

SERVICE BULLETIN



NOTE
In the interest of preserving customer safety and satisfaction, always check for outstanding recalls whenever any motorcycle is brought into your dealership for either maintenance or service.

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	WARRANTY PROCESS MANAGER	LEAD TECHNICIAN	TECHNICIAN NO. 1	TECHNICIAN NO. 2	TECHNICIAN NO. 3	RETURN THIS TO
INITIAL HERE									

M1450: Milwaukee-Eight Equipped Vehicles - Loss of Power or High Engine Braking

2018-08-21

M1450

Milwaukee-Eight: 107ci Milwaukee-Eight: 114ci Milwaukee-Eight: 117ci

Reason for Revision

Refer to Table 1.

Table 1. Document History

2017-07-05	Initial release
2017-07-07	Updated Purpose for Service Bulletin
2017-07-21	Updated Required Dealer Action, Dealer Inventory Instructions and Extra information
2017-07-25	Added Credit Procedure and Return Parts
2017-10-18	Updated Required Dealer Action
2017-10-24	Change Title
	Updated Purpose for Service Bulletin, Required Dealer Action and Extra Information
	Added Required Dealer Action > Install
2017-11-15	Change Title
	Updated Purpose for Service Bulletin, Motorcycles Affected, Part numbers: Table 2 , Dealer Inventory Instructions, Extra Information, Credit Procedure: Table 3 , Credit Procedure: Table 4
	Added Credit Procedure: Table 5
2018-08-21	Updated Part Numbers: Table 2 , Required Dealer Action, Required Dealer Action > If engine damage is not observed, Extra information
	Added Credit Procedure: Table 6 and Table 7

Service Bulletin

2017 and 2018 model motorcycles equipped with a Milwaukee-Eight™ engine can experience a condition known as sumping during extended periods at high rpm or under heavy engine load.

Sumping is when an excessive amount of oil is suspended in the engine crankcase and the flywheel must travel through the oil, resulting in loss of power or a high degree of engine braking and potential engine component damage with extended use under these conditions.

This bulletin provides the diagnostic procedure for determining if sumping is occurring.

Motorcycles Affected

This information applies to all 2017 and 2018 Touring, CVO, Trike, Touring Police and 2018 Softail model motorcycles with a Milwaukee-Eight engine.

Markets Affected

All markets are affected.

Part Numbers

Refer to Table 2.

Table 2. Part Numbers

62400121, 62400143, 62400178 ⁽¹⁾	OIL PUMP ASSY, OIL	62400178
62400124, 62400146, 62400182 ⁽¹⁾	OIL PUMP ASSY, WATER	62400182
62400125	OIL PUMP COVER ASSY	62400206

⁽¹⁾ Built or Packaged prior to 10/10/2017

Required Dealer Action

Verify that sumping symptoms are present:

1. Confirm that the customer is experiencing loss of power or high intensity engine braking during extended high **rpm** (Revolutions per minute) use.
2. Perform an oil level hot check to verify that the engine oil has not been over-filled or that oil level is low with no apparent signs of leakage. See the service manual.
 - a. Operate the engine at idle for 2 min.
 - b. Stop the engine.
 - c. Check engine oil level immediately.
 - d. Remove excess oil or add oil, if necessary.

3. **NOTE**

Sumping is more detectable at warmer oil temperatures.

- ... for a test ride and operate the engine to
operating temperature (Bulk Oil Tank
temperature).
- Temperature: 82–121 °C (180–250 °F)
4. Place vehicle in an upright position.
 - a. With the vehicle at operating temperature, allow vehicle to idle in an upright position for 45–60 s.
 5. Stop the engine. Remove the **CKP** (Crankshaft position) sensor within one minute.
 6. Measure amount of oil drained from the sensor opening.
 - a. **Less than** 177.4 ml (6 fl oz): Go to Step 7.
 - b. **Greater than** 177.4 ml (6 fl oz): Go to Step 8.
 7. The condition is not caused by sumping.
 - a. Explore other causes (fuel, timing, intake and so on).
 8. The condition is likely caused by sumping.
 - a. Verify the crankcase scavenge O-ring is in place and undamaged.
 - b. Verify there is no obstruction or loose part in the oil pump scavenge passage.
 - c. Verify the oil pump bypass valve can be moved and is not stuck closed or sticking partially down the bore.
 - d. Remove breather bolts and breather lines to verify they are free and clear without blockages. This includes both the hoses inside the air cleaner as well as the breather bolts.

NOTE

Use caution with the addition of thread sealant on breather bolts. Excess sealant added during service or P&A install can lead to a plugged passage.

- e. Verify breather umbrella valve is sealing properly. Should allow air to exit the engine but not allow air back into the engine. If it is not sealing, replace the breather assembly.
- f. Verify cylinder and piston integrity (scuffing, scoring, oil rings present) and check that ring end gaps are not aligned.
- g. Verify operation of the flywheel and connecting rods. Connecting rod bearings that require more than light force to separate may require additional service. See TA0023 for more information.
- h. A reduction in piston jet assembly screw torque is expected after operation due to gasket compression. Unless piston jet assembly is visibly loose, the piston jet assembly gasket is mis-installed or the gasket or a screw is missing, the piston jet assembly joint will not cause sumping. Tighten piston jet assembly.

1–3.7 N·m (27–33 in-lbs)

Damage is observed: Contact regional Technical Service.

Engine damage is not observed: Install new oil pump and oil pump cover ([Refer to Table 2.](#)) and existing gerotor using the torque sequence below, then assemble engine and file the appropriate warranty claim. Refer to the applicable table, [Table 3](#) , [Table 4](#) , [Table 5](#) , [Table 6](#) or [Table 7](#).

Install

1. Install cam support plate. See the service manual.
2. [Refer to Figure 1.](#) Follow modified tightening sequence.

Torque: 10.4–12.7 N·m (92–112 in-lbs)

- a. Tighten screws 1-6.
- b. Rotate crankshaft 360°.
- c. Tighten screws 7-10.

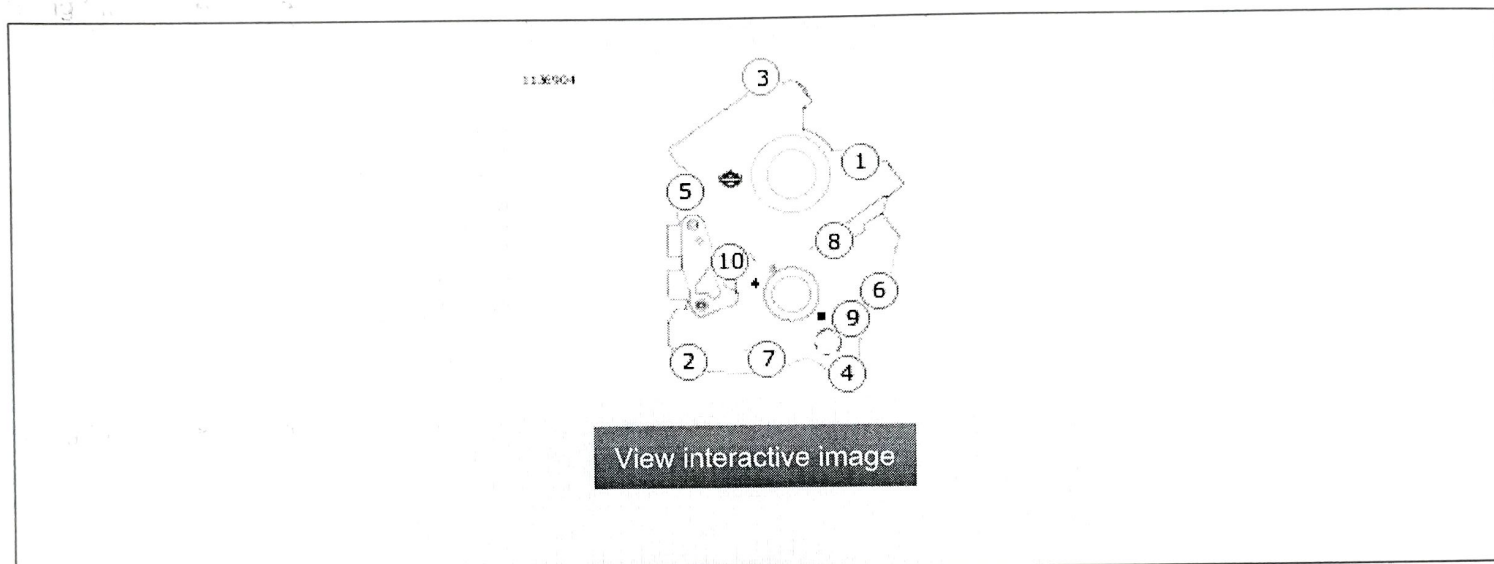


Figure 1. Cam Support Plate Tightening Sequence

Dealer Inventory Instructions

Use oil pump (Part No. 62400182 or 62400178) with a package date of 10/10/2017 or later for engines that are exhibiting sumping.

Extra information

1. When installing a Screamin' Eagle Stage III or Stage IV kit on a 2017 and 2018 Milwaukee-Eight equipped motorcycle built prior to 10/10/2017, a new pump assembly is required, which can be ordered through the regular part ordering process.
2. New oil pumps installed for new Stage III and Stage IV kit installations are reimbursed at cost. [Refer to Table 4.](#)
3. When performing an oil pump repair on an **OE** (Original equipment) 2017 or a 2018 Milwaukee-Eight equipped motorcycle built prior to 10/10/17, a new pump assembly is recommended. Order the new pump through the regular part ordering process.
4. For **OE** applications exhibiting this condition where an oil pump has been installed. [Refer to Table 5.](#)
5. New oil pumps installed for **OE** installations are reimbursed at cost. [Refer to Table 5.](#)
6. For 2017 and 2018 Touring models, installation of oil pump cover P/N 62400206 is recommended (sold separately).

Procedure: Reimbursement of Oil Pump Replacement

See this bulletin in the Event Notes/Comments of claim.

3. Kits Registered to SWR

Claim Type	PNA / Standard claim
Problem Part Number	Screamin' Eagle Stage III or IV Kit registered to VIN
Quantity	Leave Blank
Primary Labor Code	8865
Time	7.6 h
Customer Concern Code	3102
Condition Code	9106
Replacement part number	New oil pump and necessary miscellaneous parts. <u>Refer to Table 2.</u>

Submit a warranty claim for the new oil pump required for the installation of Stage III and Stage IV kits. Refer to Table 4.

Table 4. Oil Pumps Required for Installation of Kits

Claim Type	DFS / PAM Sold
Problem Part No. ⁽¹⁾	62400121, 62400124, 62400143, 62400146, 62400178, 62400182
Quantity	Leave blank
Customer Concern Code	9901
Condition Code	9110
Replacement part number	62400178, 62400182
Quantity	1

(1) Built or packaged prior to 10/10/17

Table 5. OEM Credit Table

Claim Type	MC / Standard Claim
Problem Part Number ⁽¹⁾	OEM oil pumps (62400121, 62400124, 62400143, 62400146, 62400178, 62400182)
Quantity	Leave Blank
Labor Code	3341

	5.7 h
Customer Concern Code	3102
Condition Code	9106
Replacement part number	62400178, 62400182

(1) Built or packaged prior to 10/10/17

When replacing the oil pump cover. **Refer to Table 6.**

Table 6. Replacing Oil Pump Cover Credit Table

Claim Type	MC / Standard Claim
Problem Part Number	62400125
Quantity	Leave Blank
Labor Code	3341
Time	5.7 h
Customer Concern Code	3102
Condition Code	9106
Replacement part number	62400206
Quantity	1

After receiving an authorization from Technical Services to replace the Shortblock. **Refer to Table 7.**

Table 7. Shortblock Replacement Credit Table

Claim Type	PNA / Standard Claim
Problem Part Number	Stage 3 or Stage 4 kit registered to the VIN (Vehicle identification number)
Quantity	1
Primary Labor Code	Leave Blank
Event Detail Labor Code	8888
Time	11.2 h
Customer Concern Code	3102
Condition Code	9106

Parts	New oil pump, shortblock, gaskets and fluids
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Bulletin number M1450 must be entered into the comments section of the claim.

Return Parts

Hold all claimed parts for 60 days from date of credit issued for possible field inspection and/or request to return to factory. After 60 days, destroy and discard the parts.