# SERVICE BULLETIN



M1470 2020-05-20

## M1470: SAFETY RECALL 0171: 2008 - 2011 ABS MODELS - NEW HARLEY-DAVIDSON PLATINUM LABEL DOT 4 BRAKE FLUID

#### **Reason for Revision**

Refer to Table 1.

**Table 1. Document History** 

Date	Revision Description		
2020-05-20	New Dot 4 part numbers		
2020-03-20	* Updated Part Numbers : Table 3		
	Updated bulletin		
2017-07-07	* Updated Purpose for Service Bulletin, Program Overview , Part Numbers : Table 3, Required Dealer Action : Brake Fluid Flush		
	* Added FAQ (Frequently Asked Questions)		
2018-02-88	Initial release		

#### **Purpose for Service Bulletin**

Harley-Davidson's testing indicates that if brake fluid is not flushed for a prolonged period of time beyond the 2-year maintenance schedule specified in the owner's manual and service manual, a braking issue may develop on certain Anti-lock Braking System (ABS)-equipped model year 2008 -2011 Touring, CVO Touring, Touring Police and VRSC (V-Rod) motorcycles built in the US from 05/26/2006 through 07/11/2011 and in Brazil from 02/18/2007 through 12/13/2011. Specifically, over an extended period of time, the DOT 4 brake fluid, which is hygroscopic (i.e., it will absorb water from the atmosphere), may begin to gel, which can lead to the formation of deposits on the brake components. If these deposits happen to form on the apply valve in the ABS Hydraulic Control Unit (HCU), the valve may stick. If this condition remains undetected, it may lead to a loss of brake function on the affected wheel without notice, increasing the risk of a crash.

While this condition is related to maintenance, following extensive discussions with National Highway Traffic Safety Administration (NHTSA), Harley-Davidson has agreed to voluntarily conduct a safety recall (Campaign 0171) of the subject motorcycles to address it.

The remedy is to first confirm that the motorcycle is covered by this recall. If covered, the dealer will flush the entire brake system with **new** Harley-Davidson Platinum Label DOT 4 Brake Fluid and perform an ABS bleed procedure using Digital Technician II (DT II) per this service bulletin. A recall kit is not necessary to perform the service repair. The only requirement is **new** Harley-Davidson Platinum Label DOT 4 brake fluid.

In the interest of the safety of our mutual customers and as required by federal law, dealers may sell but **NOT DELIVER** any motorcycles until the remedy is completed per this service bulletin. Refer to:

H-Dnet > My Tool Box > Warranty Campaign Center > Safety Campaign Open VIN List, under "Campaign Number" select "0171" to view Vehicle Identification Number (VIN) list.

In accordance with federal regulations administered by NHTSA and other appropriate market specific government agencies, Harley-Davidson Motor Company, Inc. or authorized Harley-Davidson dealers will provide notice to all owners of record of affected products with direction to arrange for the recall service.

#### **Program Overview**

- · Using Harley-Davidson Platinum Label DOT 4 brake fluid.
- · One-time brake fluid flush on affected motorcycles.
- Use of BASIC VACUUM BRAKE BLEEDER (PART NUMBER: BB200A) or equivalent tool is required.
- Use DIGITAL TECHNICIAN II (PART NUMBER: HD-48650) to bleed the brake system correctly.

#### **Motorcycles Affected**

Refer to Table 2.

**Table 2. Motorcycles Affected With ABS** 

Year	Platform	
	Touring	
2008 - 2011	Touring Police	
	CVO Touring	
	VRSC (V-Rod)	

#### Markets Affected

All markets are affected.

#### **Part Numbers**

Refer to Table 3.

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

in the interest of processing detection earliest									
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									

**Table 3. Part Numbers** 

	Table 3. Falt Nullibers			
Current Part No.	Item Description	New Part No.		
41800219	DOT 4 Brake Fluid	41800770 U.S., Mexico, South America 41800771 Canada 41800772 APC (English, Japanese, Simplified Chinese, Thai, Bahasa, Burmese, French, Malay, Vietnamese, Korean, Traditional Chinese) 41800773 Central EU (English, German, Czech, Slovak, Hungarian, Romanian, Polish, Slovenian, Croatian) 41800774 Russia 41800822 North EU (English, Dutch, Swedish, Norwegian, Finnish, Danish, Estonian, Lithuanian 41800823 EMEA, LA (English, Italian, French, Arabic, Spanish, Portuguese, Greek, Turkish, Hebrew, Bulgarian)		

#### Required Dealer Action

#### **Dealer Action Overview**

- Perform brake fluid flush.
- Retrieve and print owners manual flush brake fluid insert.

#### **Brake Fluid Flush**

#### **A WARNING**

Use only DOT 4 hydraulic brake fluid in the brake master cylinder. Use of other types of fluid can cause brake system damage and adversely affect braking, which could result in death or serious injury. (00597c)

#### **WARNING**

Contact with DOT 4 brake fluid can have serious health effects. Failure to wear proper skin and eye protection could result in death or serious injury.

- If inhaled: Keep calm, remove to fresh air, seek medical attention.
- If on skin: Remove contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. If irritation develops, seek medical attention.
- If in eyes: Wash affected eyes for at least 15 minutes under running water with eye lids held open. If irritation develops, seek medical attention.
- If swallowed: Rinse mouth and then drink plenty of water. Do not induce vomiting. Immediate medical attention required.
- See Safety Data Sheet (SDS) for more details available at sds.harley-davidson.com

#### (00240d)

#### NOTICE

DOT 4 brake fluid will damage painted and body panel surfaces it comes in contact with. Always use caution and protect surfaces from spills whenever brake work is performed. Failure to comply can result in cosmetic damage. (00239c)

#### **NOTICE**

Avoid leakage. Be sure gaskets, banjo bolt(s) and brake line are clean and undamaged before assembly. (00323a)

#### 1. NOTE

Follow the torque and other specifications that are in the service manual of the year and model vehicle that the service is being preformed on.

Remove bleeder screw cap. Install vacuum brake bleeder to bleeder screw.

Special Tool: BASIC VACUUM BRAKE BLEEDER (BB200A)

Position vehicle or handlebar so master cylinder reservoir is level.

#### NOTE

- Wrap a clean shop towel around the outside of the master cylinder reservoir to protect paint from brake fluid spills.
- Clean master cylinder reservoir cover before removal.
- 3. Remove cover from master cylinder reservoir.

#### **A WARNING**

Be sure the master cylinder relief port is not plugged. A plugged relief port can cause brake drag or lockup and loss of vehicle control, which could result in death or serious injury. (00317a)

 Add brake fluid as necessary. Verify proper operation of the master cylinder relief port by actuating the brake pedal or lever. A slight bulge of fluid will break the fluid surface in the reservoir if internal components are working properly.

#### NOTE

- Pay careful attention to fluid level in the master cylinder reservoir. Add fluid before it empties to avoid drawing air into the brake lines.
- A bulge may not be seen on models having remote reservoirs.
- Operate vacuum bleeder while maintaining fluid level in master cylinder reservoir.
  - a. Following the sequence, open bleeder screw about 3/4 turn. Refer to Table 4.
  - Continue until specified volume has been replaced.
     Refer to Table 4.
  - c. Tighten bleeder screw to specification. Install bleeder screw cap.
- 6. Repeat with each caliper following the sequence in service manual until all brake lines have been serviced.
- 7. Fill reservoir to specified level.
- 8. Clean gasket and sealing surfaces of debris. Install master cylinder reservoir covers.
- Use DT II and perform "ABS Service" procedure.
   Special Tool: DIGITAL TECHNICIAN II (HD-48650)
- 10. Apply brakes to check proper lamp operation.

#### **A WARNING**

After servicing brakes and before moving motorcycle, pump brakes to build brake system pressure. Insufficient pressure can adversely affect brake performance, which could result in death or serious injury. (00279a)

#### **▲ WARNING**

After repairing the brake system, test brakes at low speed. If brakes are not operating properly, testing at high speeds can cause loss of control, which could result in death or serious injury. (00289a)

 Test ride motorcycle. Perform the bleeding procedure if brakes feel spongy.

**Table 4. Bleeding Sequence** 

SYSTEM TYPE	CIRCUIT	VOLUME
	Front left	
ABS	Front right	118.3 ml (4 fl oz) each
	Rear	

#### **Owner's Manual Flush Brake Fluid Insert**

. NOTE

Login into Service Information Portal (SIP) through Google Chrome to view insert.

Click on Owner's Manual Insert and print.

- a. Click on INSERT: M1470: SAFETY RECALL 0171...
- b. Click on printer icon in up right corner of insert screen.
- c. Print.
- 2. Insert the Flush Brake Fluid page into the owner's manuals applicable to this bulletin that are on site.
- 3. If customers' owner's manual is not present with the motorcycle, do the following:
  - Give the copy of the Flush Brake Fluid page to the customer.
  - b. Inform the customer to read and insert the page into their owner's manual.

#### **A WARNING**

DOT 4 brake fluid absorbs moisture from the atmosphere over time, changing the properties of the fluid. Check brake fluid moisture content at every service interval or annually (whichever comes first). Flush and replace the brake fluid every two years, or sooner if moisture content is 3% or greater. Failure to flush and replace fluid can adversely affect braking, which could result in death or serious injury. (06304b)

4. Specify to the customer the importance of flushing the brake fluid when moisture content is 3% or greater, or every two years (whichever comes first).

#### Credit Procedure

### Credit Procedure: Talon/H-Dnet.com Warranty Claim System Users

Submit a claim for each motorcycle serviced in this bulletin for which VIN involvement was verified on h-dnet.com.

Submit a claim per table. Refer to Table 5.

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Table 5. Talon/H-Dnet.com Warranty Claim System Users

	DATA		
Claim Type	SRC		
Problem Part	Problem Part Number		
Quantity		Leave Blank	
Primary Labor	r Code <sup>(1)</sup>	2726	
Labor Hours: Touring, CVO	Labor Hours: Touring, CVO Touring, Touring Police		
Labor Hours: VRSC (V-Rod	1.1 h		
Customer Concern Code <sup>(1)</sup>		0171	
Condition Code		9981	
Replacement Part No.	USA, Mexico, South America	41800770	
Quantity	1		
(1) Download may be required.			

#### **Credit Procedure: SAP System Users**

Upon submission of the properly completed claim, dealership is credited for 1.1 h or 1.2 h of labor time and brake fluid for performing the procedure. Plus appropriate market administrative time.

Submit campaign events on their own warranty claim. Do not mix items with other warranty events.

Table 6. SAP System Users

ITEM	DATA
Claim Type	Recall Claim
FIX ID-Found in Recall Number	С
Problem Part Number	41800219
Customer Concern Code	0171
Condition Code	9981

#### **Credit Procedure: All Other System Users**

- Claim Date
- Campaign Number (0171)
  - · 1.2 h Touring, CVO Touring, Touring Police
  - 1.1 h VRSC (V-Rod)
- FIX ID (C)
- · Full Seventeen Character VIN

Upon submission of the properly completed claim, dealership is credited for 1.1 h or 1.2 h of labor time and/or brake fluid for performing the procedure. Plus appropriate market administrative time.

#### **FAQ (Frequently Asked Questions)**

### Q: What is the difference between the regular DOT 4 and the new Platinum DOT 4?

Harley-Davidson recommends using Platinum Label DOT 4 Brake Fluid because of its superior moisture and corrosion inhibiting properties.

# Q: Does the new Platinum DOT 4 mean customers can leave the fluid in the bike for longer than the recommended 2 years?

No. It is still recommended to follow the prescribed maintenance interval of 2 years and inspection points at each major service as outlined in the owners and service manuals.

### Q: Should the dealers dispose of the older DOT 4 currently in stock?

No. Per service bulletin M1471, the current DOT 4 BRAKE FLUID (41800219) is approved to use on all DOT 4 systems except for motorcycles involved in Recall 0171.

### Q: What if a customer has an affected motorcycle but does not receive a letter?

Harley-Davidson is asking customers who have sold their motorcycle and have an address for the current owner to forward this notice to the new owner. Alternatively, they may contact Harley-Davidson at 1-414-343-4056 and provide us the contact information for the purchaser so that Harley-Davidson may notify the new owner of this recall. Also, Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

### Q: If a VIN is blocked, are they still eligible to have this recall performed?

Yes. If the recall work can be safely performed, then it should be done.

### Q: Are there DTII Best Practices for performing the ABS Brake Fluid Flush?

- Motorcycle must be on a GLOBAL 5 AMP BATTERY CHARGER (PART NUMBER: 66000041) (or equivalent), and battery voltage must be 12.7 V or greater.
- Check the ABS Electronic Control Unit (ECU) [166] for corrosion or poor connection.

#### NOTE

Avoid using the wireless connection when bleeding ABS.

- Using the USB CABLE (PART NUMBER: HD-48650-9), connect DIGITAL TECHNICIAN II (PART NUMBER: HD-48650) to the TECHLINK II (PART NUMBER: HD-48650-1).
- Connect the Alternating Current (AC) adaptor to the TechLink.

#### NOTE

Occasionally, reprogramming the TechLink II using DT II can resolve communication issues.

- Removing the main fuse for 1 min can also help with communication issues.
- Apply front and rear brakes. Verify brake light illuminates when applied.

#### NOTE

ABS service will not function if the light switch is not functioning.

- Verify front and rear brakes toggle on/off by checking the Data items in DT II.
- Manually bleed the brake system to flush old brake fluid out before using DT II to perform ABS service.
- The HCU can overheat if the ABS service is run back-to-back. To prevent the overheating, allow 30 s between services.
- Verify that any aftermarket electrical accessories (i.e. turners) that can interfere with DT II are temporary disabled. After flush is completed, all aftermarket electrical accessories must be enabled.

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# Q: Should there be a color difference to the Harley-Davidson Platinum Label DOT 4 Brake Fluid? Should the new fluid be yellow or yellow/green?

See Figure 1. The difference in Platinum Label DOT 4 Brake Fluid chemistry will result in a noticeable color difference

between the two fluids. The current DOT 4 BRAKE FLUID (41800219) is clear in color. The **new** fluid has a yellow tint to the fluid. Some may describe it as a yellow/green tint as well. These fluids are completely compatible and topping off one with the other, or slight mixing during the flushing process is not a problem.



Figure 1. Dot 4 Brake Fluids

## Q: During the recall procedure, it was determined that the ABS module needed to be replaced. Why is that?

The work performed during the recall repair procedure puts the ABS module through a rigorous internal actuation. If the module is found to have a stuck valve during the procedure, it is highly likely that a stuck valve was imminent under normal operating conditions. This means that the valve could have stuck while in use instead of on the bench. The most likely cause of a stuck valve is lack of required maintenance of the DOT 4 brake fluid (Brake fluid flush every 2 years).

### Q: How can the ABS module be tested outside of the recall procedure?

On 2008 - 2011 ABS model vehicles, the ABS module can be tested using DT II by performing the following steps:

 Connect the GLOBAL 5 AMP BATTERY CHARGER (PART NUMBER: 66000041) (or equivalent) to the battery.

- Using USB CABLE (PART NUMBER: HD-48650-9) connect DIGITAL TECHNICIAN II (PART NUMBER: HD-48650) to the TECHLINK II (PART NUMBER: HD-48650-1). Connect to vehicle.
- 3. Enter vehicle information on DT II.
- 4. Click on the following:

Green check mark > Toolbox > Active Diagnostics

- 5. Under the Active Diagnostics tab, deselect all the green buttons expect for ABS.
- 6. In the "Select A Test" menu click on and highlight "Front Apply Solenoid Cmd [ABS]".
- 7. In the section right of the "Select A Test" menu, press the **Start** button.
- 8. Activate the front solenoid by pushing the **On** button.
- 9. Apply and the front brake lever.
  - a. Applying the front brake lever, the resistance in the lever should increase.

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- While holding the front brake lever, push the Off button on DT II.
  - Holding the front brake lever, the resistance in the lever should decrease.
- 11. Push the **Cancel** button to stop the test on the front apply solenoid.
- 12. Start the rear apply solenoid test.
- In the "Select A Test" menu click on and highlight "Rear Apply Solenoid Cmd [ABS]".
- 14. In the section right of the "Select A Test" menu, press the **Start** button.
- 15. Activate the rear solenoid by pushing the **On** button.
- 16. Apply the rear brake pedal.
  - Applying the rear brake pedal, the resistance in the pedal should increase.
- 17. While holding the rear brake pedal, push the **Off** button on DT II.
  - a. Holding the rear brake pedal, the resistance in the pedal should decrease.
- 18. Push the Cancel button to stop test.

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