

June 2019
FL809A-G
NHTSA #19V-138

Subject: FCCC School Bus Chassis ABS Modules

Models Affected: Specific Freightliner Custom Chassis B2 School Bus chassis (Thomas Built Buses Saf-T-Liner C2) manufactured September 11, 2018, through December 14, 2018, without ABS module.

General Information

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Freightliner Custom Chassis Corporation, has decided that a defect that relates to motor vehicle safety exists on the vehicles mentioned above.

There are approximately 137 vehicles involved in this campaign.

On certain buses, the ABS modules may not have been installed as required by FMVSS 121 S5.1.6. The operator may not be aware of the absence of the ABS function. Unknowingly operating the vehicle without ABS function may increase the risk of a crash.

Buses will be inspected and the ABS module will be installed when necessary.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR260).

Replacement Parts

Replacement parts are now available and can be obtained by ordering the part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicles involved in campaign number FL809, a list of the customers and vehicle identification numbers will be available in OWL. Please refer to this list when ordering parts for this recall.

Table 1 - Replacement Parts for FL809

Campaign Number	Part Description	Part Number	Qty.
FL809A	ECU-ABS,4S4M,ESC,144-159"WB,B2	TDA S400 862 385 0	1 ea
FL809B	ECU-ABS,4S4M,ESC,196-215"WB,B2	TDA S400 862 393 0	1 ea
FL809C	ECU-ABS,4S4M,ESC,216-239"WB,B2	WAB 400 862 394 0	1 ea
FL809D	ECU-ABS,4S4M,ESC,216-239"WB,B2	TDA S400 862 396 0	1 ea
FL809E	ECU-ABS,4S4M,ESC,240-264"WB,B2	TDA S400 862 264 0	1 ea
FL809F	ECU-ABS,4S4M,ESC,265-292"WB,B2	WAB S400 862 265 0	1 ea
FL809G	ECU-ABS,4S4M,ESC,265-292"WB,B2	TDA S400 862 266 0	1 ea
FL809A-G	SCREW-CAP,HEX SKT HD,1/4-20,PO	23-10572-175	3 ea
	BLANK COMPLETION STICKER	WAR260	1 ea

Table 1

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Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Code	Corrective Action
FL809A-G	Inspect ABS module	0.1	996-R188A	06-Inspect
FL809A-G	Inspect, install, and program the ABS module and test drive the vehicle	2.0	996-R188B	12-Repair Recall/Campaign

Table 2

IMPORTANT: When the Recall has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the red completion sticker provided in the recall kit (Form WAR260). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a recall kit is not required or there is no completion sticker in the kit, write the recall number on a blank sticker and attach it to the base completion label.

Claims for Credit

You will be reimbursed for your parts, labor, and handling (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign. Please reference the following information in OWL:

- Claim type is **Recall Campaign**.
- In the Campaign field, enter the campaign number and appropriate condition code (e.g. **FL809-A**, **FL809-B**, etc.).
- In the Primary Failed Part Number field, enter **25-FL809-000**.
- In the Parts field, enter the appropriate part number(s) as shown in the Replacement Parts Table.
- In the Labor field, first enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours.
- The VMRS Component Code is **013-011-145** and the Cause Code is **A1 - Campaign**.
- **U.S. and Canada -- Reimbursement for Prior Repairs.** When a customer asks about reimbursement, please do the following:
 - Accept the documentation of the previous repair.
 - Make a brief check of the customer's paperwork to see if the repair may be eligible for reimbursement. (See the "Copy of Owner Letter" section of this bulletin for reimbursement guidelines.)
 - Submit an OWL Recall Pre-Approval Request for a decision.
 - Include the approved amount on your claim in the Other Charges section.
 - Attach the documentation to the pre-approval request.
 - If approved, submit a based on claim for the pre-approval.
 - Reimburse the customer the appropriate amount.

IMPORTANT: OWL must be viewed prior to performing the recall to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

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U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAConnect.com / WSC, or the Customer Assistance Center at (800) 385-4357, after normal business hours, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

U.S. and Canadian Dealers: To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number. Export Distributors: Excess inventory is not returnable.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60 day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

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Copy of Notice to Owners

Subject: FCCC School Bus Chassis ABS Modules

For the Notice to U.S. Customers: This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. **For the Notice to Canadian Customers:** This notice is sent to you in accordance with the Canadian Motor Vehicle Safety Act.

Daimler Trucks North America LLC (DTNA), on behalf of its wholly owned subsidiary, Freightliner Custom Chassis Corporation, has decided that a defect that relates to motor vehicle safety exists on specific B2 school bus chassis (Thomas Built Buses Saf-T-Liner C2).

On certain buses, the ABS modules may not have been installed as required by FMVSS 121 S5.1.6. The operator may not be aware of the absence of the ABS function. Unknowingly operating the vehicle without ABS function may increase the risk of a crash.

Buses will be inspected and the ABS module will be installed when necessary.

This is the second of two notices regarding this recall. Parts are now available. Please contact an authorized Daimler Trucks North America dealer to arrange to have the Recall performed. To locate an authorized dealer, search online at www.Daimler-TrucksNorthAmerica.com. On the menu tab, select "Contact," scroll down to "Find a Dealer," and select the appropriate brand. The Recall may take up to two hours and will be performed at no charge to you.

You may be liable for any progressive damage that results from your failure to complete the Recall within a reasonable time after receiving notification.

If you do not own the vehicle that corresponds to the identification number(s) which appears on the Recall Notification, please return the notification to the Warranty Campaigns Department with any information you can furnish that will assist us in locating the present owner. If you have leased this vehicle, Federal law requires that you forward this notice to the lessee within 10 days. If you are a subsequent stage manufacturer, Federal law requires that you forward this notice to your distributors and retail outlets within five working days. If you have paid to have this recall condition corrected prior to this notice, you may be eligible to receive reimbursement. Please see the reverse side of this notice for details.

For the Notice to U.S. Customers: If you have questions about this Recall, please contact the Warranty Campaigns Department at (800) 547-0712, 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, e-mail address DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357 after normal business hours. If you are not able to have the defect remedied without charge and within a reasonable time, you may wish to submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the Vehicle Safety Hotline at (888) 327-4236 (TTY: 800-424-9153); or to <http://www.safercar.gov>. **For the Notice to Canadian Customers:** If you have questions about this Recall, please contact the Warranty Campaigns Department at (800) 547-0712, 7:00 a.m. to 4:00 p.m. Pacific Time, Monday through Friday, e-mail address DTNA.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357 after normal business hours.

We regret any inconvenience this action may cause but feel certain you understand our interest in motor vehicle safety.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Reimbursement to Customers for Repairs Performed Prior to Recall

If you have already **paid** to have this recall condition corrected you may be eligible to receive reimbursement.

Requests for reimbursement may include parts and labor. Reimbursement may be limited to the amount the repair would have cost if completed by an authorized Daimler Trucks North America LLC dealer. The following documentation must be presented to your dealer for consideration for reimbursement.

Please provide original or clear copies of all receipts, invoices, and repair orders that show:

- The name and address of the person who paid for the repair
- The Vehicle Identification Number (VIN) of the vehicle that was repaired
- What problem occurred, what repair was done, when the repair was done
- Who repaired the vehicle
- The total cost of the repair expense that is being claimed
- Proof of payment for the repair (such as the front and back of a cancelled check or a credit card receipt)

Reimbursement will be made by check from your Daimler Trucks North America LLC dealer.

Please speak with your Daimler Trucks North America LLC authorized dealer concerning this matter.

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Work Instructions

Subject: FCCC School Bus Chassis ABS Modules

Models Affected: Specific Freightliner Custom Chassis B2 school bus chassis (Thomas Built Buses Saf-T-Liner C2) manufactured September 11, 2018, through December 14, 2018, without ABS module.

ABS Module Inspection

1. Check the base label (Form WAR259) for a completion sticker for FL809 (Form WAR260) indicating this work has been done. The base label is usually located over the drivers window. If a sticker is present, no work is needed. If there is no sticker, proceed with the next step.
2. Park the vehicle on a level surface, shut down the engine, and set the parking brake. Chock the tires.
3. Check to see if an antilock brake system (ABS) module is present. If an ABS module is present, no further work is needed. Clean a spot on the base label (Form WAR259). Write the recall number, FL809, on a completion sticker (Form WAR260), and attach it to the base label to indicate this recall has been completed. If an ABS module is not present, go to 'ABS Module Installation.'

ABS Module Installation

DANGER

When working on the vehicle, shut down the engine, set the parking brake, and chock the tires. Before working under the vehicle, always place jack stands under the frame rails to ensure the vehicle cannot drop. Failure to follow these steps could result in serious personal injury or death.

1. Using the bolts, install the ABS module on the mounting plate. See [Fig. 1](#). Tighten the bolts hand tight; the nuts are welded in place.

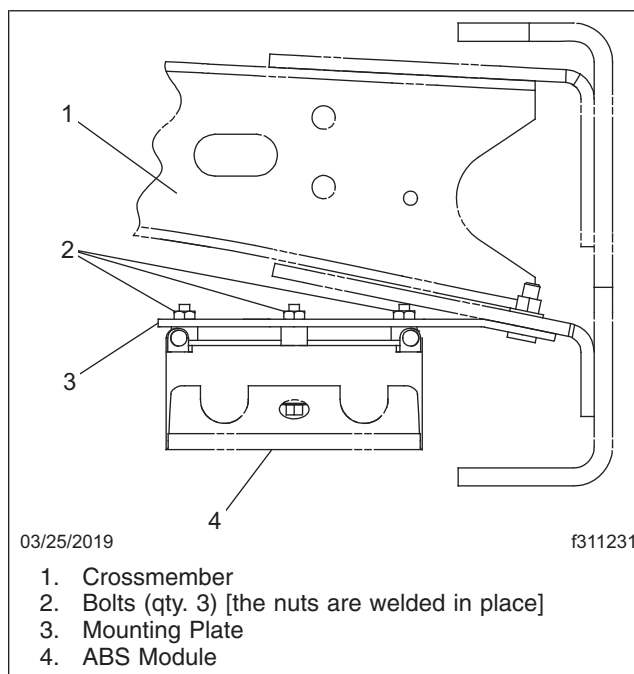


Fig. 1, Installing the ABS Module

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2. Install the harness connectors in the ABS module. Ensure the connectors are firmly in place.
3. Tighten the 1/4-20 fasteners 5 lbf-ft (7 N-m).

Electronic Stability Control (ESC) End-of-Line Calibration Procedure

The following process consists of two operations. The first is the steering angle sensor (SAS) calibration while the vehicle is stationary, followed by the ESC initialization while driving the vehicle. The status of the ESC end-of-line procedure can be verified using the following allowed faults:

- SAS not calibrated SID 89, FMI 13
- ESC initialization require SID 88, FMI 13
- ESC initialization not completed SID 88, FMI 1

IMPORTANT: Additional faults must not be active. Any other faults must be resolved in order for the main menu items to be available.

NOTE: Disconnect any telematics system(s) before performing this procedure.

IMPORTANT: To prevent incorrect activations, SAS calibration and ESC initialization must be done separately. It is necessary to perform the SAS calibration before the ESC initialization.

For questions or assistance, contact WABCO North America Customer Care at 1-855-228-3203 or visit wabco-na.com for further details.

Steering Angle Sensor Calibration

NOTE: The front tires must be in the straight-ahead position before performing the SAS calibration.

1. Turn the ignition to the ON position; do not start the engine.
2. Launch the Meritor WABCO TOOLBOX® diagnostic software and select the blue truck. See [Fig. 2](#).

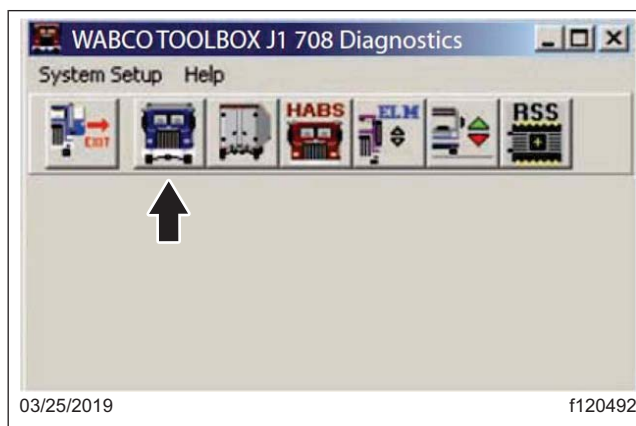


Fig. 2, WABCO TOOLBOX

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3. If using software version 10, select 'ESC Menu.' A drop down list opens. Select 'End of Line.' See [Fig. 3](#).
If using software version 11 or higher, select 'Components'. Select 'ESC' from the message box that appears, then select 'Start EOL.' See [Fig. 4](#).

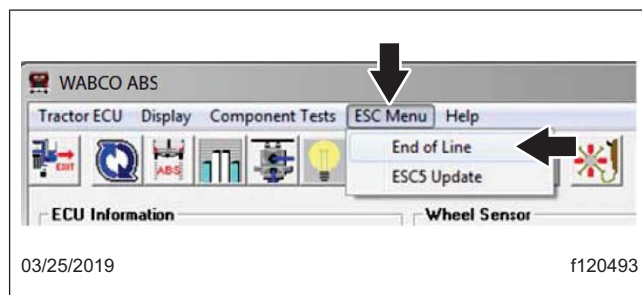


Fig. 3, Selecting the ESC Menu (software version 10)

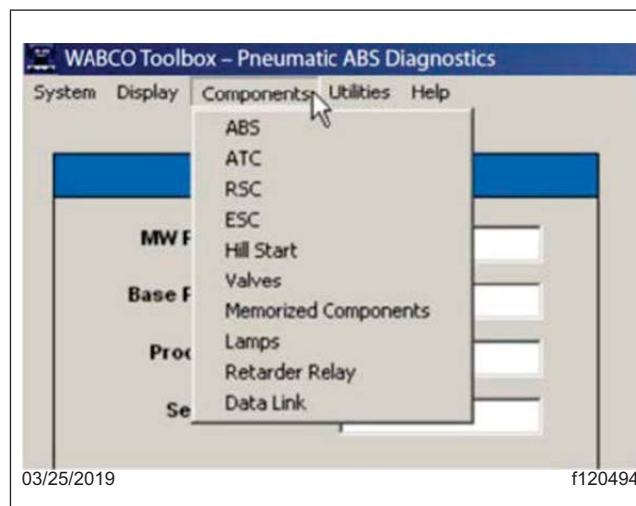


Fig. 4, Selecting the ESC Menu (software version 11 or higher)

4. In the message box that appears, select 'SAS Calibration.' See [Fig. 5](#).

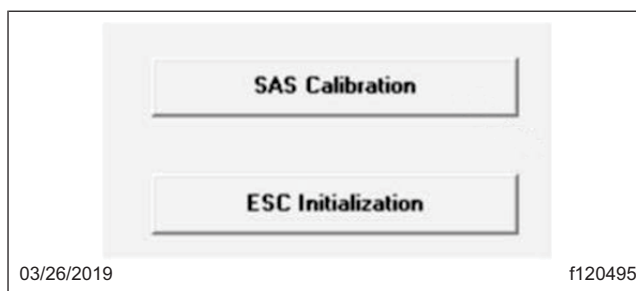


Fig. 5, Selecting SAS Calibration or ESC Initialization

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- Follow the instructions in the message box. See [Fig. 6](#). The software indicates when the SAS is calibrated. Once the SAS is calibrated, press the 'Close' button or the space bar to continue. See [Fig. 7](#).

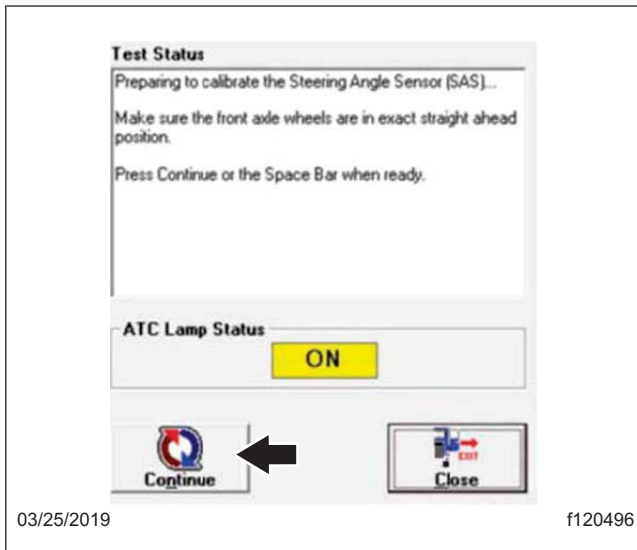


Fig. 6, Test Status, SAS Screen 1

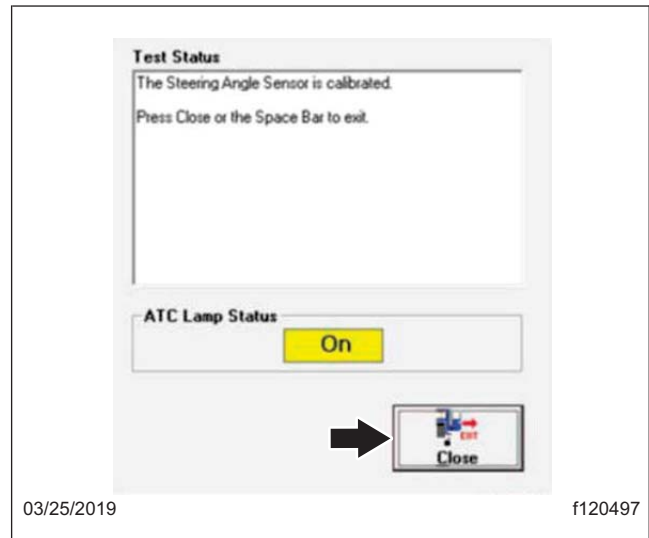


Fig. 7, Test Status, SAS Screen 2

ESC Initialization

IMPORTANT: The straight driving can be done in segments and the ECU will accumulate the information until 800 ft (240 m) is reached, however it must be done in the same ignition cycle.

- Start the engine.
- Begin with the vehicle at a complete stop. From the main menu, select 'ESC Menu,' then select 'End of Line.' See [Fig. 3](#).
- Select 'ESC Initialization.' See [Fig. 5](#).
- From the pop-up message that appears, press the space bar or select 'Continue' when ready to proceed. See [Fig. 8](#). The automatic traction control (ATC) lamp will start blinking to inform the driver that the ECU is in learning mode.

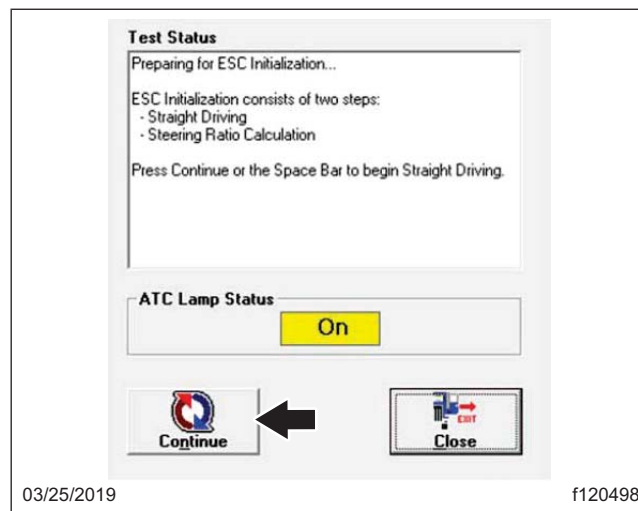


Fig. 8, Test Status, ESC Initialization

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5. Carefully follow the instructions that appear in the pop-up message. See [Fig. 8](#). The ESC initialization procedure requires the vehicle to be driven. Once the ESC initialization begins, the messages will automatically change as the requirements are met. DO NOT select the 'continue' button again as it may cause the process to fail.

ESC System Calibration

IMPORTANT: The straight driving adjustment can be done in segments as the ECU will accumulate the information until 800 ft (240 m) is reached. Cornering and stopping is allowed as long as calibration is done within the same ignition cycle.

When the 800 feet of straight driving adjustment is completed, the ATC lamp will stop blinking and remains on.

NOTE: Some vehicles may not require you to perform the turning portion of the ESC initialization steering ratio calculation process. For these vehicles, the ATC lamp will go out. Follow the instructions that appear on the screen.

The screen will automatically change to the next portion of the procedure. See [Fig. 9](#) and [Fig. 10](#).

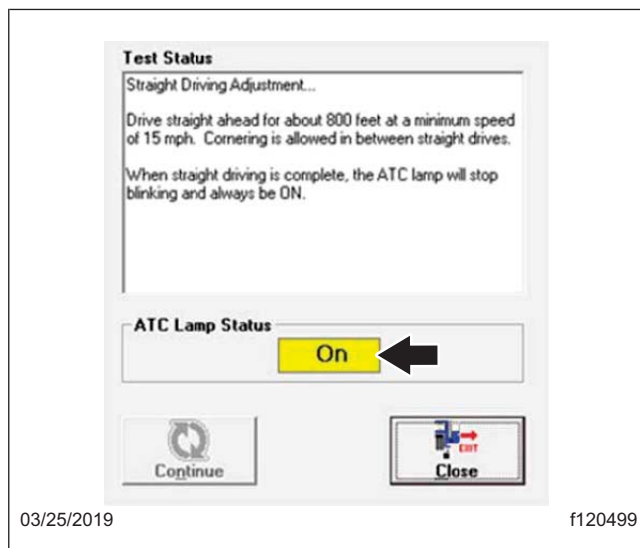


Fig. 9, ESC System Calibration, Test Status Screen 1

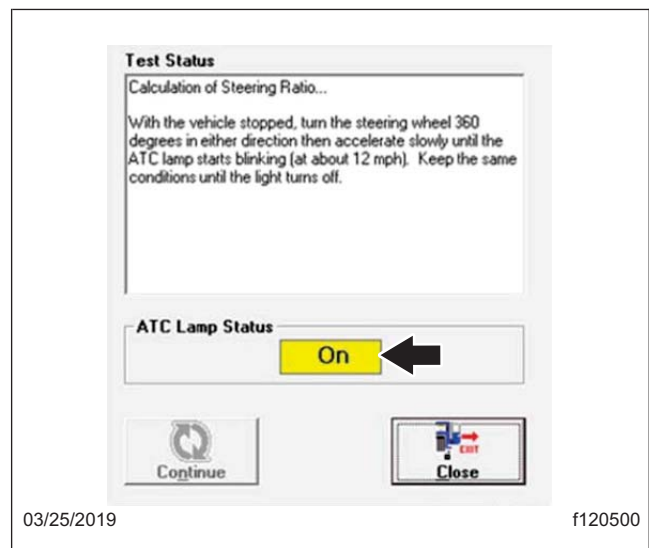


Fig. 10, ESC System Calibration, Test Status Screen 2

NOTE: The circle driving (calculation of steering ratio) can be done in segments as the ECU will accumulate the information until the desired distance is reached, but must be done within the same ignition cycle. The calibration requires driving in both directions with the steering wheel rotated 360 degrees.

1. The vehicle must come to a complete stop before starting the steering ratio calculation and turning the steering wheel 360 degrees for the first time.

Once the steering wheel is turned one revolution (360 degrees) in either direction, accelerate slowly until 12 mph (19 km/h) is reached.

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Continue driving in a circle until the screen automatically changes to inform that the steering ratio is being calculated. Maintain the vehicle speed and conditions for approximately 8 seconds until the ATC lamp turns off. The screen will automatically change to the next portion of the procedure. See [Fig. 11](#).

Test Status

Turn steering wheel to 360 degrees to the RIGHT at the same conditions.

The ATC lamp will go on at straight driving and blink again if learning conditions on the other side are met. Keep these conditions until the ATC lamp turns OFF (approximately 8 seconds).

ATC Lamp Status

On

Continue Close

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Fig. 11, ESC System Calibration, Test Status Screen 3

IMPORTANT: The vehicle does not have to come to a complete stop before turning the steering wheel 360 degrees in the other direction but it is recommended to make sure wheels are in the straight position before making the turn.

2. Turn the steering wheel 360 degrees in the opposite direction and repeat the driving conditions. The ATC lamp will start blinking when the required conditions are met. Maintain the driving conditions for approximately 8 seconds until the lamp turns off.

The screen will automatically change to show ESC end-of-line data and ratios. See [Fig. 12](#).

ESC End of Line Data

Steering Ratio Left 20.8

Steering Ratio Right 21.0

Steering Angle Offset 1.0

Enter Vehicle Number

Enter Comments (optional)

Save Print Close

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Fig. 12, ESC End-of-Line Data Screen

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3. Bring the vehicle to a stop when the steering ratio calculation is completed.
4. When the vehicle is stopped, the ESC end-of-line data with the steering ratios and steering angle offset values will appear. The data can be saved or printed for maintenance records. If saving or printing is not desired, select 'Close.' The next screen will automatically appear to complete the ESC initialization. See [Fig. 13](#).

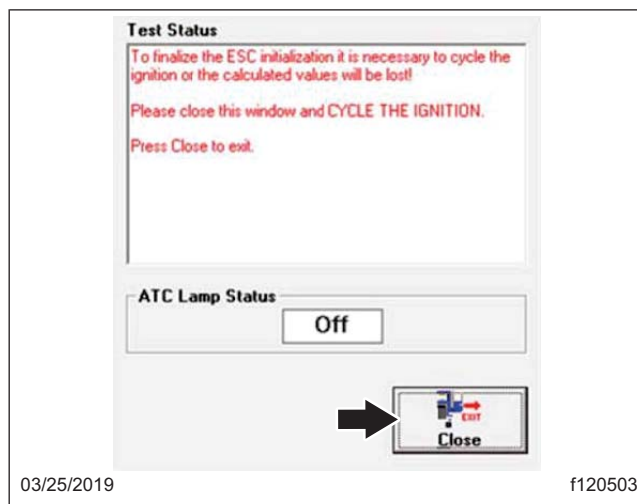


Fig. 13, ESC System Calibration, Test Status Screen 4

NOTE: The power down cycle time and sequence varies among vehicle manufacturers. Some vehicles may require the key to be removed from the ignition for ignition power to be completely turned off. Follow the vehicle manufacturer procedure to ensure the ignition is turned off.

5. The ignition must be cycled in order for the ECU to save the ratios and ESC end-of-line data. With the vehicle stopped, close window that appears on the laptop and cycle the ignition for approximately 10 seconds.
6. Turn the ignition to the ON position. Verify that no active or stored faults are logged in the ECU and that the ABS and ATC/ESC warning lamps are OFF. See [Fig. 14](#) and [Fig. 15](#).

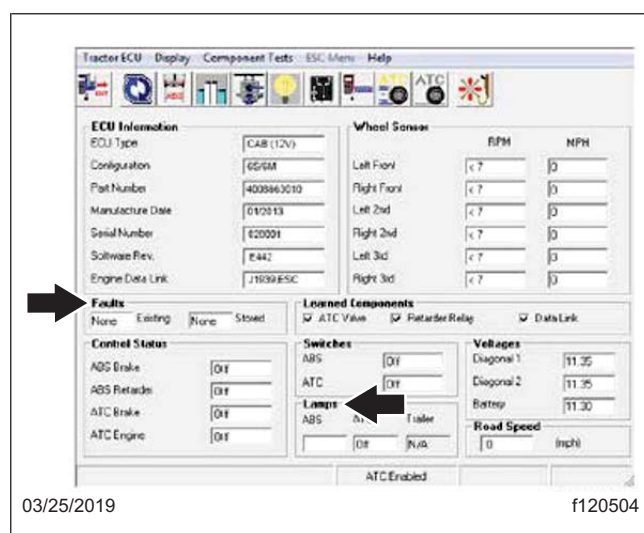


Fig. 14, Checking for Active Faults

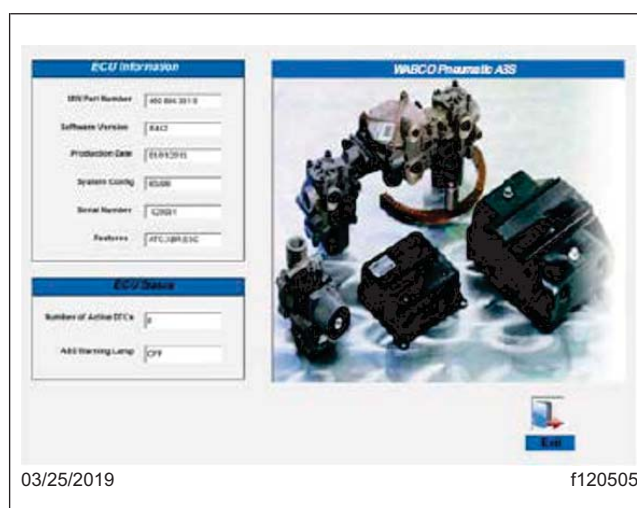


Fig. 15, Checking for Active Faults, Screen 2

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7. The ESC end-of-line initialization procedure is complete.

IMPORTANT: If the ESC end-of-line initialization was not properly completed or the ratios were not saved correctly, fault code SID 88 FMI 1 will be active. Follow the ESC initialization again and make sure each portion is successfully completed. Ensure the ignition power-down is completed for the ECU to successfully save the data.

8. If the calibration was successful, clean a spot on the base label (Form WAR259) and attach a campaign completion sticker for FL809 (Form WAR260) on the base label.

If the calibration was not successful, review MM0112 ABS and ESC Maintenance Manual on the Meritor website, or contact Meritor OnTrac at (855) 228-3203, and follow the advice given.

When the calibration is completed successfully, clean a spot on the base label (Form WAR259) and attach a completion sticker for FL809 (Form WAR260) on the base label. If additional labor was required, request the additional repair time in a WSC ticket or OWL as appropriate for your location.