



Product Improvement Campaign

No: MF000002
Issued: 11/19/2012
Re: Engine EEC Reprogramming
Group: 13 Models: FE/FG
Expires: 11/19/2013

SUBJECT:
Customer Confidence Program MF000002 – Engine EEC Reprogramming

MODELS:
FEC52, FEC72, FEC92, FGB72

VEHICLES INVOLVED:
Certain 2012 and 2013 model year FEC52, FEC72, FEC92 and FGB72 trucks produced from April 8, 2011 through September 26, 2012.

PROGRAM:
As an important part of the Fuso Customer Confidence Program, the Engine EEC will be reprogrammed.

OWNER NOTIFICATION:
The replacement transmission aspect of the Customer Confidence Program will be released in controlled segments to ensure a continuous availability of updated DUONIC transmission assemblies. Customers will be notified by MFTA that a product performance enhancement is available from their local Fuso dealer. Dealers may feel free to begin scheduling a customer appointment once the truck's VIN appears on the dealer's "Open Campaigns" report beginning December 1, 2012.

MODIFICATION:
The engine EEC will be reprogrammed.

WARRANTY CLAIM SUBMITTAL FOR EEC REPROGRAMMING:
Submit a regular Warranty Service Claim A (WSC) via Fusonet for the EEC reprogramming. Enter all requested header information, including the information listed below. MFTA Warranty will remove the MF000002 Campaign notification from the VIN after receiving the WSC.

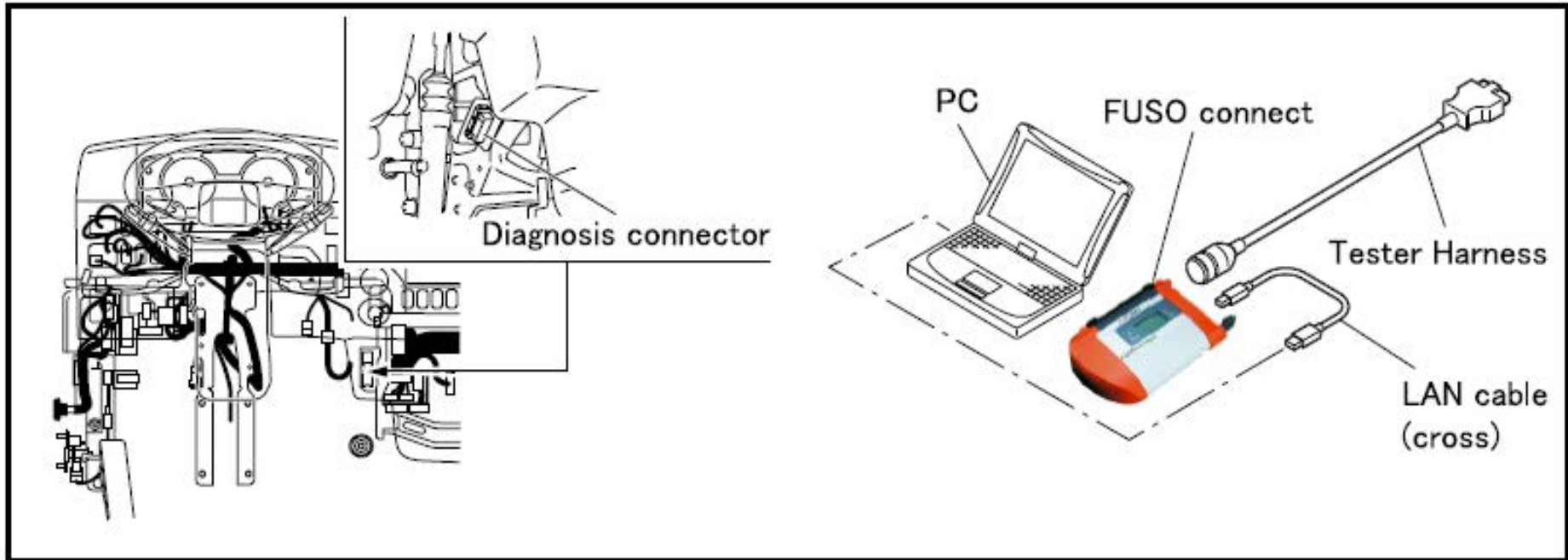
Table with 2 columns: Claim Type, Value. Rows include Failed Labor Operation Number (138502), A Code (99), B Code (60), C Code (S), Failed Part Number (NPN).

Table with 2 columns: Labor Operation / Work Code / Quantity / Labor Time, Failure Work Description. Row 1: 138502 / 99 / 1 / 1.2 hours. Row 2: "Reprogram Engine EEC"

- REPAIR PROCEDURE:
1. Park the vehicle on a flat, level surface, turn off the engine, apply the parking brake and chock the wheels.
CAUTION! Do not remove the wheel chocks until all modification work has been completed.
2. Perform the Campaign using the attached modification procedure.
IMPORTANT! IF THE VEHICLE IS IN THE DEALERSHIP FOR A FAILURE AND DTC'S EXIST IN THE SYSTEM, REMEDY THE TRUCK FIRST AND CLEAR ALL DTC'S BEFORE PROCEEDING WITH THE EEC REPROGRAMMING.

Modification Procedure

Connect the Fuso Diagnostic Scanner to the Canter as shown below. Turn the ignition key switch to the ON position. NOTE: During the reprogramming procedure, make sure the battery voltage does not drop below 11.0 VDC.



Open Fuso Diagnostic, open the EEC control unit and check and record the control unit's version information.

If the software does not match the following, the EEC must be updated:

FE Models

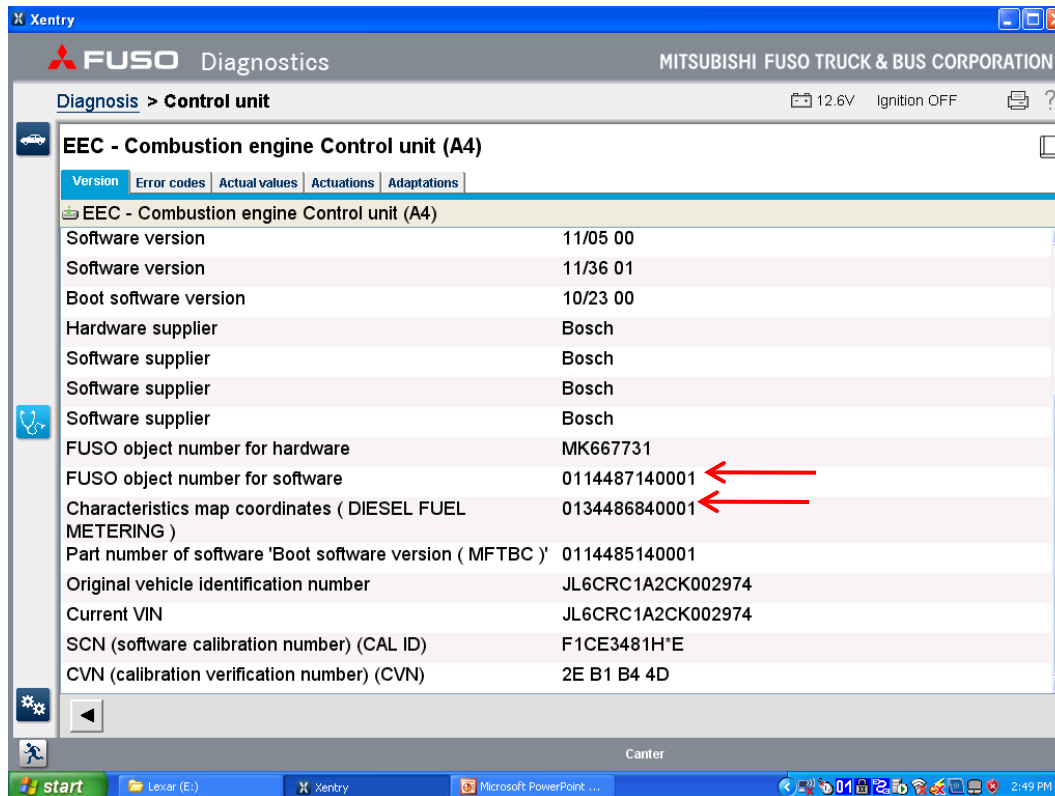
Software – A0154484440001

Characteristics map coordinates – 0154481340001

FG Models

Software – A0154484440001

Characteristics map coordinates – 0154481440001

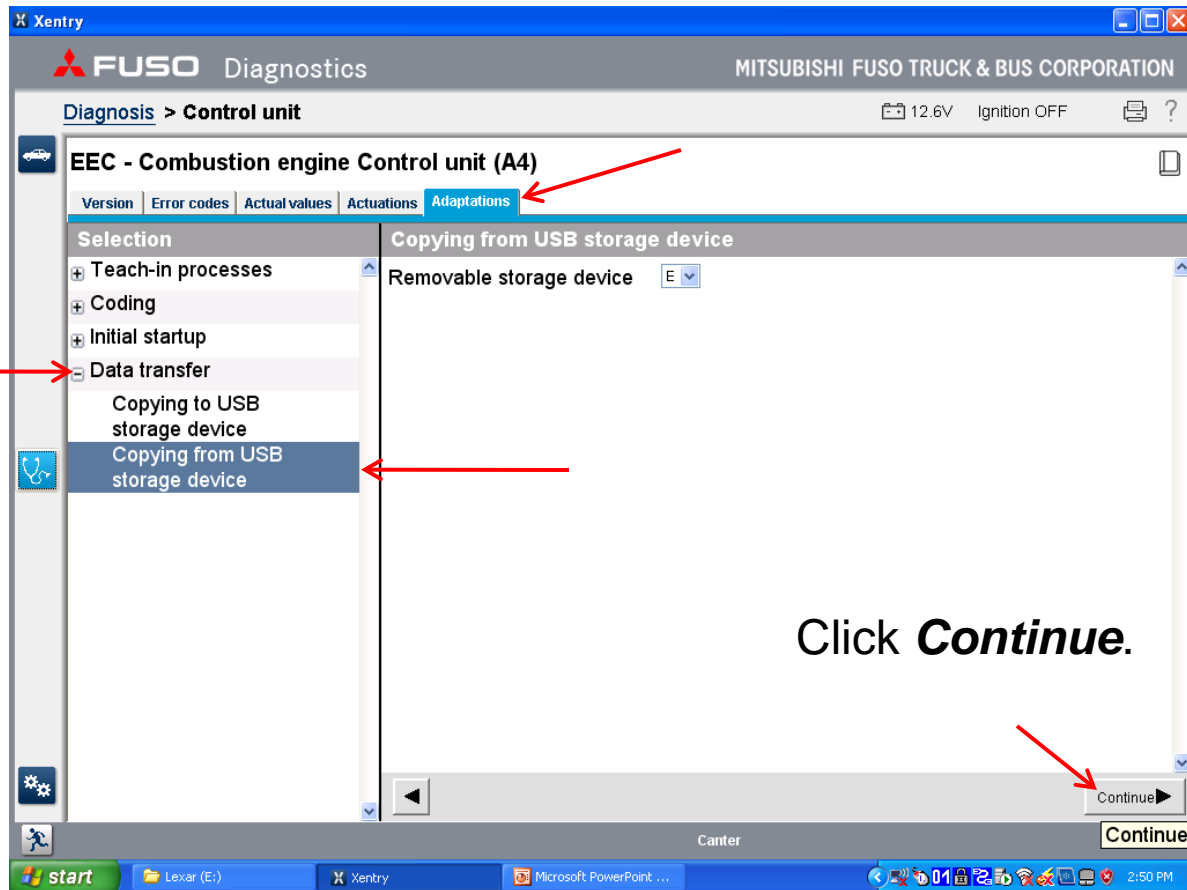


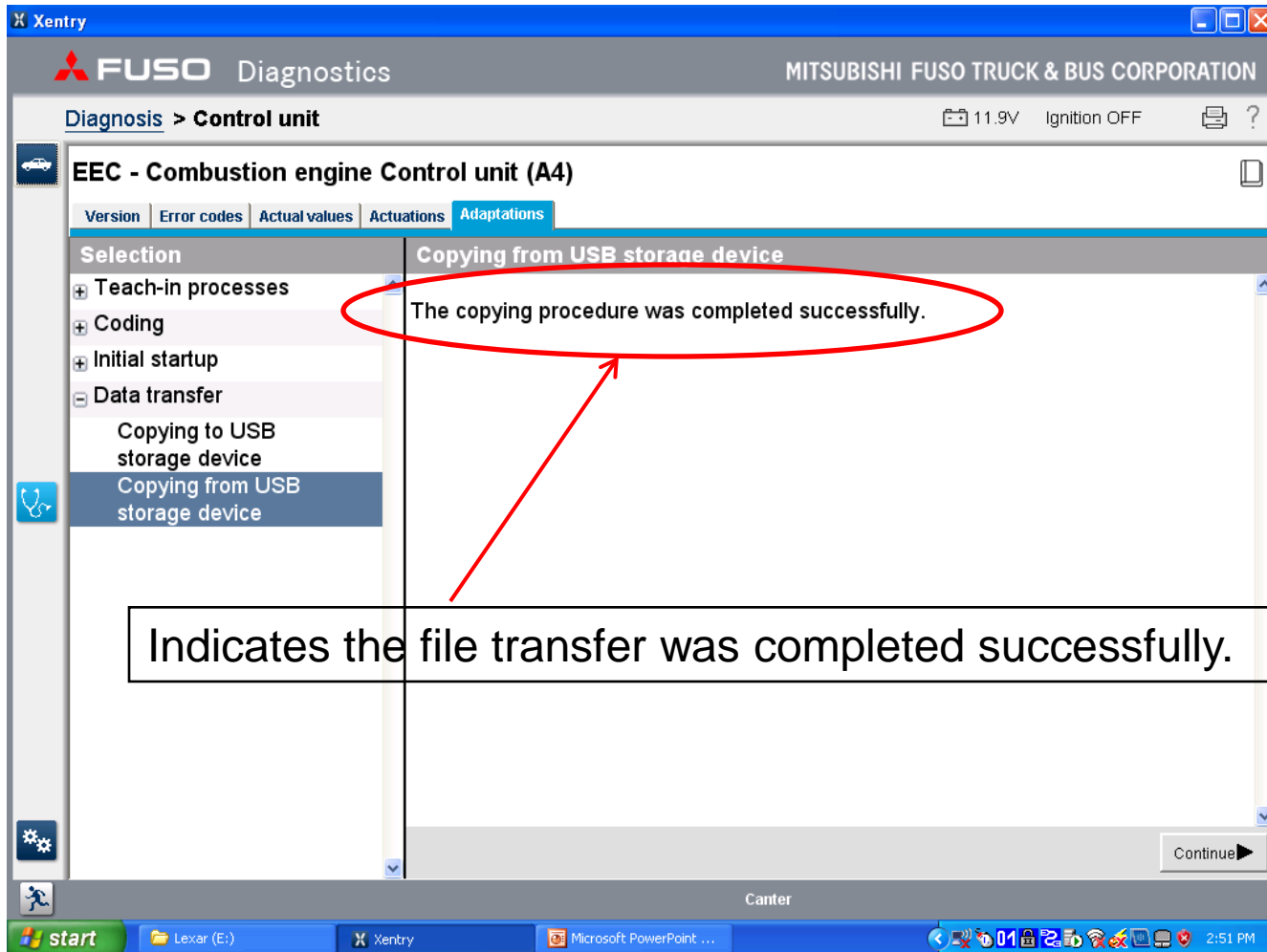
The screenshot shows the FUSO Diagnostics software interface. The main window title is 'Xentry' and the application title is 'FUSO Diagnostics'. The breadcrumb navigation shows 'Diagnosis > Control unit'. The selected control unit is 'EEC - Combustion engine Control unit (A4)'. The interface displays a list of parameters for this control unit, including software versions, hardware suppliers, and object numbers. Two red arrows point to the 'FUSO object number for software' (0114487140001) and 'Characteristics map coordinates (DIESEL FUEL METERING)' (0134486840001) fields.

Parameter	Value
Software version	11/05 00
Software version	11/36 01
Boot software version	10/23 00
Hardware supplier	Bosch
Software supplier	Bosch
Software supplier	Bosch
Software supplier	Bosch
FUSO object number for hardware	MK667731
FUSO object number for software	0114487140001
Characteristics map coordinates (DIESEL FUEL METERING)	0134486840001
Part number of software 'Boot software version (MFTBC)	0114485140001
Original vehicle identification number	JL6CRC1A2CK002974
Current VIN	JL6CRC1A2CK002974
SCN (software calibration number) (CAL ID)	F1CE3481H*E
CVN (calibration verification number) (CVN)	2E B1 B4 4D

Go to MFTBC's Field Rewrite Network (FRN) website at <https://eol.mitsubishi-fuso.com/fss/> and obtain an inquiry number and password for an EEC control module.

Insert the USB mass storage device into the laptop. Open the **Adaptations** tab, open the **Data transfer** tab, and click on **Copying from USB storage device**.





Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 11.9V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version Error codes Actual values Actuations Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Copying from USB storage device

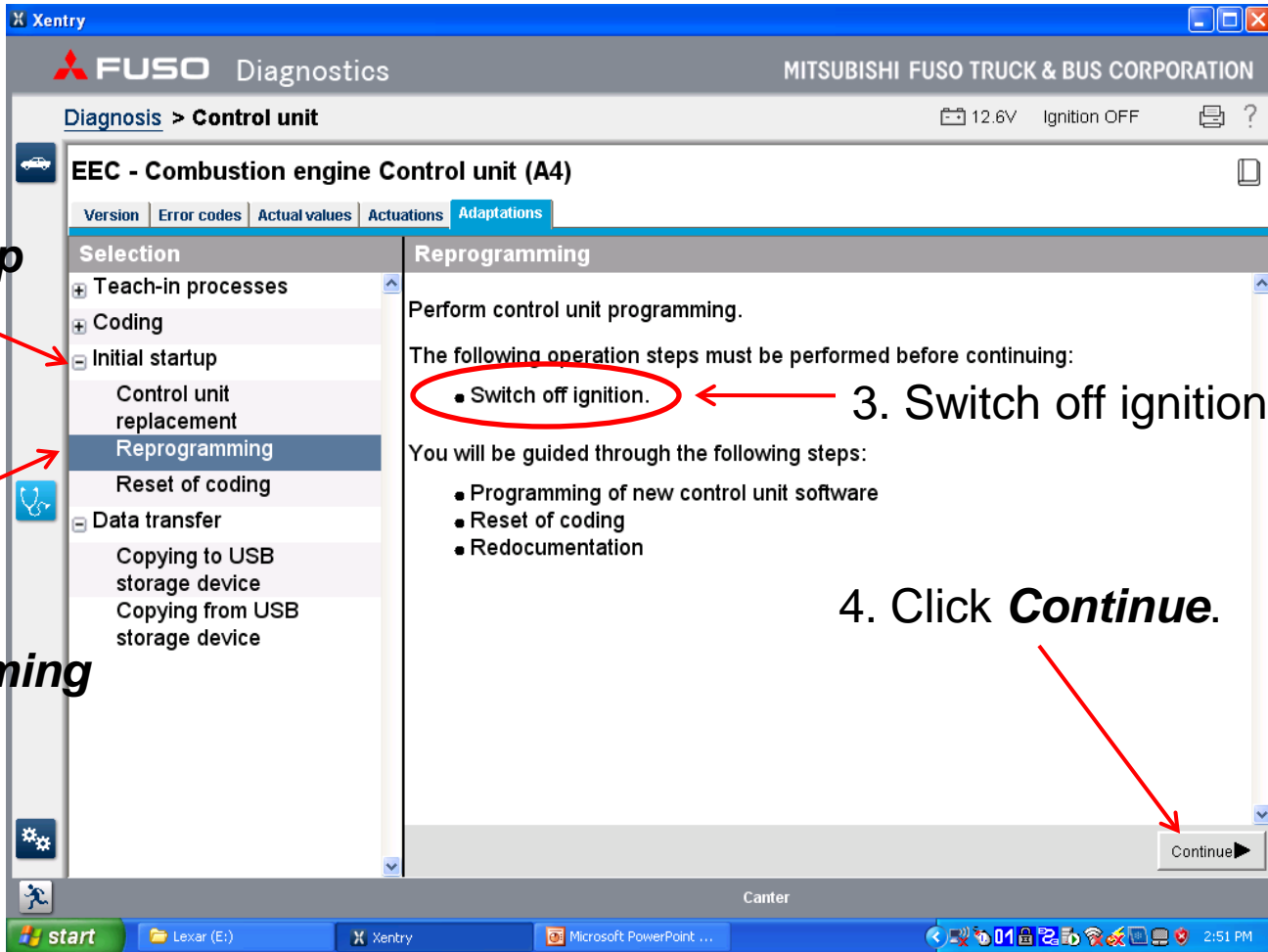
The copying procedure was completed successfully.

Indicates the file transfer was completed successfully.

Continue

Center

start Lexar (E:) Xentry Microsoft PowerPoint ... 2:51 PM



Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.6V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version Error codes Actual values Actuations Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
- Reprogramming**
- Reset of coding
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Reprogramming

Perform control unit programming.

The following operation steps must be performed before continuing:

- Switch off ignition.

You will be guided through the following steps:

- Programming of new control unit software
- Reset of coding
- Redocumentation

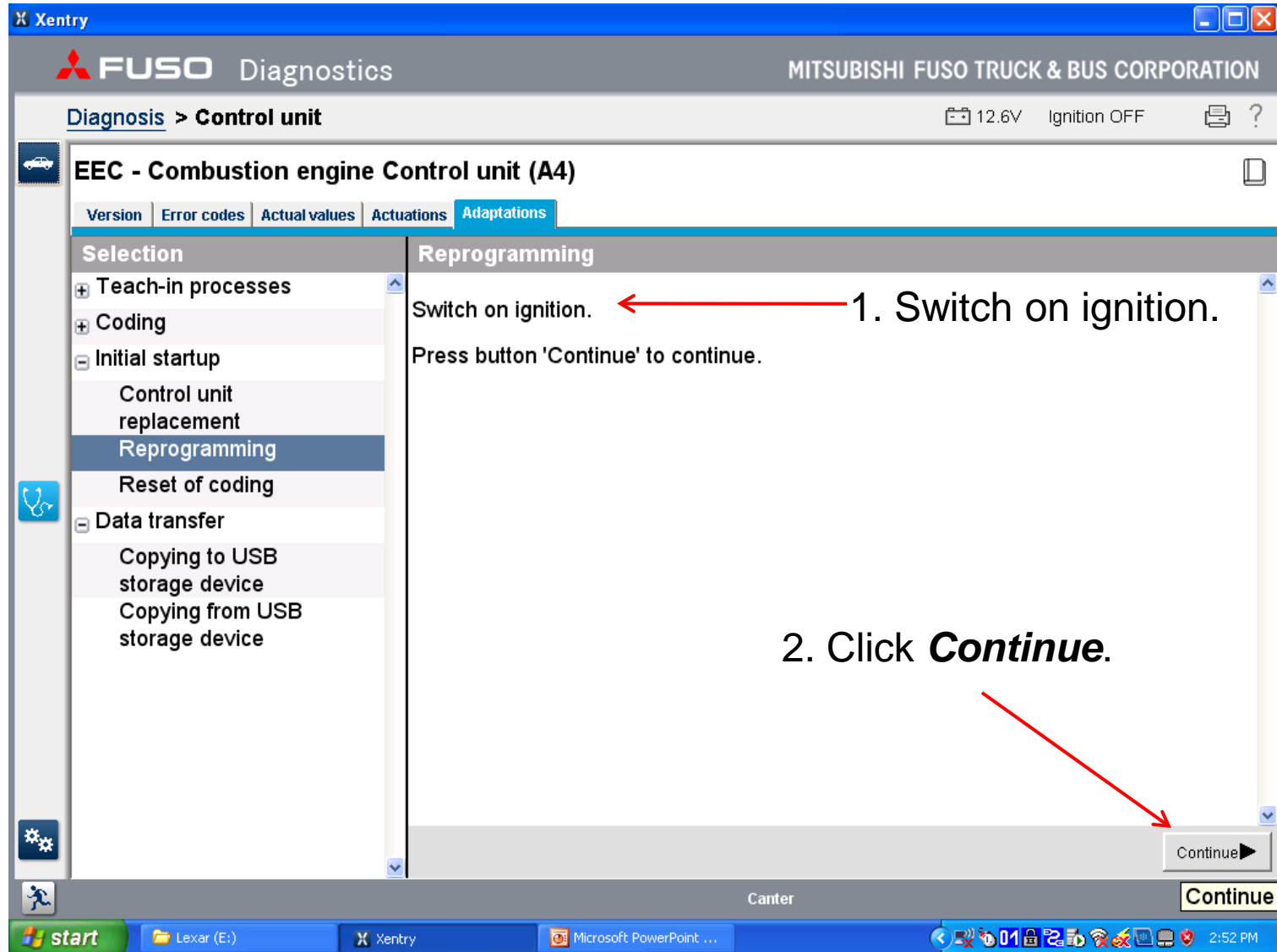
Continue

1. Click **Initial startup**

2. Click **Reprogramming**

3. Switch off ignition.

4. Click **Continue**.



Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.6V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version Error codes Actual values Actuations Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
 - Reprogramming**
 - Reset of coding
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Reprogramming

Switch on ignition. ← 1. Switch on ignition.

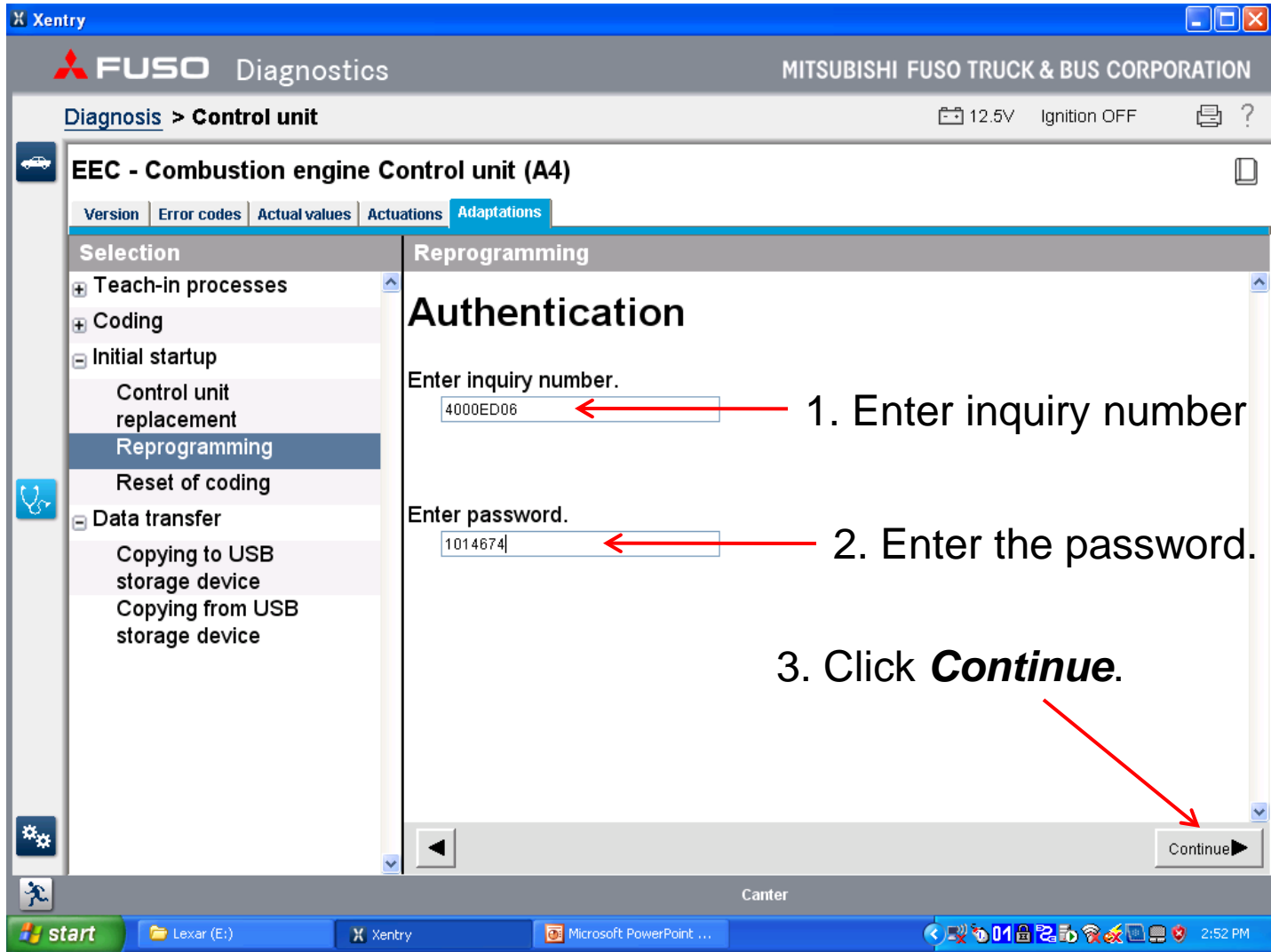
Press button 'Continue' to continue.

2. Click **Continue**.

Continue

Continue

Windows taskbar: start, Lexar (E:), Xentry, Microsoft PowerPoint ..., 2:52 PM



Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.5V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version Error codes Actual values Actuations Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
 - Reprogramming
 - Reset of coding
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Reprogramming

Authentication

Enter inquiry number.

4000ED06

1. Enter inquiry number

Enter password.

1014674

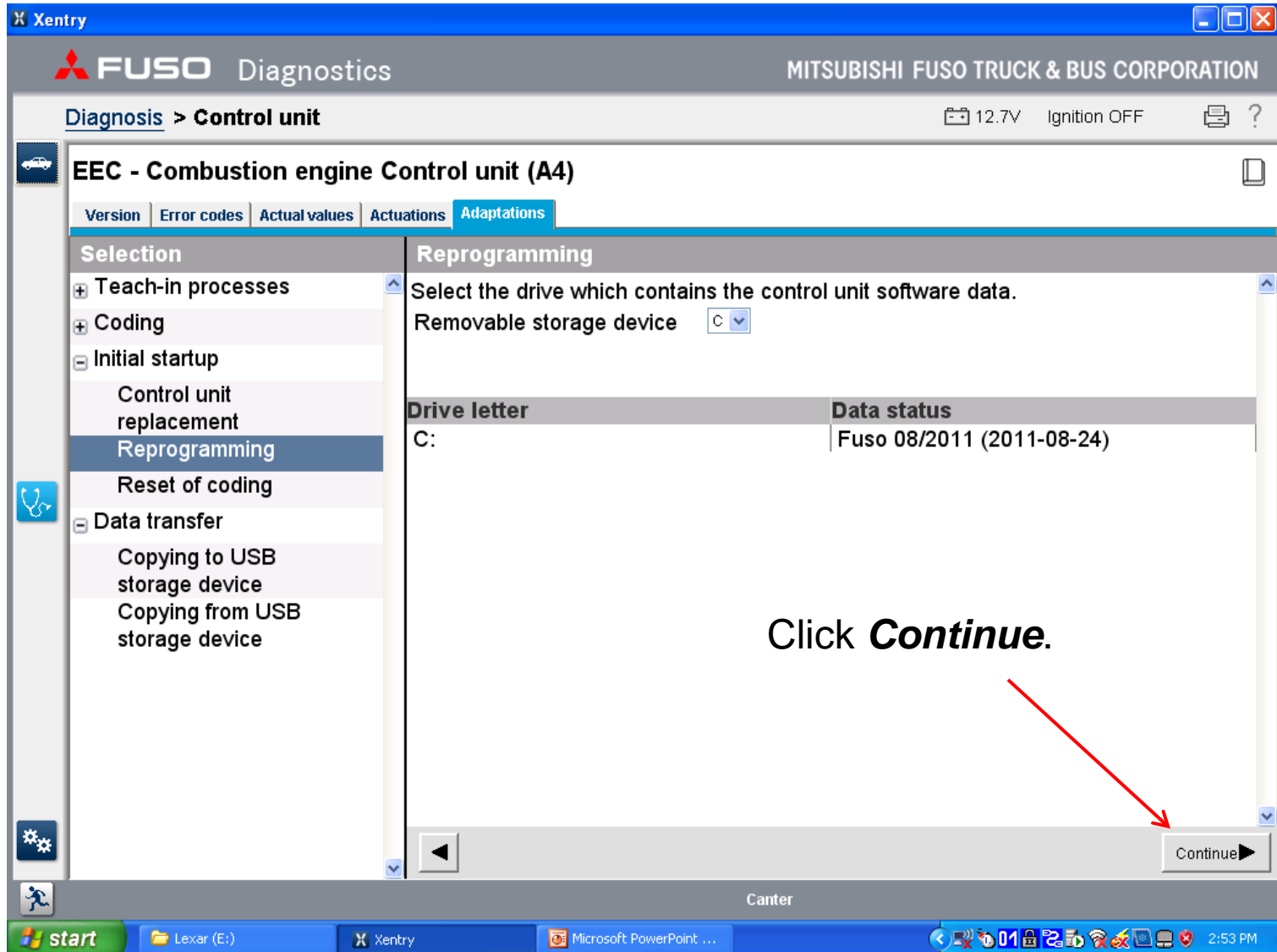
2. Enter the password.

3. Click **Continue**.

Continue

Canter

start Lexar (E:) Xentry Microsoft PowerPoint ... 2:52 PM



FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.7V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version | Error codes | Actual values | Actuations | **Adaptations**

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
 - Reprogramming**
 - Reset of coding
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Reprogramming

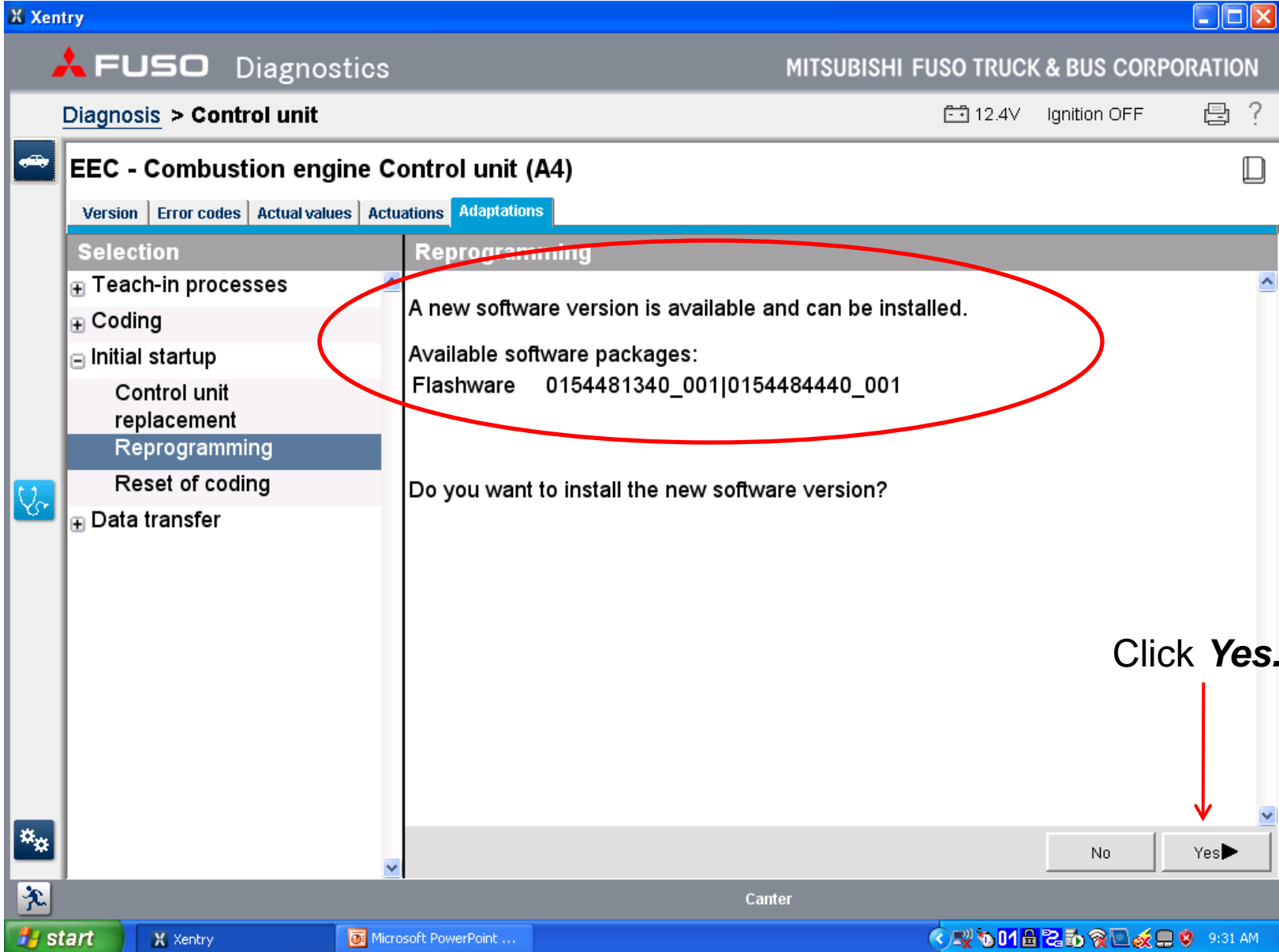
Select the drive which contains the control unit software data.

Removable storage device **C**

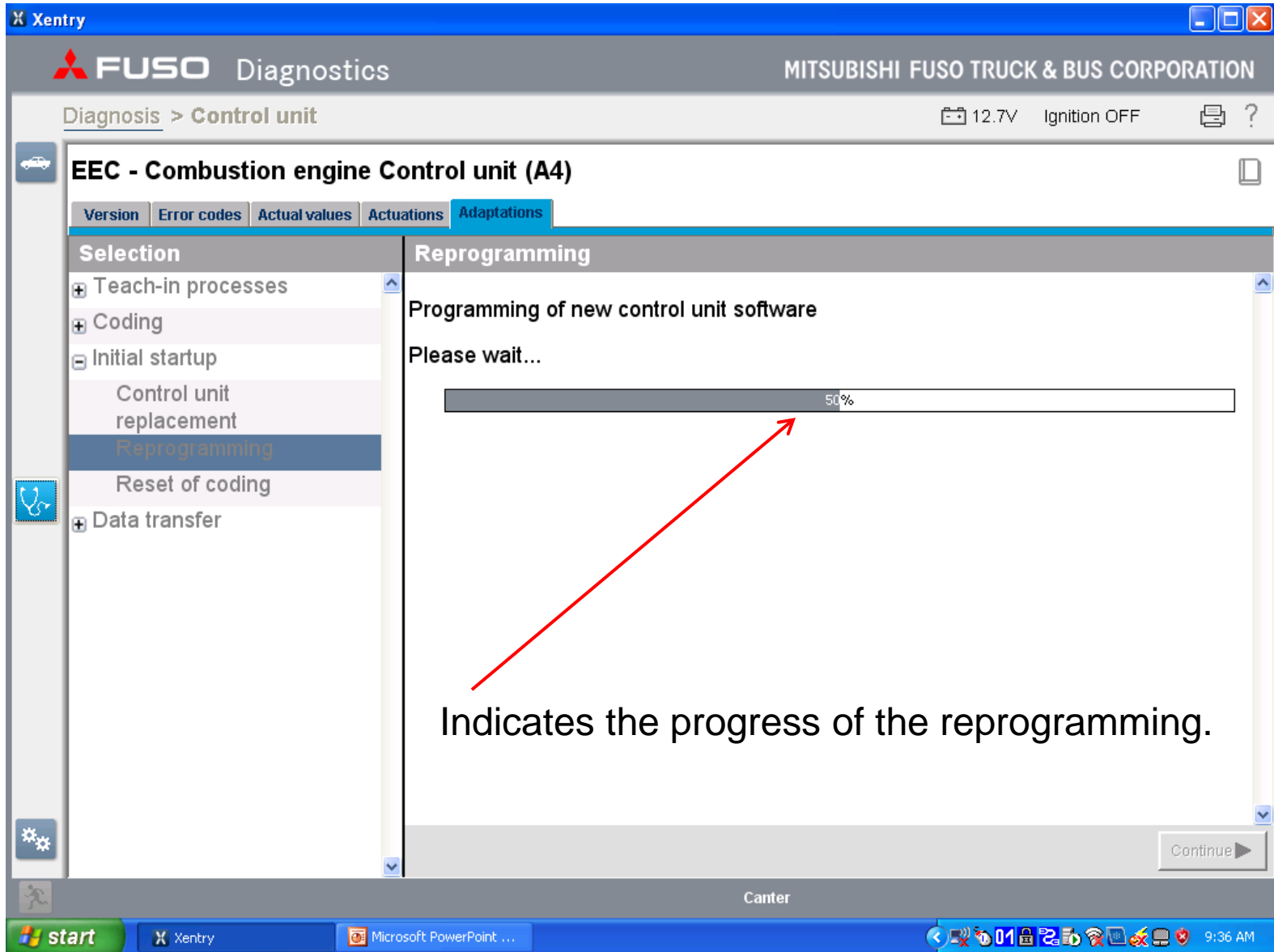
Drive letter	Data status
C:	Fuso 08/2011 (2011-08-24)

Click *Continue*.

Continue



The screenshot shows the FUSO Diagnostics software window titled "Xentry". The main header displays the FUSO logo and "Diagnostics" on the left, and "MITSUBISHI FUSO TRUCK & BUS CORPORATION" on the right. Below the header, the navigation path is "Diagnosis > Control unit". On the right side of this bar, it shows "12.4V Ignition OFF" and a printer icon. The main content area is titled "EEC - Combustion engine Control unit (A4)". There are four tabs: "Version", "Error codes", "Actual values", "Actuations", and "Adaptations". The "Adaptations" tab is active, showing a "Reprogramming" section. On the left, a "Selection" list includes "Teach-in processes", "Coding", "Initial startup" (with sub-items "Control unit replacement" and "Reprogramming"), "Reset of coding", and "Data transfer". The "Reprogramming" section contains the following text: "A new software version is available and can be installed." (circled in red), "Available software packages:", "Flashware 0154481340_001|0154484440_001", and "Do you want to install the new software version?". At the bottom right of the dialog, there are "No" and "Yes" buttons. A red arrow points to the "Yes" button with the text "Click Yes." written next to it. The Windows taskbar at the bottom shows the "start" button, "Xentry", "Microsoft PowerPoint ...", and system icons including the time "9:31 AM".

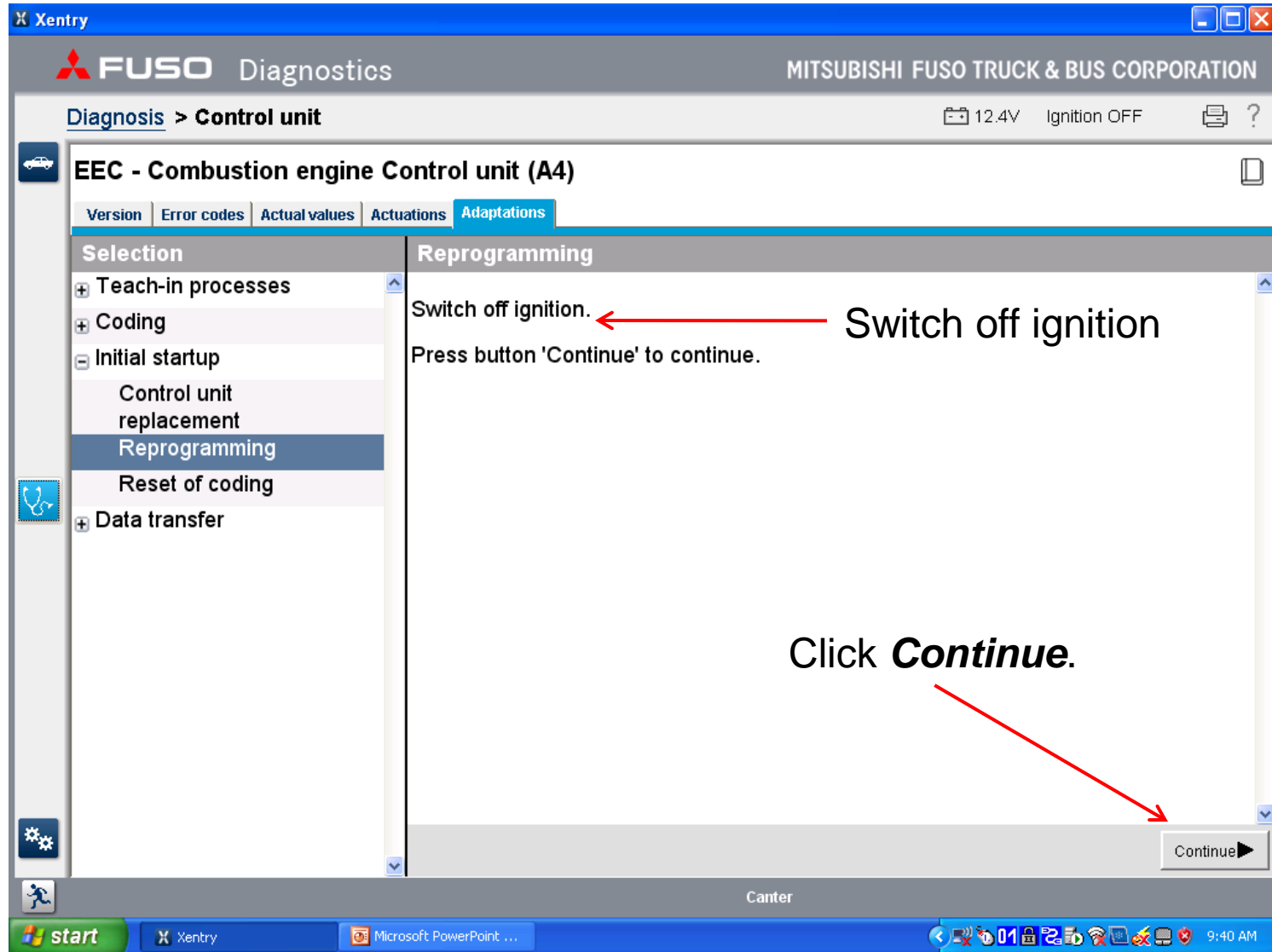


The screenshot displays the FUSO Xentry Diagnostics software interface. At the top, the window title is "Xentry" and the application header shows the FUSO logo and "Diagnostics" text. The right side of the header identifies the user as "MITSUBISHI FUSO TRUCK & BUS CORPORATION". Below the header, the navigation path is "Diagnosis > Control unit". The main area is titled "EEC - Combustion engine Control unit (A4)".

On the left side, there is a "Selection" pane with a tree view containing the following items: "Teach-in processes", "Coding", "Initial startup", "Control unit replacement", "Reprogramming" (highlighted in blue), "Reset of coding", and "Data transfer".

The main content area is titled "Reprogramming" and contains the text "Programming of new control unit software" and "Please wait...". Below this text is a progress bar that is approximately half-filled, with "50%" displayed at the right end. A red arrow points from the text "Indicates the progress of the reprogramming." below to the progress bar.

At the bottom right of the main area, there is a "Continue" button with a right-pointing arrow. The bottom status bar shows the name "Canter" and a "start" button on the left. The Windows taskbar at the very bottom shows the "start" button, the "Xentry" application, and a "Microsoft PowerPoint ..." window. The system tray on the right includes icons for network, volume, and battery, along with the time "9:36 AM".



FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.4V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version | Error codes | Actual values | Actuators | Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
 - Reprogramming**
 - Reset of coding
- Data transfer

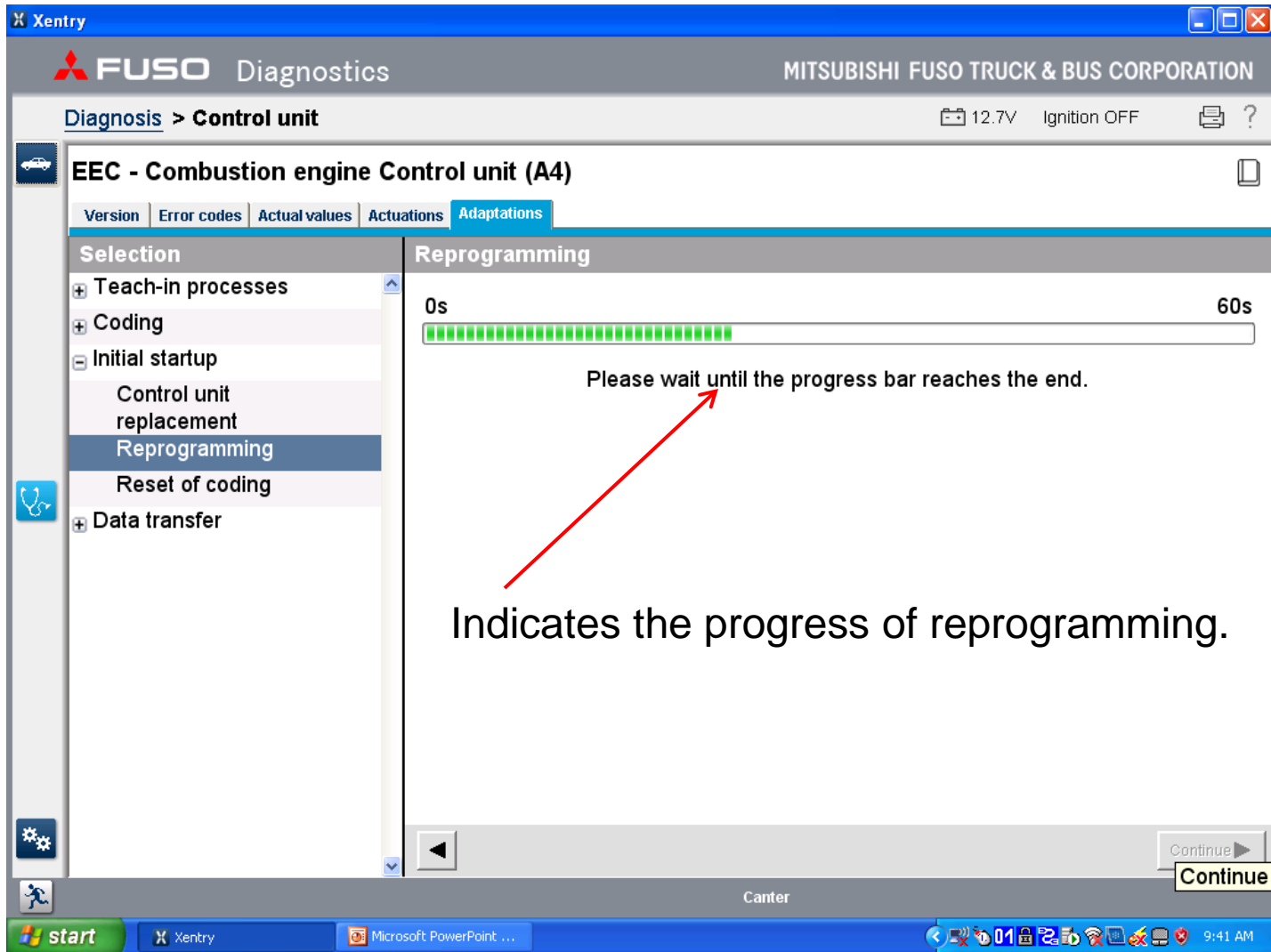
Reprogramming

Switch off ignition. ← **Switch off ignition**
Press button 'Continue' to continue.

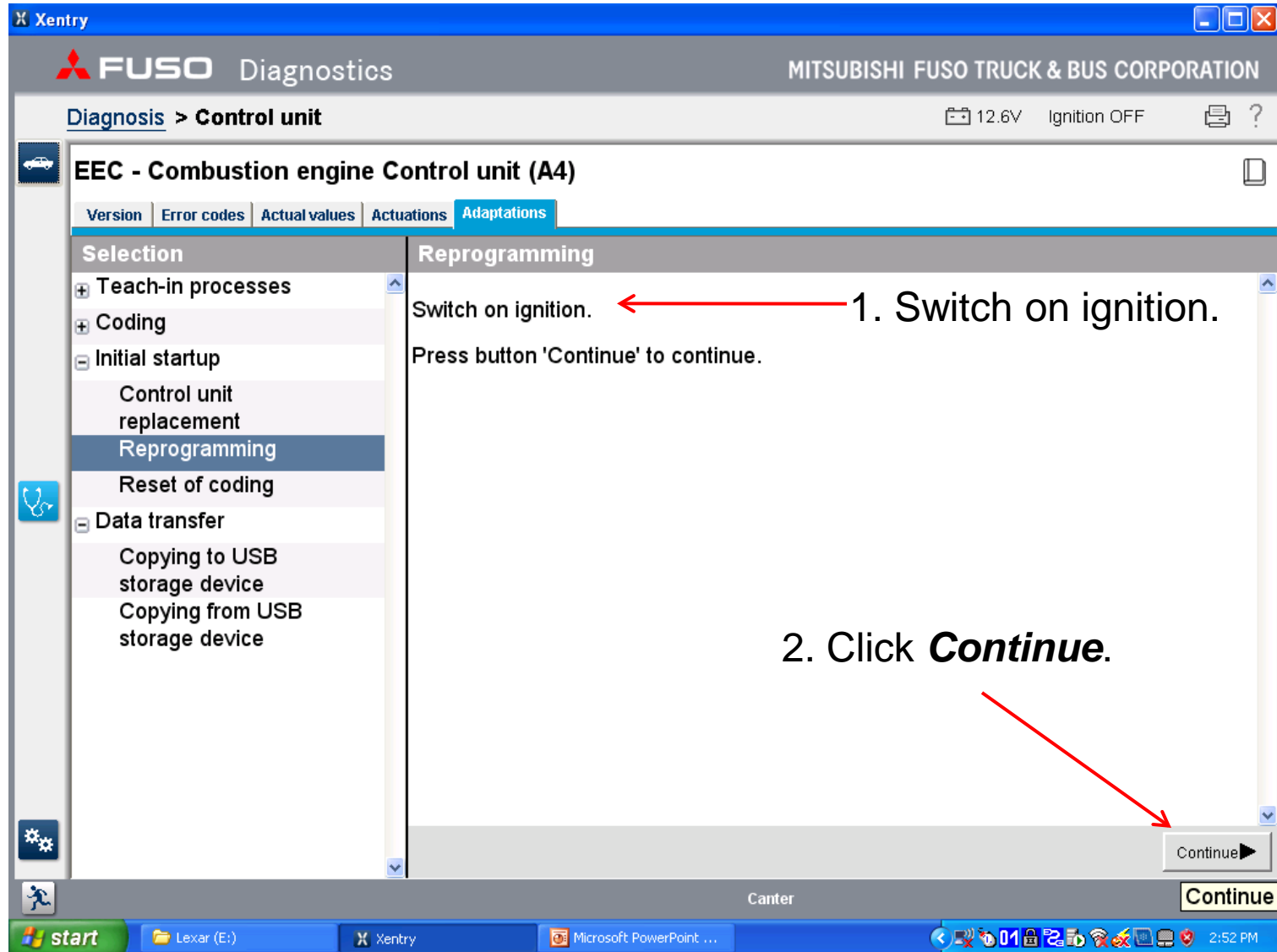
Click *Continue*.

Continue ▶

start Xentry Microsoft PowerPoint ... 9:40 AM



The screenshot shows the FUSO Diagnostics software interface. The main window title is "Xentry" and the application title is "FUSO Diagnostics". The breadcrumb navigation shows "Diagnosis > Control unit". The current selection is "EEC - Combustion engine Control unit (A4)". The "Adaptations" tab is active, showing a list of options: "Teach-in processes", "Coding", "Initial startup", "Control unit replacement", "Reprogramming", "Reset of coding", and "Data transfer". The "Reprogramming" option is selected, and a progress bar is displayed below it. The progress bar is labeled "Reprogramming" and shows a green bar that is approximately 10% full. The time displayed is "0s" on the left and "60s" on the right. A red arrow points to the progress bar with the text "Indicates the progress of reprogramming." Below the progress bar, the text "Please wait until the progress bar reaches the end." is displayed. At the bottom right, there are "Continue" buttons. The Windows taskbar at the bottom shows the "start" button, "Xentry", "Microsoft PowerPoint ...", and the system tray with the time "9:41 AM".



Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.6V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version Error codes Actual values Actuations Adaptations

Selection

- Teach-in processes
- Coding
- Initial startup
 - Control unit replacement
 - Reprogramming**
 - Reset of coding
- Data transfer
 - Copying to USB storage device
 - Copying from USB storage device

Reprogramming

Switch on ignition. ← 1. Switch on ignition.

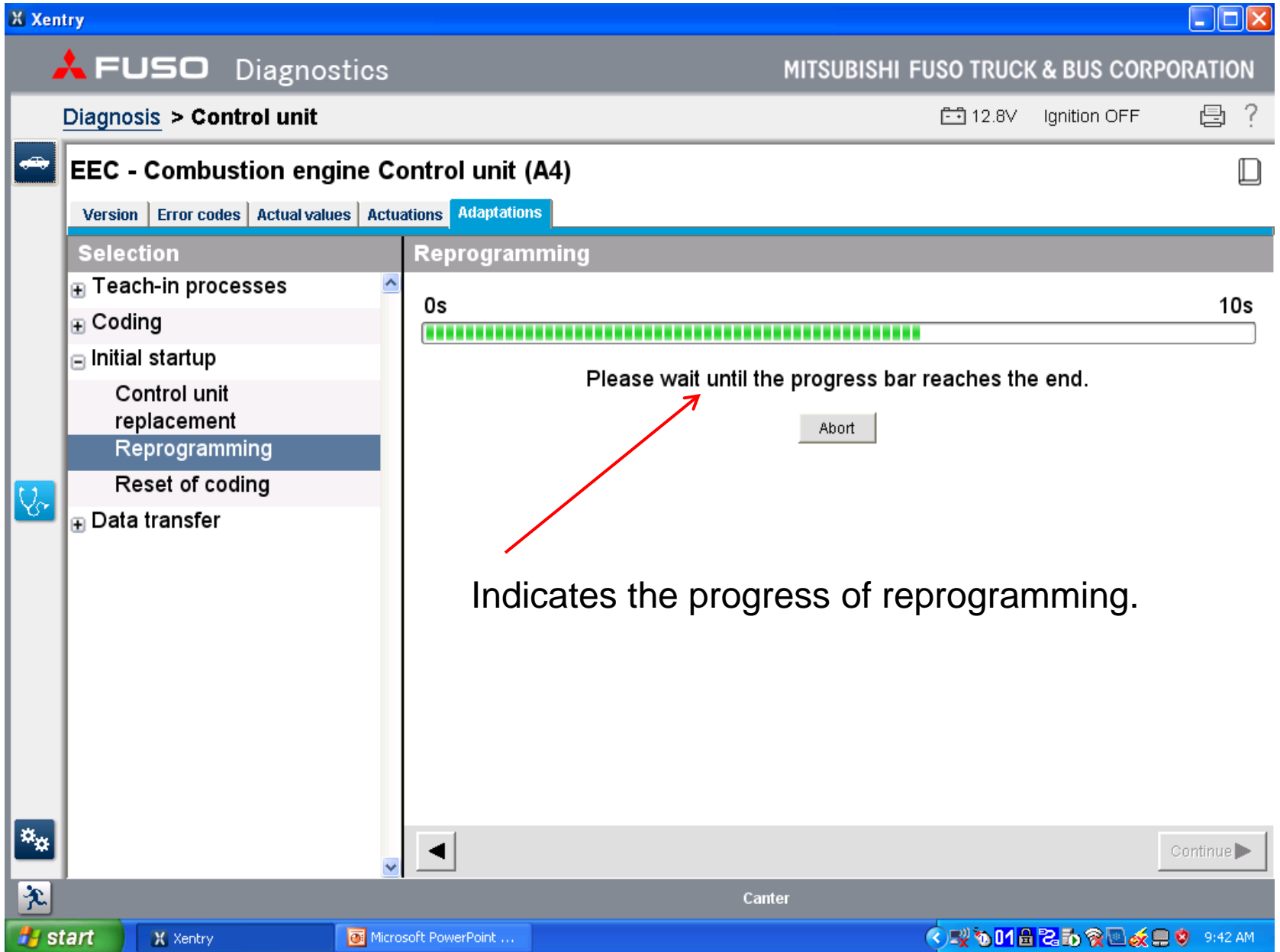
Press button 'Continue' to continue.

2. Click **Continue**.

Continue

Continue

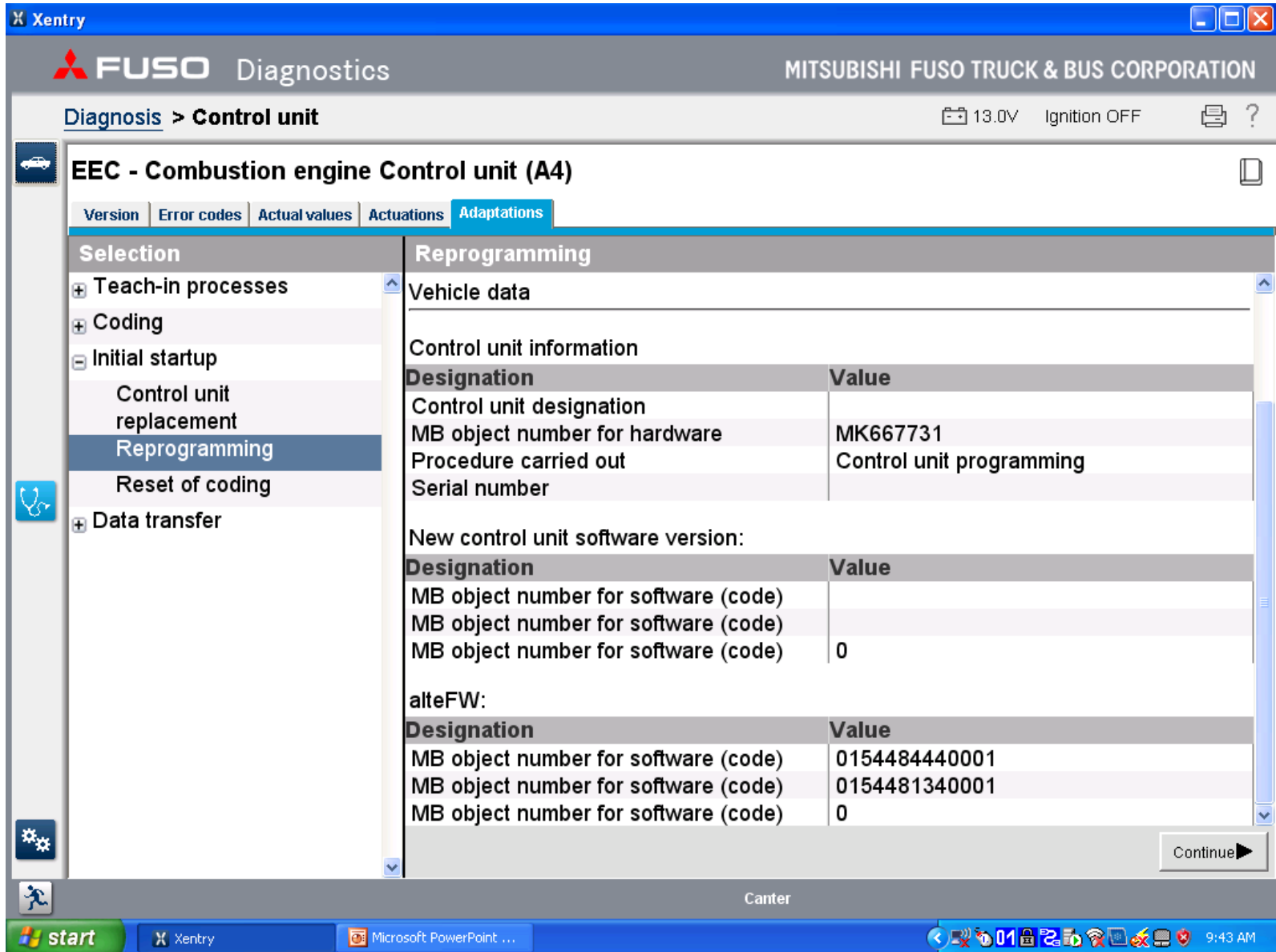
start Lexar (E:) Xentry Microsoft PowerPoint ... 01 2:52 PM



The screenshot shows the FUSO Diagnostics software interface. At the top, the title bar reads "Xentry" and the application header displays the FUSO logo and "Diagnostics" on the left, and "MITSUBISHI FUSO TRUCK & BUS CORPORATION" on the right. Below the header, the navigation path is "Diagnosis > Control unit". The main content area is titled "EEC - Combustion engine Control unit (A4)". A tabbed interface shows "Adaptations" as the active tab. On the left, a "Selection" pane lists various options: "Teach-in processes", "Coding", "Initial startup" (with sub-items "Control unit replacement" and "Reprogramming"), "Reset of coding", and "Data transfer". The "Reprogramming" option is highlighted. The main area displays a progress bar for "Reprogramming" from "0s" to "10s". The bar is approximately 70% full with green segments. Below the bar, the text "Please wait until the progress bar reaches the end." is displayed, with a red arrow pointing to the bar. An "Abort" button is visible to the right of the text. At the bottom of the software window, there are navigation buttons: a left arrow, a "Continue" button with a right arrow, and the word "Center" in the middle. The Windows taskbar at the very bottom shows the "start" button, the "Xentry" application, and a "Microsoft PowerPoint ..." window. The system tray on the right shows various icons and the time "9:42 AM".

Indicates the progress of reprogramming.

This screen is displayed when the programming is finished.



FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 13.0V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version | Error codes | Actual values | Actuations | **Adaptations**

Selection

- + Teach-in processes
- + Coding
- Initial startup
 - Control unit replacement
 - Reprogramming**
 - Reset of coding
- + Data transfer

Reprogramming

Vehicle data

Control unit information

Designation	Value
Control unit designation	
MB object number for hardware	MK667731
Procedure carried out	Control unit programming
Serial number	

New control unit software version:

Designation	Value
MB object number for software (code)	
MB object number for software (code)	
MB object number for software (code)	0

alteFW:

Designation	Value
MB object number for software (code)	0154484440001
MB object number for software (code)	0154481340001
MB object number for software (code)	0

Continue ▶

Carter

Windows taskbar: start | Xentry | Microsoft PowerPoint ... | 01 | 9:43 AM

3. Click *Diagnosis*.

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit

13.0V Ignition OFF

EEC - Combustion engine Control unit (A4)

Version | Error codes | Actual values | Actuators | Adaptations

EEC - Combustion engine Control unit (A4)	
Software version	12/25 00
Software version	12/29 01
Boot software version	10/23 00
Hardware supplier	Bosch
Software supplier	Bosch
Software supplier	Bosch
Software supplier	Bosch
FUSO object number for hardware	MK667731
FUSO object number for software	0154484440001
Characteristics map coordinates (DIESEL FUEL METERING)	0154481340001
Part number of software 'Boot software version (MFTBC)'	0114485140001
Original vehicle identification number	JL6CRC1A2CK002974
Current VIN	JL6CRC1A2CK002974
SCN (software calibration number) (CAL ID)	F1CE3481H*Paaa1
CVN (calibration verification number) (CVN)	4F DB DC 18

2. Check for new information.

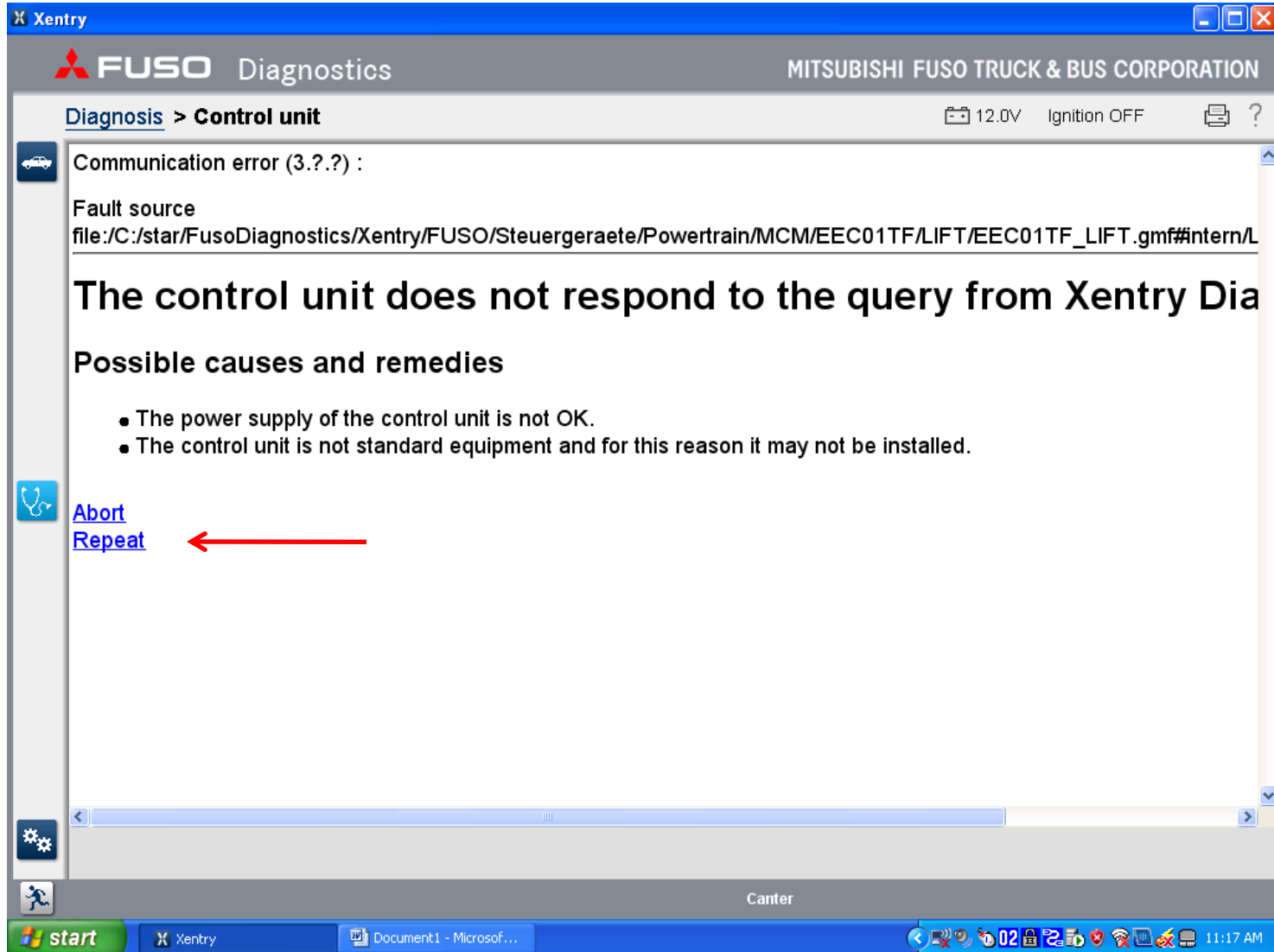
FE Models
 Software – A0154484440001
 Characteristics map coordinates – 0154481340001

FG Models
 Software – A0154484440001
 Characteristics map coordinates – 0154481440001

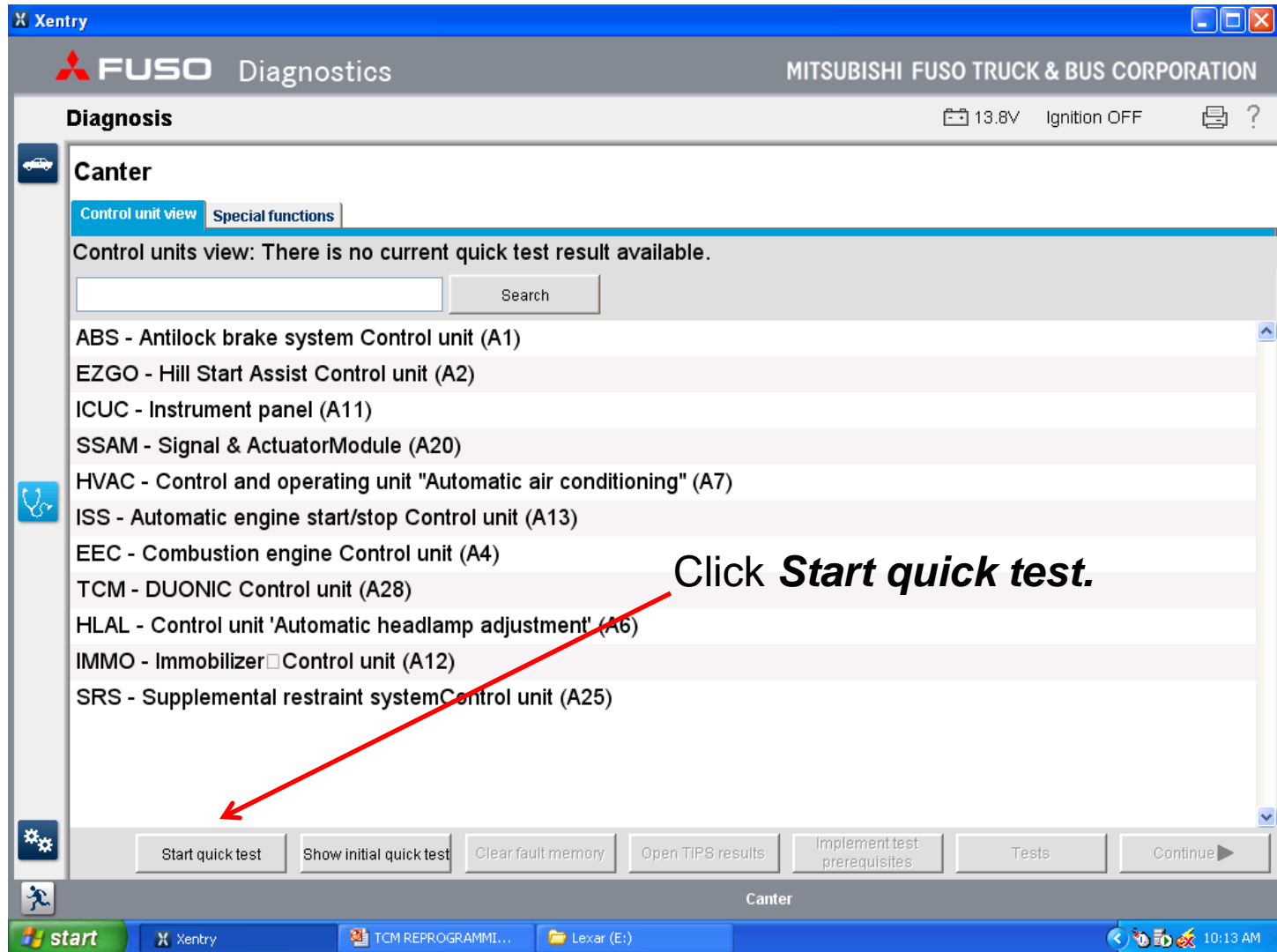
Canter

start | X Xentry | Microsoft PowerPoint ... | 01 | 9:44 AM

Turn the ignition switch OFF for a full minute. The error message below will appear. Turn the ignition switch ON and click “Repeat” to continue.

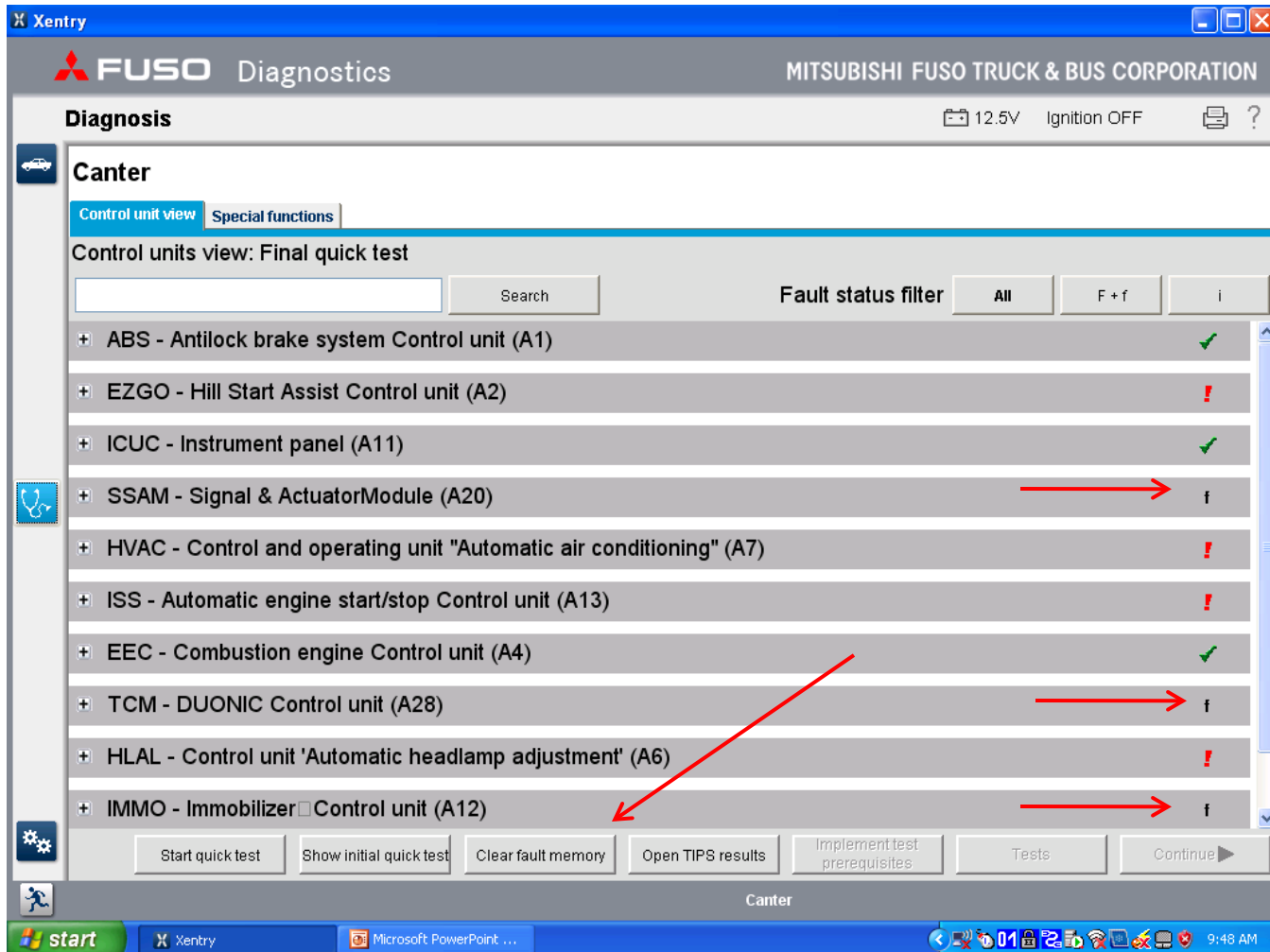


Click on “Diagnosis” to return to the main diagnosis screen and click “Start quick test”.



Click *Start quick test.*

The reprogramming procedure can cause DTCs to be logged in the SSAM, IMMO, & TCM modules. If the fault status displays a lower case letter **f**, those faults are stored and can be deleted using the **Clear fault memory** tab. Then, turn the key to the OFF position for a full minute.



The screenshot shows the FUSO Diagnostics software interface. The title bar reads "Xentry" and "FUSO Diagnostics". The main header includes the FUSO logo and "MITSUBISHI FUSO TRUCK & BUS CORPORATION". The "Diagnosis" section is active, showing a "Canter" vehicle model. The "Control unit view" tab is selected, displaying a list of control units under the heading "Control units view: Final quick test".

The list of control units and their fault status is as follows:

Control Unit	Fault Status
ABS - Antilock brake system Control unit (A1)	✓
EZGO - Hill Start Assist Control unit (A2)	!
ICUC - Instrument panel (A11)	✓
SSAM - Signal & ActuatorModule (A20)	f
HVAC - Control and operating unit "Automatic air conditioning" (A7)	!
ISS - Automatic engine start/stop Control unit (A13)	!
EEC - Combustion engine Control unit (A4)	✓
TCM - DUONIC Control unit (A28)	f
HLAL - Control unit 'Automatic headlamp adjustment' (A6)	!
IMMO - Immobilizer Control unit (A12)	f

At the bottom of the interface, there are several buttons: "Start quick test", "Show initial quick test", "Clear fault memory", "Open TIPS results", "Implement test prerequisites", "Tests", and "Continue". The "Clear fault memory" button is highlighted with a red arrow pointing to it from the SSAM row. The "Clear fault memory" button is also highlighted with a red arrow pointing to it from the IMMO row.

Turn the key to the ON position. Click **Adaptations**. Click **Data transfer**. Click **Copying to USB storage device**. Safely remove the USB storage device from the laptop. Upload the File to MFTBC on the FRN website.

