APPLICATION SOFTWARE UPDATE FOR WABCO ONGUARD™ IN-CAB DASH DISPLAY UNIT WITH ONSIDE™

APPLIES TO PART NUMBERS 400 871 800 0, 400 871 801 0 AND 400 871 850 0

TECHNICAL BULLETIN

WABCO

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This publication is not subject to any update service.
You will find the current version on the internet at
http:\\www.wabco-na.com

1 General Information

Symbols used in this document

⚠DANGER

Description of an immediate situation which will result in irreversible injury or death if the warning is ignored.

⚠WARNING

Description of a possible situation which may result in irreversible injury or death if the warning is ignored.

⚠CAUTION

Description of a possible situation which may result in irreversible injury if the warning is ignored.

NOTICE

Description of a possible situation which may result in material damage if the warning is ignored.

Important information, notes and/or tips

Reference to information on the internet

How to Obtain Additional Maintenance, Service and Product Information

If you have any questions about the material covered in this publication, or for more information about the WABCO product line, please contact the WABCO Customer Care Center at 855-228-3203, by email at wnacustomercare@wabco-auto.com, or visit our website: www.wabco-na.com.

WABCO Academy

https://www.wabco-academy.com/home/

WABCO online product catalog

http://inform.wabco-auto.com/

Your direct contact to WABCO

WABCO North America

WABCO USA LLC

1220 Pacific Drive

Auburn Hills, MI 48326

Customer Care Center: (855) 228-3203

www.wabco-na.com

2 Safety Information

⚠WARNING

This warning symbol identifies special instruction or procedures, which if not correctly followed could result in personal injury, or loss of life.

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

⚠WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

⚠WARNING

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

3 How to Obtain Additional Maintenance, Service and Product Information

For more information about OnGuard™, refer to Maintenance Manual MM-1306, OnGuard™ Collision Mitigation System. If you have any questions about the material covered in this publication, or for more information about the WABCO product line, please contact the WABCO Customer Care Center at 855-228-3203 or visit our website: wabco-na.com.

4 Description and Function

OnGuard™ is an Adaptive Cruise Control (ACC), Collision Warning System (CWS) and Collision Mitigation System (CMS). ACC is a radar-based tracking system that works in conjunction with standard cruise control to maintain the set cruise speed when no vehicle is being tracked and maintains a safe following distance when a lead vehicle is being tracked. The safe following distance is maintained by controlling engine torque, engine retarder and the foundation brakes, as necessary. This automatic brake application is intended only to provide early braking until the driver recognizes and reacts to the situation. The driver must also apply the brakes in response to the Collision Warning.

OnSide™ Blind Spot Detection (BSD) is a radar-based Advanced Driver Assistance System that supports drivers in passing and lane change maneuvers to help avoid side collisions. The system utilizes a best-in-class short range radar mounted at the side of the truck cabin to constantly monitor the vehicle's passenger side blind spot.

5 Application Software Update

Vehicles equipped with the WABCO OnGuard™ in-cab dash display, part numbers 400 871 800 0, 400 871 801 0 and 400 871 850 0, may require an application software update to enhance the user interface functions of the display unit.

This update will add the OnSide™ Blind Spot Detection functionality to the display.

The purpose of this document is to provide instructions for updating the application software for the WABCO in-cab dash display.

The application software must be updated to enable the OnSide™ Blind Spot Detection System.

NOTICE

Please verify the vehicle baud rate before the start of this procedure. Baud rate information may be reached in the vehicle's manual or through an oscilloscope. If you are not sure about the baud rate, do not proceed with this update..

Choose the correct "Firmware file" according to the baud rate of your vehicle (250kBd or 500kBd). Setting the correct Firmware file is essential for this update.

NOTICE

Using the incorrect baud rate's Firmware files will modify the WABCO in-cab dash display to the baud rate of the firmware that was selected. This will make the display incompatible with the vehicle's J1939 CAN BUS network. If the incorrect Firmware file is used, the display will no longer be useable with that vehicle and will need to be replaced with a compatible display.

Failure to follow these steps and install the correct Firmware file into the WABCO in-cab dash display will result in denial of warranty.

You shall be fully responsible for installing this software update. The responsibility for correctly installing this software update and following the instructions described herein shall lie solely with you. For the avoidance of any doubt, WABCO shall accept no liability for the incorrect installation of this software update.

5.1 Procedures

This procedure shows how to update the application software for the WABCO OnGuard in-cab display. Some older displays may require a bootloader update prior to this. Follow the steps below to confirm if your display needs it or not.

5.1.1 How to Determine if the Display Update is Required

1. Verify the ignition is “OFF”.
2. Press and hold the right DOWN-ARROW button on the display and turn the ignition “ON”. The display should now be in bootloader mode and the button may be released*.

> On some older vehicles the display screen may be dark and remain dark when in this state; proceed with the display update.

3. If the screen shows either of the “V 1.05” messages below, for only 10 seconds, **NO display** update is needed.
   - “BOOTLOADER 250K V1.05” Figure 1.

Fig. 1

   - “BOOTLOADER 500K V1.05” Figure 2.

Fig. 2

4. If the above messages do not appear, the display update is needed, proceed with the display update.

If the Display Update is Not Needed:

Proceed directly to Software Installation in Section 5.2.

If the Display Update is Required:

Refer to TP1767. The Display Update tool and TP1767 can be obtained from our website: www.wabco-na.com under the “Downloads” section. Choose “Bootloader and Application Software Update for the WABCO OnGuard Display”. Save the folder to your desktop and run the file executable to complete the update. Once the display update has been completed, continue with the next section.

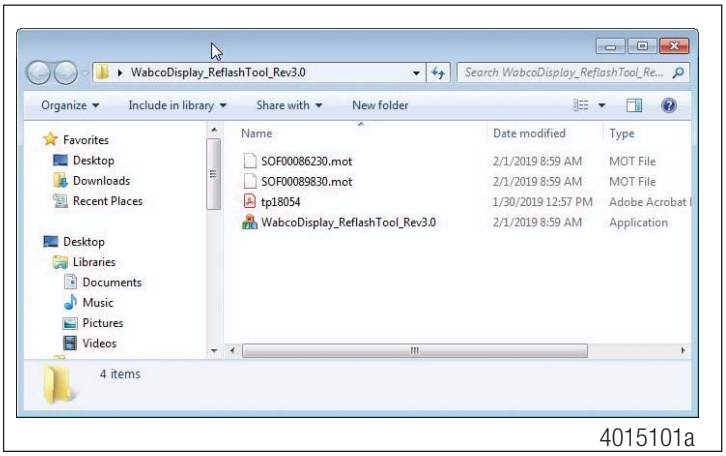
5.2 Software Installation

Before installing the reflash tool, make sure you have the latest diagnostic interface adapter driver and firmware updates installed on your PC. Refer to the adapter manufacturer for the latest driver and firmware updates.

5.2.1 Step 1 - Download the WabcoDisplay_ReflashTool_Rev3.0

1. Connect the computer to the vehicle using a J1939 adapter.
2. Download the “WabcoDisplay_ReflashTool_Rev3.0” from the link: http://www.wabco-na.com.
3. When the WABCO home page has loaded, cursor over to “Downloads”. From the drop-down menu, select “APPLICATION SOFTWARE UPDATE FOR THE WABCO ONGUARD™ IN-CAB DASH DISPLAY UNIT WITH ONSIDE™”, and “save as” to a known location such as your desktop.
4. Once the zip file has been downloaded, double-click the zip file icon to open the file. There will be one folder containing four items in the file, a copy of this Technical Publication, both software files for 250 and 500 KBaud, and the “WabcoDisplay_ReflashTool_Rev3.0”. Figure 3.

Fig. 3



5. Double-click on the “WabcoDisplay_ReflashTool_Rev3.0.exe” to open the tool.

5.2.2 Step 2 - Run the Reflash Tool to Update the Application Software

After verifying the bootloader firmware, the display will stay in bootloader mode until the application firmware is updated. The ignition does not need to be turned off to update the application firmware.

1. Use the tool’s pull-down selections to select/verify the following options for the “Download Tool” (Interface Device):
   - “Vendor”
   - “Protocol”
   - “Device”

NOTICE

Please verify the vehicle baud rate before the start of this procedure. Baud rate information may be reached in the vehicle’s manual or through an oscilloscope. If you are not sure about the baud rate, do not proceed with this update..

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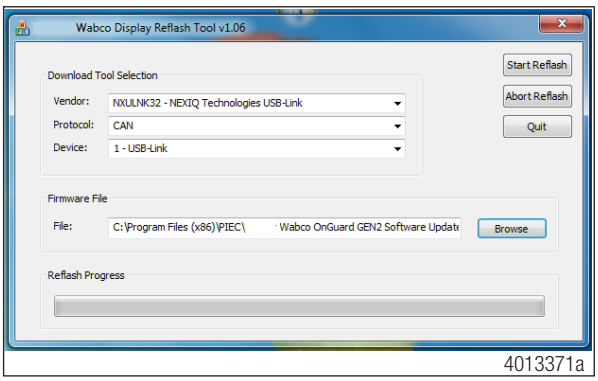
2. Click the browse button and select the correct “Firmware file“ name by double-clicking on the file. Figure 4.
   - For 250kBd vehicles, select Firmware file: SOF00086230.Mot
   - For 500kBd vehicles, select Firmware file: SOF00089830.Mot

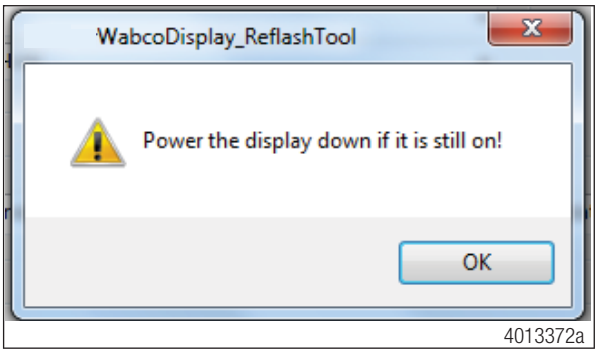
Fig. 4



3. Turn off the ignition. The ignition must be off for the display to enter bootloader mode.

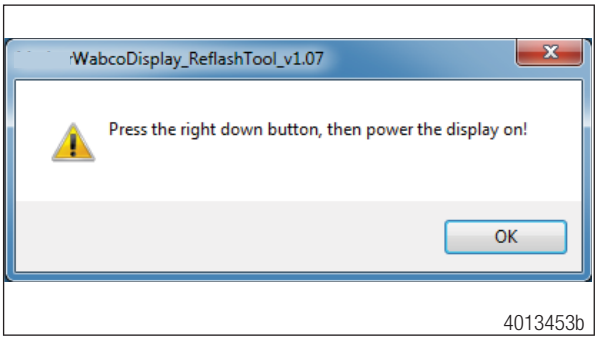
4. Click “Start Reflash” to begin the process.
   - The following reminder will be shown indicating that the display unit must be turned off. Click “OK” to close the reminder window. Figure 5.

Fig. 5



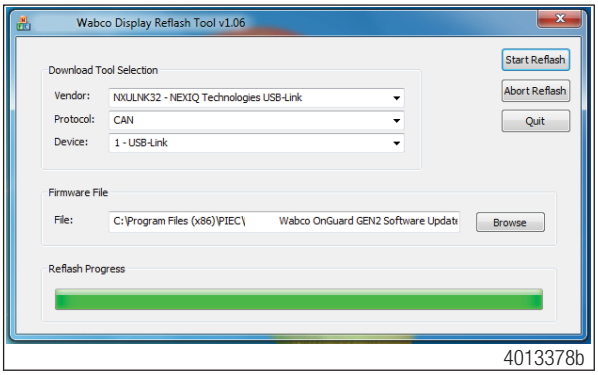
   - Another reminder will be shown to hold down the right DOWN-ARROW button and then turn on the vehicle ignition on. Click “OK” to close. Figure 6.

Fig. 6



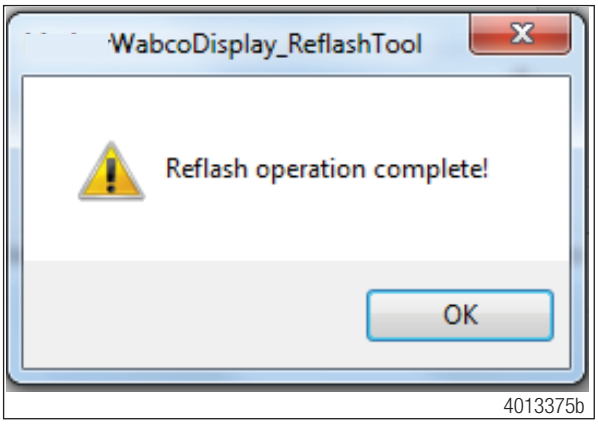
5. Hold down the right DOWN-ARROW button on WABCO in-cab dash display, while holding the button down, turn on the vehicle ignition. Once the display is in bootloader mode, the DOWN-ARROW button may be released.
6. After a few seconds, the reflash operation will start. The status of the update may be monitored in the “Reflash Progress” bar. It will take less than a minute to complete. No errors should occur. Figure 7.

Fig. 7



7. When the application software has been updated successfully, the following message will be displayed. Click “OK” to close the message. Figure 8.

Fig. 8



8. Click “Quit” to exit.

It is possible for the reflash operation to fail with an error such as the following: Figure 9 and Figure 10.

Fig. 9

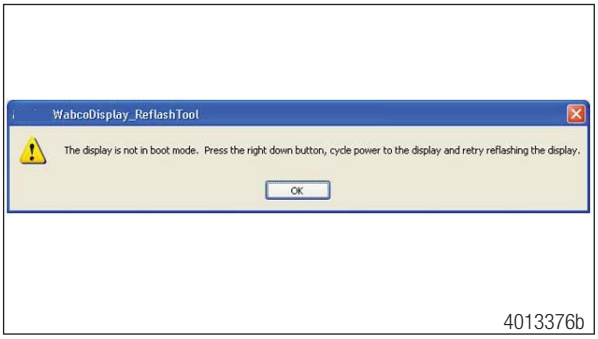


Fig. 10

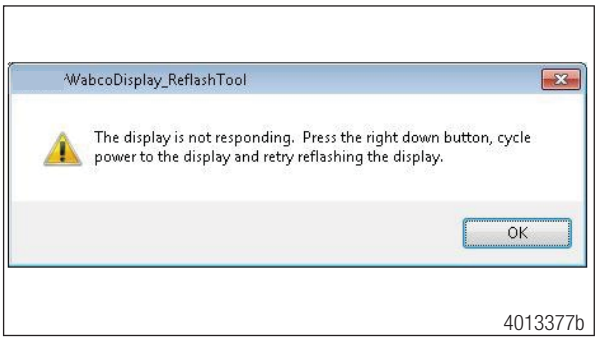


Fig. 11

This does NOT mean the display has failed; only that the reflash operation needs to be retried, including cycling power to the display. In this case, please follow the Section 5.2: Step 2 set of instructions to retry the reflash process.

Information contained in this publication was in effect at the time the publication was approved for printing and is subject to change without notice or liability. WABCO reserves the right to revise the information presented or to discontinue the production of parts described at any time.

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