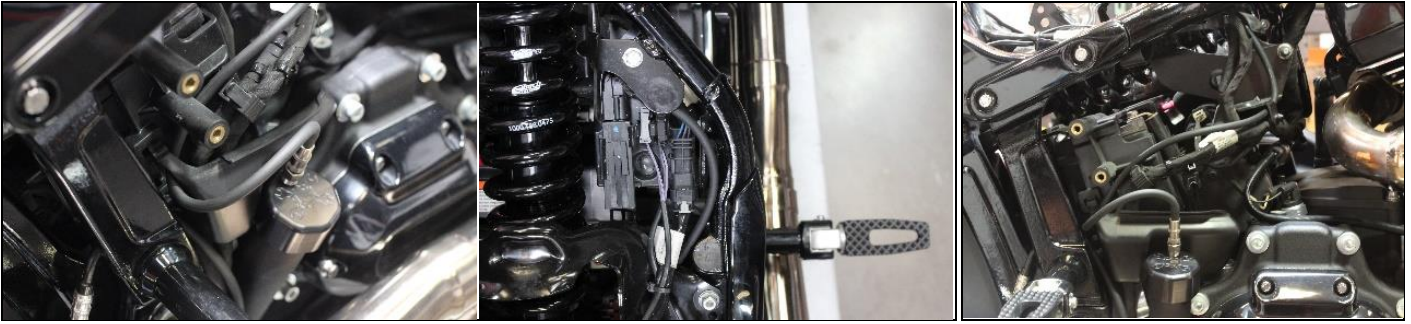
Route the line cleanly so the line and filter element are hidden.

Leave enough slack so you can easily remove coupler fitting when checking oil level.

It is advised to work backwards so you don't have to remove the filter element.



## Routing Con't



4.) The oil separator inserts into the inner dipstick housing bore, alternating the  $\frac{3}{4}$ " OD perforated screens and spacers then the large perf screen, filter, aluminum perforated disc then umbrella valve. The smaller diameter spacer is the 2<sup>nd</sup> from bottom, the umbrella valve sits on top.



5.) Screw the cap on using a dab of the 545 Loctite on the threads, this will prevent leaking.

The dipstick cap also has a small 0.050 HEX allen head screw in the side that will need to be tightened, this will lock the cap down so it doesn't unscrew when you go to remove your dipstick, it also allows you some movement to clock the fitting and logo in a desired position, use Loctite on set screw.



6.) This dipstick will get hot, use a glove to remove dipstick when checking oil level

## Checking oil level

7.) There are two ways to read the oil level with this dipstick, with the bike on the jiffy stand (FHS) or the bike upright and level (FHU).

**FHS = FULL HOT STAND** If reading the dipstick with the bike on the jiffy stand you will take your reading from the dimples labeled **FHS** (Full Hot Stand).

**FHU = FULL HOT UPRIGHT** When reading the dipstick with the bike upright and level you will take the reading from the dimples labeled **FHU** (Full Hot Upright).



**THIS DIPSTICK WILL GET HOT, USE A GLOVE TO REMOVE DIPSTICK WHEN CHECKING OIL LEVEL**

### **OIL LEVEL - DO NOT OVERFILL OIL TANK**

It is important to get the correct hot oil level in your bike. Feuling recommends running the oil level 90%-99% full when hot.

Note: The oil pick up port is on the right side of the engine. Letting the bike idle or warm up on the kickstand will naturally fill the engine case and skew the oil level in the tank.

We recommend the following steps to achieve proper oil level:

1. Check cold oil level.
2. Ride the bike until operating temperature is reached.
3. Shut the bike off while still in the upright position. (This insures an accurate reading)
4. Once the bike is on the kickstand check oil level.
5. Add or remove oil as needed

9/23/19

#### **WARRANTY:**

All parts are guaranteed to the original purchaser to be free of manufacturing defects in materials and workmanship for a period of twelve (12) months from the date of purchase. Merchandise that fails to conform to these conditions will be repaired or replaced at FOP's option if the parts are returned to FOP by the purchaser within the (12) month warranty period. In the event warranty service is required, the original purchaser must notify FOP of the problem immediately. Some problems may be rectified by a telephone call and need no further action. A part that is suspect of being defective must not be replaced without prior authorization from FOP. If it is deemed necessary for FOP to make an evaluation to determine whether the part was defective, it must be packaged properly to avoid further damage, and be returned prepaid to FOP with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem, how the part was used and the circumstances at the time of failure. After an evaluation has been made by FOP and the part was found to be defective, repair, replacement or refund will be granted. Excessive flywheel pinion shaft run out will damage camplate and oil pump and/or cause engine damage and/or failure. Damage to Feuling oil pump corporation products from excessive pinion shaft run out will void manufacturer's warranty.

#### **ADDITIONAL WARRANTY NOTE**

Feuling offers an additional 12 month warranty for a total of 2 years if product is installed by a professional V-Twin installer, oil tank is dropped and cleaned at time of install and the WARRANTY REGISTRATION form is filled out - form can be found on [www.Feulingparts.com](http://www.Feulingparts.com)

#### **ADDITIONAL WARRANTY PROVISIONS:**

FOP shall have no obligation in the event an FOP part is modified by any other person or organization, or if another manufacturer's part is substituted for one provided by FOP. FOP shall have no obligation if an FOP part becomes defective in whole or in part as a result of improper installation, improper break-in or maintenance, improper use, abnormal operation, or any other misuse or mistreatment. FOP shall not be liable for any consequential or incidental damages resulting from the failure of an FOP part, the breach of any warranties, the failure to deliver, delay in delivery, delivery in non-conforming condition, or any other breach of contract or duty between FOP and the customer.

The installation of parts may void or otherwise adversely affect your factory warranty. In addition, such installation and use may violate certain federal, state and local laws, rules and ordinances as well as other laws when used on motor vehicles operated on public highways, especially in states where pollution laws may apply. Always check with federal, state, and local laws before modifying your motorcycle. It is the sole and exclusive responsibility of the user to determine the suitability of the product for his/her use, and the user shall assume all legal, personal injury risk and liability and all other obligations, duties and risks associated therewith. Our high performance parts, engines and motorcycles are intended for experienced riders only. Feuling Oil Pump Corporation reserves the right to change prices and/or discounts without notice and to bill at the prevailing prices at the time of shipments. The words Harley®, Harley-Davidson® and H-D® and all H-D® part numbers and model designations are used in reference only. Feuling Oil Pump Corporation is in no way associated with, or authorized by Harley-Davidson Motor Co®. To manufacture and sell any of the engine parts described in this instruction sheet.