

WABCO

Technical Bulletin

Automatic Traction Control (ATC) Parameter Update for Tractor ABS ECU 400 866 335 0

Hazard Alert Messages

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.

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.

How to Obtain Additional Maintenance, Service and Product Information

For more information about E Version Tractor ABS ECUs, refer to Maintenance Manual MM-0112, Anti-Lock Braking System (ABS) and Electronic Stability Controls (ESC) For E Version ECUs 12-Volt and 24-Volt Systems. If you have any questions about the material covered in this publication, or for more information about the WABCO product line, please contact WABCO North America Customer Care at 855-228-3203 or visit our website: wncustomer care@wabco-auto.com.

System Description and Operation

The ECU is the control center of the ABS. WABCO ABS ECUs with E4.4 software version or newer have the ability to support many advanced features such as Automatic Traction Control (ATC), Roll Stability Control (RSC), Electronic Stability Control (ESC) and Hill Start Aid. The ABS ECU receives information from the sensors, processes data and sends signals to modulator valves and active braking valves to achieve different tasks based on how the ECU is configured.

The purpose of ATC is to keep the slip of spinning drive wheels compared to the non-driven front wheels in a range suitable for good traction and stability. To accomplish this, ATC employs both engine torque limitation and active drive axle brake control. During ATC, brake control pressure is supplied to the driven axles through a solenoid valve and managed at the wheel ends by the ABS modulator valves.

Purpose of the ABS ECU Parameter Update

The parameters setting of this ECU may be updated in order to disable the ATC brake control function when the brake pedal is applied.

In some particular 4x2 vehicle applications with automatic transmissions, sufficient torque can be generated in a bobtail loading condition on slippery surfaces where an ATC event may occur at idle. The parameter setting in the ABS ECU 400 866 335 0 prior to April 10, 2015 does not interrupt an active ATC event when the driver depresses the pedal (Brake Light Switch Signal Active). This can delay/reduce driver brake demand to the drive axle during an active ATC event. This situation does not present a safety risk as the full braking capability of the front axle is always available which is sufficient to prevent vehicle movement.

Disabling the ATC brake control when the brake pedal is applied may prevent situations where the rear axle can rotate under idle conditions on slick surfaces. However, if the ATC brake control is disabled, the driver may experience differences in vehicle behavior in situations where the brake and accelerator pedal are applied simultaneously. In these conditions, increased wheel spin and potential limitations related to launching the vehicle combination on a split coefficient surface on a grade could occur.

NOTE: ECU Part Number 400 866 335 0— These procedures apply only to the WABCO ABS/ESC ECU with part number 400 866 335 0. Do not perform these procedures on any other ECU part number.

This parameter update process consists of several different procedures. Please review the following steps carefully first before proceeding.

Update Procedures

This update requires you to install the Tractor ABS ECU TOOLWrench software version 2.11.0.

Once it is installed, run the TOOLWrench.exe software to complete the update.

Install the TOOLWrench Software

NOTE: An internet connection is required to obtain the Tractor ABS ECU TOOLWrench software version 2.11.0.

1. On a web browser, navigate to ftp://ftp.mwtoolbox.com.

NOTE: The password is case sensitive.

2. When prompted, enter the following User ID and password.
 - Username: TOOLWRENCH2110
 - Password: wabco
3. Navigate to the link: TOOLWrench Version 2.11.0.zip.
4. When prompted to open or save the file, select Save.
5. When prompted to Save As, save the file to a known location.
6. After the file is downloaded, select Open.
7. Unzip the TOOLWrench Version 2.11.0.zip.

The folder will contain two files:

- TOOLWrench Version 2.11.0.exe
- J1939Diag_UDS.dll

Confirm the ECU Part Number

1. Save the TOOLWrench 2_11.exe on the desktop folder of the laptop that has the WABCO TOOLBOX™ Software installed. Make sure that the file extension on the file is correct (it must be .exe). Figure 1.

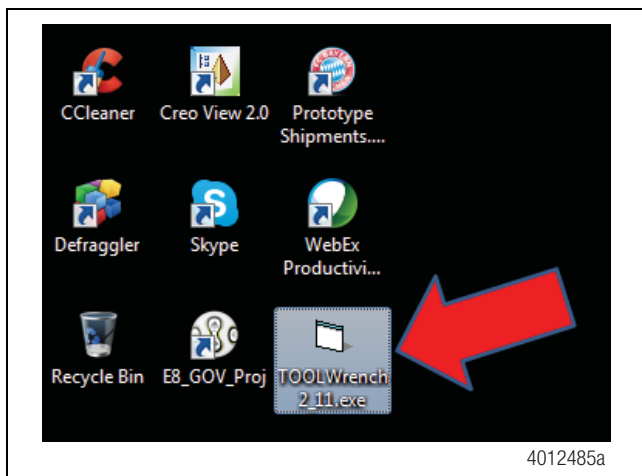


Figure 1

2. Connect your laptop or PC to the vehicle. Launch the WABCO TOOLBOX™ Software and click on the Pneumatic ABS icon for Truck, Tractor and Buses. Figure 2.



Figure 2

3. On the main ABS ECU screen, locate the field for the ECU part number. Confirm the ECU part number is correct. Figure 3.



Figure 3

4. Once the ECU part number is located and confirmed, exit the TOOLBOX™ Software completely by clicking the "Exit" icon in the bottom right corner of the window.

NOTE: During the remainder of the TOOLWrench installation procedure, the TOOLBOX™ Software must be closed.

Run the TOOLWrench Software to Update the ECU

1. Double click on the TOOLWrench.exe icon.
2. The following screen will appear. Click the “Start ECU Configuration” button. Figure 4.

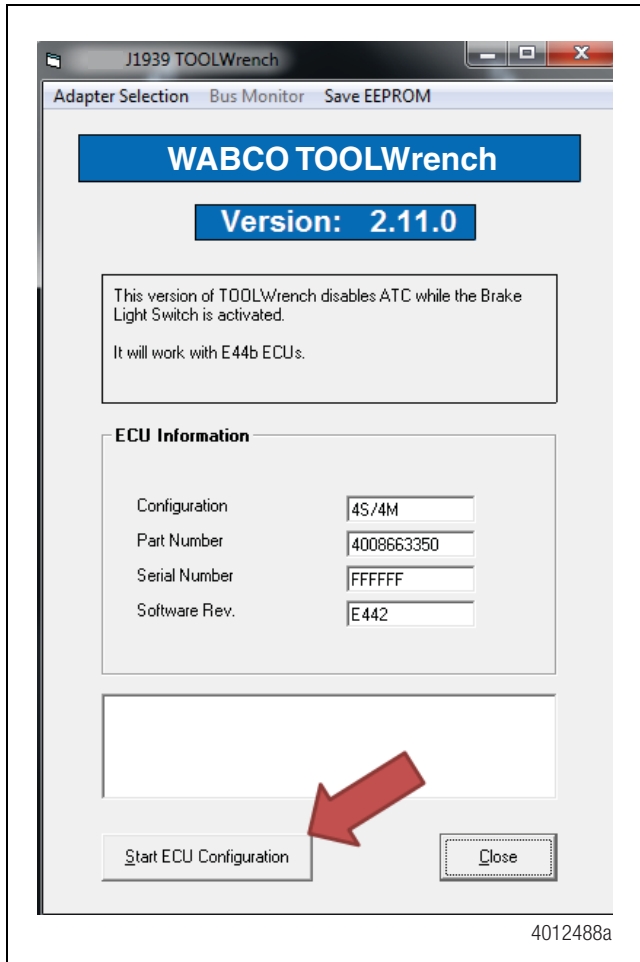


Figure 4

3. When the Parameter Updated message appears, click the “OK” button. Figure 5.

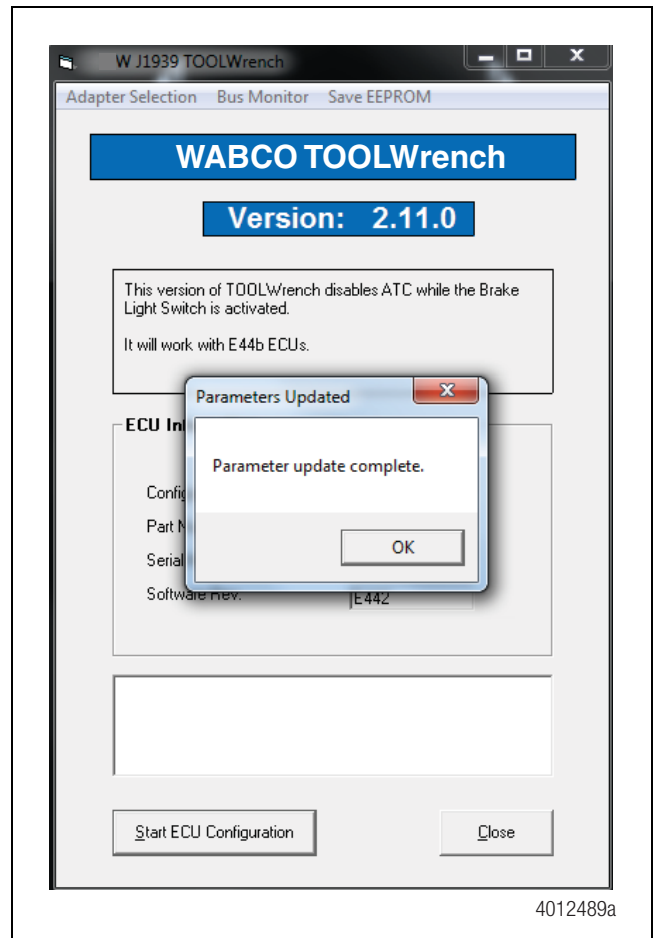


Figure 5

4. The following screen will appear. Enter the vehicle's VIN number in the field, then click the “Save EEPROM” button. Figure 6.



Figure 6

The application will save the EEPROM file into the laptop's desktop folder.

5. **IMPORTANT:** Once the parameter file is saved, a message will appear showing the file location and filename.
6. As indicated in the message, open an email program, attach the parameter file (xxxxxxxxxxxxxxxx.txt with the VIN as the filename) and send the email to toolbox@wabco-na.com. Figure 7.

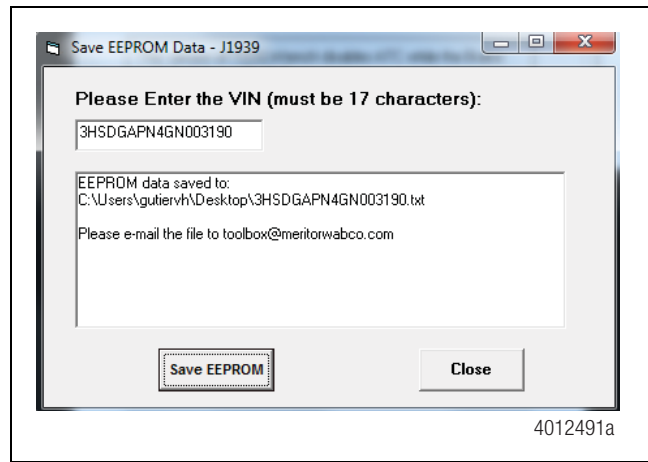


Figure 7

7. Click the “Close” button to exit the TOOLWrench software.
8. Disconnect the diagnostic interface from the vehicle. The update is now complete. The vehicle may be returned to service.

Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base warranty period. If a stored or active fault is not found, this procedure is considered preventive and warranty does not apply.

Within the OEM warranty coverage period, the claim should be submitted to the OEM with the Fault Report attached and at the same time, sent directly to warranty@wabco-na.com including “WABCO” and the OEM claim number in the subject line. Otherwise, contact WABCO North America Customer Care at 855-228-3203.

Publication	Procedure	Repair Time in Hours
TP-1611	ATC — Brake Light Switch Parameter Updates	0.2

WABCO

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