star bulletin





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Revision: This bulletin contains a revision to the illustration and process on pages 6 and 8

SUBJECT: All Models as of Model Year 2005 (Except E320 CDI)

CVN Redocumentation Process, Model Year 2005 Vehicles:

- A. Introduction
- **B.** Process Overview
- C. SCN Coding and CVN Generation
- D. CVN Redocumentation Primary Process
- E. CVN Redocumentation Back-up Process

A. Introduction

As of model year 2005, a new coding method is required in the event an engine control module or transmission control module is replaced or flashed. The applicable emission regulations require that all codeable (emission-relevant) electronic control modules have a Calibration Verification Number (CVN) which uniquely identifies the control module version installed in the vehicle.

The Calibration Verification Number (CVN) is an 8 character long string and is accompanied by 8 character long check digit. The Calibration Verification Number CVN is automatically generated by the engine or transmission control module after it has been replaced or flashed and has been subsequently SCN Coded.

Once the Calibration Verification Number (CVN) has been generated, it then must be reported back to DaimlerChrysler in a process called "Redocumentation". The "Redocumentation" of the CVN and check digit is performed via the same on-line application currently used to generate SCN Codes. This "Redocumentation" process has been created to ensure the proper reporting of each control module version so that DaimlerChrysler can maintain proper records as well as report the data to the Federal Government.

I NOTE: For information on how to access the SCN Coding On-line Application please refer to S-B-07.61/38f.

This bulletin has been created and maintained in accordance with MBUSA-SLP S423QH001, Document and Data Control, and MBUSA-SLP S424HH001, Control of Records.

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B. Process Overview

The CVN Redocumentation Process specified in this Service Bulletin is divided into three parts: SCN Coding and CVN Generation, CVN Redocumentation – Primary Process, and CVN Redocumentation – Back-Up Process.

SCN Coding and CVN Generation-

In order to generate a CVN, the control unit must first be SCN Coded. The SCN Coding process is outlined within this Service Bulletin in Section C. After SCN Coding, the control unit will automatically generate the CVN and Check Digit [3] which then must be redocumented using the procedure outlined in Section D.

I NOTE: Failure to redocument the CVN immediately after SCN Coding (using the CVN Redocumentation – Primary Process outlined in Section D) will result in a pop-up message on the STAR Diagnosis System screen noting that there are vehicles that have not had their CVN redocumented. In addition to the pop-up message, a screen will be displayed showing the VIN and pertinent information of the vehicles that have not had their CVN redocumented. This pop-up message and vehicle record screen will be displayed every time the DAS application is used until the CVN that have not been redocumented are redocumented.

CVN Redocumentation – Primary Process –

This process will allow the user to simply print out the CVN and Check Digit [3] and redocument them utilizing the familiar SCN Coding On-line Application. Once the CVN and Check Digit [3] have been redocumented, the SCN Coding On-line Application will generate a Release Code and Check Digit [4] to confirm to the user that the redocumentation was successful. This Release Code and Check Digit [4] then must be input into the STAR Diagnosis System in order to prove that redocumentation has successfully occurred.

NOTE: For information on how to access the SCN Coding On-line Application please refer to S-B-07.61/38f.

CVN Redocumentation – Back-Up Process –

NOTE: This process should only be used if it was not possible to redocument the CVN and Check Digit [3] at the time of SCN Coding.

In order to properly redocument, the VIN, CVN and Check Digit [3] must be determined as outlined in Section E. Once the VIN, CVN and Check Digit [3] have been obtained the user then must perform the Redocumentation utilizing the familiar SCN Coding On-line Application. After the CVN and Check Digit [3] have been redocumented, the SCN Coding On-line Application will generate a Release Code and Check Digit [4] to confirm to the user that the Redocumentation was successful. This Release Code and Check Digit [4] then must be input into the STAR Diagnosis System in order to prove that Redocumentation has successfully occurred.

I NOTE: Failure to input the Release Code and Check Digit [4] into the STAR Diagnosis System will result in a pop-up message on the STAR Diagnosis screen noting that there are vehicles that have not had their CVN redocumented. In addition to the pop-up message, a screen will be displayed showing the VIN and pertinent information of the vehicles that have not had their CVN redocumented. This pop-up message and vehicle records screen will be displayed every time the DAS application is used until the CVN that have not been redocumented are redocumented.

C. SCN Coding And CVN Generation

1. Determine vehicle data for SCN Coding (Figure 1)



- 2. Print out vehicle data for SCN Coding by pressing 'F11' (Figure 2)

ehicle 220.070 Control unit ME-SFI 2.8 Determine vehicle data for SCN coding. Vehicle ident no. WDB2200701A410662 MB code number 1131535479 Check digit [1] 95-8B-A3-A4 Print vehicle data with key F11 and poll the coding string, SCN and test digit using FDOK screen 4311 'Generation of SCN and coding string'. For retrofitting operations, the retrofit codes are required additionally After the data have been received, the coding can be transmitted to the control unit via menu item Perform SCN coding'. If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	Battery voltage: 13.0 V 🥥
Determine vehicle data for SCN coding. Vehicle ident no. WDB2200701A410662 MB code number 1131535479 Check digit [1] 95-8B-A3-A4 Print vehicle data with key F11 and poll the coding string, SCN and test digit using FDOK screen 4311 'Generation of SCN and coding string'. For retrofitting operations, the retrofit codes are required additionally. After the data have been received, the coding can be transmitted to the control unit via menu item 'Perform SCN coding'. If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	Control unit ME-SFI 2.8
Vehicle ident no. WDB2200701A410662 MB code number 1131535479 Check digit [1] 95-88-A3-A4 Print vehicle data with key F11 and poli the coding string, SCN and test digit using FDOK screen 4311 'Generation of SCN and coding string'. For retrofitting operations, the retrofit codes are required additionally After the data have been received, the coding can be transmitted to the control unit via menu item Perform SCN coding'. If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	
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Check digit [1] 95-8B-A3-A4 Print vehicle data with key F11 and poli the coding string, SCN and test digit using FDOK screen 4311 'Generation of SCN and coding string'. For retrofitting operations, the retrofit codes are required additionally After the data have been received, the coding can be transmitted to the control unit via menu item 'Perform SCN coding'. If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	1131535479
Print vehicle data with key F11 and poll the coding string, SCN and test digit using FDOK screen 4311 'Generation of SCN and coding string'. For retrofitting operations, the retrofit codes are required additionally After the data have been received, the coding can be transmitted to the control unit via menu item "Perform SCN coding'. If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	95-8B-A3-A4
If you have no access to FDOK, use button F4 to create and print out an application form for faxing.	string, SCN and test digit using FDOK screen 4311 quired additionally be transmitted to the control unit via menu item
	eate and print out an application form for faxing.
	-Ha

Figure 2

3. Retrieve SCN Code

I NOTE: For instructions on retrieving an SCN Code using the On-Line SCN Coding Application please refer to S-B-07.61/38f

4. Perform SCN Coding – Select 'Perform SCN Coding', Press 'F3'. (Figure 3)



Figure 3

5. Input SCN Code, then Press 'F3' (Figure 4)

I NOTE: Please be sure to input all of the characters of the SCN Code that you have retrieved including any sets of zeros (00). In some cases you will not have enough characters to fill all of the empty fields, in this case you must leave these fields empty.

6. Switch ignition 'Off/On' as instructed. (Figure 5)

DAS English		Battery voltage: 13.0 V 🌍 🕳 🗖
Vehicle	220.070	Control unit ME-SFI 2.8
Perform	SCN coding.	
Vehicle ic	lent no.	WDB2200701A410662
MB code	number	1131535479
Coding st	ring	00 • 56 • F1 • 01 • 06 • 00 • 40 • 30 • 01 • 08 • B3 • 81 • B3 • 81 • 04 • 0D • 6E • FB • 10 • 44 • 88 • BF • 19 • 41 • 54 • 20 • 00
SCN		1131535479 - 15 - 0049
Check dig	pit [2]	86 - 08 - 3F - 97
1	F1 F3	N0 F4

Figure 4

🖉 DAS English		Ø	DAS English		
Vehicle	220.070	V	/ehicle	220.070	
Perform \$	SCN coding.		Perform S	CN coding.	
Switch off	ignition.		Switch on ig	gnition.	
1		1			

Figure 5

7. The Control Module will be reset. (Figure 6)

DAS English		Battery votage: 13.2 V 🔮 🕳
ehicle	220.070	Control unit ME-SFI 2.8
Perform	SCN coding.	
Control r	nodule reset, please wait	

Figure 6

Vehicle 220.070 Control unit ME-SFI 2.8
Perform SCN coding.
Please wait 180 s.



vehicle	220.070	Control	unit ME-SFI 2.8
CVN red	ocumentation		
Vehicle i	dent no.	WDB2200701A410662	ł
MB code	number	1131535479	
CVN		AF82B393	
Check di	igit [3]	E4-8b-84-94	
100000	code	.	
Release		The second se	
Release Check di	git [4]		



 After the SCN Coding process, the CVN is automatically read out of the ECM. The calculation of the CVN may take up to 180 seconds. (Figure 7)

 The CVN and Check Digit [3] are displayed on the SDS Screen. Press 'F11' to print out the CVN and Check Digit [3]. (Figure 8)

10. The CVN must now be redocumented.

I NOTE: If the CVN is to be redocumented at this time please proceed to Section D.

[CVN Redocumentation - Primary procedure]

I NOTE: If the CVN is to be redocumented at a later date please proceed to Section E.

[CVN Redocumentation - Back-up procedure]

i NOTE: The SCN Coding process is complete at this stage and the vehicle can be released.

i NOTE: If the ME Control unit has been replaced, drive authorization may need to be performed.

D. CVN Redocumentation - Primary Procedure

Using the CVN and Check Digit [3] from the sheet printed in Section C, Step 9,

 Input the CVN and Check Digit [3] into the respective fields in the SCN Coding On-line Application. (Figure 9)

I NOTE: For information on how to access the SCN Coding On-line Application please refer to S-B-07.61/38f

- 2. Press 'F5 CVN Redocument' Button, Release Code and Check Digit [4] will be created.
- 3. Click the 'OK' Button. The Release Code and Check Digit [4] will be displayed. (Figure 10)
- 4. Press 'F11 Print' Button to Print the Release Code and Check Digit [4]. (Figure 10)

🗟 STAR NETWORK		
DaimlerChrysler	n Overview Coding Velicle data	
	Engine control unit	
	Part number 1131535479 r Status + instructions	
	Control unit software Information: SCN and coding string available. CVN is mandate Next steps:: Bwitch to DAS and go to SCN coding screen. Sex	ery. e and enter CVN and check digit 3 from I
oplications	Coding string 05 k7 ft 31 31 06 (0 × 40 → 50 - 51 ft 10 × 10 × 40 → 50 - 51 ft 10 × 41 × 40 × 50 + 51 ft 10 × 41 × 41 × 40 × 50 × 50 × 50 × 50 × 50 × 50 × 50	00 53 61 53 61 04 00 62 * 00 00 00 00 00 00 00 00 00 00 * 982: FD 7E E1 2C
Tools Star Setup	CNNL D7455985 Check dg Check dgt 1 195 89 A3 A4 Check dg	98 3: 4E EE 08 D1 98 4:
	F2 Strungersteduteg elogeben F3 guny F5 CW gickdokumentleren	
	F10 New yehicle	F11 Print 10.AT20_
Menu Help	Logout Retrieves the CVN release code.	





Figure 10

5. Enter the Release Code and Check Digit [4] into the respective areas on the SDS Screen, Press 'F3' to complete the redocumentation. (Figure 11)

ehicle	220.070	Control unit	ME-SFI 2.8
VN red	ocumentation		
Vehicle id	dent no.	WDB2200701A410662	
MB code	number	1131535479	
CVN		AF82B393	
Check di	git [3]	E4-8b-84-94	
SCN and If you hav	coding string'. e no access to FDOK.	use button F5 to create and print out an applic	ation form for faxing.
SCN and If you hav Release of	coding string'. e no access to FDOK, code	use button F5 to create and print out an applic	ation form for faxing.
SCN and If you hav Release (Check dig	i coding string' e no access to FDOK, code	use button F5 to create and print out an applic 95 - 88 - A3 3F - 97 - 68	ation form for faxing.

Figure 11

E. CVN Redocumentation – Back-Up Process

The Back-up Process should only be used when it is not possible to redocument the CVN and Check Digit [3] at the time of SCN Coding.

1. Select 'Cars', Press 'F3' (Figure 12)



Figure 12



Figure 13

The CVN and respective vehicles that have not been
redocumented will be displayed. For each of the entries
displayed you must redocument the CVN and Check
Digit [3] to 'unlock' and clear the entry from the screen.

CVN from at least one vehicle has not been

redocumented. (Figure 13)

3. Press 'F11' button to print a record of all CVN/vehicles that must be redocumented. (Figure 14)

Vehicle	220.070		Co	ontrol unit ME	SFI 2.8
VN red	ocumentati	ion - All vehicl	e data records to b	e redocumer	nted
VIN		Control unit	MB code number	CVN	Check digit [3
WDB22007	01A410662	Engine IMOTOR1	1131535479	AF82B393	E4-8B-84-94
WDB20306	41A000001	Engine [MOTOR]	1121533179	18D04203	F5-D7-CD-21
WDBRF61.	J02E008829	Engine IMOTOR1	1121533179	148D704D	C5-0D-1B-F1

Figure 14

Redocument CVN and Check Digit [3] using SCN Coding On-Line Application

i NOTE: For information on how to access the SCN Coding On-line Application please refer to S-B-07.61/38f

- 4. Using the CVN and Check Digit [3] from the sheet printed in Section E, Step 3, input the CVN and Check Digit [3] into the respective fields in the SCN Coding On-line Application. (Figure 15)
- 5. Press 'F5 CVN Redocument' Button, Release Code and Check Digit [4] will be created.
- 6. Click the 'OK' Button. The Release Code and Check Digit [4] will be displayed. (Figure 16)
- 7. Press 'F11 Print' Button to Print the Release Code and Check Digit [4]. (Figure 16)

You must now select the CVN/vehicle record that you

8. Select the CVN/vehicle record that you wish to clear

by highlighting, then press 'F9' (Figure 17)

wish to 'unlock' and clear.

STAR NETWORK			
DaimlerChrysler	Overview Coding Vehicle data ENV/N SAPESTORTORACCERS Ptgs SA		Antonia Filipi
	Engine control unit	- Status + instructions	
	Control unit software	Information: BCN and coding Next steps: Switch to DAS an	string available. CVN is mandatory. nd go to SCN coding screen. Save and enter CVN and check digit 3 from
opications		SCN Coding string: 00 56 71 78 10 47 00 00 00	01 01 06 00 40 30 01 08 83 81 83 81 04 00 48 4 89 87 19 41 54 20 00 00 00 00 00 00 00 00 4 0 00 00 00 00
ognasn		SCN: 113153547	79 15 0049 Check digit 2: FD 7E E1 2C
ools <u>S</u> tar Setup	<	CVN: D74559B5 Release code:	Check digt 3: [4E EE 05 D1] Check digt 4:
	F2 Steuergerätedateg eingeben F3	Query F5 CVN glickdokumer	nberen
	F10 New yehicle		F11 gm
Menu Help	Logout Retrieves the CVN release code.		







atlery votage: 13.0 V 🌰 📰 🔀 DAS Engli Vehicle 220.070 Control unit ME-SFI 2.8 CVN redocumentation - All vehicle data records to be redocumented MB code numbe 1131535479 CVN Check digit [3] Control unit VDB2200701A410662 AE826 E4 88 84 0/ Engine MOTOR1 WDB2030641A000001 1121533179 F5-D7-CD-21 18D04203 Engine [MOTOR] WDBRF61J02E008829 1121533179 148D704D C5-0D-1B-F1 Engine [MOTOR] 1 1 2 U Í F11 F1 F7 F5 F6 F9

Figure 17

9. Enter the Release Code and Check Digit [4] for the respective VIN, Press 'F3' (Figure 18)

DAS English		<u>M</u> -
/ehicle	Control unit	
CVN redocumentation		
Vehicle ident no.	WDBRH81JX5F547964	
MB code number	1121534479	
CVN	D42D9432	
Check digit [3]	A1-88-96-62	
Release code	CD - 8C - 89 - 66	
Check digit [4]	90 - 61 - F0 - DC	
± 🗸		۵
F4 F2		F44

Figure 18

OAS English		() - Ø ×
Vehicle	Control unit	
CVN red	ocumentation - All vehicle data records to be redocumented	
All vehicle da	ta records have been redocumented	
All vehicle da		
		AL
🐮 Start 🙀 STAR D	AGNOSIS 🖉 pcAnywhere (In Ses 🕘 DAS English	9 🛸 🔔 18:43

Figure 19

Once all vehicles have had their CVN and Check Digit [3] redocumented and their records 'unlocked' and cleared with the Release Code and Check Digit [4], the redocumentation process is complete. (Figure 19)

i Note: The following allowable labor operations should be used when submitting a warranty claim for this repair.

In Case of Warranty

Flashing ME Control Unit:

- Operation: Repair#1 Short test, perform (54-1011) Only can be claimed once per ROOperation Options.Engine Control Module Flashing (after test), perform (07-8821)Control unit(ME/ETC) -CVN code(MY 2005 and newer), perform
(02-3952)
 - #2 Replacing ME Control Unit: Short test, perform (54-1011) Only can be claimed once per RO Engine Control Module - All Fuel Inj. Systems, replace(07-1628) Control unit(ME/ETC) -CVN code(MY 2005 and newer), perform (02-3952)
 - #3 Flashing ETC Control Unit: Short test, perform (54-1011) Only can be claimed once per RO Control Unit - Software install (54-0991) Control unit(ME/ETC) -CVN code(MY 2005 and newer), perform (02-3952)
 - #4 Replacing ETC Control Unit: Short test, perform (54-1011) Only can be claimed once per RO Control Module - For Electronic Transm. (722.6), replace (27-2351) or Valve Body (Electro-hydr.), r & r / repl. (27-4982) to be used with 722.9 transmissions only Control unit(ME/ETC)-CVN code(MY 2005 and newer), perform (02-3952)

Damage Code	Oper.No.	Time	Model Ind.	
Repair Option #1				
54575 ED 8	54-1011	.3 hours	00	
	07-8821	.3 hours	M1,M2,M6,M7,N1,P1	
			P2,P4, P6,P7,P8,P9	
			Q1,Q2,Q3,Q4,R1,S1	
			S2,S4,S5,T1,T2,T4	
			T5,U1,U3,U4	
	02-3952	.1 hours	M1,M2,M6,M7,N1,P1	
			P2,P4, P6,P7,P8,P9	
			Q1,Q2,Q3,Q4,R1,S1	
			S2,S4,S5,T1,T2,T4	
			T5,U1,U3,U4	
Repair Option #2				
54575 ** 7	54-1011	.3 hours	00	
** applicable damage type	07-1628	.3 hours	M0,N0,S1,S2,S4,S5	
			U1,U3,U4	
		.5 hours	P1,P2,P4,P6,P7	
			P8,P9,Q2,Q4,T1,T2	
			T4,T5,	
		.6 hours	R1	
		.7 hours	Q1,Q3	
	02-3952	.1 hours	M1,M2,M6,M7,N1,P1	
			P2,P4,P6,P7,P8,P9	
			Q1,Q2,Q3,Q4,R1,S1	
			S2,S4,S5,T1,T2,T4	
	C D 07 09/42a 07 00/44a October 0004			10

Damage Code	Oper.No.	Time	Model Ind.
			T5,U1,U3,U4
Repair Option #3 54553 90 8	54-1011	.3 hours	00
Repair Option #4 54553 ** 7 ** applicable damage type	54-0991	.3 hours	M1,M2,M6,M7,N1,N4 N5,N6,P1,P2,P4,P6 P7,P8,P9,Q1,Q2,Q3 Q4,R1,R2,R3,R4,S1 S2,S3,S4,S5,S6,T1 T2,T3,T4,T5,U1,U3 U4
	02-3952	.1 hours	M1,M2,M6,M7,N1,N4 N5,N6,P1,P2,P4,P6 P7,P8,P9,Q1,Q2,Q3 Q4,R1,R2,R3,R4,S1 S2,S3,S4,S5,S6,T1 T2,T3,T4,T5,U1,U3 U4
	54-1011	.3 hours	00
	27-2351	.3 hours	M0,N0,P0,Q0,R1,R2 R3,R4,S1,S2,S3,S4
	or	.4 hours	55,56 T1,T2,T3,T4,T5,U1 U3,U4
	27-4982	1.5 hours	M0,N0,R1,T2
	02-3952	.1 hours	M1,M2,M6,M7,N1,N4 N5,N6,P1,P2,P4,P6 P7,P8,P9,Q1,Q2,Q3 Q4,R1,R2,R3,R4,S1 S2,S3,S4,S5,S6,T1 T2,T3,T4,T5,U1,U3 U4

i Note: Op Code 54-1011 can only be claimed once when performing the above.

i Note: Figure #8 and #10 must be printed and retained in the service file.