



Trucks and
Commercial Vehicles

IVECO

Heavy _ Troubleshooting VCM_IMMobilizer

Da CET (Pirillo Luigi)



You can not to make the key storage via Teleservice, the procedure does not terminate correctly:

1) Be sure you are using the correct keys kit (2 Keys + ide 1+ide2 + pin source+ meccanical code).

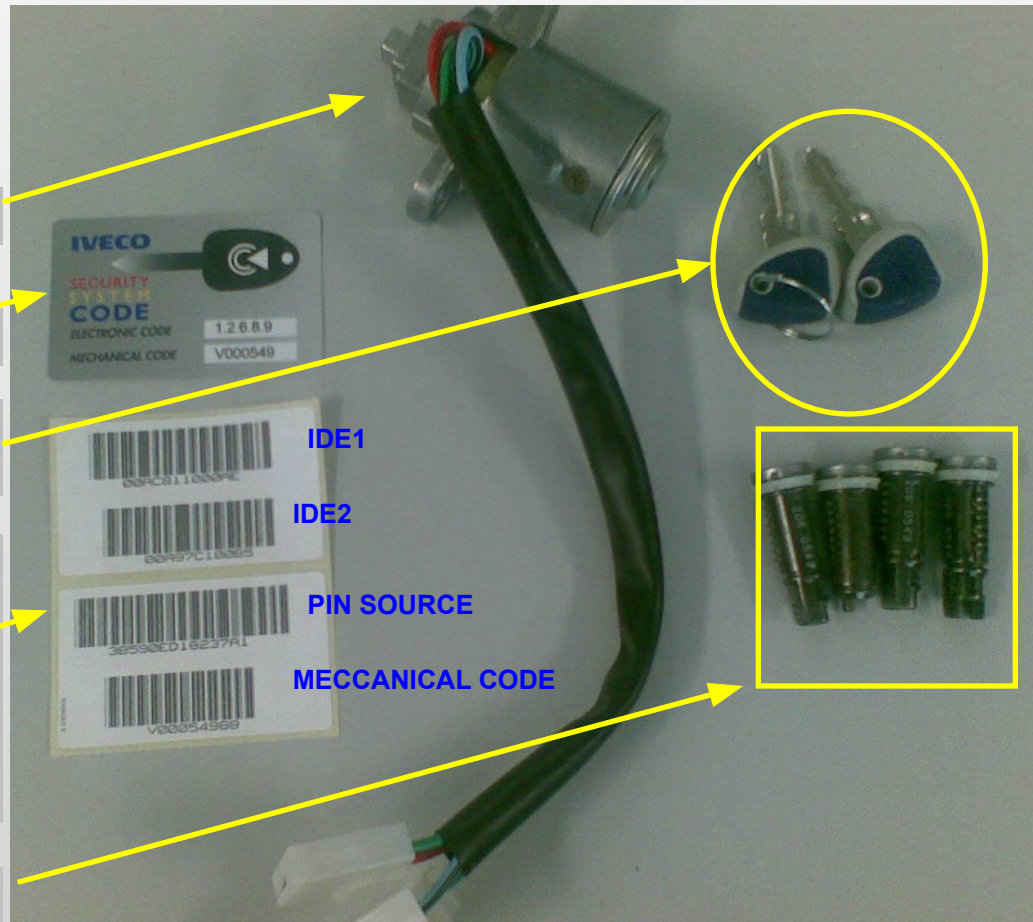
- For this operation can not be used the keys parts.
- Be careful not to use the keys of range € 3
- Be careful not to use the keys without transponders (only mechanical)
- If point 1 has been complied
- You should read the memory faults in the VCM and check if have present errors :

WHAT YOU NEED WHEN REPLACING THE VCM ON A VEHICLE WITH IMMOBILIZER



VCM

- COMMUTATOR
- +
- ELECTRONIC CODE
- +
- 2 KEYS WITH TRASPONDER
- +
- BAR CODE
- IDE1
- IDE2
- PIN SOURCE
- MECCANICAL CODE
- +
- 4 IGNITION SWITCH



DTC	FMI	DESCRIPTION FAULT	SOLUTION / POSSIBLE CAUSES
B4	02	Impossible Programming The TRANSPONDER keys	Transponder key defective, or you are using a key without transponder
	0B	Impossible Programming The TRANSPONDER keys	Transponder key defective, or you are using a key without transponder
	0C	PING SOURCE different between the two keys	The two keys of the kit must have the same Pin source, but id code is different. This means that the keys have been mixed with those of another kit.
	0D	IDE code is been read 2 time, or is same zero	Ide code of the keys can not be read, verify that you are not using a key without a transponder, then only mechanical
	0E	Exceeded the max number of programmable keys	you are trying to add the keys in a VCM, which has already stored inside 7 Keys
B5	02	Key on out of time	The key was kept on for a long time throughout the procedure of memo key .
	0B	Code IDE kit unknown	Code of KIT IDE differently than the one known and stored by the VCM. Probably you are using a key of another Kit
B6	0C	No communication with ECM	the VCM not receive any feedback from ECM, verify the supply ECM and line can between ECM and VCM
	0D	ECM unknown	ECM with another code Immobilizer inside, different from VCM
	0E	IMMOBILIZER function is not enabled in ECM	Reprogram ECM via Teleservice to enable the immobilizer.
B7	02	ECU VCM PLANT MODE, HAS NOT YET keys stored inside	Make a memory keys in VCM.
	0B	ECM in PLANT MODE, memory keys already completed	The ECM is not yet married to VCM, has not yet stored inside the immobilizer code that sent the VCM. Check line can between VCM and ECM.If you replaced the ECM, make the procedure Recognition of new ECM with Easy.
B8	02	ECU VCM PLANT MODE (no keys stored). Procedure and storage keys active	The VCM can not memory keys inside, try another kit of keys
B9	02	FEEDBACK from TRASPONDER wrong	you using a different transponder key with es x € 3, or interference disturbance from mobile phone.
	07	Hardware error on the antenna	Antenna faulty, not correctly positioned. Check the resistance of the antenna (about 9.9 hom between pin 1 and x1-x1-3 of the VCM).
	0B	Inside error of the ECU	Defective inside of VCM, try replacing
	0C	No feedback from the keys TRASPONDER	Means that the VCM not get any response from the transponder. This could be: keys with faulty transponder / keys already stored on another VCM / Key used without transponder (mechanical)

We have 6 situation where FAILS THE PROCESS FOR PROGRAMMING KEYS:

1. CASE: VCM WITH ALREADY 2 KEYS STORED
2. CASE: PROBLEMS OF ANTENNA
3. CASE: YOU ARE USING THE KEYS PARTS (WRONG KEYS)
4. CASE: YOU ARE USING BETWEEN TWO KEYS mixed KIT
5. CASE: YOU ARE USING THE KEYS ALREADY STORED ON ANOTHER VCM
6. CASE: YOU ARE USING THE KEYS WHITOUT TRASPONDER (MECHANICAL)

PREMISE:

For cases where you can not successfully complete Storing keys BY Teleservice, it is **VERY IMPORTANT TO GO TO CONSULT THE READING FAULT MEMORY OF ECU VCM.**

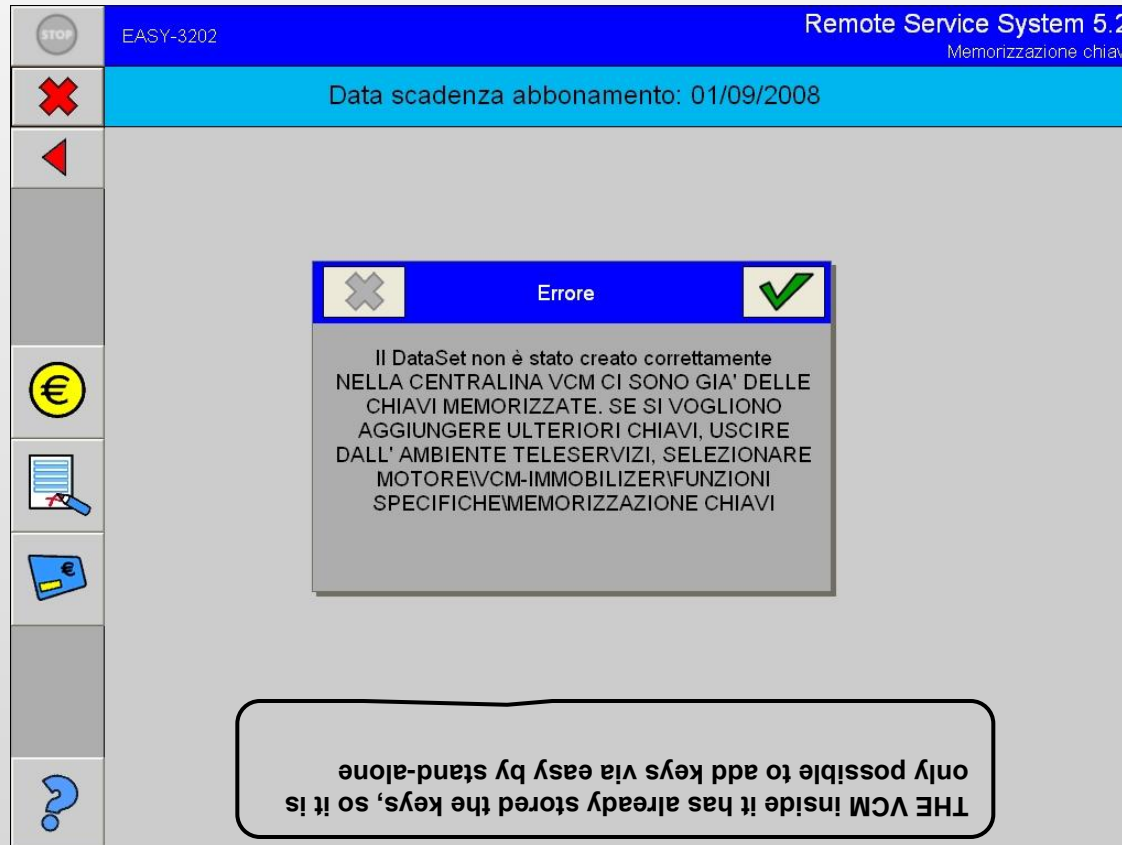
That because, when the procedure for storing keys does not end correctly, the VCM gives us always at least 2 Faults:

- 1 PRESENTE
- 1 INTERMITTENTE

The fault present, will always make refers to the fact that the VCM has not yet get any key (PLANT MODE).

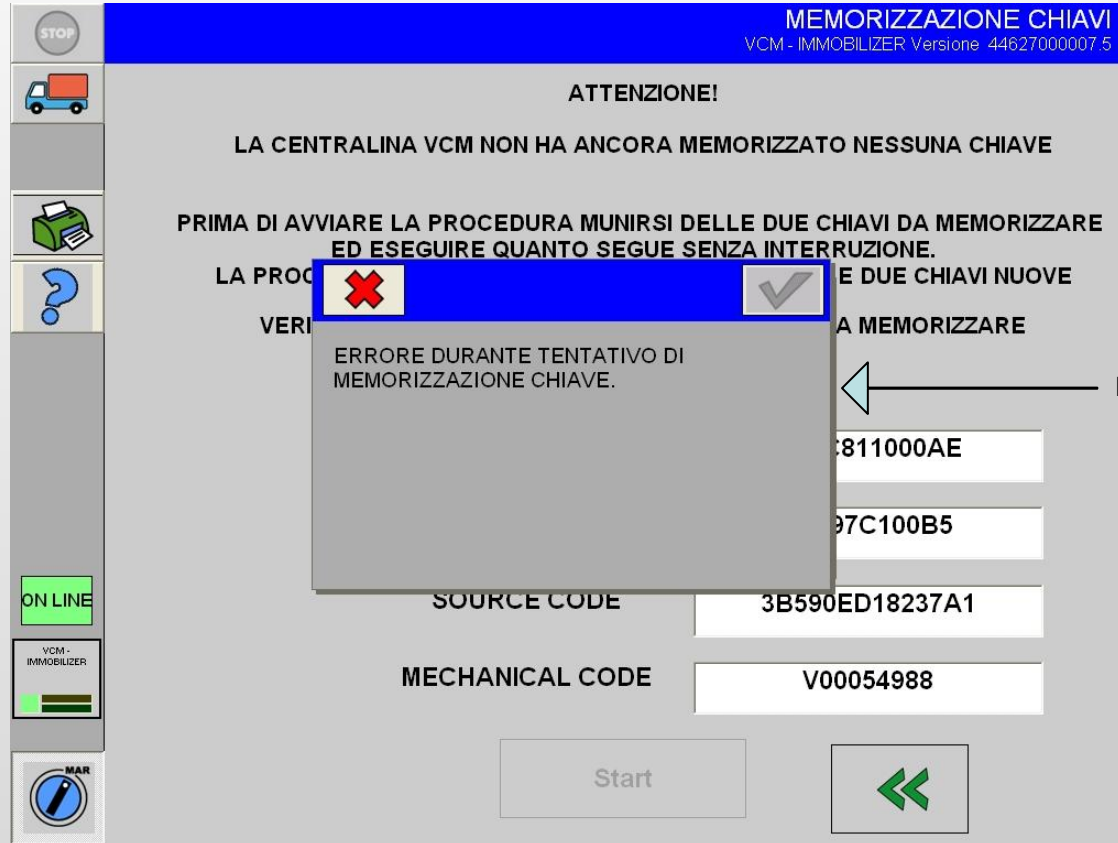
The Intermittent Fault instead, it will be essential to understand why the storage procedure fails.

1 CASE: VCM WITH ALREADY 2 KEYS STORED



The screenshot shows the 'Remote Service System 5.2' interface. At the top, there is a blue header with 'EASY-3202' on the left and 'Remote Service System 5.2' on the right, with 'Memorizzazione chiavi' below it. A red 'X' icon is visible in the top left corner. A light blue banner displays 'Data scadenza abbonamento: 01/09/2008'. A central error dialog box is open, titled 'Errore' with a red 'X' and a green checkmark. The error text reads: 'Il DataSet non è stato creato correttamente NELLA CENTRALINA VCM CI SONO GIA' DELLE CHIAVI MEMORIZZATE. SE SI VOGLIONO AGGIUNGERE ULTERIORI CHIAVI, USCIRE DALL' AMBIENTE TELESERVIZI, SELEZIONARE MOTORE\VCM-IMMOBILIZER\FUNZIONI SPECIFICHE\MEMORIZZAZIONE CHIAVI'. A callout box at the bottom of the screenshot contains the text: 'THE VCM inside it has already stored the keys, so it is only possible to add keys via easy by stand-alone'. The left sidebar contains several icons: a 'STOP' button, a red triangle, a Euro symbol, a document with a red 'X', a blue card with a Euro symbol, and a question mark.

2 CASE: PROBLEMS OF ANTENNA



STOP **MEMORIZZAZIONE CHIAVI**
VCM - IMMOBILIZER Versione 44627000007.5

ATTENZIONE!

LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE

PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE.

LA PROCEDURA CONSISTE NEL PRESSIONE DELLE DUE CHIAVI NUOVE
VERIFICARE IL SUONO DELLA CENTRALINA PER LA MEMORIZZAZIONE

ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE.

SOURCE CODE 3B590ED18237A1

MECHANICAL CODE V00054988

Start

← Error during memory keys

2 CASE: PROBLEMS OF ANTENNA

Easy.NET

VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4:5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 INTERMITTENTI: 1

Lista guasti

- RELÈ AVVIAMENTO MOTORE > RELÈ AVVIAMENTO MOTORE - TERMINALE L
- PEDALE ACCELERATORE > SENSORE ANALOGICO PEDALE ACCELERATORE
- IMMOBILIZER > IMMOBILIZER
- IMMOBILIZER > IMMOBILIZER

ONLINE

Luigi

IMMOBILIZER > IMMOBILIZER

-ANTENNA [DTC: 0xB9] [FMI: 0x7]

ON OFF Cancellazione memoria guasti Guasti Condizioni ambientali Guida riparativa

start Easy.NET Videate IT 10.30

Easy.NET

VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4:5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

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ONLINE

Luigi

IMMOBILIZER > IMMOBILIZER

-VCM IN PLANT MODE [DTC: 0xB7] [FMI: 0x2]

ON OFF Cancellazione memoria guasti Guasti Condizioni ambientali Guida riparativa

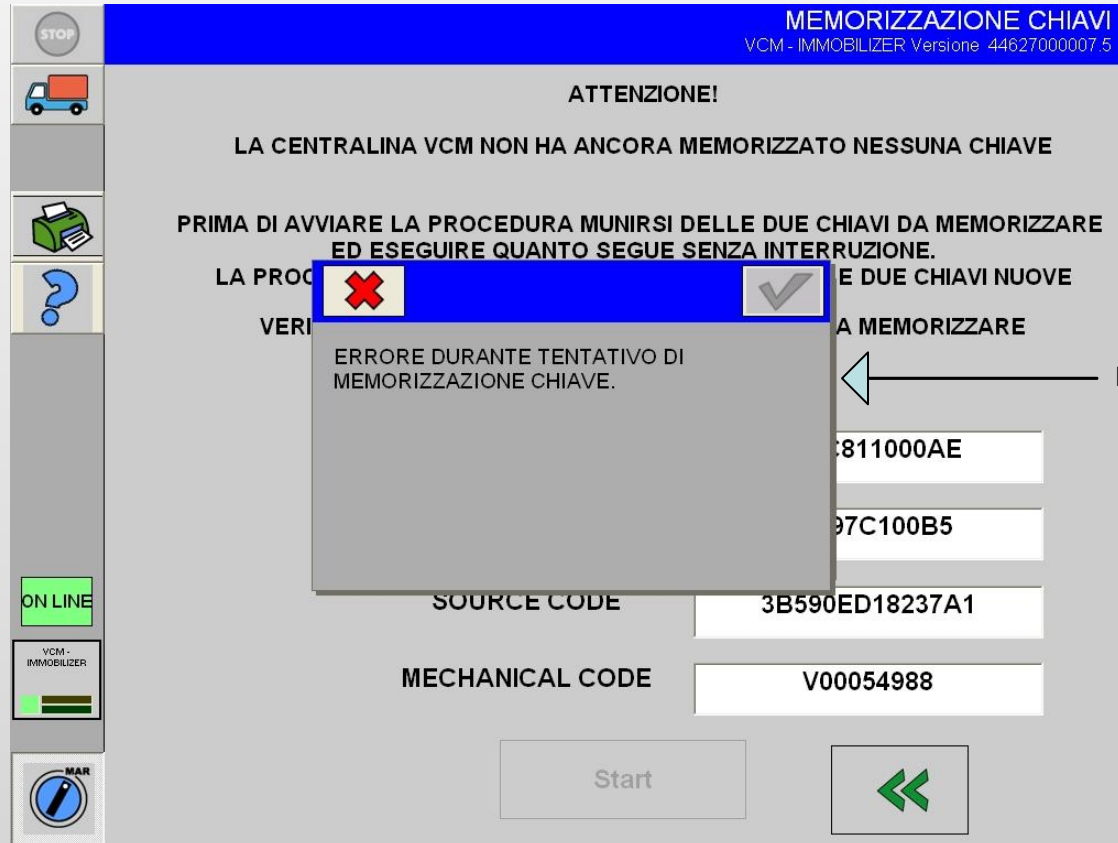
start Easy.NET Videate IT 10.30

The DTC: B9 FMI: 07 shows a hardware problem es:
antenna defective,
not correctly positioned or one of the two pins
unconnected in VCM X1, CHECK THE RESISTANCE OF
ANTENNA (9.9 ohm APPROXIMATELY between pin X1-1
and X1-3 of the VCM.

This fault DTC: B7 FMI: 02 indicates that the VCM
is IN THE STATE IN WHICH IT IS NOT 'STILL ABLE
TO GET THE STORAGE OF 2 KEYS.

3 CASE: YOU ARE USING THE KEYS PARTS (WRONG KEYS)

The correct procedure, requires the use of keys with different ide, pin source the same for both keys



The screenshot shows the 'MEMORIZZAZIONE CHIAVI' (Key Memorization) screen of the VCM-IMMOBILIZER software. The interface is in Italian and includes a sidebar with icons for STOP, a truck, a printer, a question mark, and a key icon. The main area displays instructions: 'ATTENZIONE! LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE' (Attention! The VCM control unit has not yet memorized any key) and 'PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE.' (Before starting the procedure, have the two keys to be memorized and follow the steps without interruption). Below this, there are fields for 'SOURCE CODE' (3B590ED18237A1) and 'MECHANICAL CODE' (V00054988). A 'Start' button is visible at the bottom. An error dialog box is overlaid on the screen, containing the text 'ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE.' (Error during key memorization attempt). An arrow points from the text 'Error during memory keys' to the error dialog box.

MEMORIZZAZIONE CHIAVI
VCM - IMMOBILIZER Versione 44627000007.5

ATTENZIONE!

LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE

PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE.

LA PROCEDURA CONSISTE NEL MEMORIZZARE LE DUE CHIAVI NUOVE
VERIFICARE LA MEMORIZZAZIONE

ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE.

SOURCE CODE 3B590ED18237A1

MECHANICAL CODE V00054988

Start

Error during memory keys

3 CASE: YOU ARE USING THE KEYS PARTS (WRONG KEYS)

In practice, I'm using the wrong keys

Easy.NET
VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 INTERMITTENTI: 1

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- IMMOBILIZER > IMMOBILIZER**
- IMMOBILIZER > IMMOBILIZER

ONLINE

IMMOBILIZER > IMMOBILIZER

-pin source diverso tra le chiavi [DTC: 0xB4] [FMI: 0xC]

ON OFF Cancellazione memoria guasti Guasti Condizioni ambientali Guida riparativa

Easy.NET
VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 INTERMITTENTI: 1

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- IMMOBILIZER > IMMOBILIZER

ONLINE

IMMOBILIZER > IMMOBILIZER

-VCM IN PLANT MODE [DTC: 0xB7] [FMI: 0x2]

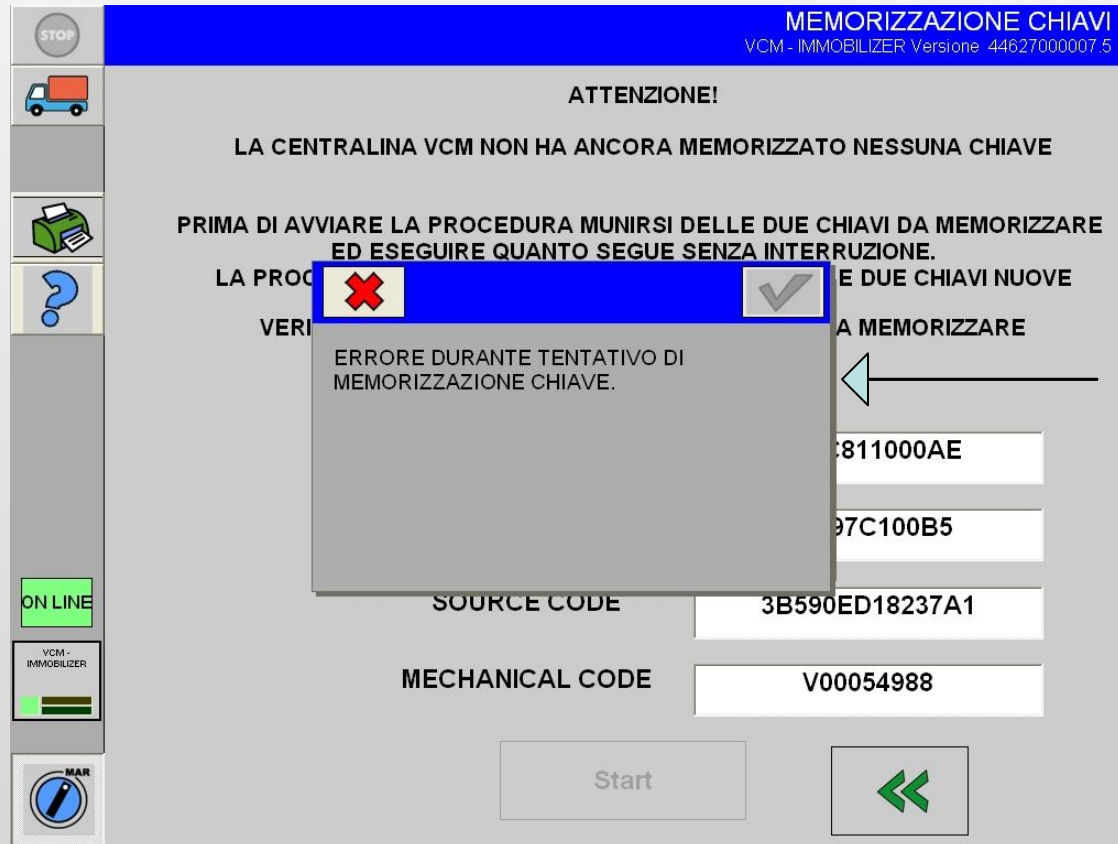
ON OFF Cancellazione memoria guasti Guasti Condizioni ambientali Guida riparativa

The DTC: FMI B4: 0C indicates that PIN THE SOURCE OF THE TWO KEY AND DIFFERENT or equal to 0, There is not inside of the keys. In fact we were using parts of the keys (3 keys) that does not have inside source your PIN

This fault DTC: B7 FMI: 02 indicates that the VCM is IN THE STATE IN WHICH IT IS NOT 'STILL ABLE TO GET THE STORAGE OF 2 KEYS.

4. CASE: YOU ARE USING BETWEEN TWO KEYS mixed KIT

The correct procedure, requires the use of keys with different ide pin and source the same for both keys



The screenshot displays the 'MEMORIZZAZIONE CHIAVI' (Key Memorization) screen of the VCM-IMMOBILIZER software. The interface includes a sidebar with icons for STOP, a truck, a printer, a question mark, a green 'ON LINE' indicator, and a battery level indicator. The main area contains the following text:

ATTENZIONE!
LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE
PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE.
LA PROCEDURA CONSISTE NEL MEMORIZZARE DUE CHIAVI NUOVE
VERIFICARE IL SUCCESSO DELLA MEMORIZZAZIONE

An error dialog box is overlaid on the screen with the text: "ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE." (Error during key memorization attempt). The dialog box has a red 'X' icon on the left and a grey checkmark icon on the right. An arrow points from the text "Error during memory keys" to the dialog box.

Below the error message, the following codes are visible:

SOURCE CODE	3B590ED18237A1
MECHANICAL CODE	V00054988

At the bottom of the screen, there is a 'Start' button and a green double-left arrow button.

VCM Troubleshooting Memory keys by teleservices

4 CASE: YOU ARE USING BETWEEN TWO KEYS mixed KIT

VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 **INTERMITTENTI: 1**

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IMMOBILIZER > IMMOBILIZER

-pin source diverso tra le chiavi [DTC: 0xB4] [FMI: 0xC]

VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 **INTERMITTENTI: 1**

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- IMMOBILIZER > IMMOBILIZER

IMMOBILIZER > IMMOBILIZER

-VCM IN PLANT MODE [DTC: 0xB7] [FMI: 0x2]

The DTC: FMI B4: 0C indicates that PIN THE SOURCE OF THE TWO KEY AND 'DIFFERENT OR EQUAL TO 0, THERE IS NOT INSIDE OF THE KEYS IN OUR CASE WE WERE USING THE KEYS FROM TWO DIFFERENT KIT, THEREFORE WITH TWO DIFFERENT PINSOURCE between a key and the other.

This fault DTC: B7 FMI: 02 indicates that the VCM is IN THE STATE IN WHICH IT IS NOT 'STILL ABLE TO GET THE STORAGE OF 2 KEYS.

VCM Troubleshooting Memory keys by teleservices

5 CASE: YOU ARE USING THE KEYS ALREADY STORED ON ANOTHER VCM

The correct procedure, requires the use of keys with different ide pin and source the same for both keys

The screenshot shows the 'MEMORIZZAZIONE CHIAVI' (Key Memorization) screen. At the top, it says 'ATTENZIONE!' (Attention!) and 'LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE' (The VCM control unit has not yet memorized any key). Below this, it instructs the user: 'PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE.' (Before starting the procedure, have the two keys to be memorized and follow the steps without interruption). The screen is divided into two columns for 'LA PROCEDURA' (The Procedure) and 'VERIFICHE' (Checks). The 'LA PROCEDURA' column has a red 'X' icon, and the 'VERIFICHE' column has a green checkmark icon. An error dialog box is displayed in the center, with the text: 'ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE.' (Error during key memorization attempt). The dialog box has a blue header with a red 'X' on the left and a green checkmark on the right. Below the dialog box, there are input fields for 'SOURCE CODE' (3B590ED18237A1) and 'MECHANICAL CODE' (V00054988). At the bottom, there are 'Start' and 'Back' buttons. On the left side of the screen, there is a vertical toolbar with icons for 'STOP', a truck, a printer, a question mark, 'ON LINE', 'VCM - IMMOBILIZER', and a 'MAR' logo.

← Error during memory keys

VCM Troubleshooting Memory keys by teleservices

5 CASE: YOU ARE USING THE KEYS ALREADY STORED ON ANOTHER VCM

Easy.NET

VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

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- IMMOBILIZER > IMMOBILIZER

IMMOBILIZER > IMMOBILIZER

-NESSUNA RISPOSTA DAL TRANSPONDER [DTC: 0xB9] [FMI: 0x2]

The DTC: B9 FMI: 0C indicates that the VCM receives no response from the transponder. This could be: Key with transponder defective
Keys already stored on another VCM

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VCM - IMMOBILIZER (44627000007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 INTERMITTENTI: 1

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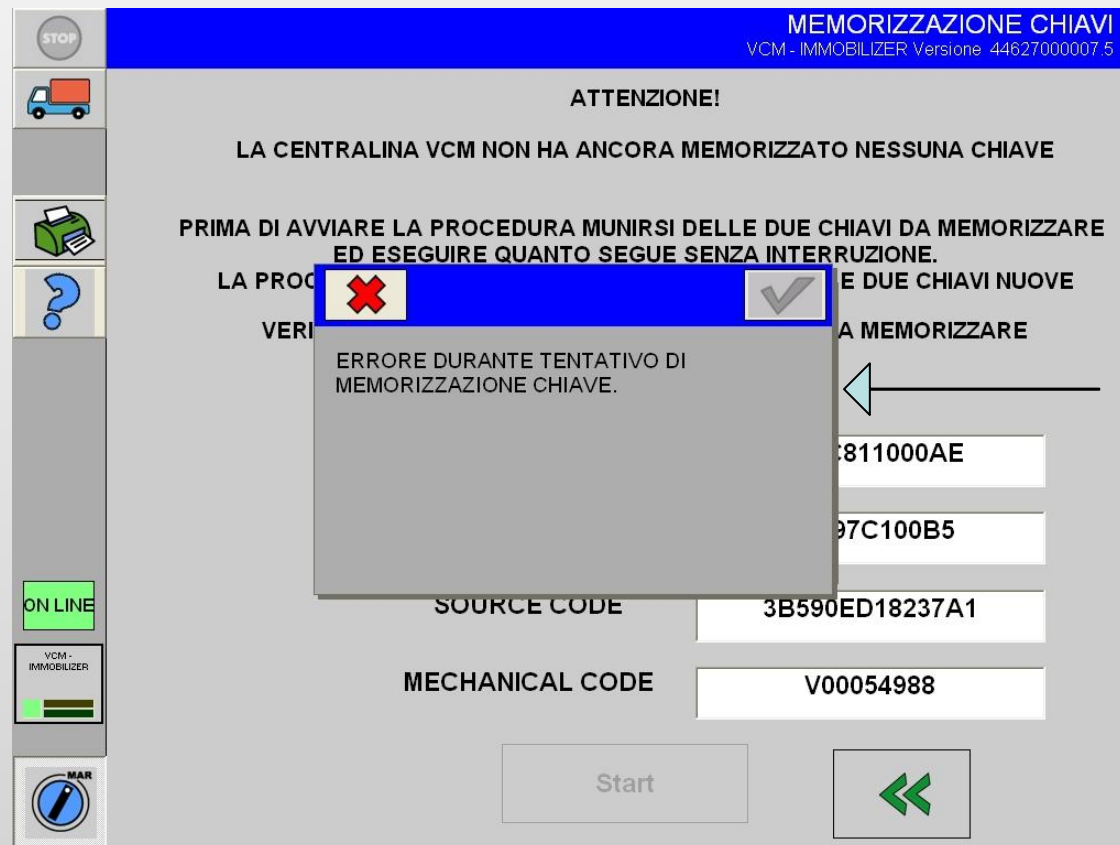
IMMOBILIZER > IMMOBILIZER

-VCM IN PLANT MODE [DTC: 0xB7] [FMI: 0x2]

This fault DTC: B7 FMI: 02 indicates that the VCM is IN THE STATE IN WHICH IT IS NOT 'STILL ABLE TO LEARNING THE STORAGE OF 2 KEYS.

6 CASE: YOU ARE USING THE KEYS WHITOUT TRASPONDER (MECHANICAL)

The correct procedure, requires the use of keys with different ide pin and source the same for both keys



The screenshot shows the 'MEMORIZZAZIONE CHIAVI' (Key Programming) screen. The main text reads: 'ATTENZIONE! LA CENTRALINA VCM NON HA ANCORA MEMORIZZATO NESSUNA CHIAVE. PRIMA DI AVVIARE LA PROCEDURA MUNIRSI DELLE DUE CHIAVI DA MEMORIZZARE ED ESEGUIRE QUANTO SEGUE SENZA INTERRUZIONE. LA PROCEDURA DEVE ESSERE COMPLETATA CON LE DUE CHIAVI NUOVE. VERIFICARE CHE LE CHIAVI SIANO CORRETTAMENTE MEMORIZZATE.' Below this, there are input fields for 'SOURCE CODE' (3B590ED18237A1) and 'MECHANICAL CODE' (V00054988). A 'Start' button is visible at the bottom. An error dialog box is overlaid on the screen, displaying a red 'X' icon and the text: 'ERRORE DURANTE TENTATIVO DI MEMORIZZAZIONE CHIAVE.' An arrow points from the text 'Error during memory keys' to the error dialog box.

6 CASE: YOU ARE USING THE KEYS WHITOUT TRASPONDER (MECHANICAL)

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VCM - IMMOBILIZER (4462700007.5)>Lettura memoria guasti
IVECO>Stralis>Euro 4.5>AS>Centraline elettroniche

DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

PRESENTI: 9 **INTERMITTENTI: 1**

Lista guasti

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- IMMOBILIZER > IMMOBILIZER

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IMMOBILIZER > IMMOBILIZER

-NESSUNA RISPOSTA DAL TRASPONDER [DTC: 0xB9] [FMI: 0xC]

ON OFF

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start Easy.NET

The DTC: B9 FMI: 0C indicates that the VCM receives no response from the transponder. This could be: Key with transponder defective
Keys already stored on another VCM
Key used without transponder (mechanical)

Easy.NET

VCM - IMMOBILIZER (4462700007.5)>Lettura memoria guasti
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DIAGNOSI TEST PROGRAMMAZIONE FUNZIONI SPECIFICHE

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ONLINE

Luigi

IMMOBILIZER > IMMOBILIZER

-VCM IN PLANT MODE [DTC: 0xB7] [FMI: 0x2]

ON OFF

Cancellazione memoria guasti Guasti Condizioni ambientali Guida riparativa

start Easy.NET

This fault DTC: B7 IMF: 02 indicates that the VCM is IN THE STATE IN WHICH IT IS NOT 'STILL ABLE TO GET THE STORAGE OF 2 KEYS.