



TECHNICAL SERVICE BULLETIN

DRW - 17 Inch Aluminum Front Wheels Leaking Air At Valve Stem

22-2389

17 October
2022

Model:

Ford 2017-2020 F-Super Duty

Issue: Some 2017-2020 F-Super Duty vehicles equipped with dual rear wheels (DRW) and 17 inch aluminum wheels may exhibit a loss of tire pressure from the valve stem sealing area of the front wheels. This may be due to corrosion of the wheel preventing the valve stem from sealing properly. To correct the condition, follow the Service Procedure to clean the corrosion from the valve stem sealing area of the affected wheel.

Action: Follow the Service Procedure to correct the condition on vehicles that meet all of the following criteria:

- 2017-2020 F-Super Duty
- Equipped with DRW and 17 inch aluminum wheels
- Exhibits a loss of tire pressure from the valve stem sealing area of the front wheels

Parts

Service Part Number	Quantity	Description	Note
F2GZ-1700-D	1	Tire Valve Stem	
ZC-42	As Needed	Motorcraft® Bug And Tar Remover	
ZC-31-B	As Needed	Motorcraft® Metal Surface Prep Wipes	
DAGWHL SVC-A	1	Rotunda Technician Tools Program (RTTP) Special Tool Kit	1 kit will service 2 front wheels, order from www.rotundatechtools.com
Obtain Locally	As Needed	Isopropyl Alcohol	
Obtain Locally	As Needed	Shop Rags	
Obtain Locally	As Needed	Nitrile Gloves	

Warranty Status: Eligible under provisions of New Vehicle Limited Warranty (NVLW)/Service Part Warranty (SPW)/Special Service Part (SSP)/Extended Service Plan (ESP) coverage. Limits/policies/prior approvals are not altered by a TSB. NVLW/SPW/SSP/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

Labor Times

Description	Operation No.	Time
2021 F-Super Duty DRW: Clean Corrosion From One (1) Front Wheel Following The Service Procedure (Do Not Use With Any Other Labor Operations)	222389A	1.0 Hrs.
2021 F-Super Duty DRW: Clean Corrosion From Both (2) Front Wheels Following The Service Procedure (Do Not Use With Any Other Labor Operations)	222389B	1.9 Hrs.

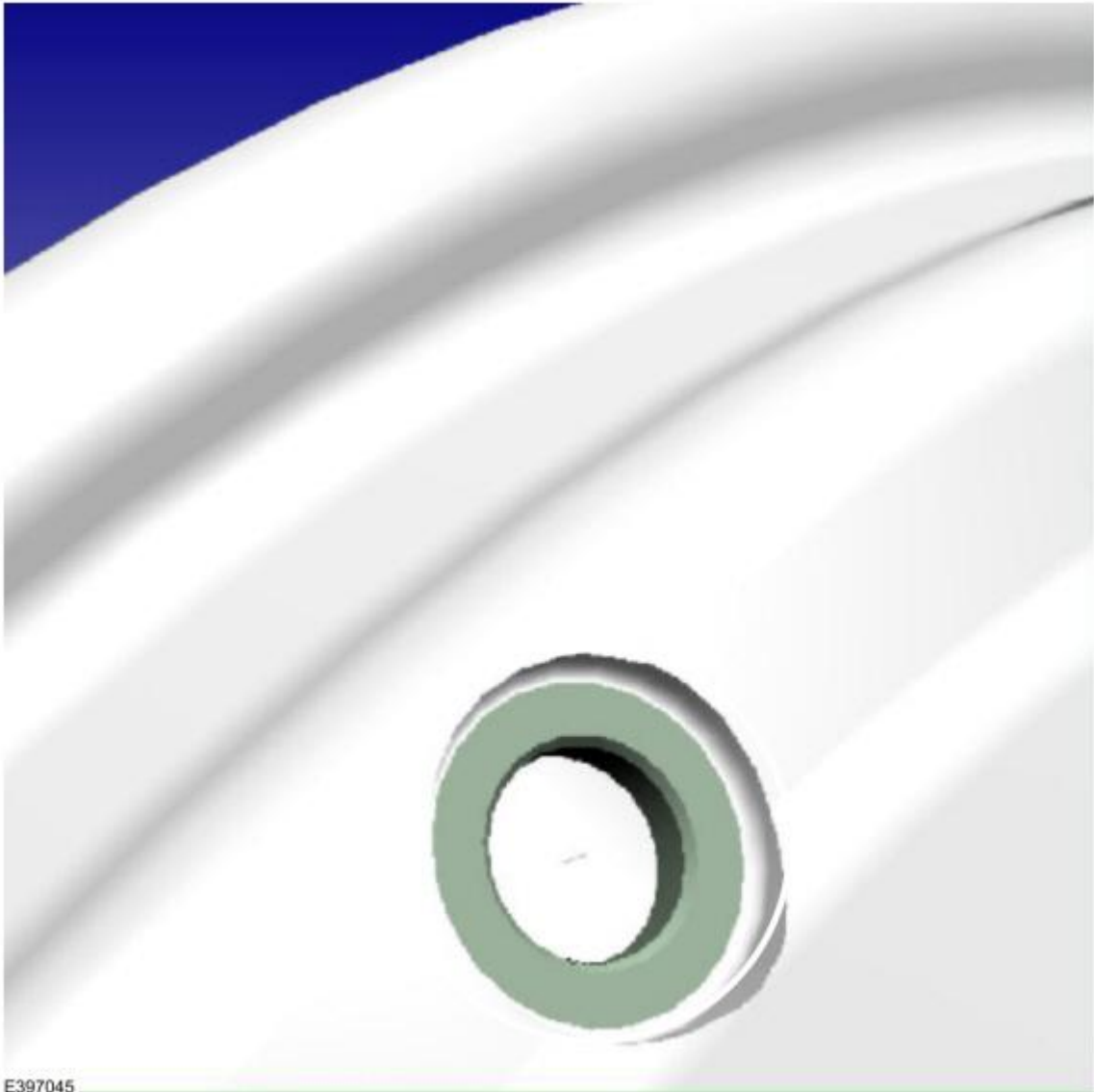
Repair/Claim Coding

Causal Part:	1007
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Service Procedure

NOTE: This repair procedure will remove superficial corrosion from the 3 valve stem contact surfaces shown in green. (Figure 1)

Figure 1 - Valve hole surfaces



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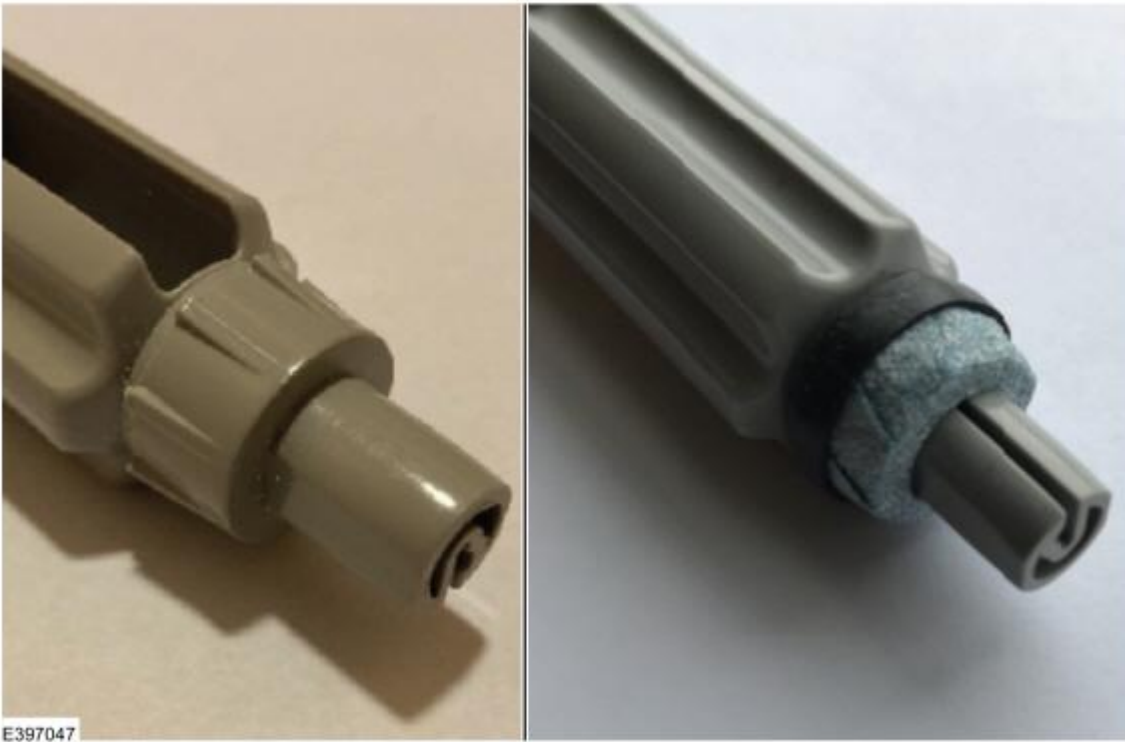
NOTE: If the wheel coating has delaminated across the line, this article does not apply. Replace the wheel. (Figure 2)

Figure 2 - Excessive corrosion



1. Mark the original position of the tire on the wheel with a grease pencil to avoid needing to rebalance the wheel and tire assembly after repairing. Do not remove clip-on wheel balance weights. Disassemble the affected front wheel and tire, remove the tire pressure monitoring system (TPMS) sensor, and remove the valve stem. Refer to Workshop Manual (WSM), Section 204-04.
2. Thoroughly clean both sides of the valve stem hole of the wheel with a clean shop rag and Motorcraft® Bug and Tar Remover.
3. Place 100 grit blue abrasive paper disc over the counterbore (flat) side of the special tool and secure with elastic band. Position the elastic band close to the tool handle to avoid contact with the wheel surface.(Figure 3)

Figure 3



4. Place 100 grit blue abrasive paper sleeve over the end of the counterbore side of the special tool and secure by inserting the tension pin until it contacts the bottom of the hole. (Figure 4)

Figure 4

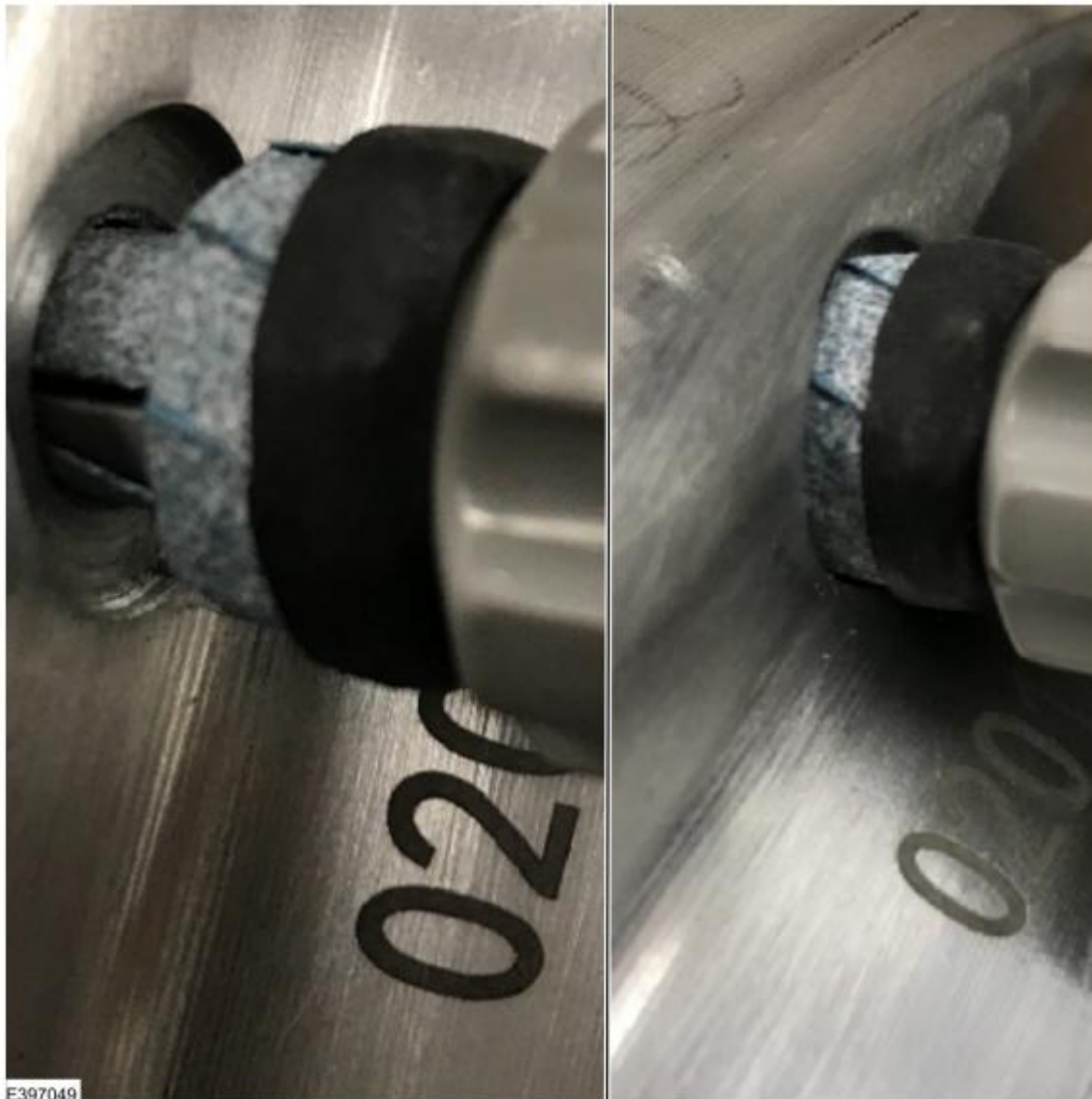


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5. Slowly feed the abrasive paper sleeve into the valve stem hole from the inside (tire side) of the wheel, rotating counterclockwise until the tool is seated. Make sure the abrasive paper sleeve and disc remain in position throughout the procedure. (Figures 5)

(1). Always turning tool counterclockwise, slowly feed sleeve part way into valve hole, remove, clean and repeat. For tighter fits, to avoid tearing sleeve, this partial in and out process will need to be repeated a number of times before tool will fully seat in the valve hole.

Figure 5



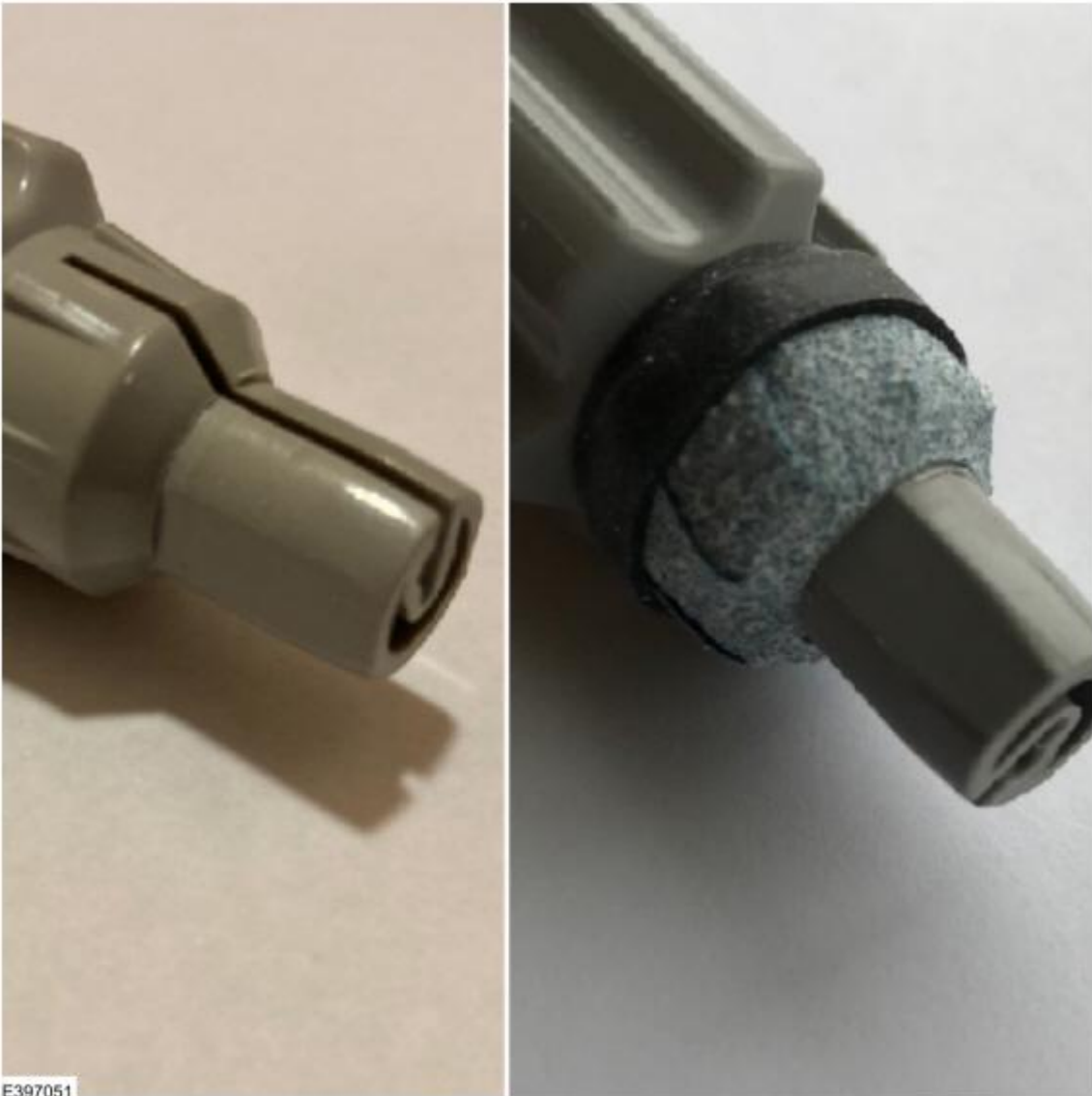
6. Using moderate pressure, rotate the tool counterclockwise 2 or 3 revolutions.
 7. Remove the tool from the wheel by slowly rotating the tool counterclockwise.
 8. Wipe away debris on the counterbore surface and valve stem bore with a clean dry shop rag. Tap away all debris from the tool, abrasive sleeve, and disc.
 9. Repeat Steps 5-8 until the corrosion is removed from the valve stem bore and the counterbore surface of the inside of the wheel.
 10. Remove the tension pin and 100 grit blue abrasive paper sleeve and set aside for future use. Remove the elastic band and 100 grit blue abrasive paper disc and discard the disc. Clean any debris from the special tool.
- NOTE: Steps 11-31 of this article should be performed in a timely manner. Gather isopropyl alcohol, clean shop rags, nitrile gloves and Motorcraft™ Metal Surface Prep Wipes prior to Step 11.**
11. Place 120 grit red abrasive paper disc over the end of the counterbore side of the special tool and secure with the elastic band. Position the elastic band close to the tool handle to avoid contact with the wheel surface.
 12. Place previously used 100 grit blue abrasive paper sleeve over the end of the counterbore side of the special tool and secure by inserting the tension pin until it contacts the bottom of the hole.
 13. Slowly feed the abrasive paper sleeve into the valve stem hole from the inside (tire side) of the wheel, rotating counterclockwise until the tool is seated. Make sure the abrasive paper sleeve and disc remain in position throughout the procedure. (Figure 6)

Figure 6



14. Using moderate pressure, rotate the tool counterclockwise 2 or 3 revolutions.
15. Remove the tool from the wheel by slowly rotating the tool counterclockwise.
16. Wipe away debris on the counterbore surface and valve stem bore with a clean dry shop rag. Tap away all debris from the tool, abrasive sleeve and disc.
17. Place 100 grit blue abrasive paper disc over the end of the angled chamfer side of the special tool and secure with the elastic band. (Figures 7)

Figure 7

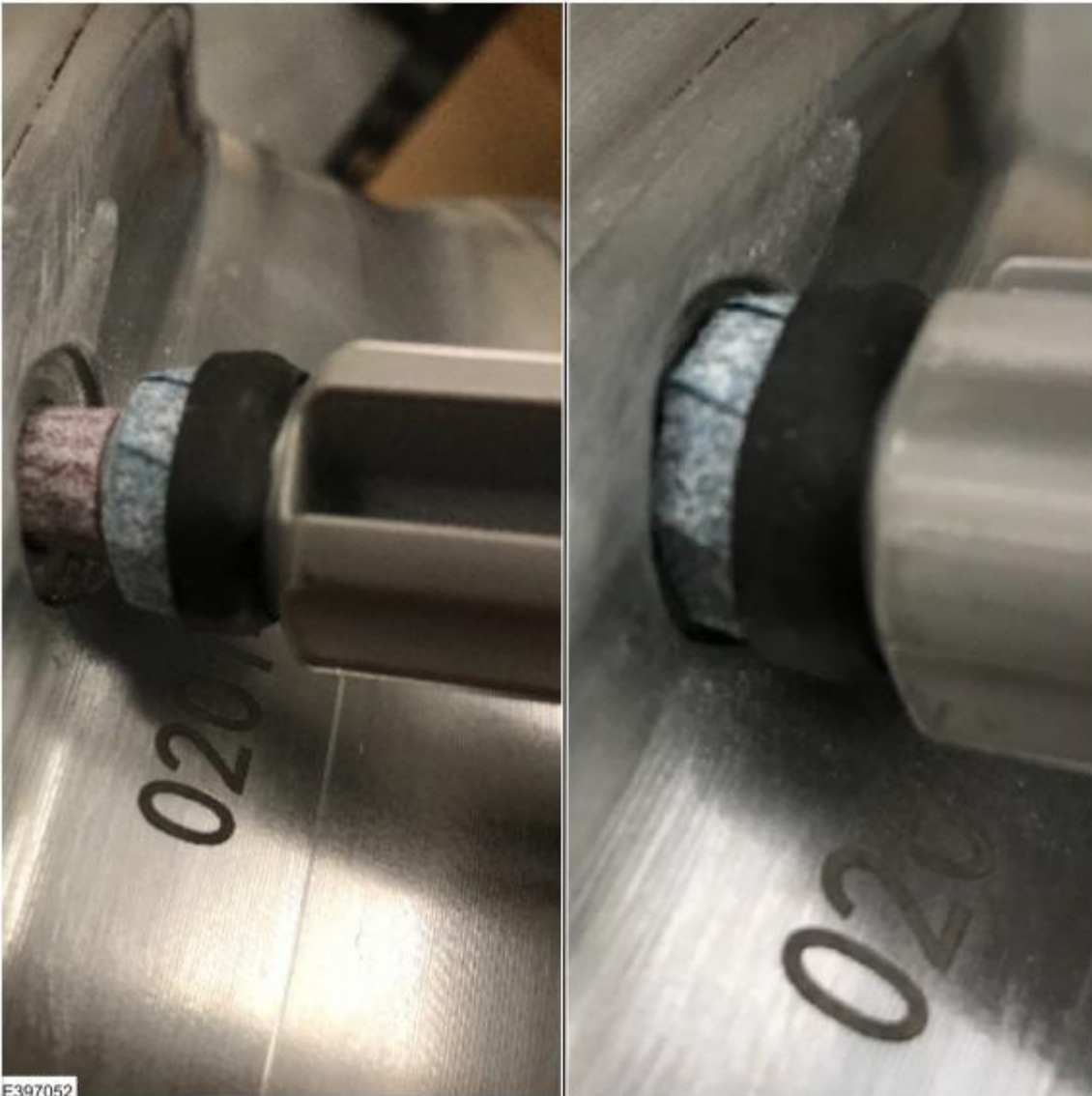


18. Place 120 grit red abrasive paper sleeve over the end of the chamfer side of the special tool and secure by inserting the tension pin until it contacts the bottom of the hole.

19. Slowly feed the abrasive paper sleeve into the valve stem hole from the inside (tire side) of the wheel, rotating counterclockwise until the tool is seated. Make sure the abrasive paper sleeve and disc remain in position throughout the procedure. (Figure 8)

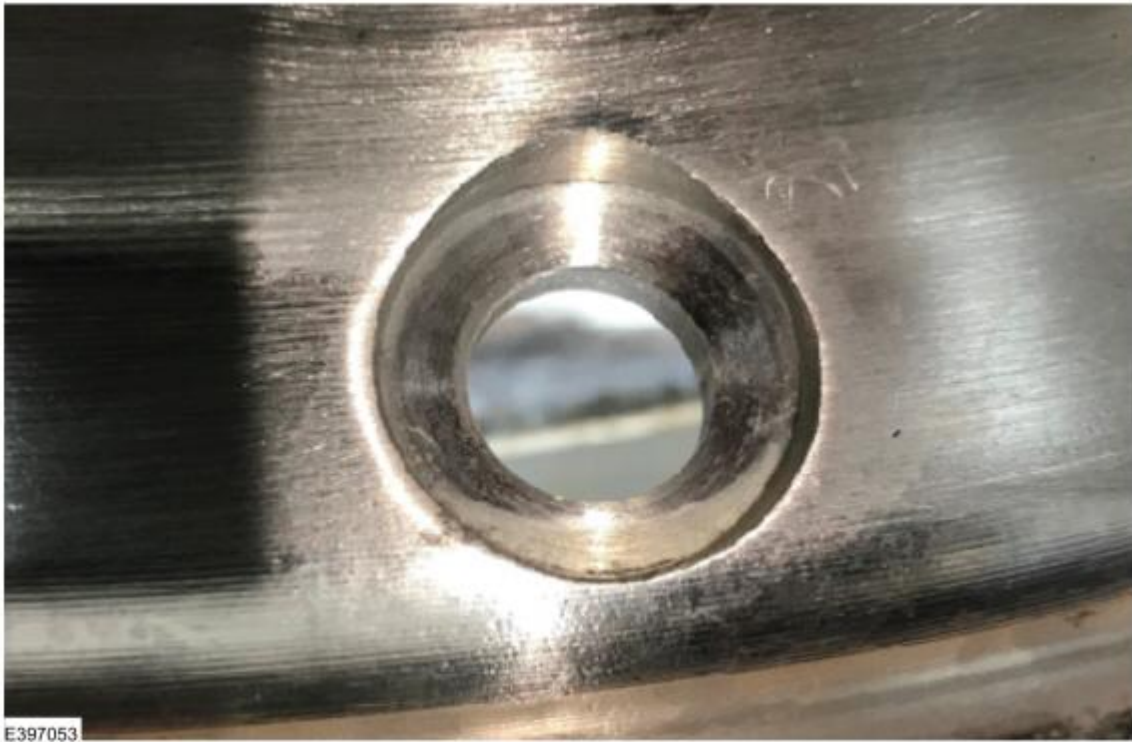
(1). Always turning the tool counterclockwise, slowly feed the sleeve part way into the valve hole, remove, clean and repeat. For tighter fits, to avoid tearing the sleeve, this partial in and out process will need to be repeated a number of times before tool will fully seat in the valve hole.

Figure 8



- 20.** Using moderate pressure, rotate the tool counterclockwise 2 or 3 revolutions.
- 21.** Remove the tool from the wheel by slowly rotating the tool counterclockwise.
- 22.** Wipe away debris on the counterbore surface and valve stem bore with a clean dry shop rag. Tap away all debris from the tool, abrasive sleeve and disc.
- 23.** Repeat Steps 19 through 22 until corrosion is removed from the chamfer surface of the inside (tire side) of the wheel. Corrosion removal is complete when the valve stem hole surface appears like Figure 9.

Figure 9



- 24.** Remove the tension pin and 120 grit red abrasive paper sleeve and set aside for future use. Remove the elastic band and 100 grit blue abrasive paper disc and discard the disc. Clean any debris from the special tool.
- 25.** Place 120 grit red abrasive paper disc over the end of the chamfer side of the special tool and secure with the elastic band.
- 26.** Place previously used 120 grit red abrasive paper sleeve over the end of the chamfer side of the special tool and secure with the tension pin.
- 27.** Slowly feed the abrasive paper sleeve into the valve stem hole from the inside (tire side) of the wheel, rotating counterclockwise until the tool is seated. Make sure the abrasive paper sleeve and disc remain in position throughout the procedure. (Figure 10)

Figure 10



- 28.** Using moderate pressure, rotate the tool counterclockwise 2 or 3 revolutions.
- 29.** Remove the tool from the wheel by slowly rotating the tool counterclockwise. Set the tool aside as it is no longer needed.
- 30.** Using a clean shop rag and isopropyl alcohol, remove all fine residue from the valve stem hole surfaces of the wheel. Allow to dry for 10 minutes.
- 31.** Fold a Motorcraft™ Metal Surface Prep Wipe and feed through the valve stem hole starting on the inside of the wheel. Twist the wipe and pull through from the outside of the wheel soaking all surfaces cleaned in previous steps and adjacent surfaces. (Figures 11-13)

Figure 11



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Figure 12



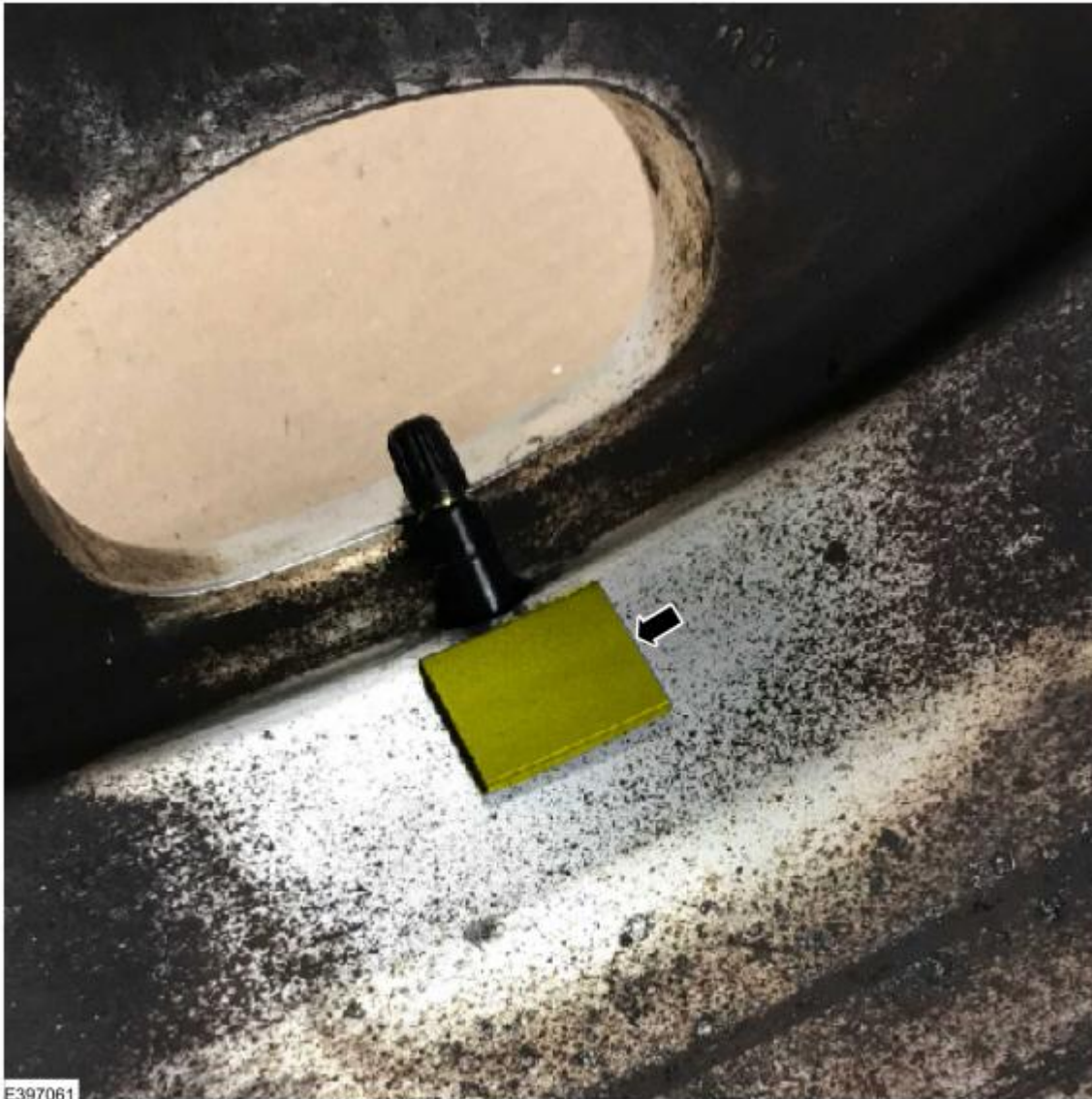
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Figure 13



- 32.** Discard the wipe. Tilt the wheel as needed to allow any remaining liquid to run from the valve stem hole surfaces. Allow the wheel to air dry in a dust free area for 15 minutes.
- 33.** Install the existing TPMS onto a new rubber snap-in valve stem and reassemble the wheel and tire matching the grease pencil marks added before disassembly. Refer to WSM, Section 204-04.
- 34.** Per usual practice for stick-on balance weights, clean and dry the flat surface on the inside of the wheel next to the valve stem hole. Apply a 14 g (0.5 oz) adhesive backed balance weight on the cleaned flat surface centered next to valve stem hole. (Figure 14)

Figure 14



35. Install the wheel and tire assembly on the vehicle. Refer to WSM, Section 204-04.

36. Verify no air leaks are present using soapy water.

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NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.