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May 12, 2021

**TO:** All U.S. Ford and Lincoln Dealers

**SUBJECT:** **Safety Recall 19S54 – Supplement #1**

Certain 2006-2010 Model Year Fusion/Milan/MKZ/Zephyr Vehicles Equipped with Anti-Lock Brake Systems  
 DOT 3 Brake Fluid and Anti-Lock Brake System Function

**New! REASON FOR THIS SUPPLEMENT**

- Service Action Updates:
  - *A pedal/drive evaluation is added to the repair procedure both before and after the repair, so technicians can properly evaluate brake pedal travel on each vehicle. This will assist in reviewing pre-existing concerns with the customer, before the repair begins.*
  - *Pushing on the brake pedal (as required) during the flush procedure due to low flow is added.*
- ADDITIONAL REPAIR (LABOR TIME AND/OR PARTS)
  - *For vehicles outside new vehicle bumper-to-bumper warranty coverage, dealers are pre-approved to claim up to \$200.00 in related damage.*
- LABOR ALLOWANCES
  - *Additional labor time is added for a pedal evaluation before and after the repair, and extra time to remove both rear wheels to more easily access the bleeder screws during the brake flush routines.*
- PARTS REQUIREMENTS / ORDERING INFORMATION
  - *An equivalent brake fluid may be used (which meets the Ford DOT4 PM-20 specification number: WSS-M6C65-A2 and ISO4925 Class 6) to complete this service repair if PM-20 is on back-order.*

**AFFECTED VEHICLES**

Vehicle	Model Year	Assembly Plant	Build Dates
Fusion/Milan/MKZ/ Zephyr	2006-2010	Hermosillo	February 22, 2006 through July 15, 2009

Affected vehicles are identified in OASIS and FSA VIN Lists.

**REASON FOR THIS SAFETY RECALL**

In some of the affected vehicles, a chemical reaction between aged DOT 3 brake fluid and the zinc plating inside the Hydraulic Control Unit (HCU) may result in a gel formation. A normally closed valve may be stuck open, which may result in extended brake pedal travel. However, the condition does not result in a loss of braking function or loss of vehicle control, and vehicles can be safely brought to a controlled stop.

**New! SERVICE ACTION**

Dealers are to confirm the proper function of your HCU using Ford's Integrated Diagnostic Software system. The HCU inspection and following service actions will be performed free of charge (parts and labor).

- *Evaluate the condition of the brake system and the brake pedal travel by completing a short drive in the dealership parking lot, both before and after the repair. Review existing brake pedal travel with customer before beginning the repair procedure.*

- If the HCU passes the inspection, the brake system will be pressure flushed with DOT 4 brake fluid, the DOT 3 reservoir cap will be replaced with a new DOT 4 cap, and you will receive an updated owner's guide insert.
- If the HCU does not pass the inspection, the HCU will be replaced and the brake system will be pressure flushed with DOT 4 brake fluid, the DOT 3 reservoir cap will be replaced with a new DOT 4 cap, and you will receive an updated owner's guide insert.
- This program is **not** intended to cover all brake system concerns on customer vehicles. Normal workshop manual (WSM) diagnostics and related damage are not covered in this program.
- If a customer with an affected vehicle arrives at your dealership with a brake concern and mentions FSA 19S54, dealers should review pre-existing brake concerns and recommend performing the applicable WSM diagnostics, starting in Section 206.
- Any existing diagnostic trouble codes (DTCs) should be properly diagnosed and resolved outside of this field service action. There are no DTCs associated with this concern, no DTCs are generated by the HCU when this concern occurs and resolution of DTCs cannot be claimed as part of this program or as related damage.
- HCUs will only be replaced with documented pass/does not pass IDS service function test. VIN-specific IDS session files must be saved and uploaded upon request. We expect this failure rate to be less than 1% of the vehicle population.
- Failed HCUs and related damage parts are subject to random selection for return to the Ford Warranty Parts Analysis Center (WPAC).

### **OWNER NOTIFICATION MAILING SCHEDULE**

Owner letters are expected to be mailed the week of April 5, 2021. Dealers should repair any affected vehicles that arrive at their dealerships, whether or not the customer has received a letter.

### **PLEASE NOTE:**

**Federal law requires dealers to complete this recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$21,000 per vehicle. Correct all vehicles in your new vehicle inventory before delivery.**

### **New! ATTACHMENTS**

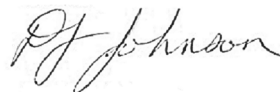
*Attachment I: Administrative Information*  
*Attachment II: Labor Allowances and Parts Ordering Information*  
*Attachment III: Technical Information*

Owner Notification Letters  
 Recall Reimbursement Plan

### **QUESTIONS & ASSISTANCE**

For questions and assistance, contact the Special Service Support Center (SSSC) via the SSSC Web Contact Site. The SSSC Web Contact Site can be accessed through the Professional Technician Society (PTS) website using the SSSC link listed at the bottom of the OASIS VIN report screen or listed under the SSSC tab.

Sincerely,



David J. Johnson

**Safety Recall 19S54 – Supplement #1**  
Certain 2006-2010 Model Year Fusion/Milan/MKZ/Zephyr Vehicles  
Equipped with Anti-Lock Brake Systems  
DOT 3 Brake Fluid and Anti-Lock Brake System Function

**OASIS ACTIVATION**

OASIS was activated on December 19, 2019.

**FSA VIN LISTS ACTIVATION**

FSA VIN Lists were available through <https://web.fsavinlists.dealerconnection.com> on December 19, 2019. Owner names and addresses were available on October 23, 2020.

**NOTE:** Your FSA VIN Lists may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this recall is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this recall.

**SOLD VEHICLES**

- Ford has not issued instructions to stop selling/delivering or driving used vehicles under this safety recall. Owners can continue to safely drive their vehicles, as previously stated this condition does not result in a loss of braking function or loss of vehicle control, and the vehicles can be safely brought to a controlled stop. Owners should contact their dealer for an appointment to have their vehicles remedied as soon as practicable. Owners can continue to safely drive their vehicles.
- Immediately contact any of your affected customers whose vehicles are not on your VIN list but are identified in OASIS. Give the customer a copy of the Owner Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.
- Dealers are to prioritize repairs of customer vehicles over repairs of new and used vehicle inventory.

**STOCK VEHICLES**

Use OASIS to identify any affected vehicles in your used vehicle inventory.

**DEALER-OPERATED RENTAL VEHICLES**

The Fixing America's Surface Transportation (FAST) Act law effective June 2016 prohibits a rental company from selling, renting or leasing vehicles subject to a safety or compliance recall. Please consult your legal counsel for legal advice.

**TITLE BRANDED / SALVAGED VEHICLES**

Affected title branded and salvaged vehicles are eligible for this recall.

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**OWNER REFUNDS**

- **This safety recall must still be performed, even if the owner has paid for a previous repair. Claiming a refund will not close the recall on the vehicle.**
- **NOTE: DOT 3 MUST BE REPLACED WITH DOT 4 BRAKE FLUID, and a DOT 4 cap installed on brake fluid reservoir.**
- Ford Motor Company is offering a refund for owner-paid repairs covered by this recall if the repair was performed prior to the date indicated in the reimbursement plan, which is posted with this bulletin. Owners are directed to seek reimbursement through authorized dealers or, at their option, directly through Ford Motor Company at P.O. Box 6251, Dearborn, MI 48121-6251.
- Dealers are also pre-approved to refund owner-paid emergency repairs that were performed away from an authorized servicing dealer after the end date specified in the reimbursement plan. Non-covered repairs, or those judged by Ford to be excessive, will not be reimbursed.
- Refunds will only be provided for the cost associated with HCU replacement (base part number 2C215).

**RENTAL VEHICLES**

- Rental vehicles are not approved for this program.
- Ford has not issued instructions to stop driving vehicles under this safety recall. Owners can continue to safely drive their vehicles, as previously stated this condition does not result in a loss of braking function or loss of vehicle control, and the vehicles can be safely brought to a controlled stop. Owners should contact their dealer for an appointment to have their vehicles remedied as soon as practicable. Owners can continue to safely drive their vehicles.
- Part shortages do not qualify for rental vehicles for this program.

**LINCOLN CLIENT SPECIAL HANDLING**

Owners of 2017 MY and newer Lincoln vehicles have the option of requesting pickup and delivery service with a Lincoln loaner (up to 2 days), from their dealership. For details, reference EFC07715, 2020 Lincoln Pickup & Delivery Updates.

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**New! ADDITIONAL REPAIR (LABOR TIME AND/OR PARTS)**

Additional repairs identified as necessary to complete the FSA should be managed as follows:

- For related damage and access time requirements, refer to the Warranty and Policy Manual / Section 6 – Ford & Lincoln Program Policies / General Information & Special Circumstances for FSA's / Related Damage.
- For vehicles within new vehicle bumper-to-bumper warranty coverage, no SSSC approval is required, although related damage must be on a separate repair line with the "Related Damage" radio button checked.
  - Ford vehicles – 3 years or 36,000 miles
  - Lincoln vehicles – 4 years or 50,000 miles
- For vehicles outside new vehicle bumper-to-bumper warranty coverage, dealers are pre-approved to claim up to \$200.00 in related damage. This should not be used for required maintenance items, i.e. brake pads, etc.
  - Due to part shortages, screw extractor tools (aka easy outs) should be used to remove broken caliper bleeder screws, before proceeding to replace calipers.
  - For claims exceeding the pre-approved amount, submit an Approval Request to the SSSC Web Contact Site prior to completing the repair.
  - Help increase your SSSC contact approvals by including the following:
    - Requests for additional labor should clearly state in detail why it is required to complete the repair. Provide a detailed explanation of what happened during the repair process from start to finish
    - Photos should be limited to areas of damage/parts needing repair and clearly focused with proper lighting. Please highlight the damage in photos if possible.
    - Provide clock-times for additional labor requests
  - Dealers may be audited and charged back at any time if related-damage claims are excessive and/or not following the terms of this program, and/or Warranty & Policy Manual guidelines.
- Dealers may also be requested to upload IDS session files to the Ford Technical Hotline server before SSSC approval is provided. It is highly recommended that all IDS session files be saved, requests will be denied if they are not available upon request.
- Any existing diagnostic trouble codes (DTCs) should be properly diagnosed and resolved outside of this field service action.
  - There are no DTCs associated with this concern
  - There are no DTCs generated by the HCU when this concern occurs
  - Resolution of DTCs cannot be claimed as part of this program or as related damage.
- Dealers should review pre-existing brake concerns with their customers, this program will not cover all brake system concerns on customer's vehicles or as related damage, including required maintenance items.



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**New!** **LABOR ALLOWANCES**

- The BrakeMate Jr. Standard and Hybrid Brake System Pressure Bleed Machine with Master Cylinder Adapter Kit and Fluid Extractor was used to complete the brake system flush for this program.
- Before starting the brake system flush, ensure that you have the correct adapter that fits securely, or you will introduce air into the brake system.

**Understanding required IDS functions for this service action:**

**Valve Actuation:** To access this function on IDS select Toolbox, Chassis, Braking, Valve Actuation. This function will cycle the HCU valves a total of four times to determine if the valves are stuck in an open position.

**ABS Service Bleed:** To access this function on IDS select Toolbox, Chassis, Braking, ABS Service Bleed. This function is performed when the brake system is flushed.

**ADDITIONAL LABOR FOR RELATED DAMAGE:**

- *It is recognized and acknowledged that attempting to complete repairs on vehicles that are 10 to 15 years old is difficult and can result in related damage.*
- *The labor operations below are not meant to encompass all possible issues that a Technician may encounter in related damage due to the age of the vehicle and excessive corrosion while completing this service action.*
- *The approval code to claim 19S54K is no longer needed but will be reinstated if 19S54K is claimed incorrectly when the IDS service function passes and HCU replacement is not needed.*

PASS: BRAKE SYSTEM FLUSH, REPLACE CAP	Labor Operation	Labor Time
<ol style="list-style-type: none"> <li>1. <i>Brake Pedal/Drive Evaluation, in parking lot</i></li> <li>2. Perform Valve Actuation Service Function using the latest available IDS release.</li> <li>3. Flush brake system with power brake bleed machine               <ul style="list-style-type: none"> <li>- Exchange DOT 3 brake fluid with DOT 4 brake fluid</li> </ul> </li> <li>4. Perform ABS Service Bleed a total of <u>10 times</u>.</li> <li>5. Bleed brakes per Technical Instructions Step 1, Page 9</li> <li>6. Replace Brake Fluid Reservoir cap</li> <li>7. <i>Brake Pedal/Drive Evaluation, in parking lot</i></li> </ol> <p><i>Note: This includes additional time to remove rear wheels to access bleeder screws as required.</i></p>	19S54J	1.2 Hours

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FAIL: HCU REPLACEMENT	Labor Operation	Labor Time
<ol style="list-style-type: none"> <li>1. <i>Brake Pedal/Drive Evaluation, in parking lot</i></li> <li>2. Perform Valve Actuation Service Function using the latest available IDS release (<b>Save IDS Session File</b>).</li> <li>3. <i>Contact SSSC</i> - IDS Session Log File must be Uploaded, and part order must be approved</li> <li>4. Replace HCU</li> <li>5. Flush brake system with power brake bleed machine                             <ol style="list-style-type: none"> <li>a. Exchange DOT 3 brake fluid with DOT 4 brake fluid</li> </ol> </li> <li>6. Perform ABS Service Bleed a total of <u>5 times</u>.</li> <li>7. Bleed brakes per Tech Instructions Step 1, Page 17</li> <li>8. Replace brake fluid reservoir cap</li> <li>9. <i>Brake Pedal/Drive Evaluation, in parking lot</i></li> </ol> <p><i>Note: This includes additional time to remove rear wheels to access bleeder screws as required.</i></p>	19S54K	2.0 Hours



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**New!** PARTS REQUIREMENTS / ORDERING INFORMATION

**For information only - the Brake System Pressure Bleed Machine & Adapter Kit may be ordered through Rotunda (this is a recommendation, not a requirement):**

- BrakeMate Jr. Standard and Hybrid Brake System Pressure Bleed Machine with Master Cylinder Adapter Kit and Fluid Extractor
- Master Cylinder Brake Bleeder Cap BA04 SP

**SSSC Web Contact Site:**

**Most vehicles will not require HCU replacement; brake system will be flushed, and a new DOT 4 brake fluid reservoir cap will be installed.**

To place an order for an HCU, submit a VIN-specific Part Order contact via the SSSC Web Contact Site and attach the entire IDS session log file to the part order:

- One file attached to the part order (multiple photos or screen shot are not acceptable)
- PDF file format with the following information **highlighted in red or similar bright color**
  - VIN number
  - Date IDS service function completed
  - Result of IDS service function test (pass or fail).

Note: IDS session files showing both pass and fail results will not be approved.

- Dealers may also be requested to upload IDS session files to the Ford Technical Hotline server before SSSC approval is provided.
- It is highly recommended that all IDS session files be saved, requests will be denied if they are not available upon request.
- Any existing diagnostic trouble codes (DTCs) should be properly diagnosed and resolved outside of this field service action.
  - There are no DTCs associated with this concern
  - There are no DTCs generated by the HCU when this concern occurs
  - Resolution of DTCs cannot be claimed as part of this program or as related damage.

Part Number	Description	Order Quantity
*-2C215-*	HCU (part number varies by vehicle – use Ford ECat to identify the specific part number by VIN)	Only if IDS Service Function is failed and documented in IDS Log File

Dealers will be notified via a DOES II communication if circumstances warrant a change in part supply strategy and when open ordering resumes.

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**Order the parts below through normal order processing channels:**

Note: Do not order DOT 4 Brake Fluid Reservoir Cap for stock, if excessive caps are ordered sales restrictions will be implemented.

<b>Part Number</b>	<b>Description</b>	<b>Order Quantity</b>	<b>Claim Quantity</b>
PM-20 Or <i>OSP</i>	Brake Fluid 16 oz, pint bottle (4 required, 4 per case)  <i>If PM-20 is back-ordered, an equivalent may be used if it meets the Ford DOT4 brake fluid specification number: WSS-M6C65-A2 and ISO4925 Class 6</i>	<i>As Required (up to a quantity of 4, not to exceed a total cost of \$80)</i>	
6E5Z-2162-A	DOT 4 Brake Fluid Reservoir Cap	1	1

To guarantee the shortest delivery time, an emergency order for parts must be placed.

**DEALER PRICE**

For latest prices, refer to DOES II.

**PARTS RETENTION AND RETURN**

Follow the provisions of the Warranty and Policy Manual, Section 1 - WARRANTY PARTS RETENTION AND RETURN POLICIES.

**EXCESS STOCK RETURN**

Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.

## CERTAIN 2006-2010 MODEL YEAR FUSION/MILAN/MKZ/ZEPHYR VEHICLES EQUIPPED WITH ANTI-LOCK BRAKE SYSTEMS — DOT 3 BRAKE FLUID AND ANTI-LOCK BRAKE SYSTEM FUNCTION

### REGULAR MAINTENANCE & RELATED DAMAGE

A lack of regular maintenance on a vehicle's brake system may result in poor braking or even a complete inability to stop. Some of the more common problems are listed below and should be discussed with the customer before the repair begins, as they are outside the scope of this program.

1. Leaking brake fluid due to cracks in brake lines or hoses
2. Leaking fluid or other problems with master cylinder
3. Unreliable braking due to air in the system
4. Poor braking caused by worn pads or warped rotors
5. Temporary loss of stopping ability due to oil or grease on the pads or rotors
6. Poor braking due to uneven application of hydraulic pressure on all four wheels
7. A chattering or shaking sensation when the brakes are applied due to bent pads or rotors
8. A screeching or grinding noise caused by worn brake pads gouging the rotors

### SERVICE PROCEDURE

- A. Pedal Evaluation.....Page 2**
- B. IDS Service Function - Hydraulic Control Unit (HCU) Valve  
Inspection..... Page 2**
- C. Inspection Results.....Page 8**
- D. Valve Activation PASSES IDS Routine.....Page 9**
- E. Valve Activation DOES NOT PASS IDS Routine.....Page 14**



## **NEW ! Pedal Evaluation**

1. Perform a pedal/drive evaluation in the dealer parking lot to determine the condition of the brake pedal:
  - Make a note of the following on the repair order before beginning the repair:
    1. Pedal travel
    2. Height from floor board when pressed
    3. Overall pedal feel
2. Perform a walk around visual inspection of the vehicles condition, ensuring there is no current brake fluid leaks or damage to the braking system before performing this procedure.
3. Review any existing brake pedal travel concerns with customer prior to starting repair.
  - Information should be provided to customer that if HCU passes test, brake pedal travel will be the same as it currently is.

## **IDS Service Function - HCU Valve Inspection**

**NOTE:** Ensure that your Integrated Diagnostic Software (IDS) is updated with the most current version.

1. Park the vehicle on a flat, level surface.
2. Apply the parking brake.

**NOTE:** For manual vehicles ensure the vehicle is in neutral.

3. Connect a battery charger to the 12V battery.
4. Connect the IDS and start a new session.
5. Check for existing diagnostic trouble codes (DTCs) they should be properly diagnosed and resolved outside of this field service action. There are no DTCs associated with this concern, no DTCs are generated by the HCU when this concern occurs and resolution of DTCs cannot be claimed as part of this program or as related damage.

- Review any existing DTCs with customer prior to starting repair.

6. Select the "Tool Box" tab then "Chassis", "Braking" then "Valve Activation". See Figure 1.
7. Follow the on screen prompts to complete the procedure. See Figures 2 through 11, for screenshots of the process, and applicable notes.

• The procedure will complete the activation of the valves a total of four times.



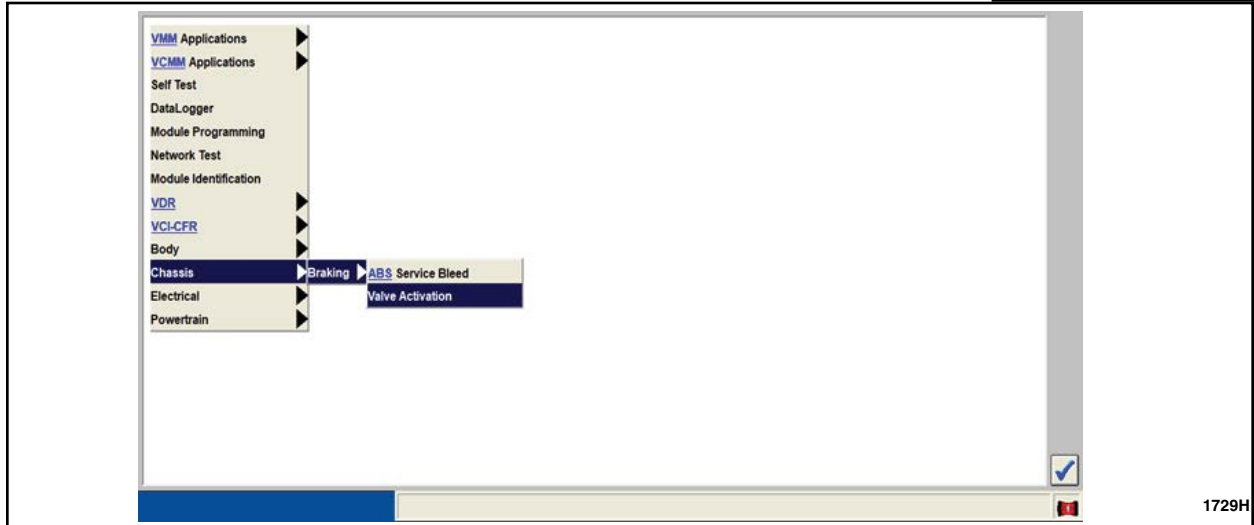


FIGURE 1

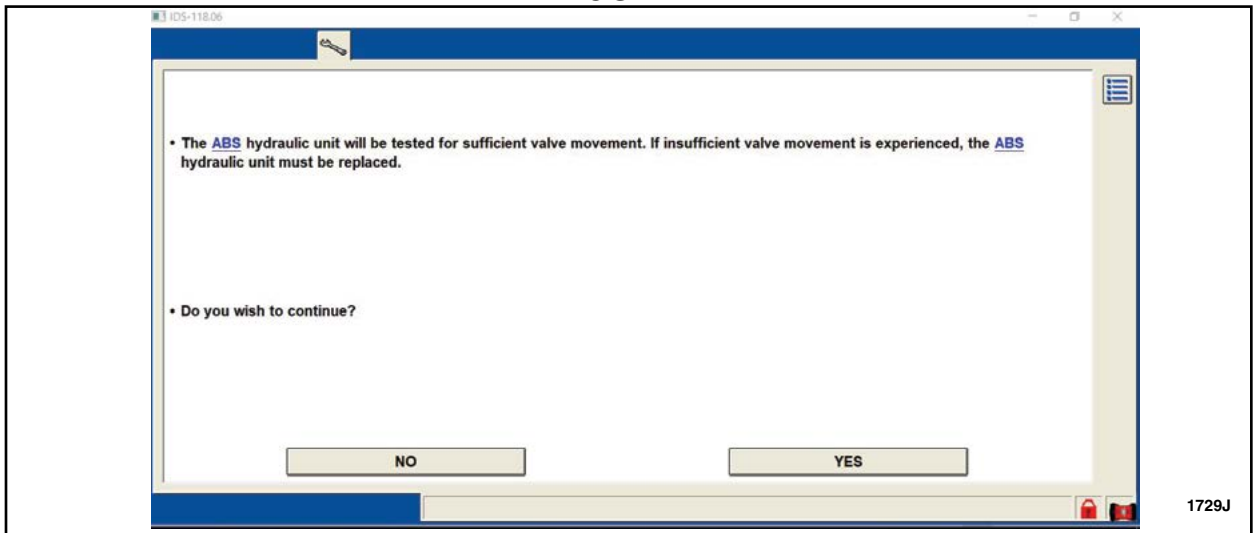


FIGURE 2

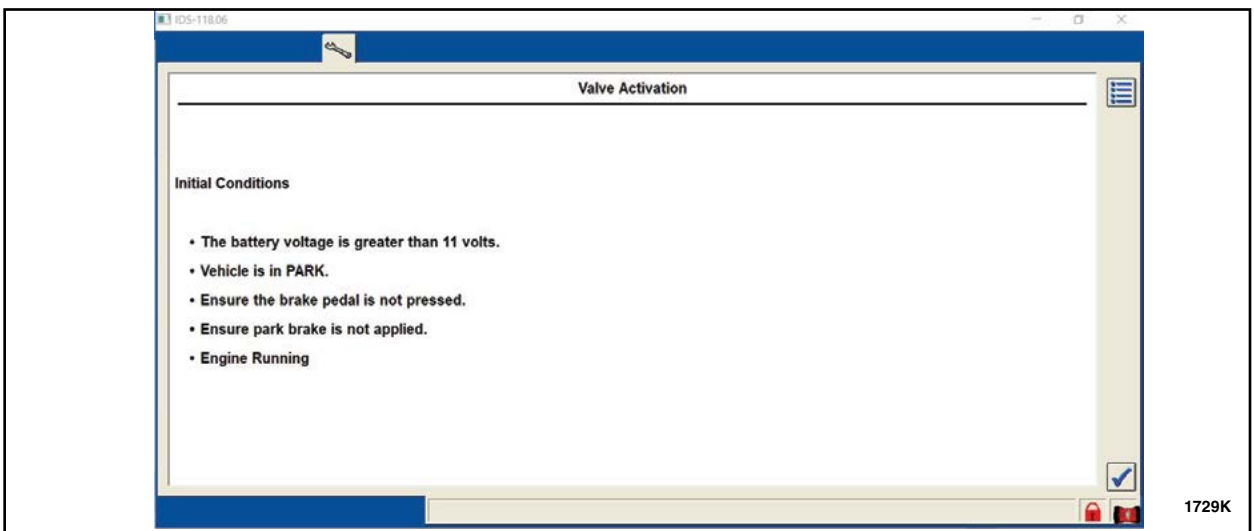


FIGURE 3



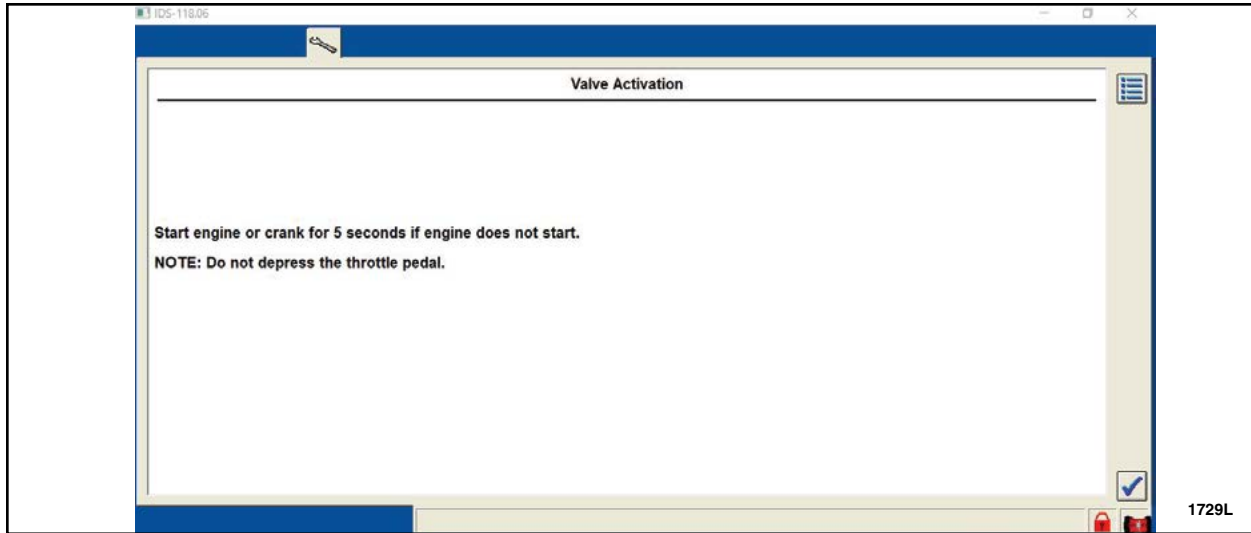


FIGURE 4

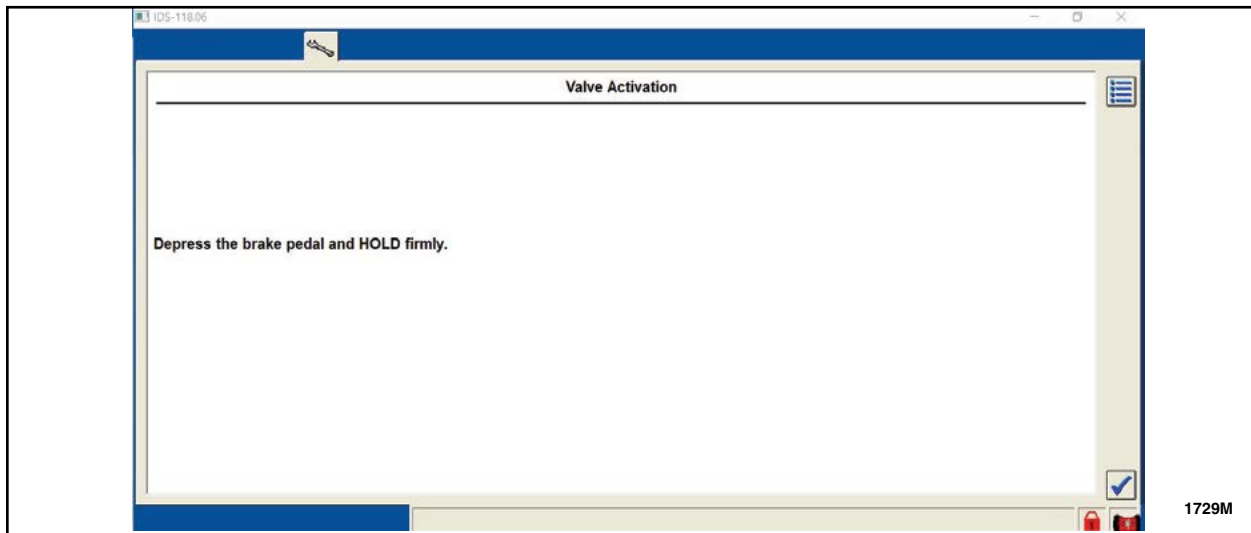
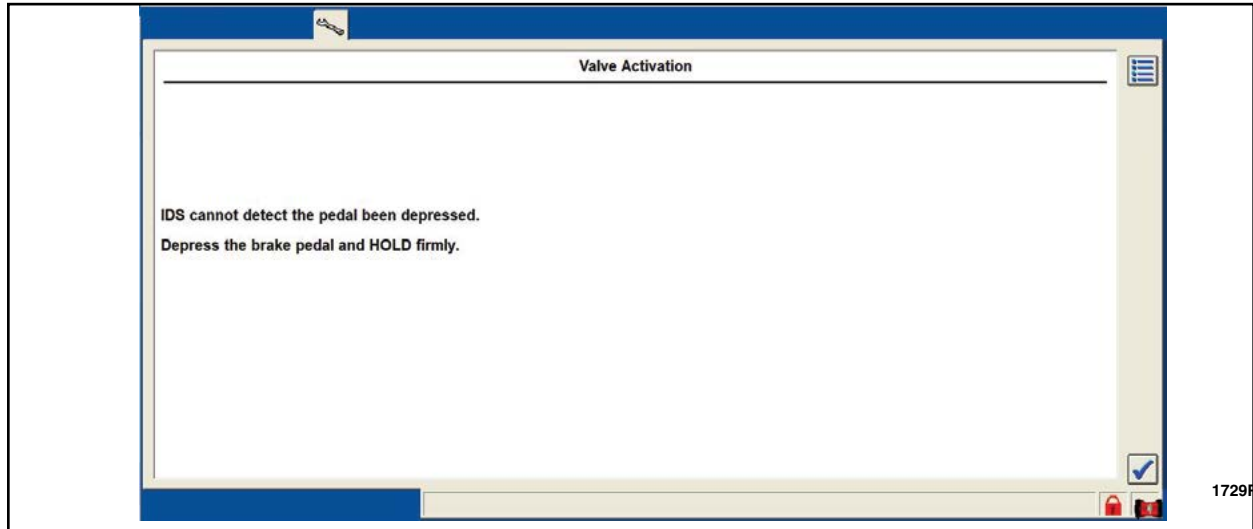


FIGURE 5

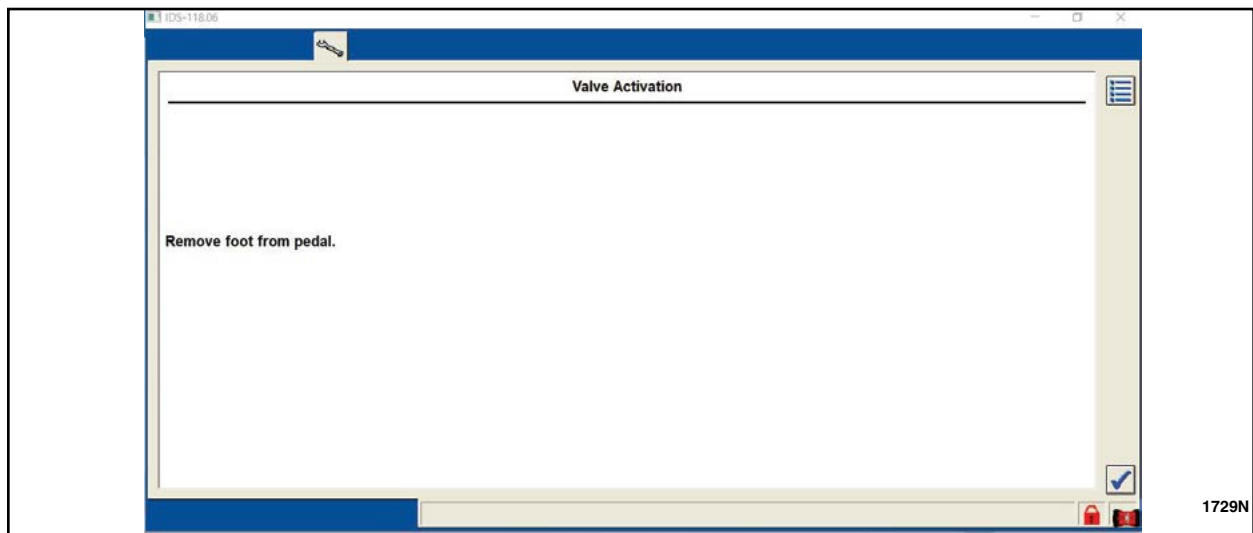


**NOTE:** Brake pedal must be depressed when prompted to complete the IDS routine, **if brake pedal is not depressed** you will receive a message prompting you to do so. See Figure 6.

**NOTE:** If brake pedal is depressed properly, Figure 6 **will not** apply.



**FIGURE 6**



**FIGURE 7**



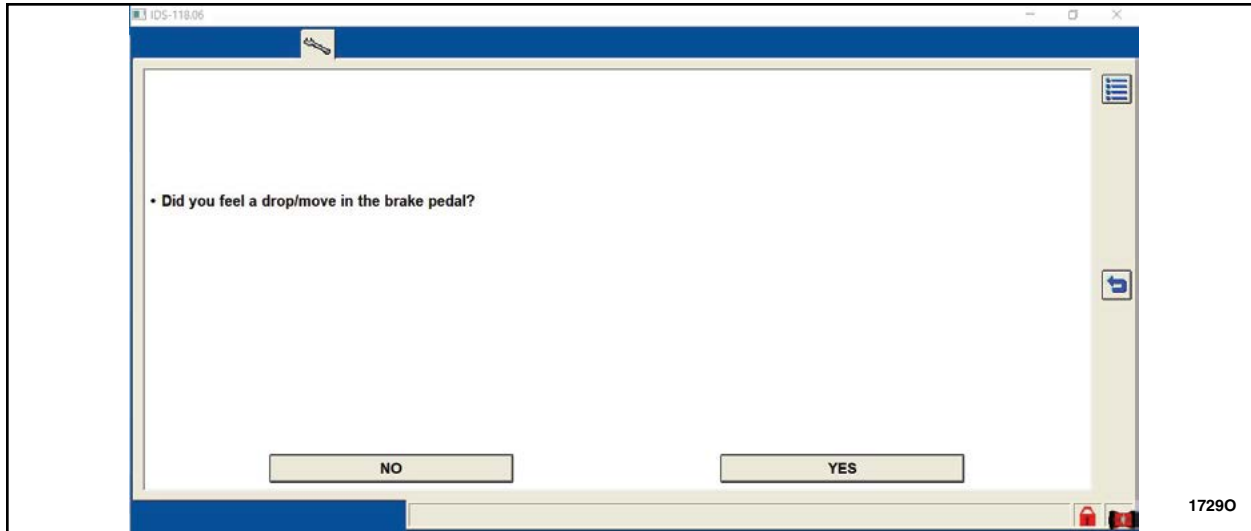


FIGURE 8

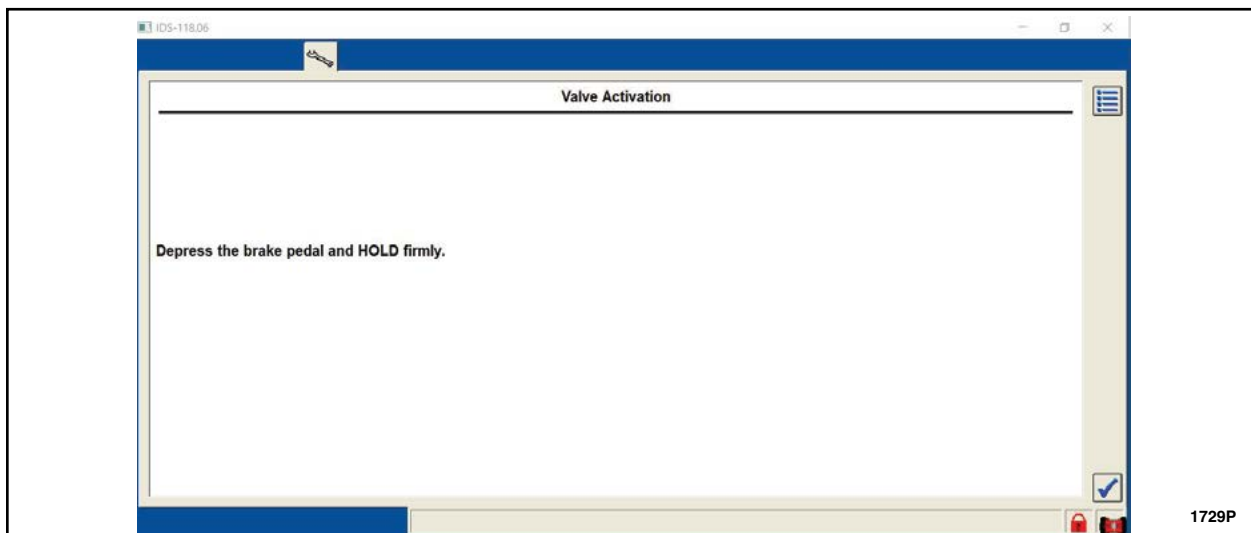


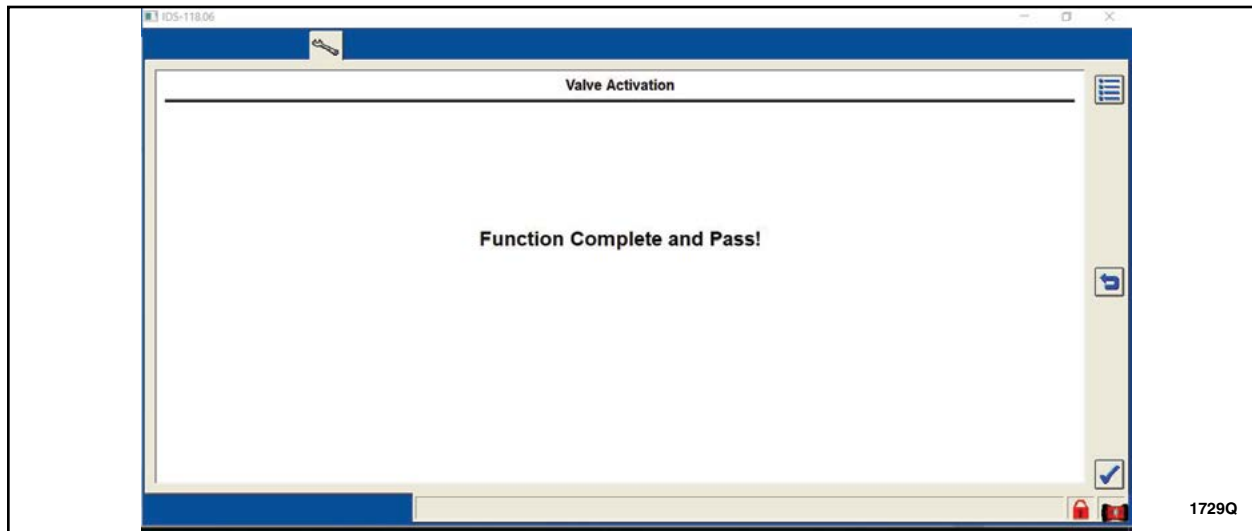
FIGURE 9



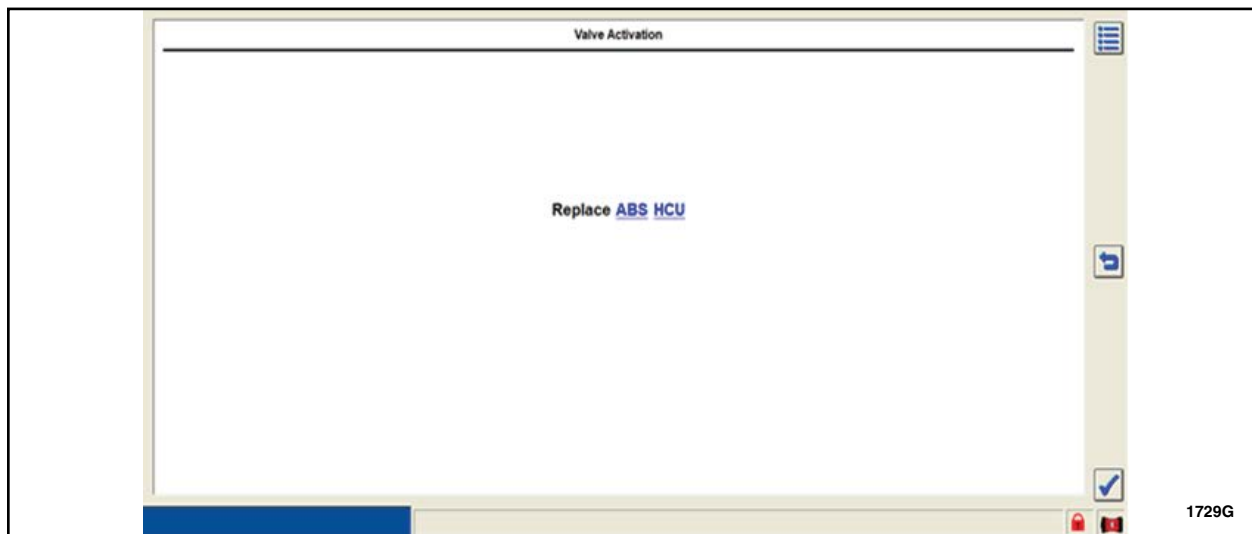


**NOTE:** At the end of the IDS routine, after the activation of the valves has completed a total number of four times, you will receive one of the two possible screens shown below determining if the IDS routine has passed or failed. See Figures 10 and 11.

**NOTE:** All IDS session files must be saved, requests for additional labor or related damage will be denied if they are not available upon request. Dealers may also be requested to upload IDS session files upon request to the Ford Technical Hotline server before SSSC approval is provided.



**FIGURE 10**



**FIGURE 11**



## INSPECTION RESULTS

1. Did the HCU pass inspection after the IDS routine was performed?

HCU Passes inspection - Proceed to Valve Activation PASSES IDS Routine, on Page 9.  
HCU Replacement Not Required.

HCU DOES NOT PASS inspection - Proceed to Valve Activation FAILS IDS Routine, on Page 14.  
This procedure will include the HCU Replacement procedure,  
and Brake Fluid Change Procedure.



## Valve Activation PASSES IDS Routine

**NOTE:** If the IDS routine ends with a Function Complete and Pass screen, See Figure 10 the brake system will need to have the DOT 3 brake fluid removed and replaced with DOT 4.

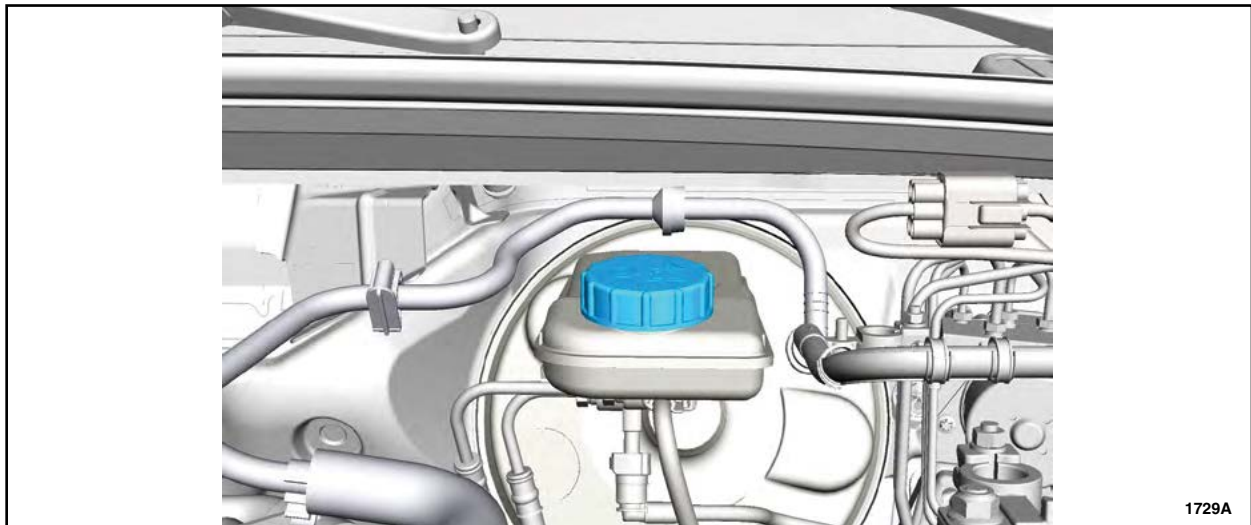
## Brake Fluid Change Procedure

1. With the vehicle in NEUTRAL, position it on a hoist. Please follow the Workshop Manual (WSM) procedures in section 100-02.

**NOTE:** The front and rear wheel tire assemblies will remain on the vehicle while bleeding the brake calipers.

**NOTE:** Make sure the area around the master cylinder reservoir cap is clean and free of foreign material.

2. Remove the master cylinder reservoir cap. See Figure 12.



**FIGURE 12**



- NEW !** 3. Using a suitable Brake/Clutch System Pressure Bleeder/Filler, such as the Flo-Dynamics® BrakeMate JR™ brake flush machine, install the bleeder adapter to the brake master cylinder reservoir and attach the bleeder tank hose to the fitting on the adapter.

**NOTE:** When using a suitable Brake/Clutch System Pressure Bleeder/Filler ensure that you are using the correct adapter cap. The cap should fit tight/snug on the brake master cylinder reservoir. To ensure a proper fit to the brake master cylinder while using the power bleeder, it is recommend to use **adapter 199-40100045 available through Rotunda** or adapter BA04 SP available through NORCO INDUSTRIES©. **The cap can be manually adjusted and tightened by moving the bands of the cap with your hands to further ensure a proper fit.** See Figure 13.



**FIGURE 13**

4. Adjust the pressure on the pressure bleeder machine to 30-50 psi (207-345 kPa).

**NOTE:** It may be necessary to adjust the pressure as required during the brake flushing procedure.

**NOTE:** It is not necessary to cycle the parking brake cable for this bleed procedure.

**NOTE:** For manual transmission vehicles it is not necessary to bleed the clutch slave cylinder for this procedure.

5. Remove the brake caliper bleeder screw covers and attach fluid capture reservoirs to all four brake caliper bleeder screws. See Figure 14.



NEW !

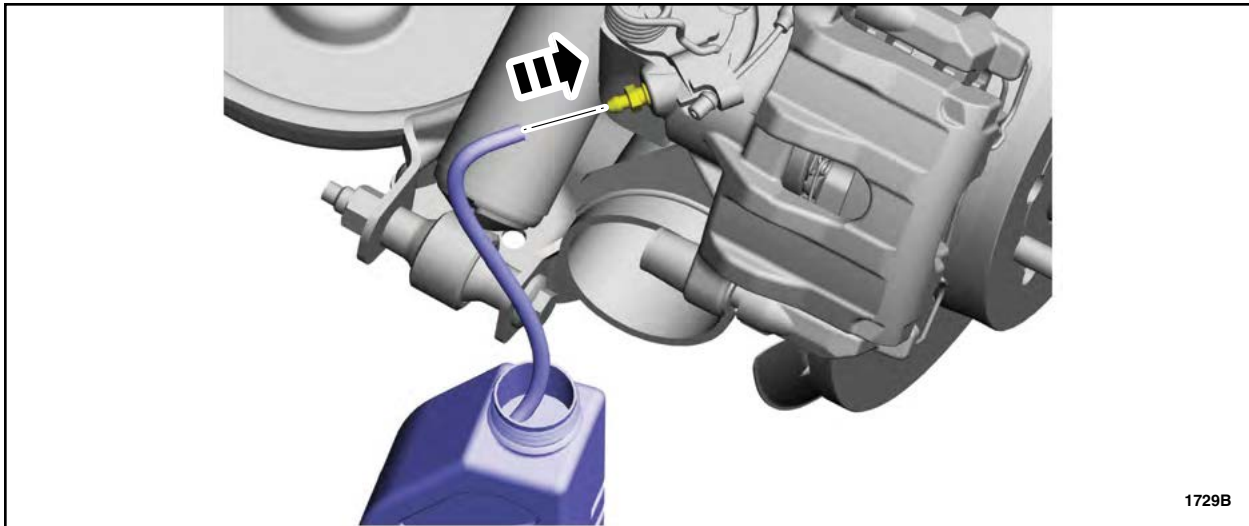


FIGURE 14

6. Loosen all four caliper bleeder screws in the order indicated. See Figure 15. Allow approximately 10 fl oz (295.7 mL) to drain from each bleeder screw, **one wheel at a time**.

- Once 10 fl oz (295.7 mL) of brake fluid has drained from each of the four caliper bleeder screws, tighten to 8 Nm (71 lb in).

**NOTE:** If the brake fluid is slow to drain from any of the four caliper bleeder screws, press the brake pedal once or twice to increase the flow while the pressure bleeder is still running, and then as required to drain the 10 fl oz (295.7mL).

**NOTE:** Two people are not required to complete this bleed procedure.

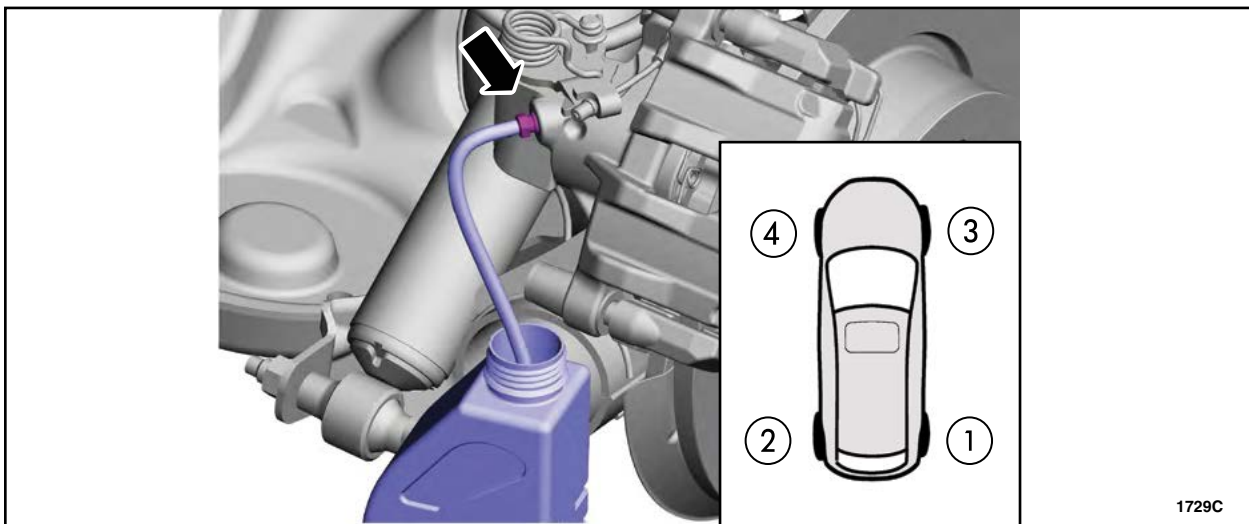


FIGURE 15



7. Turn off the pressure bleeding machine and remove the adapter cap from the master cylinder reservoir – The pressure bleeder will be used one last time for a final bleed after the next step (IDS Routine).
8. Verify the brake system connections are secure and functioning properly (master cylinder cap, bleeder screws, etc.) prior to performing the IDS Routine.

**NOTICE:** The Integrated Diagnostic Software (IDS) ABS service bleed procedure must be performed.

9. Select the "Tool Box" tab then "Chassis", "Braking" then "ABS Service Bleed". See Figure 16.

10. Follow the on screen prompts to complete the procedure.

- Using IDS perform the ABS service bleed a total of **TEN** times.

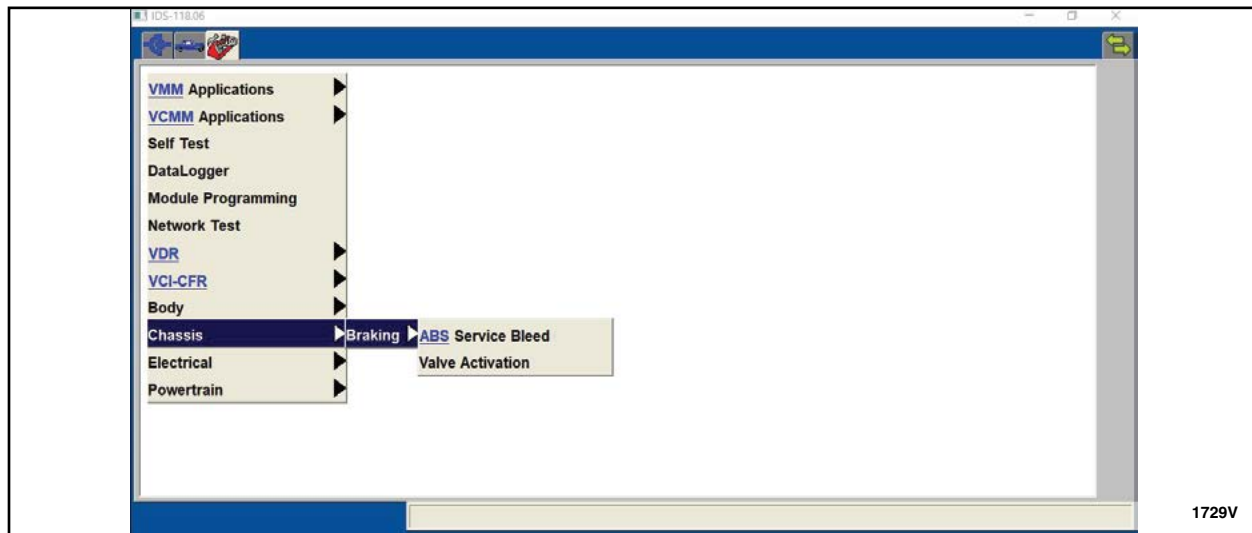


FIGURE 16

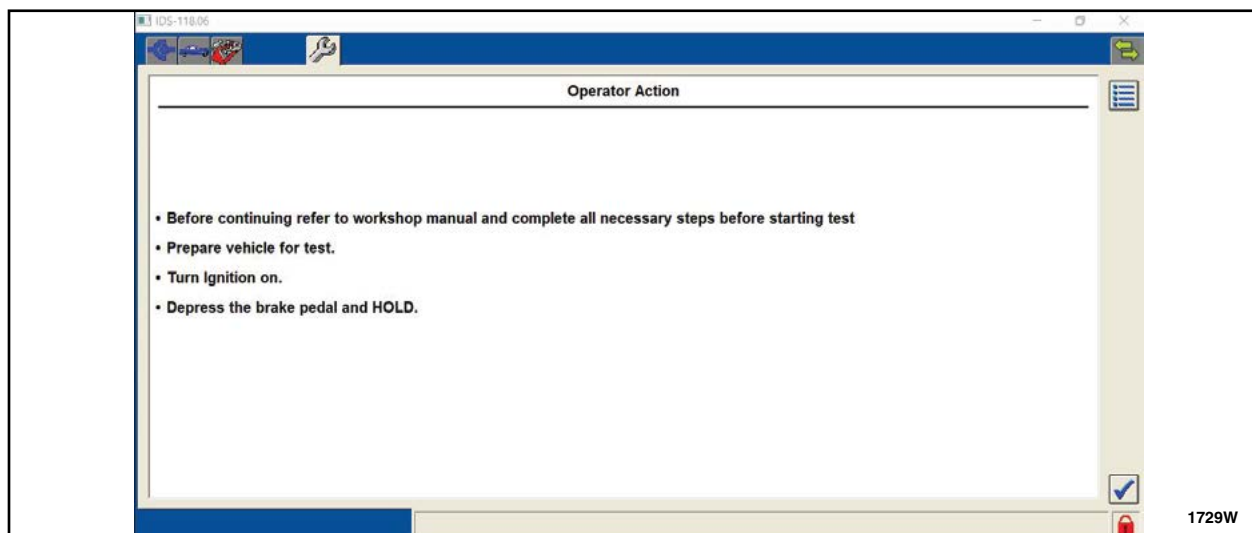
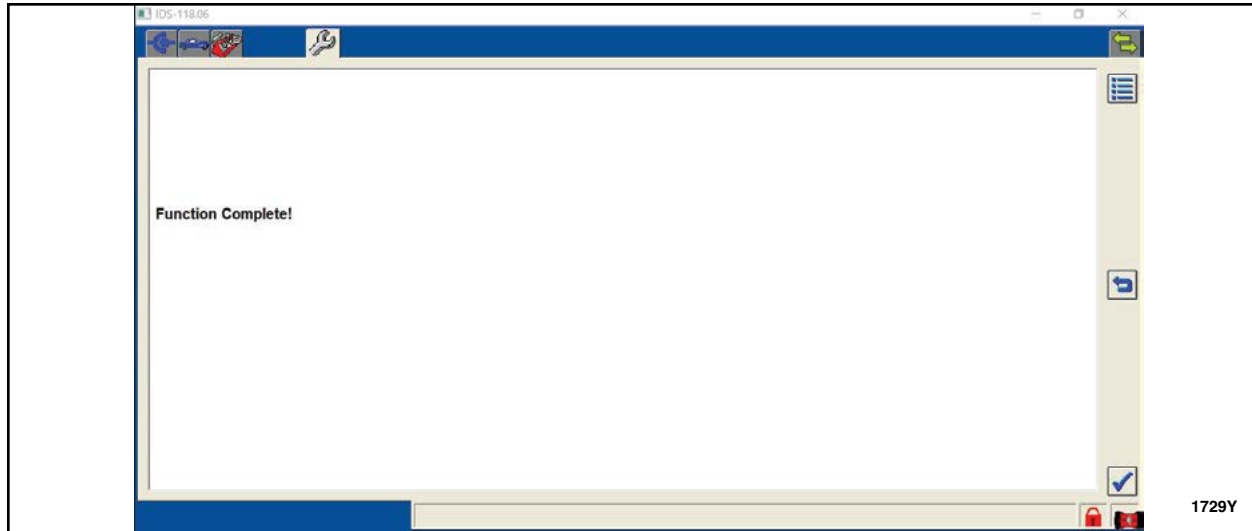


FIGURE 17



NEW !



**FIGURE 18**

11. Repeat the "Brake Fluid Change Procedure" (Steps 1 through 6, above), while bleeding an additional 2 to 3 oz. from each bleeder screw.
  - It is not necessary to perform the ABS service bleed during the secondary bleed.
12. Adjust the brake fluid level in the master cylinder reservoir to the "Max" line.
13. Reassemble the vehicle and ensure the vehicle is secure by reversing the removal procedure.
14. Replace master cylinder reservoir cap with *new* DOT 4 cap.
15. Before returning the keys to the customer, perform a road test to determine the status of the brake pedal. Since the vehicle passed the IDS service function test, there should be no deterioration in the brake pedal.
16. If the condition of the pedal is worse, or goes to the floor, this may be an indication that air has been introduced into the brake system:
  - Confirm that the ABS service bleed function in IDS see step 10 was completed a minimum of 10 times?
  - There is no need to perform the IDS service function repeatedly. Pass/Fail results do not indicate the HCU is the root cause, all other root causes must be properly eliminated.
  - It may be necessary to step outside these technical instructions and complete normal workshop manual diagnostics for low or spongy brake pedal to resolve a customer's concern.

**IMPORTANT NOTE: Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall. Unless a part is requested to be returned to Ford, all parts replaced under this FSA must be scrapped in accordance with all applicable local, state and federal environmental protection and hazardous material regulations. Refer to the Parts Retention, Return, & Scrapping section of the FSA dealer bulletin for further information.**



**NEW ! Valve Activation DOES NOT PASS IDS Routine**

**NOTE:** If the IDS routine ends with a Replace ABS HCU screen, See Figure 11. Documents will be required to be submitted to the SSSC prior to HCU Replacement.

**Required Submission for HCU Replacement Approval**

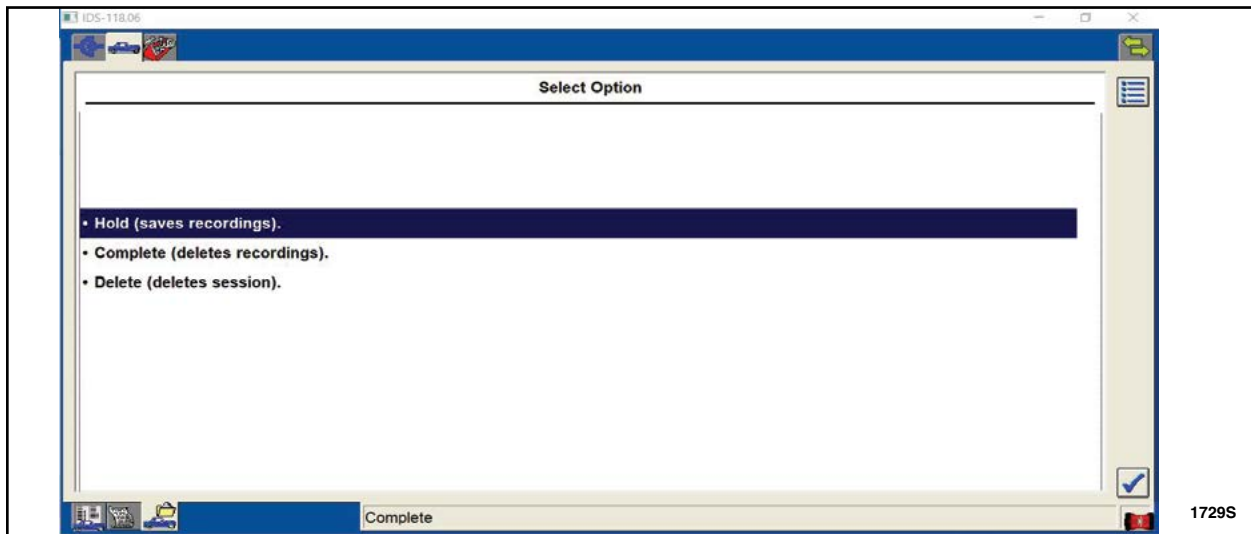
1. Send the following pictures to Special Service Support Center (SSSC) via the SSSC Web Contact Site:

- One picture of the odometer
- One picture of the Vehicle Certification (VC) Label showing the Vehicle Identification Number (VIN).
- IDS Log file in PDF format. See Figure 19 and 20.

- Due to software and network differences between dealers, consult your IT department or IT contact in your dealership for additional instructions.

**NOTE:** All IDS session files must be saved, requests for additional labor or related damage will be denied if they are not available upon request. Dealers may also be requested to upload IDS session files upon request to the Ford Technical Hotline server before SSSC approval is provided.

**IDS Log File**



**FIGURE 19**





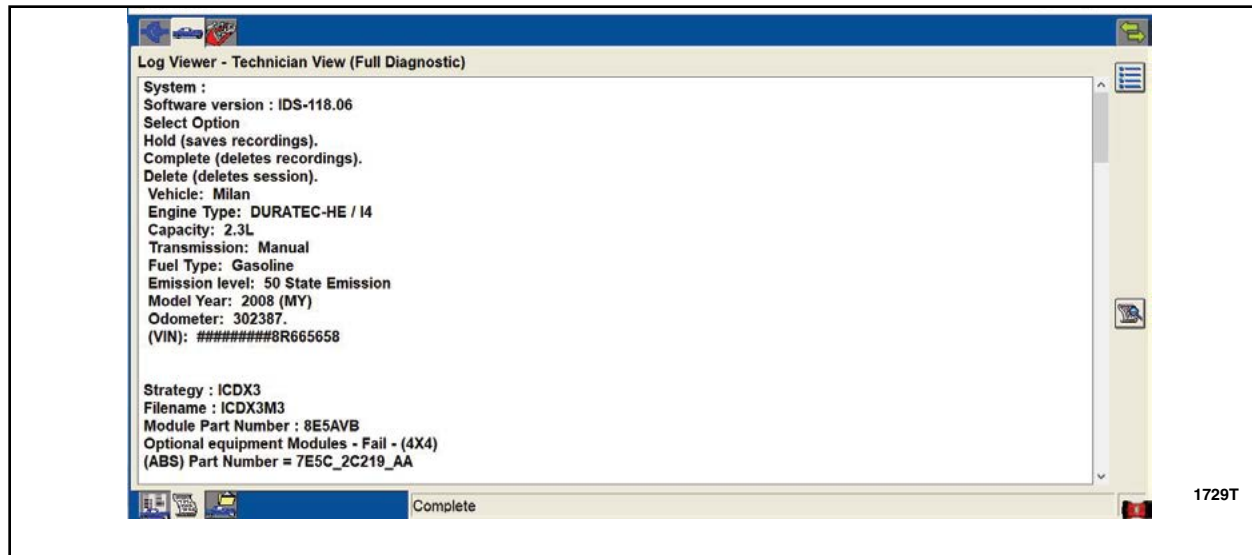


FIGURE 20

2. Proceed to HCU Replacement, after approval is given by the SSSC.

## Hydraulic Control Unit (HCU) Replacement

**WARNING:** Do not use any fluid other than clean brake fluid meeting manufacturer's specification. Additionally, do not use brake fluid that has been previously drained. Following these instructions will help prevent system contamination, brake component damage and the risk of serious personal injury.

**WARNING:** Carefully read cautionary information on product label. For EMERGENCY MEDICAL INFORMATION seek medical advice. In the USA or Canada on Ford/Motorcraft products call: 1-800-959-3673. For additional information, consult the product Material Safety Data Sheet (MSDS) if available. Failure to follow these instructions may result in serious personal injury.

**NOTICE:** Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, immediately wash it with water.

1. Remove the condenser-to-evaporator line and compressor manifold and tube bracket bolts.

- To install, tighten to 6 Nm (53 lb-in).

2. Position the engine coolant degas bottle aside.

1. If equipped, detach the wiring harness retainer from the degas bottle.
2. Remove the bolt.
  - To install, tighten to 9 Nm (80 lb-in).
3. Remove the nut.
  - To install, tighten to 9 Nm (80 lb-in).

**NOTE:** It is not necessary to evacuate, recover and remove the Air Conditioning (A/C) lines for this procedure.



3. Disconnect the ABS module electrical connector.

4. Disconnect the brake tube fittings.

- To install:
  - tighten the front and rear brake tube fittings to 20 Nm (177 lb-in).
  - tighten the master cylinder brake tube fittings to 27 Nm (20 lb-ft).

5. Remove the HCU bracket-to-HCU bolt.

- To install, tighten to 9 Nm (80 lb-in).

**NOTE:** Due to rust and corrosion the HCU bracket-to-HCU bolt and the HCU may be difficult to remove.

6. Remove the HCU.

**NOTE:** It is not necessary to remove the HCU bracket from vehicle to complete this procedure.

**NOTE:** Make sure the HCU and ABS module are clean and free of any brake fluid or foreign material before separating the components.

7. Transfer the ABS module and the two HCU to bracket grommet securement studs to the *new* HCU Valve Body.

8. To install the HCU, reverse the removal procedure.

9. Follow bleed procedure to remove DOT 3 from braking system and replace with DOT 4.

**NOTE:** For manual transmission vehicles it is not necessary to bleed the clutch slave cylinder for this procedure.



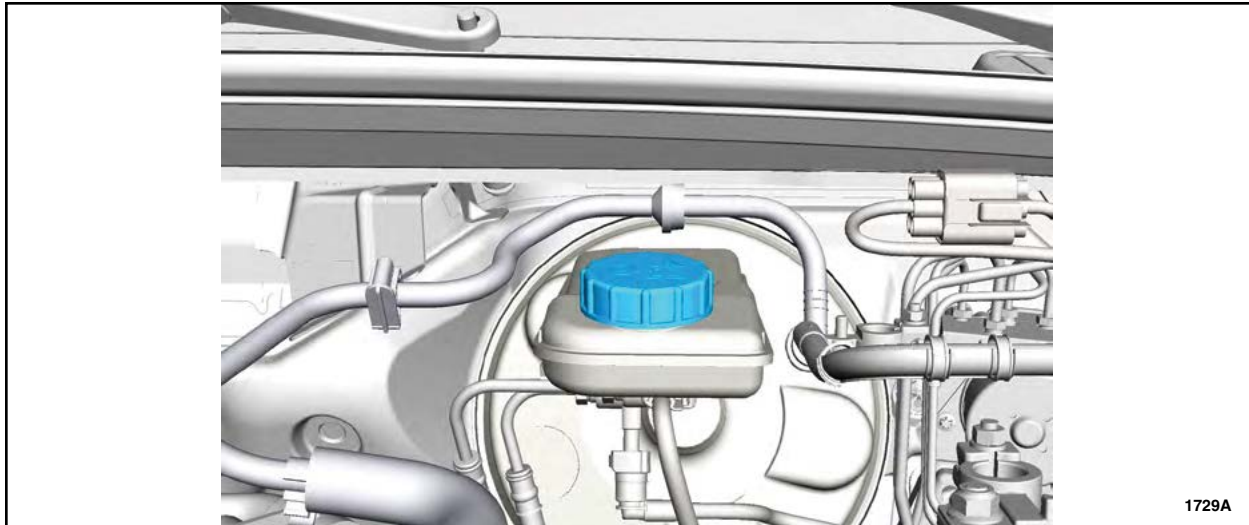
**NEW ! Brake Fluid Change Procedure**

1. With the vehicle in NEUTRAL, position it on a hoist. Please follow the Workshop Manual (WSM) procedures in section 100-02.

**NOTE:** The front and rear wheel tire assemblies will remain on the vehicle while bleeding the brake calipers.

**NOTE:** Make sure the area around the master cylinder reservoir cap is clean and free of foreign material.

2. Remove the master cylinder reservoir cap. See Figure 21.



**FIGURE 21**

3. Using a suitable Brake/Clutch System Pressure Bleeder/Filler, such as the Flo-Dynamics® BrakeMate JR™ brake flush machine, install the bleeder adapter to the brake master cylinder reservoir and attach the bleeder tank hose to the fitting on the adapter.

**NOTE:** When using a suitable Brake/Clutch System Pressure Bleeder/Filler ensure that you are using the correct adapter cap. The cap should fit tight/snug on the brake master cylinder reservoir. To ensure a proper fit to the brake master cylinder while using the power bleeder, it is recommend to use [adapter 199-40100045 available through Rotunda](#) or adapter BA04 SP available through NORCO INDUSTRIES®. The cap can be manually adjusted and tightened by moving the bands of the cap with your hands to further ensure a proper fit. See Figure 22.



NEW !



FIGURE 22

4. Adjust the pressure on the pressure bleeder machine to 30-50 psi (207-345 kPa).

**NOTE:** It may be necessary to adjust the pressure as required during the brake flushing procedure.

**NOTE:** It is not necessary to cycle the parking brake cable for this bleed procedure.

5. Remove the brake caliper bleeder screw covers and attach fluid capture reservoirs to all four brake caliper bleeder screws. See Figure 23.

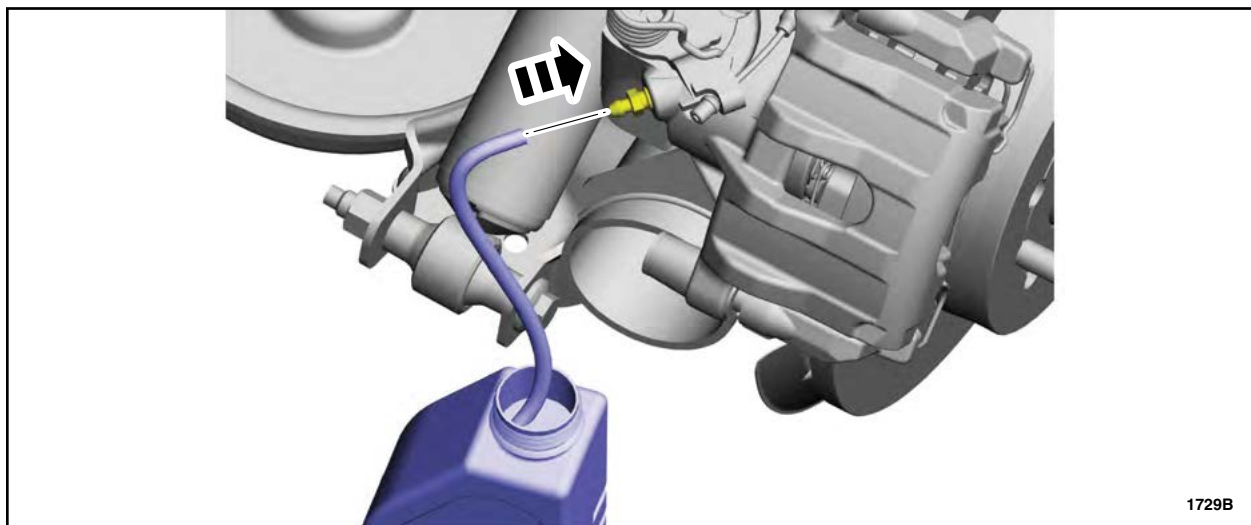


FIGURE 23



**NEW !** 6. Loosen all four caliper bleeder screws in the order indicated. See Figure 24. Allow approximately 10 fl oz (295.7 mL) to drain from each bleeder screw **one wheel at a time**.

- Once 10 fl oz (295.7 mL) of brake fluid has drained from each of the four caliper bleeder screws, tighten to 8 Nm (71 lb in).

**NOTE:** If the brake fluid is slow to drain from any of the four caliper bleeder screws, press the brake pedal once or twice to increase the flow while the pressure bleeder is still running, and then as required to drain the 10 fl oz (295.7mL).

**NOTE:** Two people are not required to complete this bleed procedure.

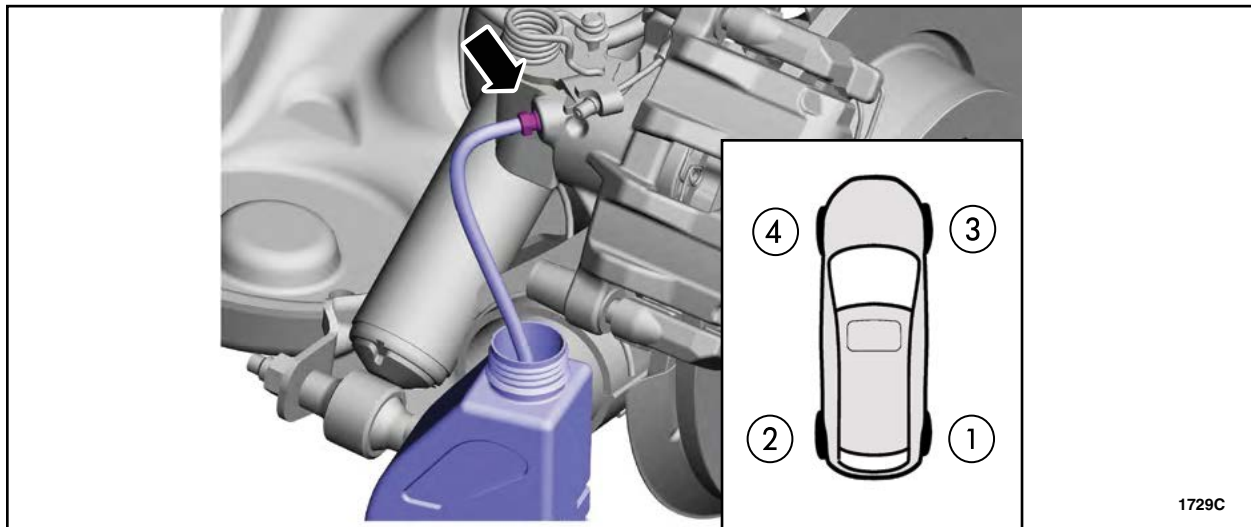


FIGURE 24



7. Turn off the pressure bleeding machine and remove the adapter cap from the master cylinder reservoir – The pressure bleeder will be used one last time for a final bleed after the next step (IDS Routine).
8. Verify the brake system connections are secure and functioning properly (master cylinder cap, bleeder screws, etc.) prior to performing the IDS Routine.

**NOTICE:** The Integrated Diagnostic Software (IDS) ABS service bleed procedure must be performed.

9. Select the "Tool Box" tab then "Chassis", "Braking" then "ABS Service Bleed". See Figure 25.

10. Follow the on screen prompts to complete the procedure.

- Using IDS perform the ABS service bleed a total of **FIVE** times.

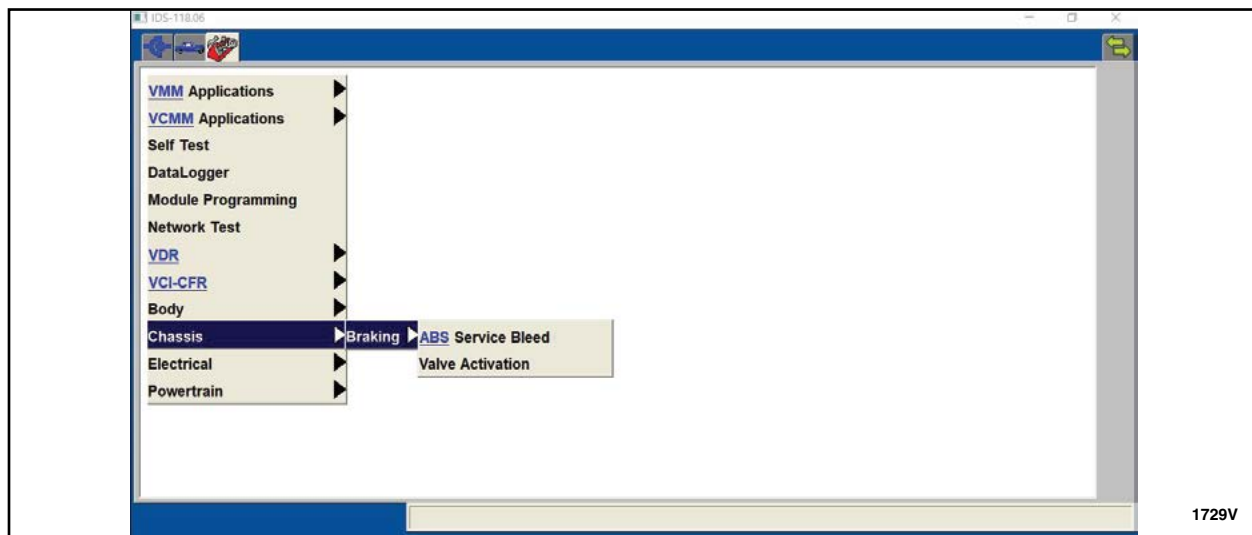


FIGURE 25

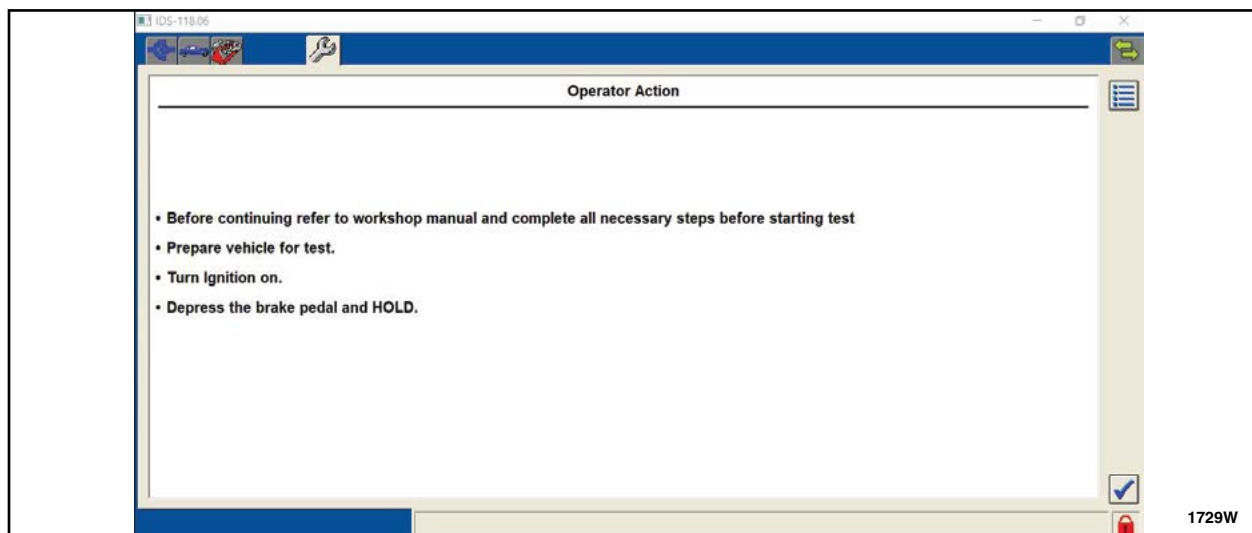
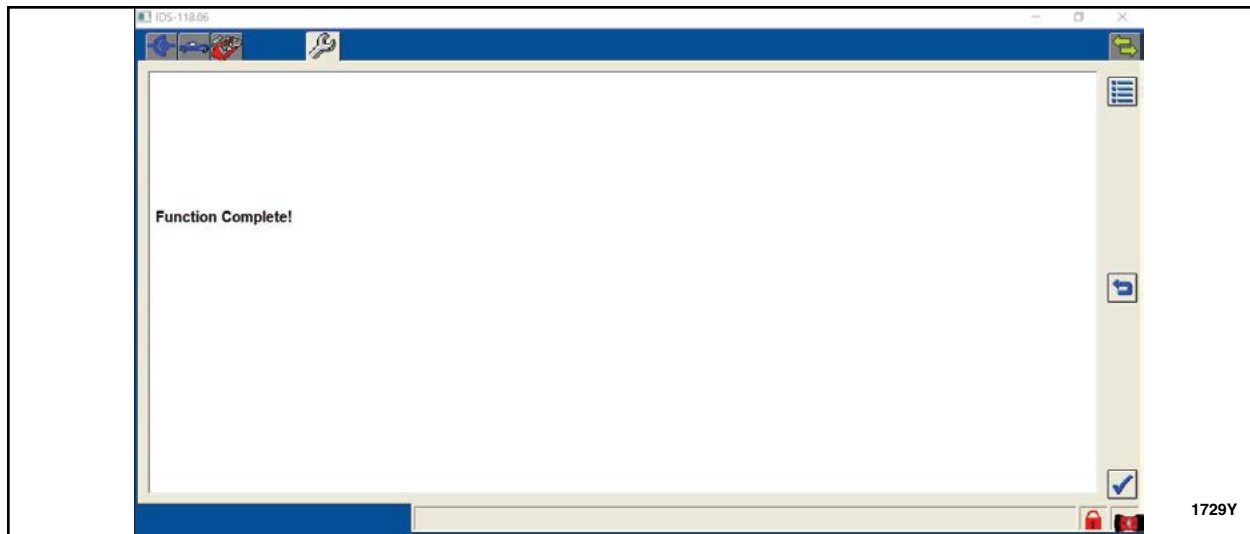


FIGURE 26





**FIGURE 27**

11. Repeat the "Brake Fluid Change Procedure" (Steps 1 through 6, above), while bleeding an additional 2 to 3 oz. from each bleeder screw.
  - It is not necessary to perform the ABS service bleed during the secondary bleed.
12. Adjust the brake fluid level in the master cylinder reservoir to the "Max" line.
13. Reassemble the vehicle and ensure the vehicle is secure by reversing the removal procedure.
14. Replace master cylinder reservoir cap with *new* DOT 4 cap.
15. Perform a Road Test to see if the brake pedal improves or returns to initial condition.
16. If the condition of the pedal is not improved or worsened, contact the SSSC for further direction and approval.
  - Low or spongy brake pedal.
  - Slow or incomplete brake pedal return.

**IMPORTANT NOTE: Federal law prohibits selling motor vehicle parts or components that are under safety, compliance, or emissions recall. Unless a part is requested to be returned to Ford, all parts replaced under this FSA must be scrapped in accordance with all applicable local, state and federal environmental protection and hazardous material regulations. Refer to the Parts Retention, Return, & Scrapping section of the FSA dealer bulletin for further information.**





**Ford Motor Company**  
**Recall Reimbursement Plan for 19S54**

*Ford and Lincoln dealers are in the best position to quickly and efficiently process reimbursement requests. However, federal legislation requires all motor vehicle manufacturers to establish processes through which customers may seek recall reimbursement directly from the manufacturer or from the dealers.*

*Regarding the specific reimbursement plan for Recall # 19S54, owners who have paid for service to remedy the defect or noncompliance must have had that service performed prior to April 15, 2021. After this date, if repairs related to this recall are performed by a non-Ford repair facility in an emergency situation, customers must submit any refund requests through their dealership. As required by this federal regulation, Ford Motor Company submitted the details of its latest General Recall Reimbursement Plan in a letter to the National Highway Traffic Safety Administration (NHTSA) in February 2019. The following is the text of that letter and the Plan:*

**General Recall Reimbursement Plan**  
(As submitted to the NHTSA)

Pursuant to the requirements set forth in 49 CFR Part 573 and Part 577 of the Code of Federal Regulations, Ford Motor Company (Ford) is submitting required information pertaining to our general reimbursement plan for the cost of remedies paid for by vehicle owners before they are notified of a related safety recall.

Set forth below is Ford's general plan to reimburse owners and purchasers for costs incurred for remedies in advance of notification of potential safety-related defects or noncompliances pursuant to Part 573.6 (c)(8)(i). This plan has not changed since our February 20, 2019 submission.

**Reimbursement Notification**

Ford's notice to a vehicle owner in accordance with 49 CFR Part 577 will indicate that Ford is offering a refund if the owner paid to have service to remedy the defect or noncompliance prior to a specified ending date. In accordance with Part 573.13 (c)(2), this ending date will be defined as a minimum of ten calendar days after the date on which Ford mailed the last of its Part 577 notifications to owners, and will be indicated in the specific reimbursement plan available to owners for an individual recall. This notice will direct owners to seek eligible reimbursement through authorized dealers or, at their option, directly through Ford at the following address:

Ford Motor Company  
P.O. Box 6251  
Dearborn, MI 48121-6251

Ford notes that this rule allows for the identification of a beginning date for reimbursement eligibility. Under the rule, an owner who paid to remedy the defect or noncompliance prior to the identified beginning date would not be eligible for reimbursement. Ford generally has not established such a beginning date for reimbursement eligibility and does not presently anticipate changing this general policy. However, in any case where Ford determines a beginning date is appropriate, Ford will indicate that date in the owner notice. As permitted by 577.11(e), Ford may not include a reimbursement notification when all vehicles are well within the warranty period, subject to approval by the agency.



## **Costs to be Reimbursed**

For vehicles, reimbursement will not be less than the lesser of:

- The amount paid by the owner for the remedy that specifically addressed and was reasonably necessary to correct the defect or noncompliance that is the subject of the recall, or
- The cost of parts for the remedy (to be no more than the manufacturer's list retail price for authorized part(s), plus associated labor at local labor rates, miscellaneous fees (such as disposal of waste) and taxes.

For replacement equipment, reimbursement will be the amount paid by the owner for the replacement item (limited by the amount of the retail list price of the defective or noncompliant item that was replaced, plus taxes, where the brand or model purchased by the owner was different than the brand or model that was the subject of the recall). If the item of motor vehicle equipment was repaired, the reimbursement provisions identified above for vehicles will apply.

Ford notes that costs incurred by the owner within the period during which Ford's original or extended warranty would have provided for a free repair of the problem will not be eligible for reimbursement, as provided by Part 573.13 (d)(1).

### Entities Authorized to Provide Reimbursement

Ford will continue to use authorized dealers to reimburse owners under the specific reimbursement plans for a particular recall, and will encourage owners to pursue requests for reimbursement directly through dealers to expedite reimbursement. Ford will also provide a mailing address to which customers can, at their option, send requests for reimbursement directly to Ford, as previously noted. Requests for reimbursement sent directly to Ford may take up to 60 days to process. Whether the owner chooses to pursue reimbursement requests through a dealer or directly through Ford, the owner will be directed to submit the required documentation, upon which reimbursement eligibility will be determined.

## **Required Documentation**

The reimbursement determination will depend upon the information provided by the customer. Consistent with Part 573.13 (d)(4) the following information must be submitted:

- Claimant name and address
- Vehicle make, model, and model year
- Vehicle identification number (VIN) and, for replacement equipment, a description of such equipment or, for tires, the model, size and TIN (DOT code)
- Identification of the recall number (either the Ford recall number or the NHTSA recall number)
- Identification of the owner of the recalled vehicle at the time that the pre-notification remedy was obtained
- An original receipt for the pre-notification remedy that includes a breakdown of the amount for parts, labor, other costs and taxes, including costs for the replacement item. Where the receipt covers work other than to address the recall or noncompliance, Ford may require the claimant to separately identify costs that are eligible for reimbursement.
- If the remedy was obtained during the warranty period, documentation indicating that the warranty was not honored or the warranty repair did not correct the problem related to the recall.

Failure to submit all of the above information may result in denial of the reimbursement request.

## **Additional Information**

The Part 577 required owner notice will provide a toll-free telephone number through which specific information about the reimbursement plan can be requested from Ford. This general reimbursement plan will be incorporated into notifications pursuant to Part 573.6 by reference. Information specific to an individual recall also may be incorporated into the Part 573.6 notification.