## Chronology H-D Recall 0171

7/6/16 – NHTSA opens investigation PE16-009 to evaluate ABS module failures "resulting from brake fluid absorbing moisture from the surrounding environment" on MY2008 – 2011 ABS-equipped motorcycles. The Opening Resume states: "[t]he 'old' fluid, which is hygroscopic, becomes contaminated by moisture and allegedly corrodes the ABS actuator valves. The valves then fail to cycle and the affected brake calipers are no longer actuated when riders apply the brake(s). While it may be true that the complainants failed to adhere to Harley Davidson's 2 year brake fluid service interval requirement, the consequent sudden and complete loss of brake(s), without warning, is a concern."

8/5/16 – Harley-Davidson's Recall Investigations Committee (RIC) closes review of this issue based on root cause findings that sticking HCU valves were the result of owners not changing brake fluid per the prescribed 2-year maintenance schedule. Joint Harley-Davidson/Supplier root cause team continued investigation.

9/30/16 - Harley-Davidson submits final response to NHTSA information request.

10/2016 – 12/2016 – Harley-Davidson launched a 10-Channel Communication Campaign to further educate customers on the specified maintenance schedule related to brake fluid flushing on motorcycles that use DOT4 brake fluid.

12/22/17 – Phone conference with Lead Investigator for PE16-009.

1/17/17 – First in-person meeting with NHTSA staff related to PE16-009.

2/22/17 - Phone meeting with new Lead NHTSA investigator

1/2017 – 5/2017 - Root cause team continues to work to better understand the conditions that could lead to an apply valve sticking in an HCU, including engaging with outside consultants on analysis of deposits, tear down of HCU (H-D and competitive), requested information from DOW chemical related to formulation and any potential changes to their DOT 4 formulation. H-D commences a 100 HCU Study.

5/3/17 – Second in-person meeting with NHTSA staff related to PE16-009.

6/2/17 – Harley-Davidson issues a letter to all identified owners of 2008-2013 Touring/CVO Touring/VRSC model motorcycles explaining importance of flushing brake fluid in accordance with service requirements.

7/2017 – 8/2017 - Root cause team continues to work on multiple workstreams as more information becomes available related to this issue.

8/24/17 – Phone conference with NHTSA Lead investigator and third-party brake component manufacturer related to Brake Fluid Stability testing.

9/1/17 – Harley-Davidson's Recall Investigations Committee reopens investigation to review additional information developed by technical team.

- 9/2017 10/2017 Root cause team continues to work on multiple workstreams as more information becomes available related to this issue.
- 11/9/17 Phone conference update with NHTSA Lead investigator
- 11/21/17 Phone conference update with NHTSA Lead investigator
- 12/7/17 RIC meets to consider additional information developed during the investigation. RIC again closes the issue.
- 12/7/17 Phone conference update with NHTSA Lead investigator
- 12/19/17 Third in-person meeting with NHTSA staff related to PE16-009.
- 1/12/18 Harley-Davidson and NHTSA participate in phone conference/web meeting to discuss the elements of a Product Program (field campaign) proposed by Harley-Davidson to resolve the investigation.
- 1/19/18 Harley-Davidson was advised by NHTSA staff that they are not willing to recommend closure of PE16-009 unless the company proceeds with a safety recall.
- 1/24/18 Harley-Davidson decided to conduct a voluntary recall to provide a free one-time brake fluid flush using a new fluid [H-D Platinum Label DOT 4 Brake Fluid] on MY2008 2011 Touring, CVO Touring and VRSC motorcycles equipped with ABS and to again reinforce the importance of regular brake fluid flushes.