



Product Improvement Campaign

No: C1005630

Issued: 11/19/2012

Re: DUONIC TCM Reprogramming

Group: 22 Models: FE/FG

Expires: 11/19/2013

SUBJECT:

Fuso Customer Confidence Program C1005630 – DUONIC TCM 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 April 4, 2012.

PROGRAM:

As an important part of the Fuso Customer Confidence Program, the DUONIC TCM will be reprogrammed on affected 2012 and 2013 Fuso Canter trucks.

OWNER NOTIFICATION:

Since 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 when their vehicle becomes eligible for the DUONIC campaign. 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 DUONIC TCM will be reprogrammed with updated software to improve shift quality and add a clutch temperature warning lamp illumination and buzzer activation. An Owner's Manual addendum explaining the additional warning will be mailed to customers with their notification letter.

CAMPAIGN PARTS:

Campaign Parts			
Part #	Part Name	Qty.	Remarks
MH996809	Owner's Manual Addendum	1	Mailed to customer with notification letter

CAMPAIGN CLAIM SUBMITTAL:

Claim labor via Fusonet using the Recall Claim Entry screen. Enter all requested information, including the Campaign Number. The system will apply the labor allowance and parts pricing adjustment shown.

Campaign Reimbursement					
Campaign Number	Models	Allowances		Labor Description	Part Number
C1005630	FEC52 FEC72 FEC92 FGB72	Labor Time	0.5 hour	Reprogram DUONIC TCM	N/A
		Parts Pricing	N/A		

REPAIR PROCEDURE:

1. Park the vehicle on a flat, level surface, turn off the engine, apply the parking brake and chock the wheels.

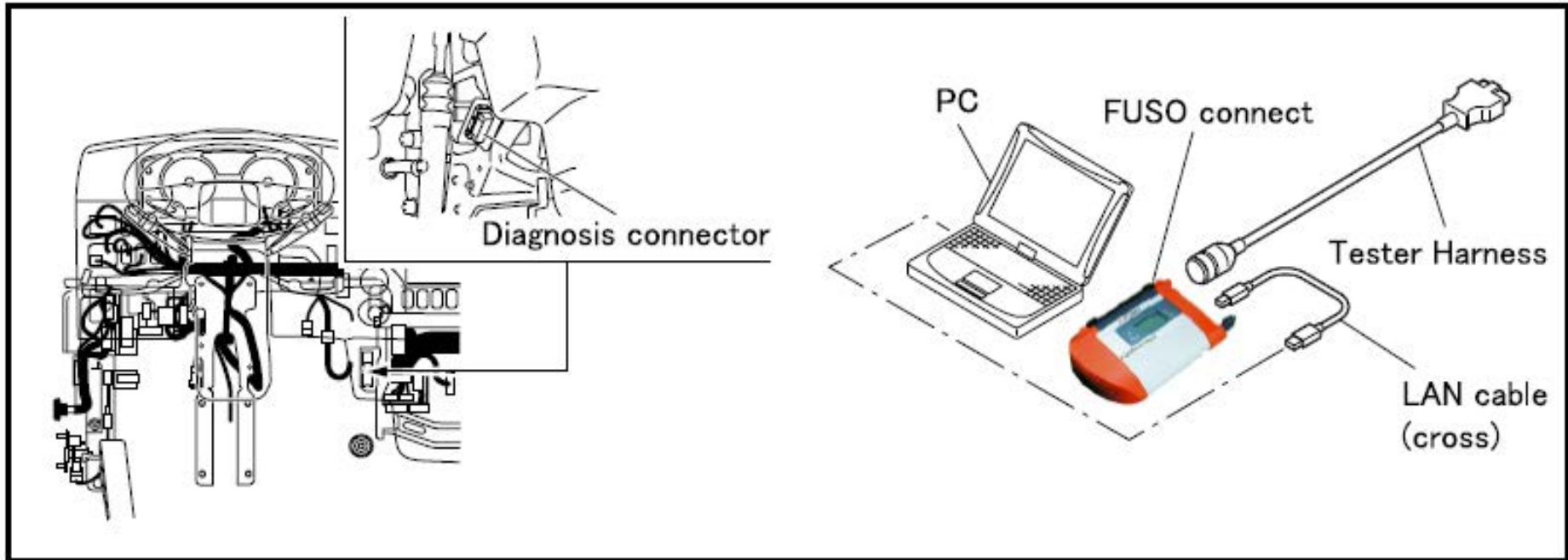
**CAUTION! Do not remove the wheel chocks until all modification work has been completed.**

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 TCM 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 TCM- DUONIC Electronic Control Unit and check and record the control unit's version information.

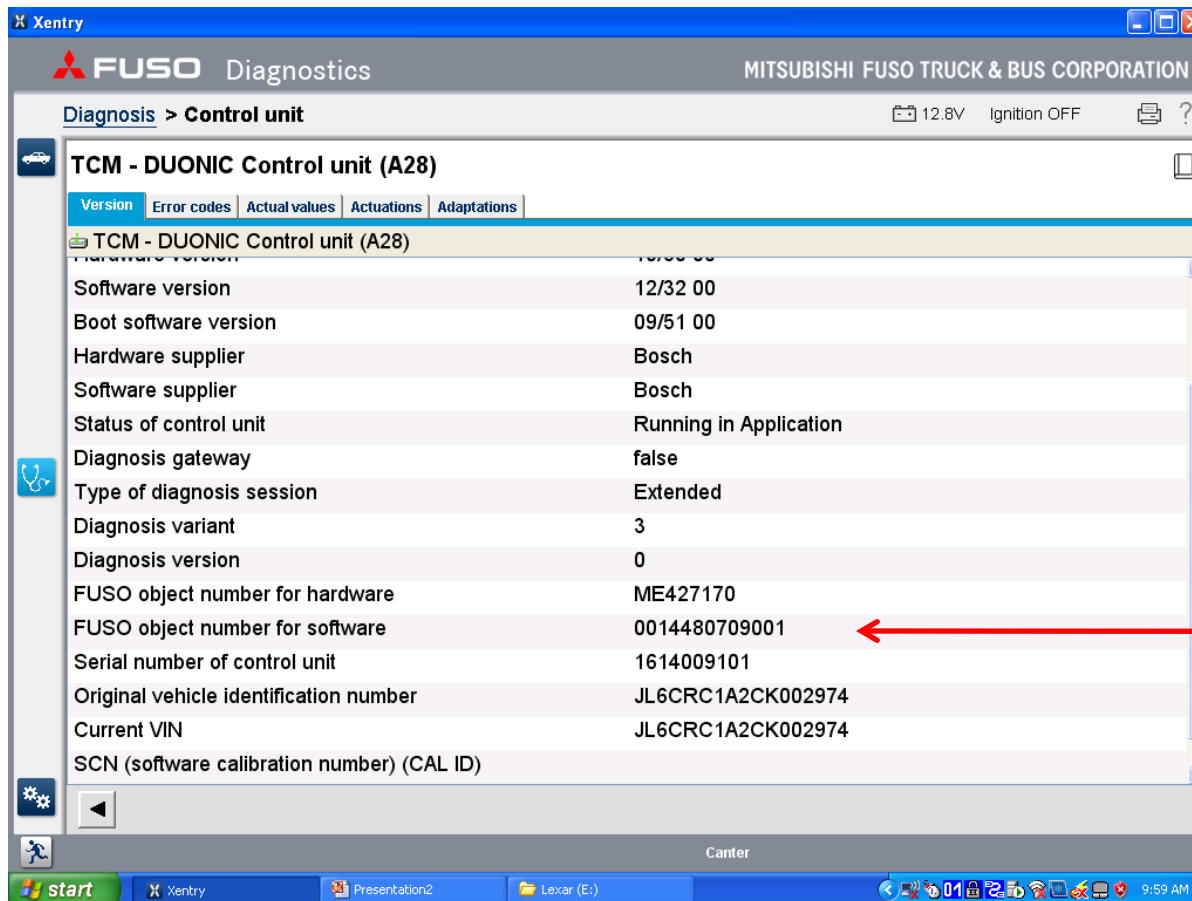
If the software does not match the following, the TCM must be updated:

### FE Class 3 Models

Software – 0014480309001

### FE/FG Class 4 & 5 Models

Software – 0014480609001



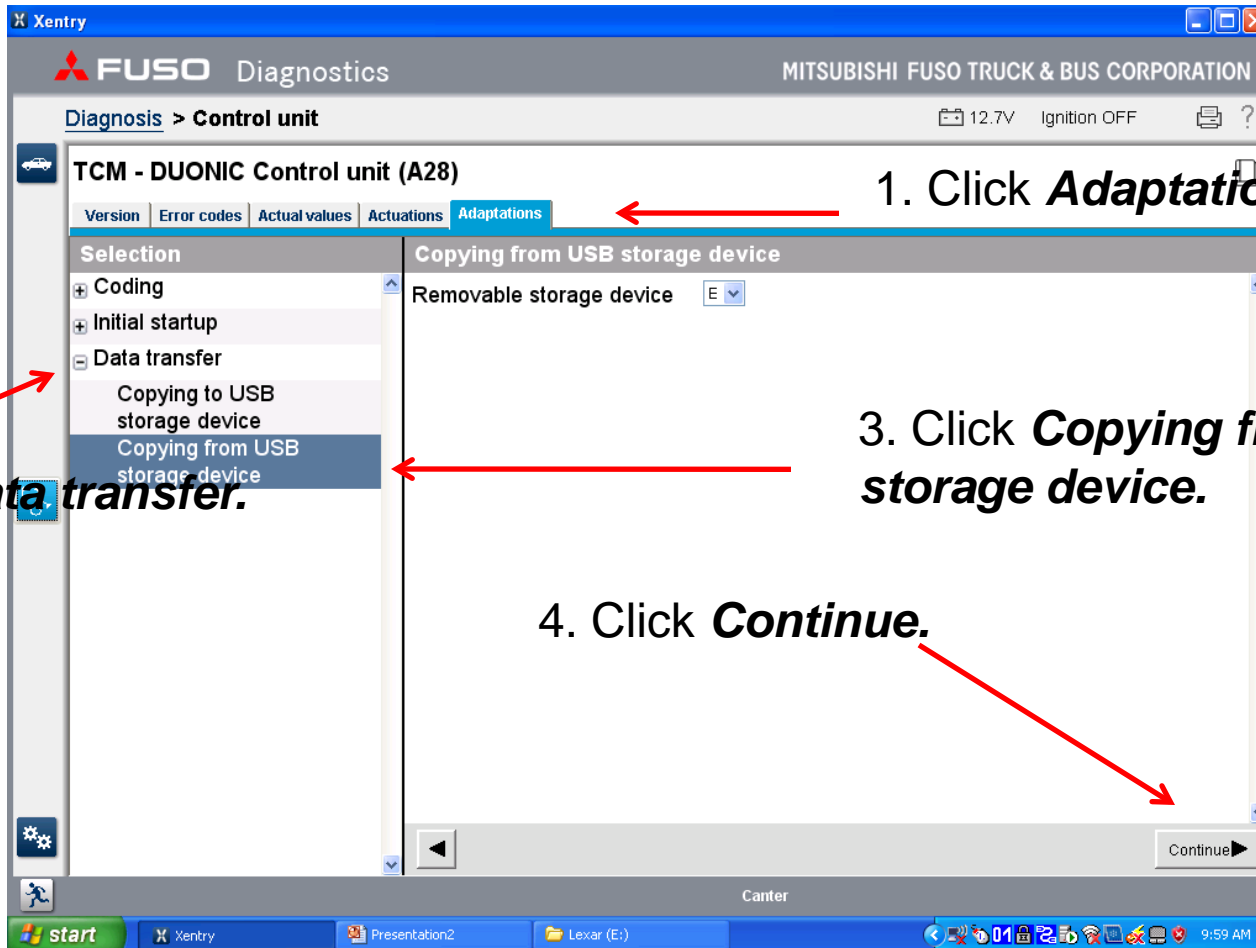
The screenshot shows the FUSO Diagnostics interface for a TCM - DUONIC Control unit (A28). The 'Version' tab is selected, displaying the following information:

Parameter	Value
Software version	12/32 00
Boot software version	09/51 00
Hardware supplier	Bosch
Software supplier	Bosch
Status of control unit	Running in Application
Diagnosis gateway	false
Type of diagnosis session	Extended
Diagnosis variant	3
Diagnosis version	0
FUSO object number for hardware	ME427170
FUSO object number for software	0014480709001
Serial number of control unit	1614009101
Original vehicle identification number	JL6CRC1A2CK002974
Current VIN	JL6CRC1A2CK002974
SCN (software calibration number) (CAL ID)	

A red arrow points to the 'FUSO object number for software' value, 0014480709001.

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 TCM 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**.

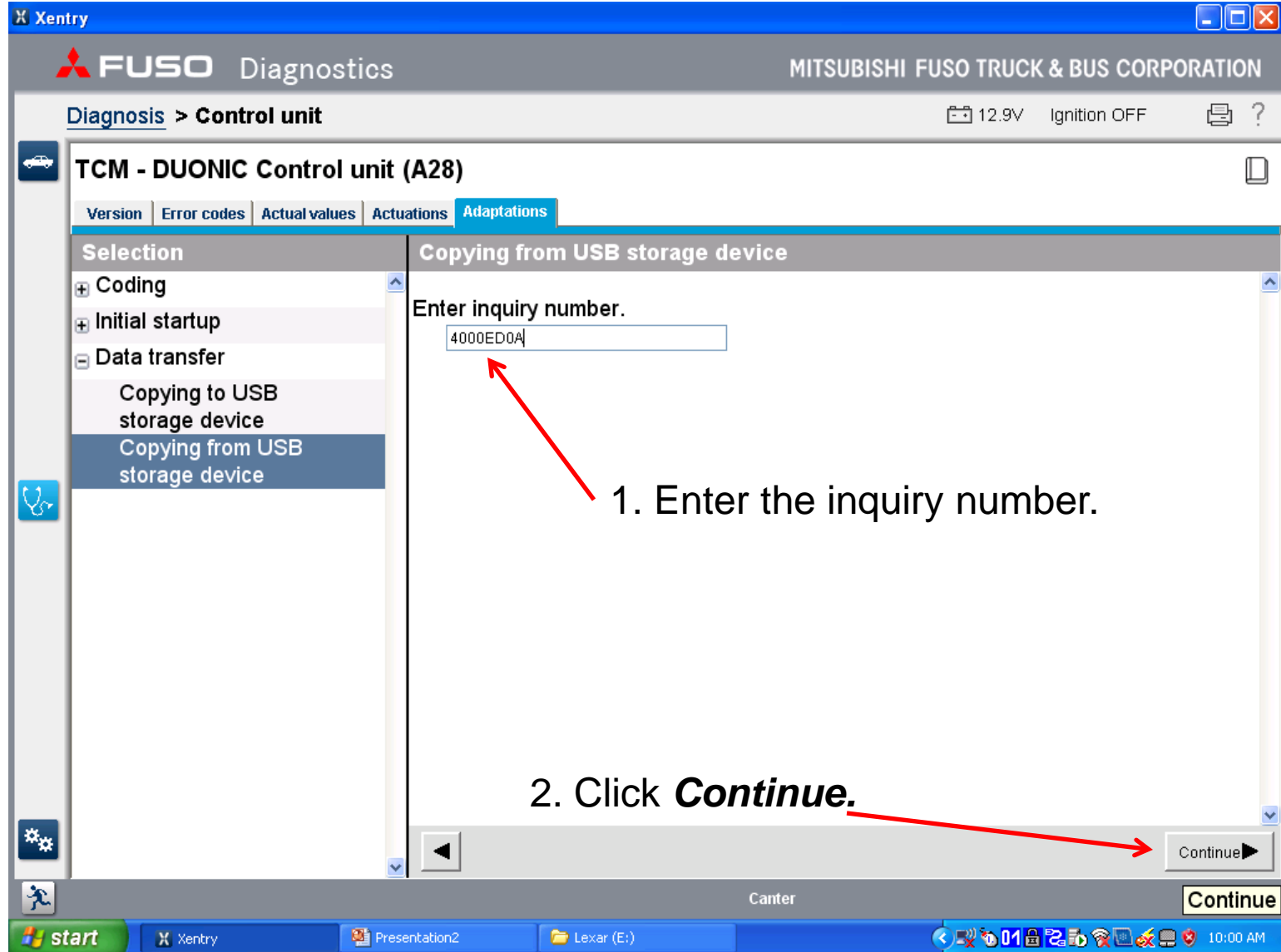


1. Click **Adaptations**.

2. Click **Data transfer**.

3. Click **Copying from USB storage device**.

4. Click **Continue**.



Xentry

FUSO Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.9V Ignition OFF

TCM - DUONIC Control unit (A28)

Version Error codes Actual values Actuations Adaptations

Selection

- + Coding
- + Initial startup
- Data transfer
  - Copying to USB storage device
  - Copying from USB storage device

Copying from USB storage device

Enter inquiry number.

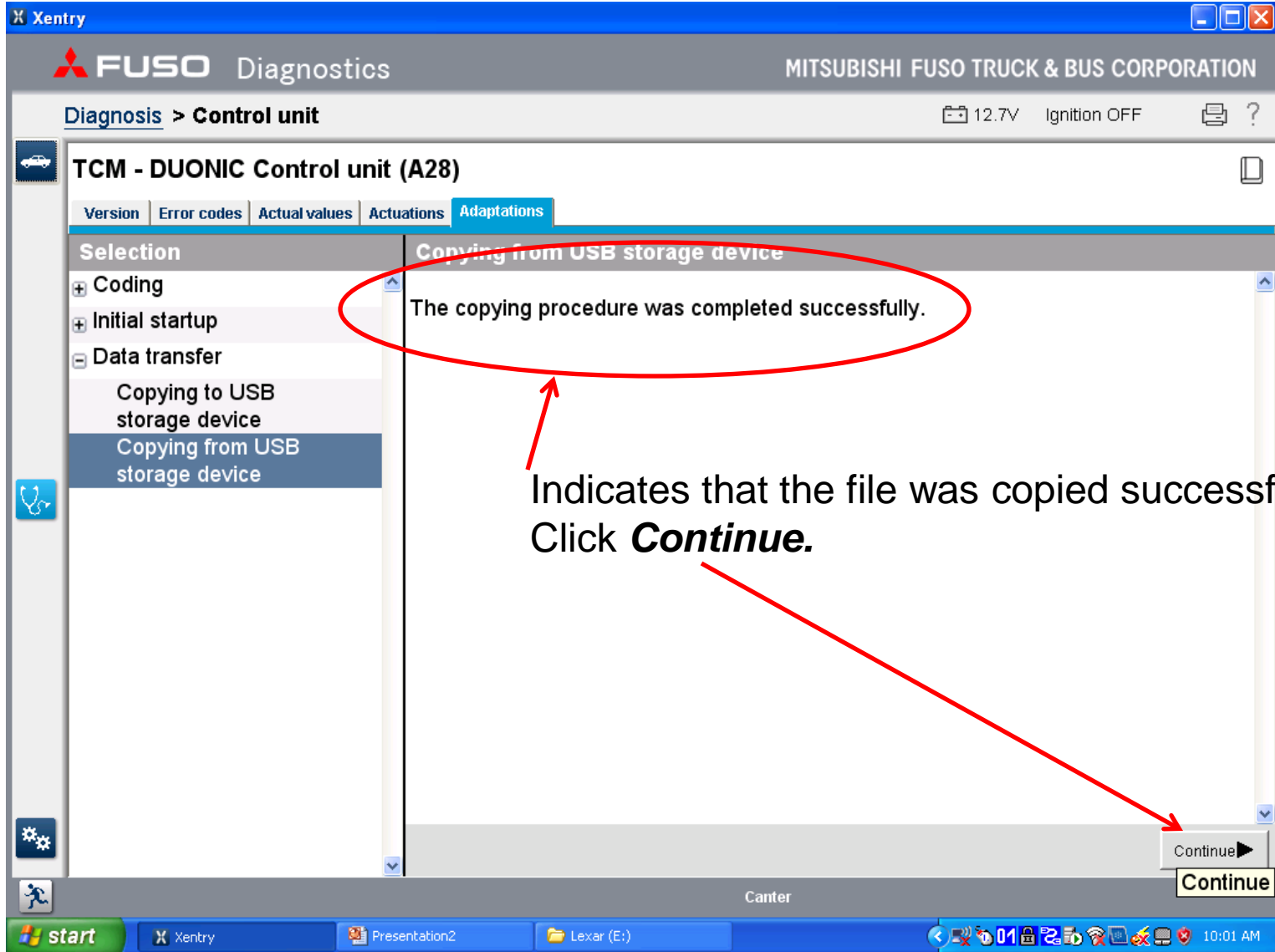
4000ED0A

1. Enter the inquiry number.

2. Click **Continue**.

Continue

start Xentry Presentation2 Lexar (E:) 01 10:00 AM

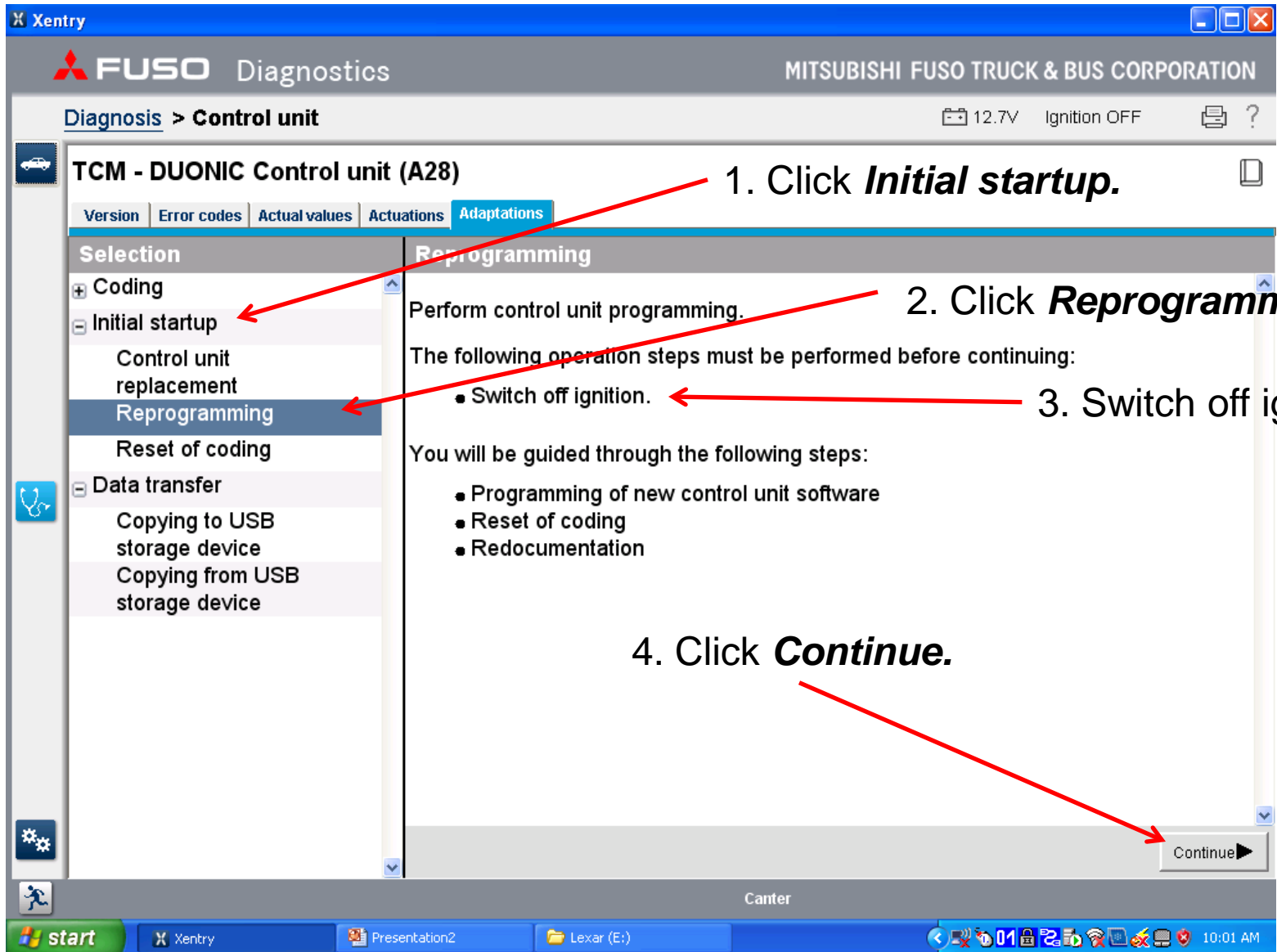


The screenshot displays the Xentry diagnostic software interface. At the top, the title bar reads "Xentry" and the main header shows the "FUSO Diagnostics" logo and "MITSUBISHI FUSO TRUCK & BUS CORPORATION". The navigation path is "Diagnosis > Control unit". The current view is for the "TCM - DUONIC Control unit (A28)".

On the left, a tree view under "Data transfer" shows "Copying from USB storage device" selected. The main panel displays the message "Copying from USB storage device" and "The copying procedure was completed successfully." This message is circled in red. A red arrow points from this message to the "Continue" button at the bottom right of the panel. Another red arrow points from the text "Click **Continue**." to the same button.

The Windows taskbar at the bottom shows the "start" button, open applications (Xentry, Presentation2, Lexar (E:)), and system tray icons including the time "10:01 AM".

Indicates that the file was copied successfully.  
Click **Continue**.



**1. Click *Initial startup*.**

**2. Click *Reprogramming*.**

**3. Switch off ignition.**

**4. Click *Continue*.**

The screenshot shows the FUSO Diagnostics software window titled 'Xentry'. The main header displays 'FUSO Diagnostics' and 'MITSUBISHI FUSO TRUCK & BUS CORPORATION'. The navigation path is 'Diagnosis > Control unit'. The selected unit is 'TCM - DUONIC Control unit (A28)'. The 'Adaptations' tab is active, showing a 'Selection' list on the left and a 'Reprogramming' section on the right. The 'Reprogramming' section contains the following text: 'Perform control unit programming.', 'The following operation steps must be performed before continuing:', a bulleted list with 'Switch off ignition.', and 'You will be guided through the following steps:' followed by a bulleted list: 'Programming of new control unit software', 'Reset of coding', and 'Redocumentation'. A 'Continue' button is located at the bottom right of the main content area.

Xentry

**FUSO** Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

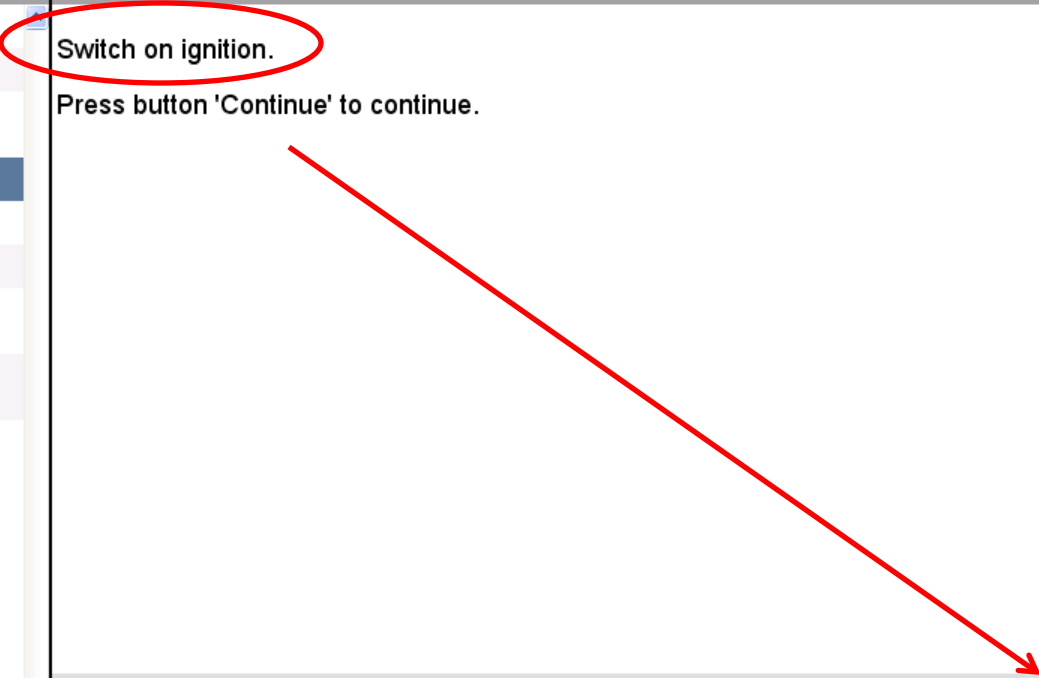
Diagnosis > Control unit 12.4V Ignition OFF

### TCM - DUONIC Control unit (A28)

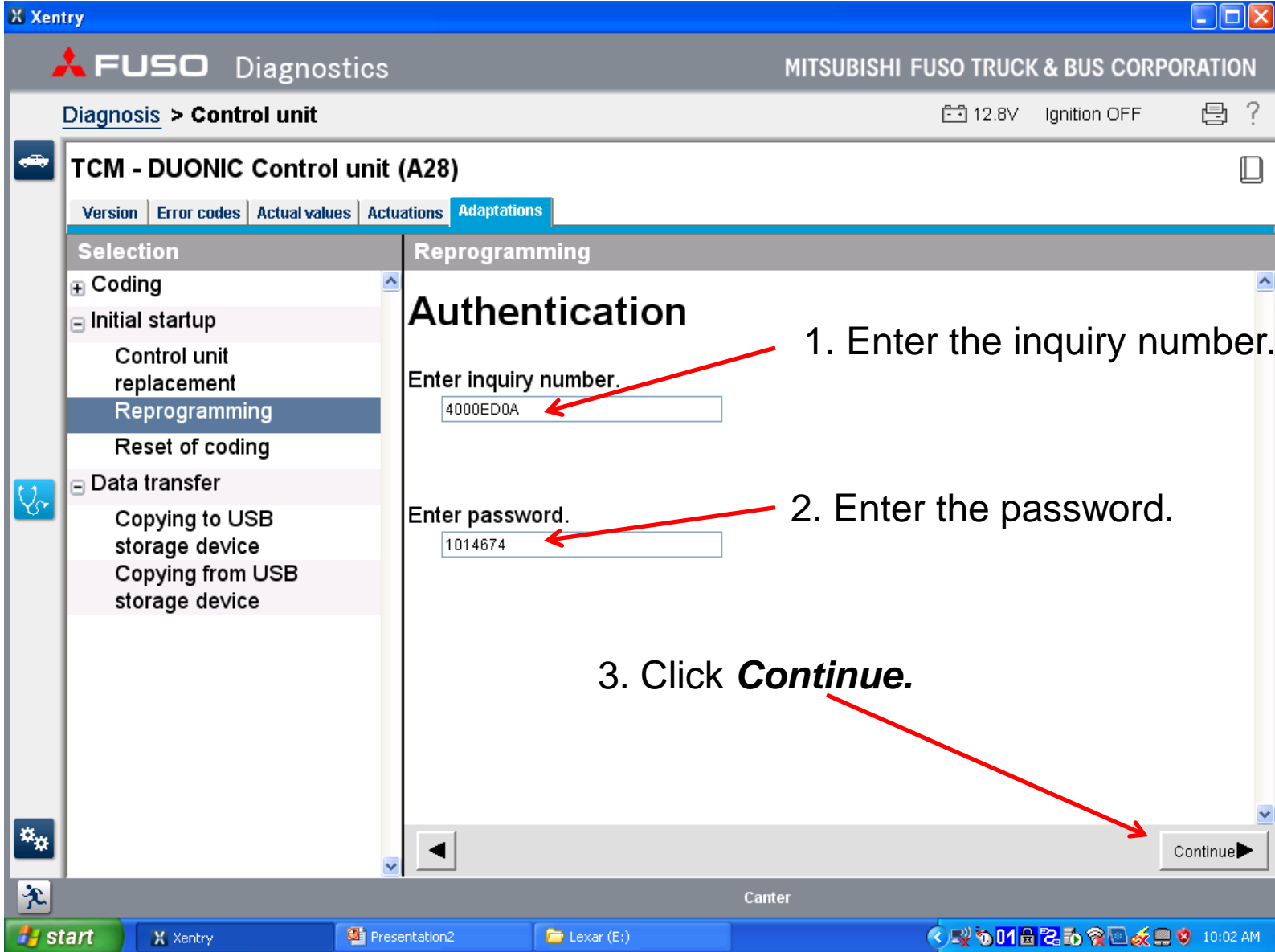
Version | Error codes | Actual values | Actuators | Adaptations

Selection	Reprogramming
+ Coding	Switch on ignition.
- Initial startup	Press button 'Continue' to continue.
Control unit replacement	
Reprogramming	
Reset of coding	
- Data transfer	
Copying to USB storage device	
Copying from USB storage device	

Continue







**FUSO Diagnostics** MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.8V Ignition OFF

**TCM - DUONIC Control unit (A28)**

Version | Error codes | Actual values | Actuations | Adaptations

**Selection**

- 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.

4000ED0A

Enter password.

1014674

1. Enter the inquiry number.

2. Enter the password.

3. Click **Continue**.

Canter

start | Xentry | Presentation2 | Lexar (E:) | 10:02 AM

Xentry

**FUSO** Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.8V Ignition OFF

### TCM - DUONIC Control unit (A28)

Version | Error codes | Actual values | Actuators | Adaptations

**Selection**

- + 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)

3. Click **Continue**.

Continue

Continue

start Xentry Presentation2 Lexar (E:) 01 10:03 AM

Xentry

**FUSO** Diagnostics MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis > Control unit 12.7V Ignition OFF

### TCM - DUONIC Control unit (A28)

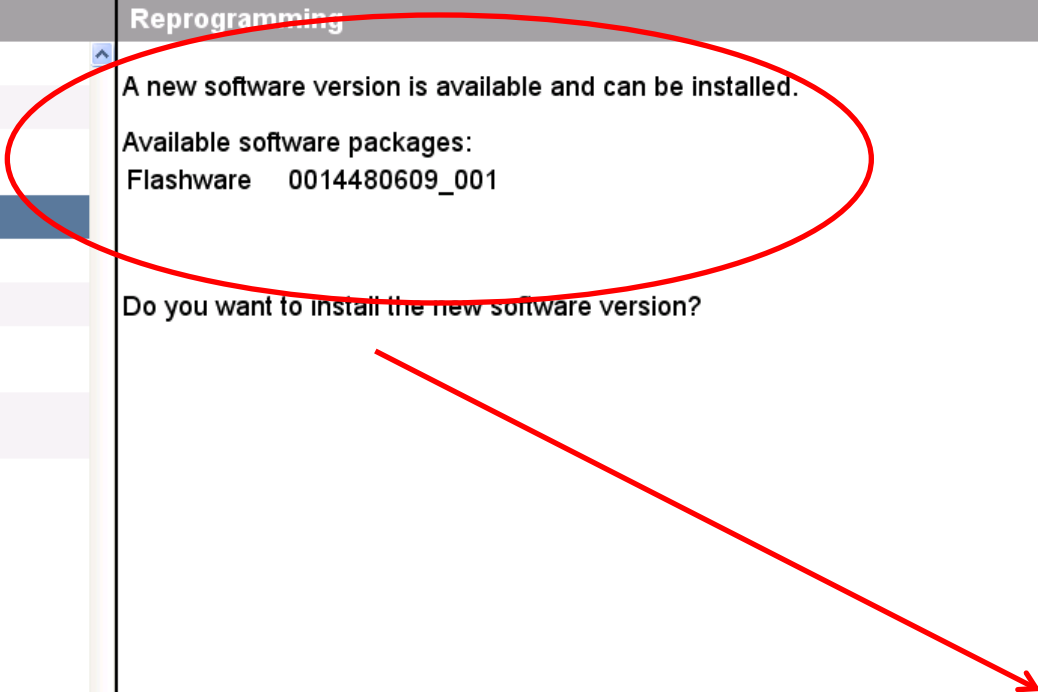
Version | Error codes | Actual values | Actuations | Adaptations

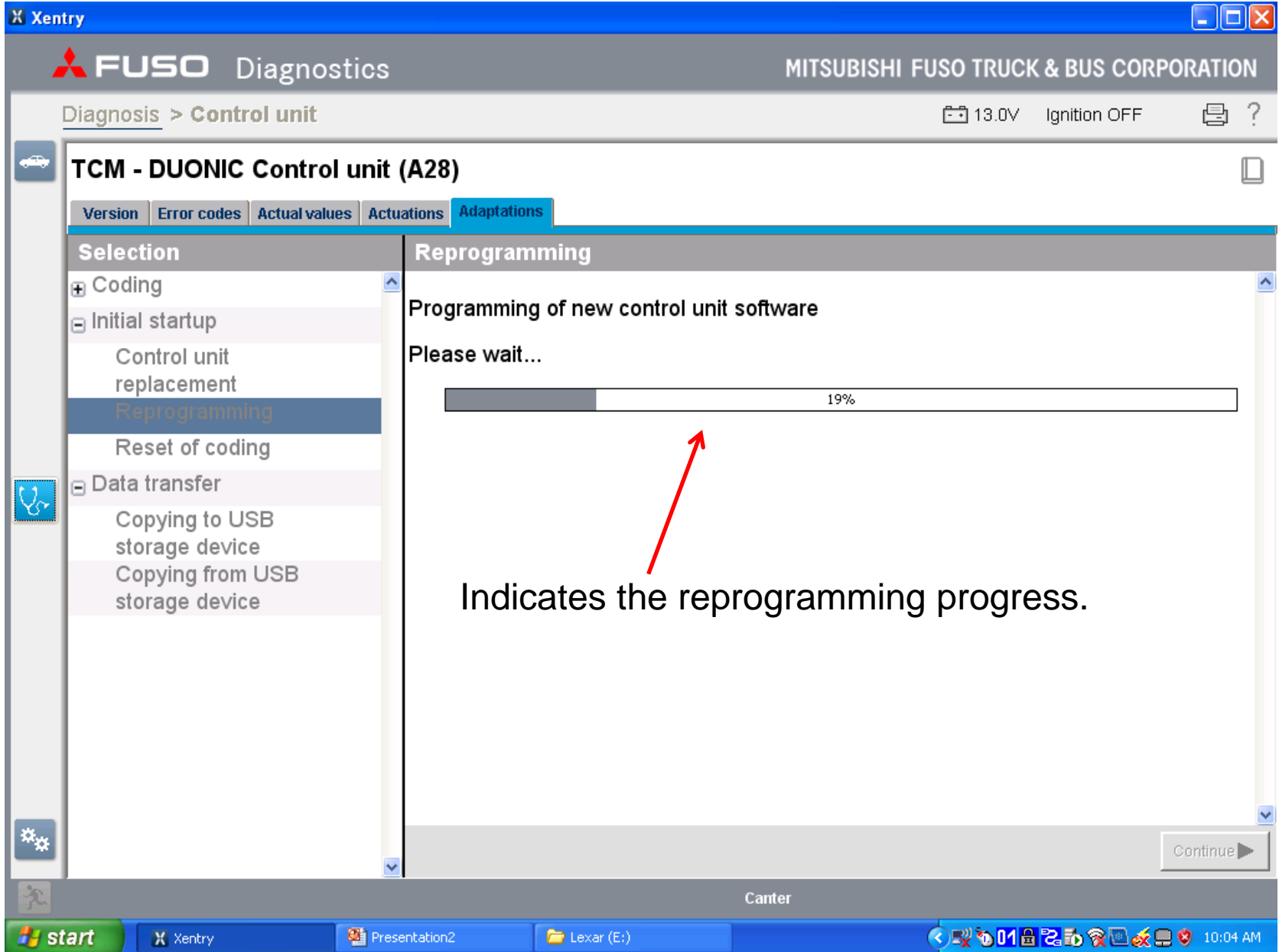
Selection	Reprogramming
+ Coding	A new software version is available and can be installed. Available software packages: Flashware 0014480609_001  Do you want to install the new software version?
- Initial startup	
Control unit replacement	
Reprogramming	
Reset of coding	
- Data transfer	
Copying to USB storage device	
Copying from USB storage device	

Center

No Yes

start Xentry Presentation2 Lexar (E:) 01 10:03 AM





The screenshot shows the FUSO Diagnostics software interface. The title bar reads "Xentry" and "FUSO Diagnostics". The main header displays "MITSUBISHI FUSO TRUCK & BUS CORPORATION". The navigation path is "Diagnosis > Control unit". The current view is for "TCM - DUONIC Control unit (A28)".

The interface is divided into two main sections: "Selection" on the left and "Reprogramming" on the right. The "Selection" section includes options like Coding, Initial startup, Data transfer, etc. The "Reprogramming" section is titled "Programming of new control unit software" and shows a progress bar at 19% with the text "Please wait...". A red arrow points to the progress bar.

Indicates the reprogramming progress.

This is the screen that is displayed when the programming is finished.

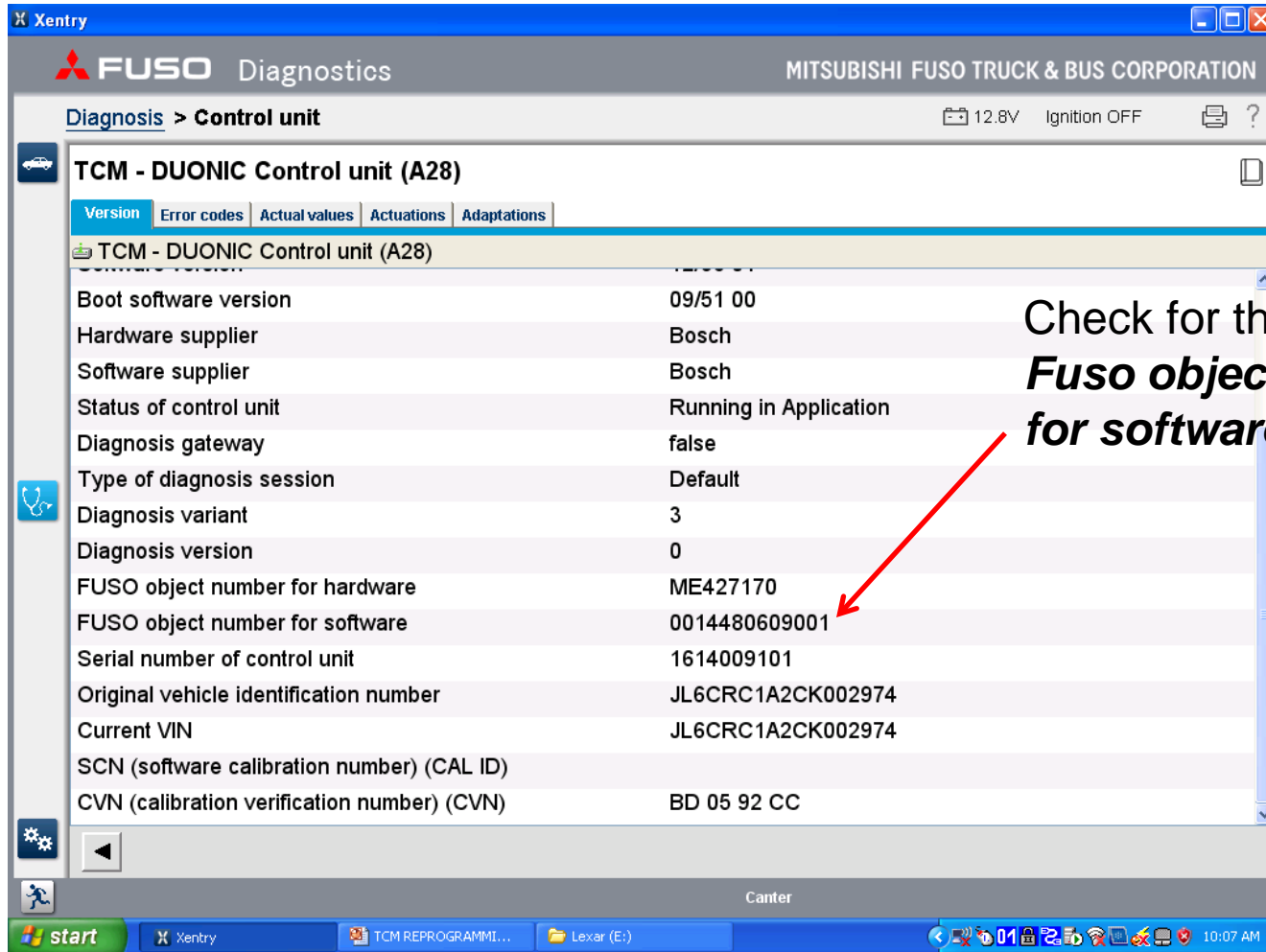
**Click *Version.***

**Displays the new software number.**

**FE Class 3 Models**  
Software – 0014480309001

**FE/FG Class 4 & 5 Models**  
Software – 0014480609001

Designation	Value
Control unit designation	
MB object number for hardware	ME427170
Procedure carried out	Control unit programming
Serial number	
New control unit software version:	
Designation	Value
MB object number for software (code)	
alteFW:	
Designation	Value
MB object number for software (code)	0014480609001



**Check for the proper Fuso object number for software.**

Parameter	Value
Boot software version	09/51 00
Hardware supplier	Bosch
Software supplier	Bosch
Status of control unit	Running in Application
Diagnosis gateway	false
Type of diagnosis session	Default
Diagnosis variant	3
Diagnosis version	0
FUSO object number for hardware	ME427170
FUSO object number for software	0014480609001
Serial number of control unit	1614009101
Original vehicle identification number	JL6CRC1A2CK002974
Current VIN	JL6CRC1A2CK002974
SCN (software calibration number) (CAL ID)	
CVN (calibration verification number) (CVN)	BD 05 92 CC

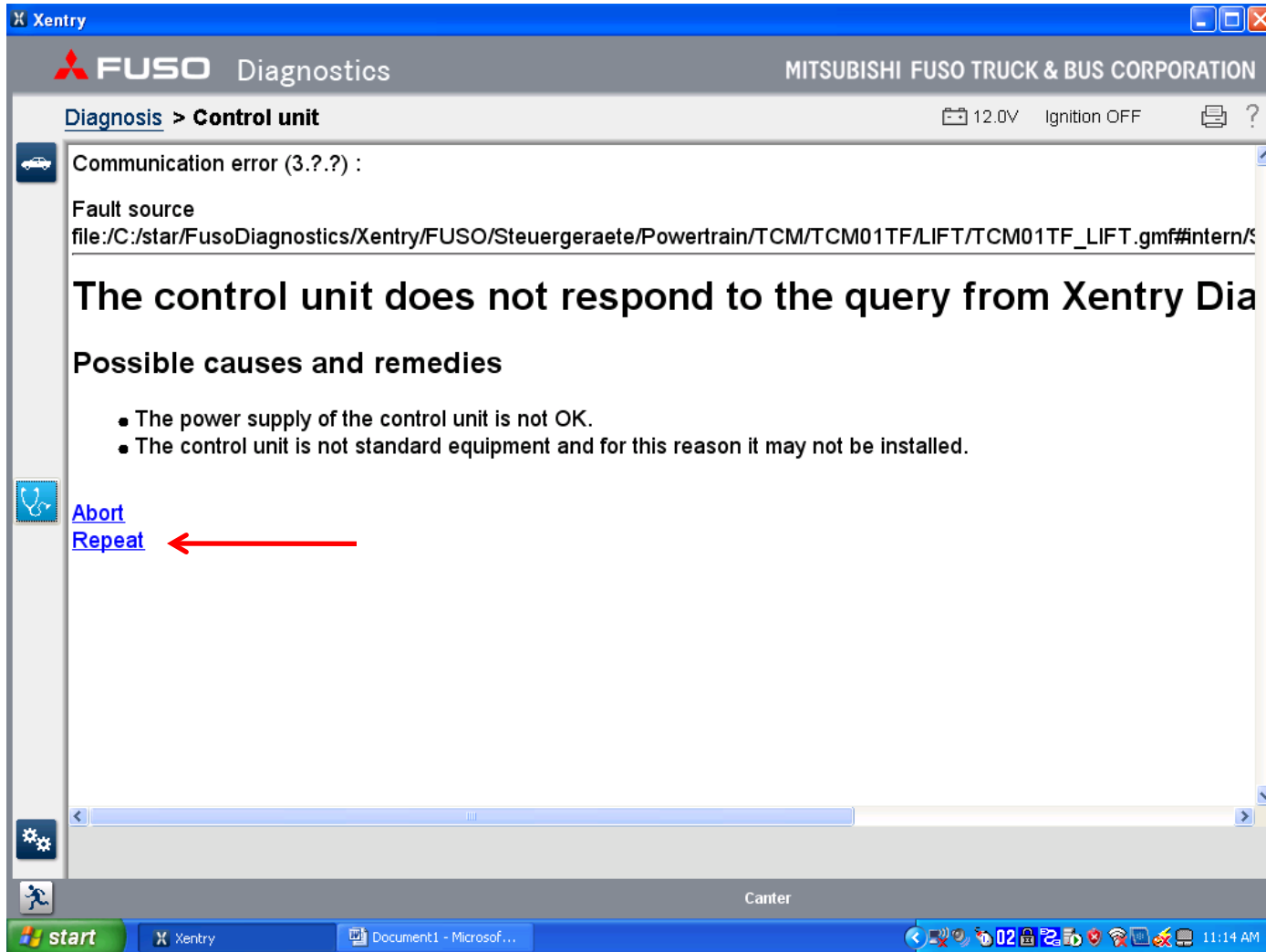
**IMPORTANT!** The Amber T/M warning lamp will now be illuminated. This is normal. To clear the warning lamp, perform a DUONIC transmission initialization as per Service Information Bulletin 11-008 (Steps shown on next page).

## DUONIC™ TRANSMISSION INITIALIZATION PROCEDURE (SIB 11-008)

1. Park the vehicle on a flat, level surface and chock the wheels to prevent movement of the vehicle.
2. Fully engage the parking brake.
3. Insert the key into the ignition switch and turn to the “ON” position (DO NOT START!)
4. Using your right foot, fully depress the accelerator to floor (100% throttle) and hold the pedal in this position (until Step 11).
5. With your left foot, fully depress the brake pedal and hold it in this position.
6. With your left hand, move the gearshift selector lever down from the “P” position through “R” to “N” and then left to the “D” position for 1 second.
7. Using your left hand, move the selector lever to the “A/M” position and hold in this position (until Step 10).
8. Using your right hand, release and fully engage the parking brake lever for 1 second.
9. Release and fully engage the parking brake a second time, then leave the parking brake fully engaged. The gear position indicator should display a flashing “1” in the multi-information display.
10. Release the selector lever and move it to the “P” position.
11. Release the accelerator pedal.
12. Start the engine and leave it running at an idle.
13. Release the brake pedal. The gear position indicator should display a flashing “2”.
14. Allow the system to continue initialization and run through its entire cycle. The gear position indicator should display a flashing “2”, then “3”, “4”, and “5” and the engine speed will increase automatically as initialization proceeds. **IMPORTANT!:** Do not touch any controls until the cycle completes.
15. When the gear position indicator displays a flashing “N”, initialization is complete.

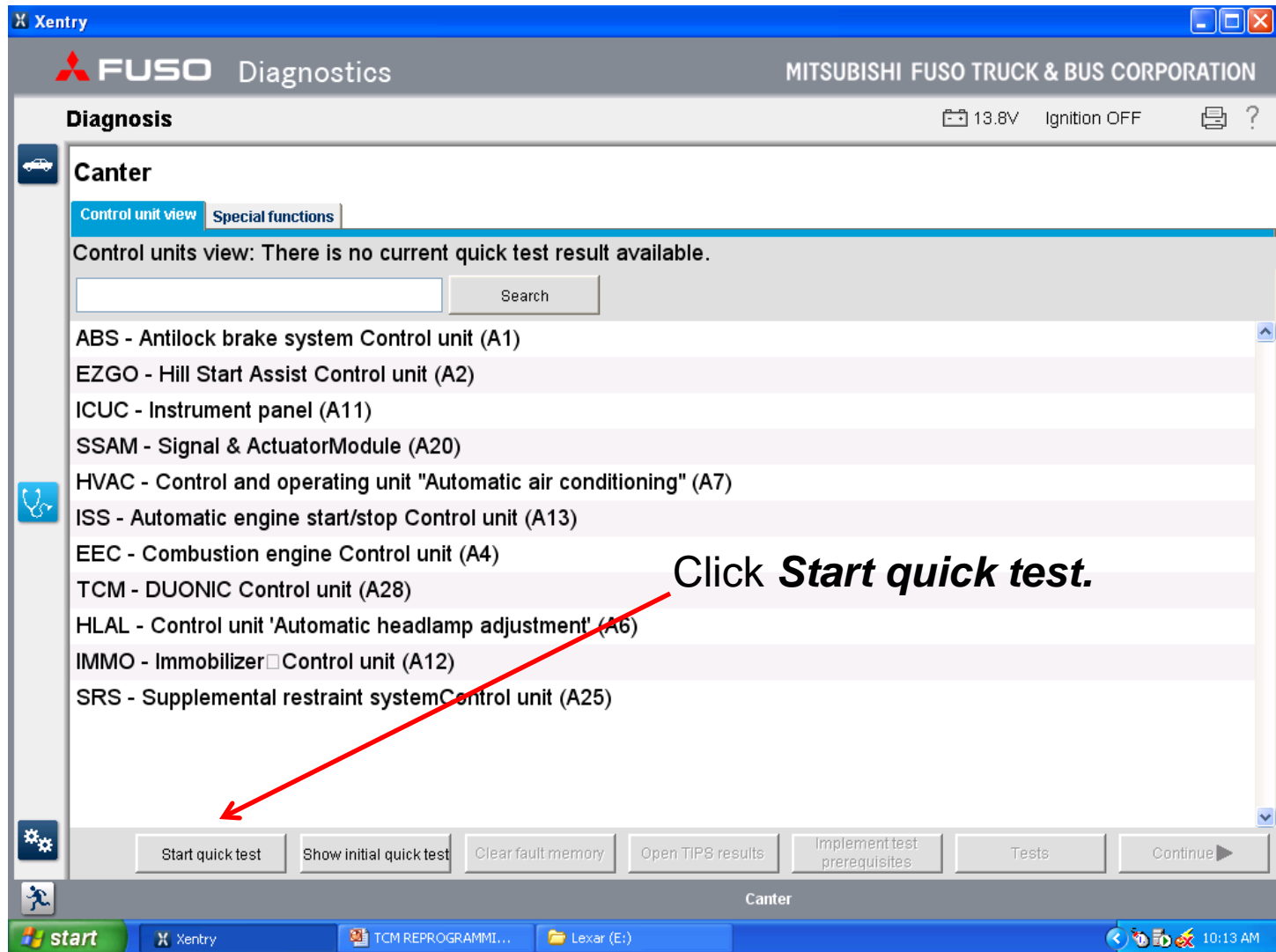
**Note:** The amber T/M warning lamp should now be extinguished.

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.



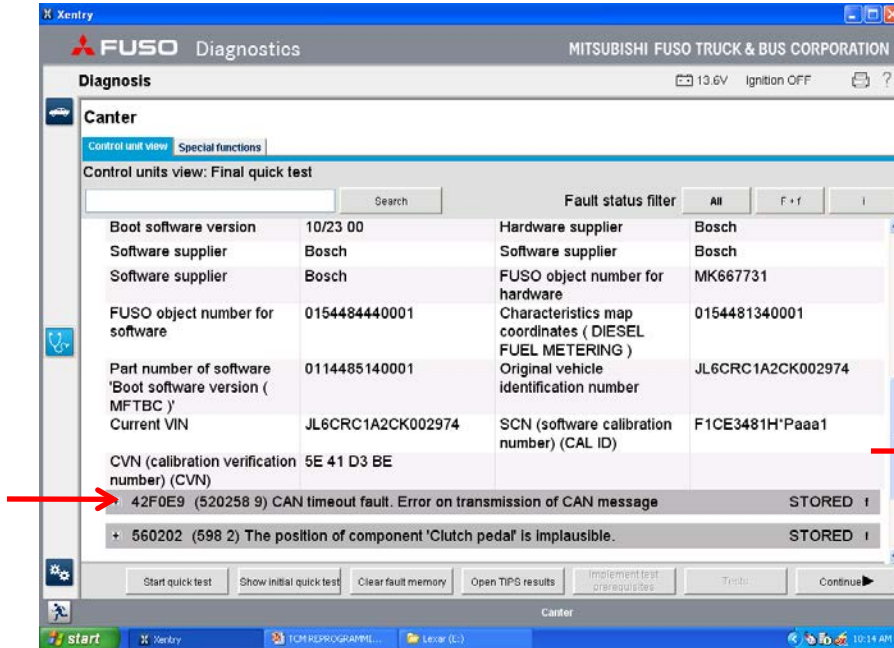


Click on “Diagnosis” to return to the main diagnosis screen and click “Start quick test”.



**Click *Start quick test.***

**NOTE:** There can be stored DTCs logged in multiple systems due to the programming procedure. These stored codes can be deleted.



**FUSO Diagnostics** MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis 13.6V Ignition OFF

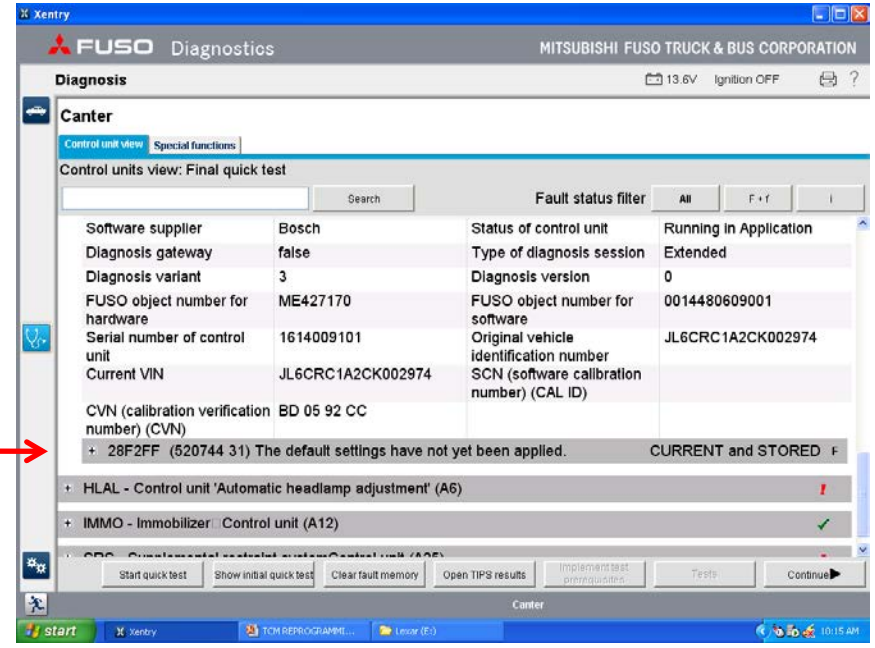
Canter

Control unit view Special functions

Control units view: Final quick test

Search		Fault status filter	
		All	F + I
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)	5E 41 D3 BE		
42F0E9 (520258 9) CAN timeout fault. Error on transmission of CAN message			STORED I
+ 560202 (598 2) The position of component 'Clutch pedal' is implausible.			STORED I

Start quick test Show initial quick test Clear fault memory Open TIPS results Implement test prerequisites Tests Continue ▶



**FUSO Diagnostics** MITSUBISHI FUSO TRUCK & BUS CORPORATION

Diagnosis 13.6V Ignition OFF

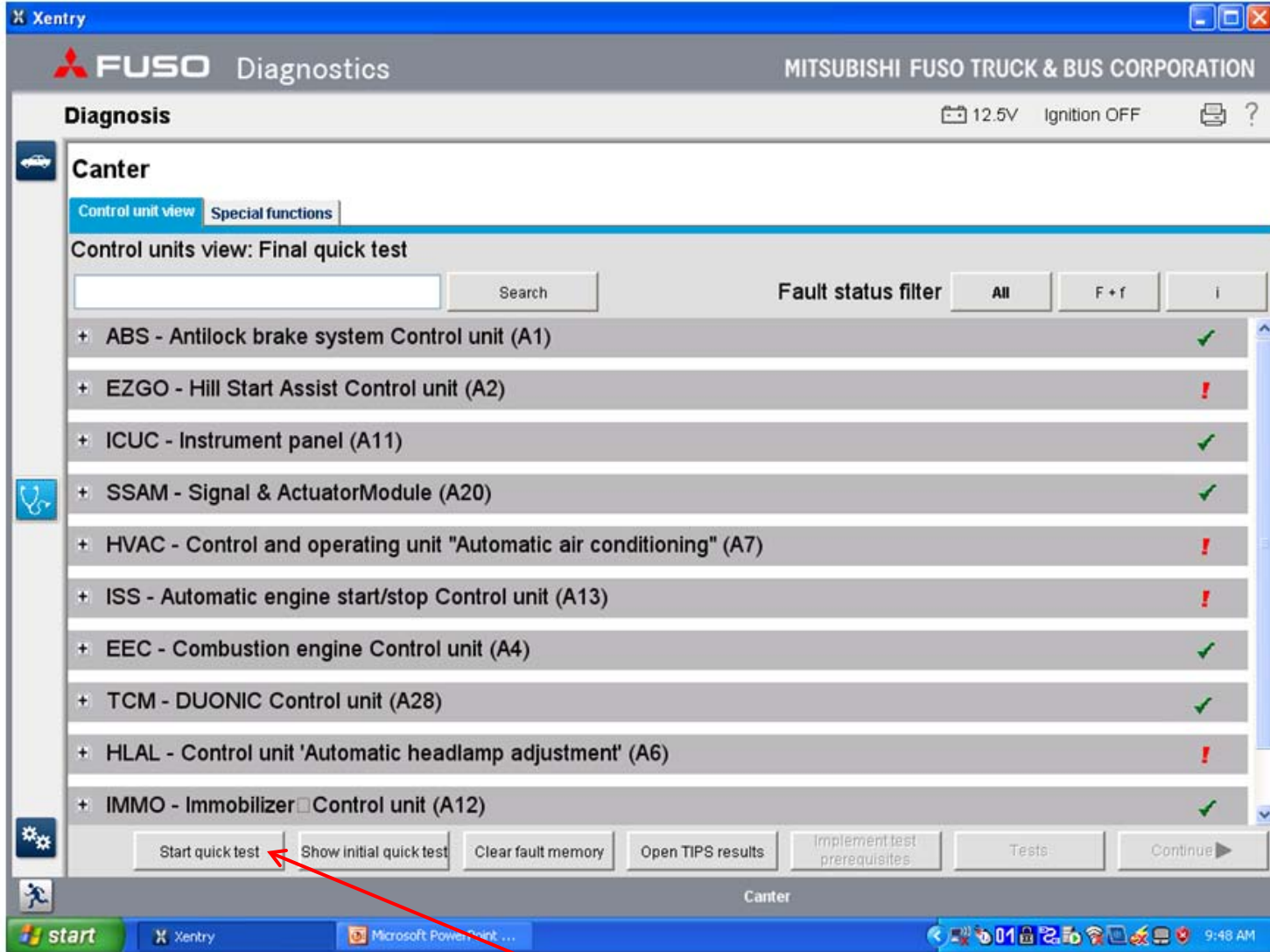
Canter

Control unit view Special functions

Control units view: Final quick test

Search		Fault status filter	
		All	F + I
Software supplier	Bosch	Status of control unit	Running in Application
Diagnosis gateway	false	Type of diagnosis session	Extended
Diagnosis variant	3	Diagnosis version	0
FUSO object number for hardware	ME427170	FUSO object number for software	0014480609001
Serial number of control unit	1614009101	Original vehicle identification number	JL6CRC1A2CK002974
Current VIN	JL6CRC1A2CK002974	SCN (software calibration number) (CAL ID)	
CVN (calibration verification number) (CVN)	BD 05 92 CC		
+ 28F2FF (520744 31) The default settings have not yet been applied.			CURRENT and STORED F
+ HVAL - Control unit 'Automatic headlamp adjustment' (A6)			I
+ IMMO - Immobilizer: Control unit (A12)			✓

Start quick test Show initial quick test Clear fault memory Open TIPS results Implement test prerequisites Tests Continue ▶



**Diagnosis** 12.5V Ignition OFF

**Canter**

Control unit view Special functions

Control units view: Final quick test

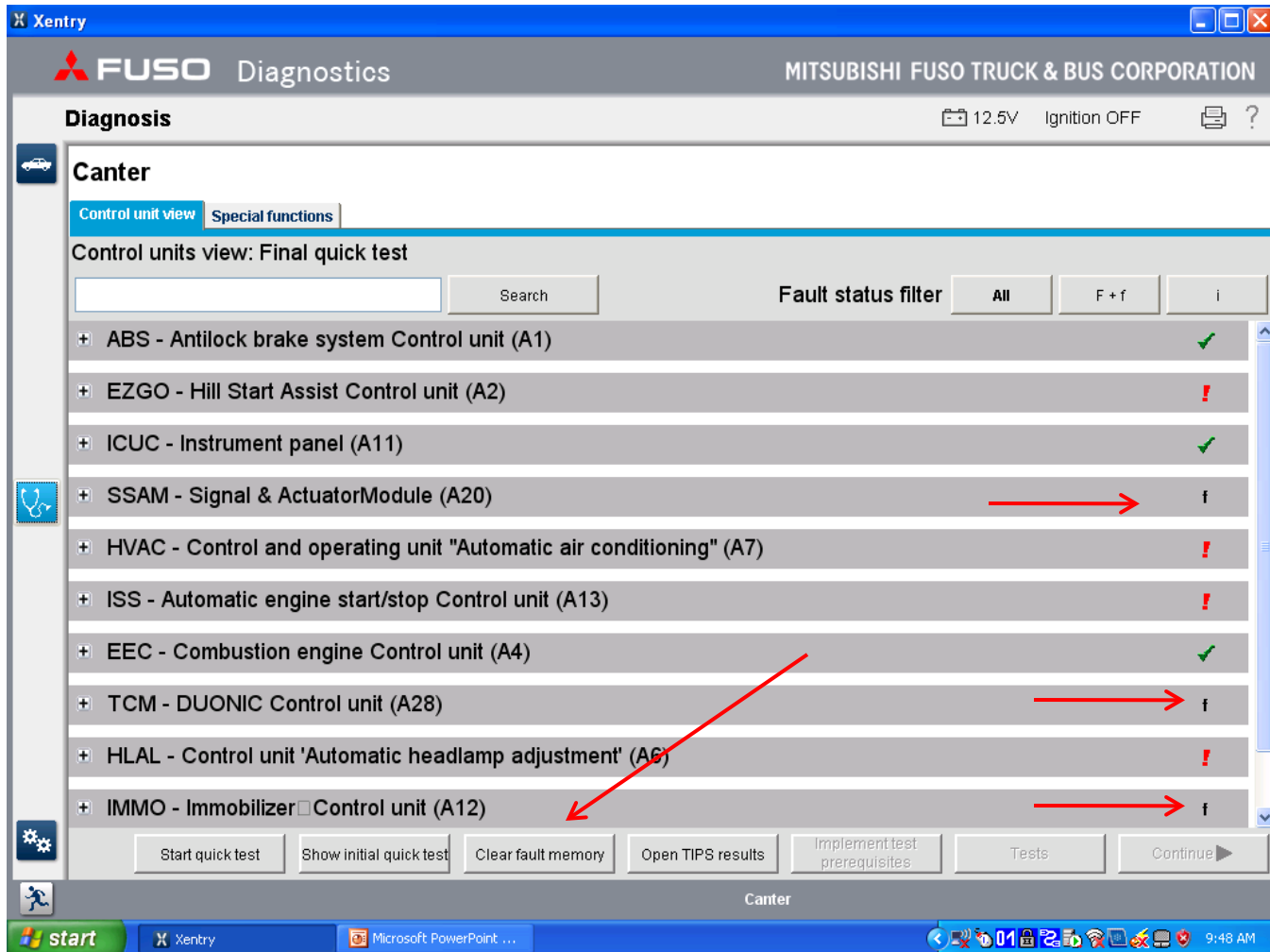
Search Fault status filter All F+f i

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)	✓
+ 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)	✓
+ HLAL - Control unit 'Automatic headlamp adjustment' (A6)	!
+ IMMO - Immobilizer Control unit (A12)	✓

Start quick test Show initial quick test Clear fault memory Open TIPS results Implement test prerequisites Tests Continue

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 the main header includes the FUSO logo and 'MITSUBISHI FUSO TRUCK & BUS CORPORATION'. The 'Diagnosis' section is active, showing '12.5V Ignition OFF'. The vehicle model is 'Canter'. The 'Control unit view' tab is selected, displaying a 'Final quick test' results screen. A search bar and a 'Fault status filter' (set to 'All') are visible. 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 bottom of the list. Another red arrow points to the 'f' status of the SSAM module, and a third points to the 'f' status of the IMMO module.

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.

