

# SM094 – DCU trouble shooting

Service Manual

2023-04-25

Part number Part description

Release date

DCU (Door Control Unit)

# We welcome millions of people every day

Approval date 2023-04-25

**SM** 

File name SM094 DCU trouble shooting



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# Acronyms and Abbreviations

Abbreviation	Description
DCU	Door Control Unit
CCM	Customer Cooperation Manual

# References

#### Ventura Systems documents

#	Reference	Туре	Description	Revision	Date
1	QM000016	CCM	Customer Cooperation Manual	-	-

# 1 Instructions on DCU related issues

# 1.1 Purpose and motivation

#### <u>Purpose</u>

As stated in the CCM: issues that seem to be related to the DCU, need to be submitted for advice at Ventura Systems, before removing the DCU from the door system and submit it as warranty. Diagnostic status should be evaluated to determine the root cause. Warranty will not be granted for DCU's without a proper root cause analysis.

#### **Motivation**

Ventura Systems receives customer complaints regarding DCU's not functioning. Customers will send the DCU's to Ventura to be checked. Most of these complaints are rejected, because the DCU turns out to be functioning according to specification. To speed up this process of sending and receiving DCU's, it would be helpful if we'd first receive data out of the DCU to help with the actual complaint.



# 1.2 Scope

This service manual is applicable to all Ventura door systems equipped with a DCU. It describes the first steps to take when there are any calibration or functional failures with the mechanism.

# 1.3 How to proceed

Follow the manual and collect the necessary information before rebooting the DCU.

# 2 Steps to be taken

### 2.1 Step 1: connect Vdiag

Connect Vdiag to the concerned DCU. Make sure to select the right DCU (DCU 1, 2, 3 etc.).

# 2.2 Step 2: make screenshots

#### 2.2.1 Screenshot 1: Main screen

Make a screenshot of the main screen, which shows the identifier and software version (to be shared with Ventura Support).

💙 ECU Software Info		
ECU 1		
Actions		
		/ / × 2
Configuration		
Configuration version Vehicle Identifier Vehicle CAN Variant Vehicle CAN Baud rate Vehicle CAN connection Door System Type Leaf Width Leaf Actuator Type Cycle counter DS1 Leaf Position Sensor Type Lock configuration	Ventura DCU 3.5.7 TC02-03 RSE 650 Demo 255 - Service mode 2 - 250Kbit/s 0 - CAN2 = Veh, CAN1 = VDN 1 - Rapid Sliding 650 mm 2 - Electric motor 0 3 - A/B Encoder Unlocked	
Application Software		
Name	DCU Software VB5740	
Version	R 3.5.7 SVN25696	
Copyright	VENTURA	
Compile date	Jul 29 2022	
Compile time	09:52:17	
BSP Software		
Name	VENTURA DCU BSP	
Version	R 1.9.3	
Reference	P110672	
Copyright	@ACTIA	
Compile time	Jul 21 2022 14-44-23	
Compile time		
BL Software		
Name	PWR VENTURA BL	
Reference	R 2.2.0 P109399	
Copyright	@ACTIA	
Compile date	Jun 30 2022	
Compile time	16:51:07	
WD Software		
Version	2.0.6	
		5011.0
Progress		ECU Communication
		Refresh

Figure 1: DCU Vdiag main screen (example, names and values may differ)



# 2.2.2 Screenshot 2: Read I/O

Select the read I/O icon

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and make a screen shot (to be shared with Ventura Support).

Please make sure all information is seen on the screenshot. If necessary, scroll and make more screenshots to cover all information.

	Name	Value
•	Open Status	2 - Idle
	Obstruction - Cause	0 - No Obstruction
	Obstruction - Context	0 - No context
	Door Mode	12 - Low Voltage
	Left Position	-1 mm
	Potentiometer Voltage Left	2,7 V
	Right Position	0 mm
	Potentiometer Voltage Right	2,7 V
	Active fault code	109
	Authorization - Authorized to open	On
	Sensitive Edge 1	Error
	Open Button State	Off
	Close Button State	Off
	Workshop Button State	Off
	Door Block Input State	Off
	Left leaf timing - Opening	0 s
	Left leaf timing - Closing	0 s
	Right leaf timing - Opening	0 s
	Right leaf timing - Closing	0 s
	Temp DCU	29 ° C
	VAMS	28 V
	VBat	28,1 V
	V1	4,6 V
	Sensor Supply 1 Voltage	15,5 V
	Sensor Supply 2 Voltage	15,6 V
Parame	ter Group	
Door In	formation	

Figure 2: I/O screen (example, names and values may differ)



# 2.2.3 Screenshot 3: DTC

Select the read DTC icon



and make a screen shot (to be shared with Ventura Support). Save the DTC file.

Active	DTC	Description	Class	Occurrences	First Cycle Count	Ignition	Authorized
	13	End switch unreliable (Close direction)	Major	1	0		
	31	Motor left open load	Major	1	0		
	91	VBat below 19 V	Major	1	0		
	93	V1 below 19 V	Major	1	0		
	95	VAMS below 19 V	Major	1	0		
	109	Invalid loss of closed position	Major	4	0		
	147	Sensitive edge left interrupted	Minor	1	0		
	174	Modified configuration	Minor	3	0		
DTC 1 End swi Symp	174 13 - En ttch input toms oves in s	Modified configuration d switch unreliable (Close not activated when pulse count is n low speed only, as position informa	Minor e direction lear to close ation is unkno	3 n) reference own, but speed	lis measurable.		
DTC 1 End swi Symp Door mo Possi Broken	174 I3 - En Itch input toms oves in s ble ca wire, def	Modified configuration d switch unreliable (Close not activated when pulse count is n low speed only, as position informa uses ective switch, badly adjusted cam, b	Minor e direction lear to close ation is unkno ad contacts,	3 n) reference own, but speed unplugged. Cf	is measurable.		

*Figure 3: DTC screen (example, names and values may differ)* 

Store all three screenshots from Step 2.

# 2.3 Step 3: reboot

After saving all screenshots, reboot the DCU. The issues with the DCU could have been caused by calibration issues, which may be solved by a reboot.

If this doesn't work, please send the DTC File and the screenshots to Ventura Systems for determination of the root cause of the problem. You can send the files to: support@venturasystems.com.