

Technical Bulletin



Bulletin No: TCH-27-001

Effective Date: 1/1/22 Cancells: N/A

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Subject: **Bendix™ SmarTire® Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU) Update for PACCAR Vehicles**

DESCRIPTION

This update corrects timing parameters on the 500K Bendix™ Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU) model number TPMS200.0225. On some vehicles, the ECU will generate CAN error frames, and the following procedure corrects this issue.

DETERMINING IF THE UPDATE IS REQUIRED

To determine if an update is required, use either Bendix® ACom® PRO™ Diagnostic Software or Bendix® ACom® Legacy Diagnostic Software. **NOTE:** Only ACom Legacy Diagnostic Software can be used to update the TPMS firmware.

USING ACOM PRO DIAGNOSTIC SOFTWARE

1. Launch ACom PRO Diagnostic Software and connect to the vehicle as normal. When the ECU list is displayed on the left-hand side of the screen, *select Bendix™ SmarTire® Standalone TPMS as shown in Figure 1.*

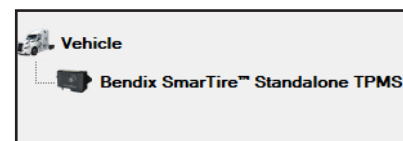


Figure 1 – ACom PRO - SmarTire TPMS

2. Locate the *Tire Pressure Controller Information* at the bottom of the window. See Figure 2.

- The model number for affected ECUs is TPMS200.0225. If a different model number is shown, no further action is required.
- The firmware release number is listed after the part number for the software version.
 - If this number is N000 (as shown in Figure 2), then the ECU requires updating.
 - If the release is N002 for the first part and N001 for the second, the ECU is already updated and no further action is required.
- If the ECU is not listed but there is a TPMS ECU called *Bendix SmarTire Next GEN TPMS*, no firmware update is required.

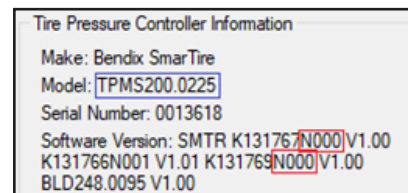


Figure 2 – Tire Pressure Controller Information

USING ACOM LEGACY DIAGNOSTIC SOFTWARE

1. Launch ACom Legacy Diagnostic Software and connect to the vehicle as normal. Select *TPMS* from the list of ECUs and select the *Start with ECU* icon.

2. After ACom Legacy Diagnostic Software connects, select the *Monitor* tab.

3. Select the *Software Info* group box at the bottom left-hand side of the window. See Figure 3.

- The firmware release number is listed after the part number for the software version.
 - If this number is N000 (as shown in Figure 3), then the ECU requires updating.
 - If the CAN release is N002, the ECU is already updated and no further action is required.
- If the TPMS and CAN application firmware *K numbers* do not match (See Figure 3), no further action is required.

Component Info	Software Info
TPMS Application Version	K131769N000V1.00
TPMS Boot Loader Version	BLD248.0095V1.00
CAN Application Version	K131767N000V1.00
CAN Boot Loader Version	K131766N001V1.01

Figure 3 – Software Info

Continued...

UPDATING THE BENDIX™ SMARTIRE® TIRE PRESSURE MONITORING SYSTEM (TPMS) ELECTRONIC CONTROL UNIT (ECU)



If the vehicle has a Bendix™ FLC-20™ camera, it must be disconnected prior to attempting the update procedure. Failure to disconnect the FLC-20 camera will cause the update to fail and the Electronic Control Unit (ECU) will remain in a failed state.

1. If it is determined that the Bendix™ SmarTire® Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU) requires an update, launch the Bendix® ACom® Legacy Diagnostic Software and connect to the TPMS ECU.
2. Once connected to the TPMS ECU, select the *Firmware Download* icon in the toolbar. See *Figure 4*.
3. If the TPMS ECU requires updating, there will be an entry displayed in the ECU window as shown in *Figure 5*. If no entry exists, then it is possible the ECU is already updated. Please read the instructions to check if the ECU requires updating.
4. To start the update, select the ECU as shown in *Figure 6*. This will enable the *Download* icon on the bottom of the window. Select the *Download* icon to start the update process. The process should then begin (See *Figure 7*) and the ECU firmware will be updated.
5. After the update, the software version, as shown on the *Monitor tab* in *Figure 8*, should display as follows:
 - The TPMS Application will be at release N001
 - The CAN Application will be at release N002

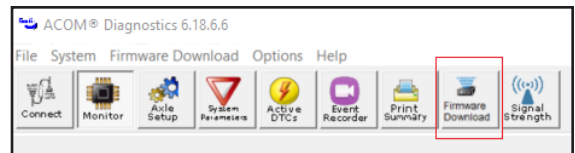


Figure 4 – Firmware Download

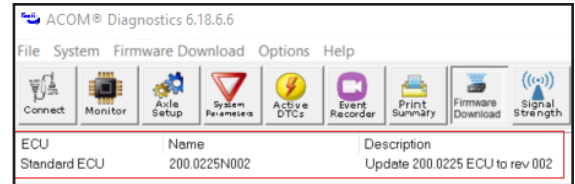


Figure 5 – ECU Window

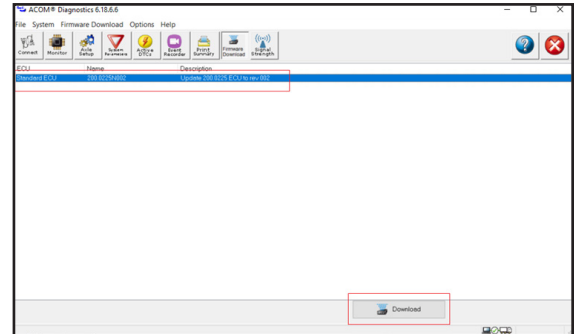


Figure 6 – Download to Start Update Process

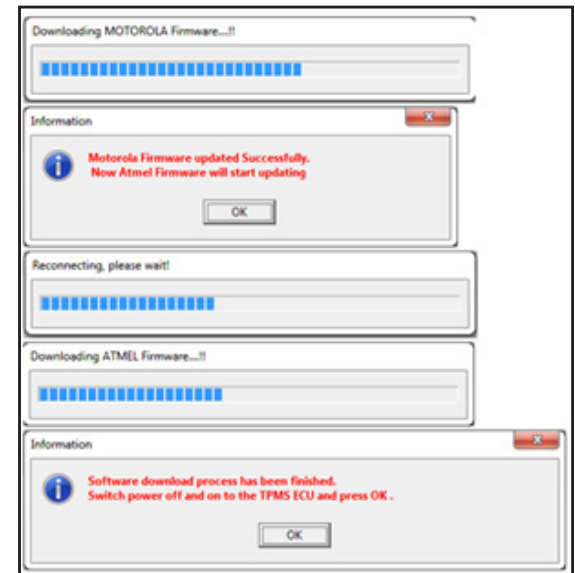


Figure 7 – Download in Process



Figure 8 – Updated Software Version

RECOVERING FROM A FAILED UPDATE TO THE BENDIX™ SMARTIRE® TIRE PRESSURE MONITORING SYSTEM (TPMS) ELECTRONIC CONTROL UNIT (ECU)

If the update process failed, the Bendix™ SmarTire® Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU) may have gotten stuck in a bootloader mode due to the fact that the firmware was erased. Unfortunately, Bendix® ACom® Legacy Diagnostic Software cannot recover from failure. ACom Legacy Diagnostic Software will no longer be able to connect to the ECU if it is in bootloader mode.

1. If this occurs, a standalone update program can be downloaded using the link below:

http://www.smartire.com/downloads/SmartWave_Updater_For_200_0225.zip

2. Extract the archive from the above link to a directory on your computer. Navigate to the folder you created and run the *SmartWave_Updater.exe* program.
3. Select the *Update* icon. See *Figure 9*.
4. Select the applicable *RP120 adapter*, the *Device*, and *J1939 Protocol* shown in the three highlighted boxes in *Figure 10*.
5. Click the *Select* icon. The warning shown in *Figure 11* will appear. Select Yes. If the update fails, you can retry. However, if it continues to fail, it may be a sign that the Bendix™ FLC-20™ Camera is interfering with the update process. Please ensure the FLC-20 has been disconnected.



Bendix®-brand Electronic Control Units (ECUs) are not designed to store data for purposes of accident reconstruction, and Bendix® ACom® PRO™ Diagnostic Software is not intended to retrieve data for purposes of accident reconstruction. Bendix makes no representations as to the accuracy of data or video retrieved and interpreted from ECUs for purposes of accident reconstruction. Bendix does not offer accident reconstruction services or interpretation of stored data. Bendix ECUs are not protected from fire, loss of power, impact damage, or other conditions that may be sustained in a crash situation and may cause data to be unavailable or irretrievable.

ADDITIONAL SUPPORT

For technical support, the Bendix Tech Team is available at 1-800-AIR-BRAKE (1-800-247-2725), option 2, Monday through Thursday, 8:00 a.m. to 6:00 p.m., and Friday, 8:00 a.m. to 5:00 p.m. ET. Follow the instructions in the recorded message. The Bendix Tech Team can also be reached by email at techteam@bendix.com.

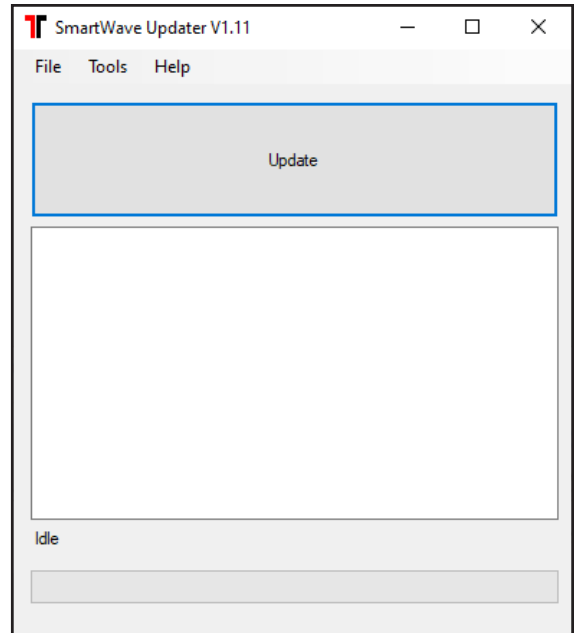


Figure 9 – SmartWave Updater

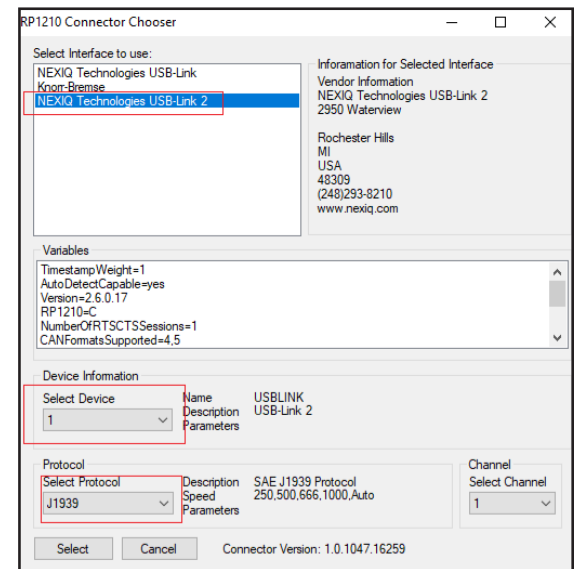


Figure 10 – SmartWave Updater

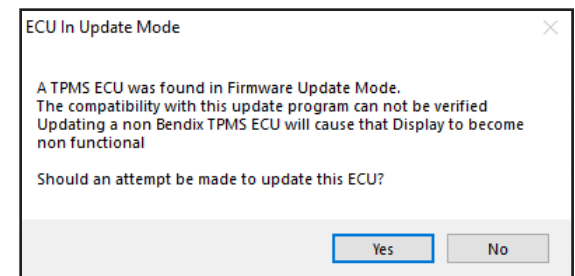


Figure 11 – ECU in Update Mode

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