



FEULING

PART #'s 3085 & 3086

VENTED DIPSTICK INSTRUCTIONS FOR MILWAUKEE EIGHT SOFTTAILS



The FEULING® billet dipsticks vent/breathe excessive crank case pressure from the oil tank through a PCV style breather, consisting of an oil separator system, perforated disc, replaceable filter element and umbrella flapper valve. Feuling vented dipsticks screw into the factory oil fill spout as a stock replacement part. These breathing dipsticks remove unwanted build-up of blow by pressure in the oil tank.

Blow by is pressure that is forced past the rings and cylinders, pushed into the crankcase and then forced into the oil tank. FEULING® dipsticks help remove this unwanted pressure through a (CVS) Crankcase Ventilation System. Test results show a decrease in engine oil sump levels, more freely/smoothly revving engine, increased MPG and decreased blow-by.

NOTE: All internal combustion engines have a certain amount of blow by. Larger cubic inch engines as well as engines with worn and or loose ring clearances will have increased blow by. Engines pushed to their limits will also produce excessive build up of 'power robbing' blow by.

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 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.

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

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

MILWAUKEE EIGHT

FEULING #	DRAG #	M8 SOFTAIL '18-'21
3085	0710-0261	POLISHED CAP
3086	0710-0262	BLACK CAP
FEULING #	DRAG #	M8 BAGGER '17-'21
3087	0710-0259	POLISHED CAP
3088	0710-0260	BLACK CAP

TWIN CAM

FEULING #	DRAG #	TWIN CAM DYNA '06-'17
3089	0710-0263	POLISHED CAP
3090	0710-0264	BLACK CAP
FEULING #	DRAG #	TWIN CAM BAGGER '07-'16
3091	0710-0265	POLISHED CAP
3092	0710-0266	BLACK CAP

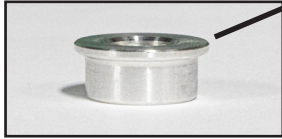
INSTRUCTIONS

- 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 internal oil separator inserts into the 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 (tophat) is the 2nd from bottom. The umbrella valve sits on top & is held down by the cap.

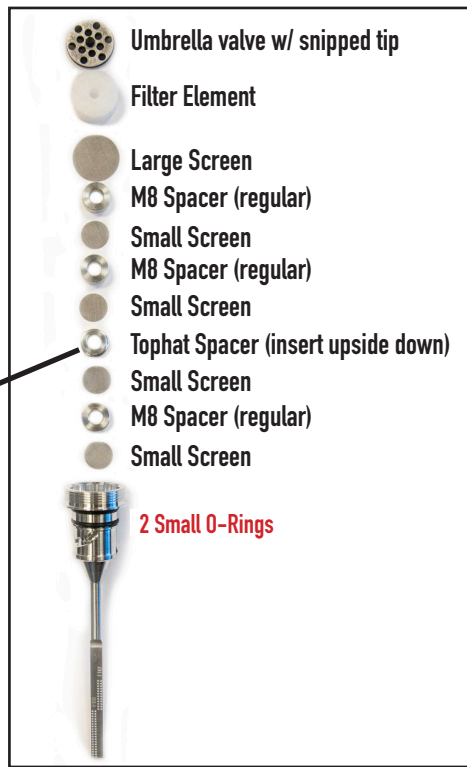
ASSEMBLY

INTERNAL STACK UP (from bottom & working up):

- 1.) 3/4" OD mesh screen
- 2.) 3/4" Spacer
- 3.) 3/4" OD mesh screen
- 4.) Tophat Spacer .630" OD (inserted with flange on top)
- 5.) 3/4" OD mesh screen
- 6.) 3/4" Spacer
- 7.) 3/4" OD mesh screen
- 8.) 3/4" Spacer
- 9.) 1 1/4" OD mesh screen
- 10.) Filter element
- 11.) Perforated disc
- 12.) Umbrella valve

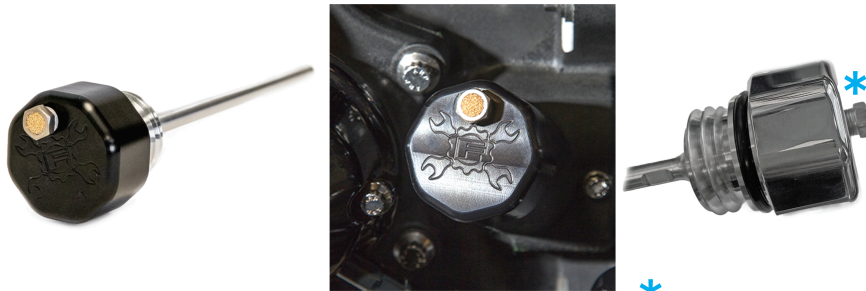


Tophat spacer gets inserted into dipstick with flange on top



3.) Install the desired vent fitting into the dipstick cap, using Loctite 545 on threads: We provide 2 venting options to choose from:

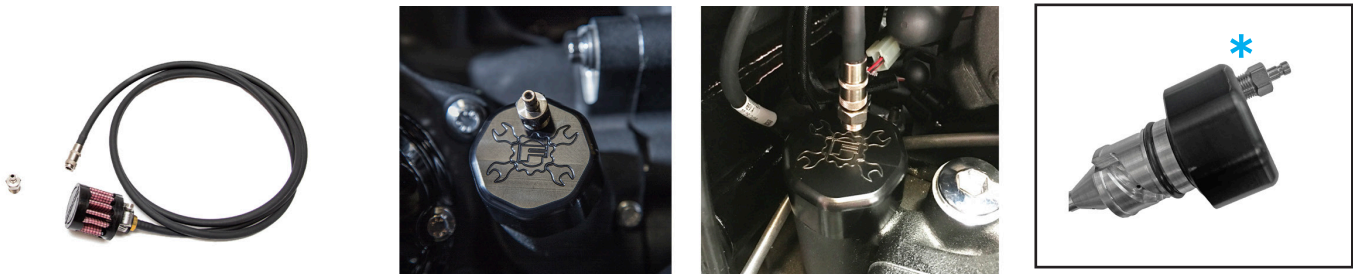
OPTION 1.) 1/8 NPT breather vent fitting with internal porous filter element. This option gives a clean look however it can produce an oil misting/residue out of the element on engines with excessive leakdown/blow by.



* **NOTE:** THREADS ARE 1/8" NPT. DEPTH CAN BE ADJUSTED USING A 1/8" NPT TAP. TAKE CAUTION NOT TO GO TOO DEEP WHERE FITTING PUTS PRESSURE ON THE UMBRELLA VALVE. USE 1/8" NPT TAP IF DEEPER THREADS ARE DESIRED.

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 requires 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 mating area on the inside of the lower right frame rail. Zip tie the filter element up under the inside of the right frame rail. ***DO NOT OVER TIGHTEN ZIPTIES.**



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4.) Screw the cap on using a dab of the 545 Loctite on dipstick 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 & logo in a desired position, use Loctite on set screw (threads are 4-40).



The cap has an O-Ring on the inside for further sealing.



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

6.) Checking oil level

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 WHEN CHECKING OIL LEVEL.

TECH TIP

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. When conducting initial cold oil level check, volume should be around 4.5 dots low for a starting point to allow for oil heat expansion.

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

TROUBLESHOOTING GUIDE

1. Leaking Cap/ Loose cap:

- A.) Use thread sealant on cap threads (recommended 545 Loctite).
- B.) Cap to dipstick tightness.
- C.) Side set screw tight, locking cap in place.
- D.) Oil level too high - See tech tip above on proper oil level.

2. Excessive oil carry over

- A.) Oil level too high - See tech tip above on proper oil level.
- B.) Engine sumping - 1.) Oil level too high 2.) Excessive leak down through the rings and cylinders 3.) Issues with piston cooling jets/gaskets.
- C.) Oil - running synthetic oil vs. conventional oil.

SERVICE YOUR DIPSTICK. When the filter element is solid (full of oil) it prevents the dipstick from breathing properly and can cause leaks. See Dipstick Re-Build kit (Part #3083) for the pieces and parts to properly service your dipstick. We recommend pulling apart and servicing your dipstick with every oil change.

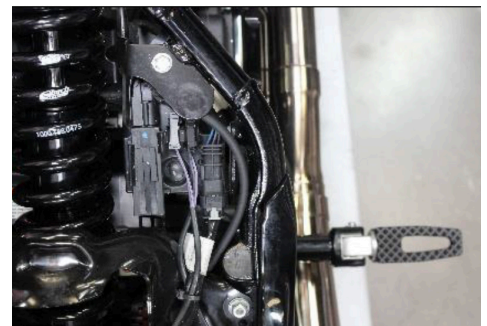


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DIPSTICK BREATHER LINE ROUTING

- 1.) Route the breather line up the inside of the frame rail, up under the seat/abs area then back down along the right side frame rail, over the swing arm then 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.
- 2.) Route the line cleanly so the line and filter element are hidden.
- 3.) Leave enough slack so you can easily remove coupler fitting when checking oil level.

NOTE: Be careful to not over tighten zip ties & pinch breather line.



* STANDARD 1 YEAR WARRANTY:

- WARRANTY COVERS MANUFACTURE DEFECTS.
- DOES NOT COVER PARTS THAT HAVE FAILED DUE TO IMPROPER INSTALLATION, MAINTENANCE, EXCESSIVE CRANKSHAFT RUNOUT, OR MISUSE.
- DOES NOT COVER ANY CONSEQUENTIAL DAMAGE RESULTING FROM A FAILURE OF A FEULING PRODUCT.

* OPTIONAL 2 YEAR WARRANTY:

- ADDITIONAL YEAR WARRANTY IS ONLY AVAILABLE IF PARTS ARE INSTALLED BY A PROFESSIONAL INSTALLER.
- THE ONLINE WARRANTY FORM MUST BE COMPLETED BY THE DEALER PRIOR TO BIKE DELIVERY.
- OIL TANK MUST BE DROPPED & CLEANED.
- CRANKSHAFT RUNOUT MUST BE BELOW 0.005"

NOTE : FOR FULL WARRANTY INFORMATION VISIT WWW.FEULINGPARTS.COM/WARRANTY

DISCLAIMER: NOT LEGAL FOR SALE OR USE IN CALIFORNIA ON ANY POLLUTION CONTROLLED MOTOR VEHICLE. FEULING DOES NOT RECOMMEND TUNING BEYOND STOCK EMISSION STANDARDS.

THINGS OF QUALITY HAVE NO FEAR OF TIME