

No.: 17TS-05Rev2 October 2020

TO: Service Locations

FROM: Service Systems Development

### SUBJECT: Detroit<sup>™</sup> DT12<sup>™</sup> TCM GHG17 Only; Bootloader Update

#### ISSUE

On Detroit<sup>™</sup> DT12<sup>™</sup> equipped vehicles, it may be necessary to complete an additional step in the programming process when updating the TCM software.

## **REQUIRED ACTION**

- 1. To improve the programming success rate, a hard-wired connection from DiagnosticLink<sup>®</sup> to the vehicle is preferred. Connect DiagnosticLink version 8.12 with Service Pack 2 (or higher versions) on the Identification Tab and check the TCM01T Hardware Part Number. Is the TCM Hardware Part Number listed as A0504463109 ZGS **901** or A0504463409 ZGS **901**?
  - a. Yes; special programing steps are <u>NOT</u> necessary and you may continue to program the powertrain modules as usual with Model Year 2020 package.
  - b. No; the TCM Hardware Part Number level is either A0504463109 ZGS 001 or A0504463409 ZGs 001. Continue to step 2.



2. Connect DiagnosticLink® version 8.12 with Service Pack 2 (or higher). Download Unit Data from server and note the TCM01T Hardware Part Number (last 3 digits are **001**).

Requ	est Equipment Dat	a Dow	nload			
Enter the identity of the equipment you wish to program.						
Veł	Vehicle Identification (VIN/PIN)					
1FU	JJGLDR0GLZZ3415					
Enc	gine Serial Number	(Unit N	lumber)			
472	91050356782					
Dev	vice controllers for t	this equ	upment			
•	Add 💥 Remove					
	Device	_	Hardware Part Number	_		
•	CPC04T	•	A0034461102-002			
	MCM21T	•	A0014465835-002			
	TCM01T	-	A0504463109-001	=		
	IPPC01T	-	A0004460675-001			
	ICU4ME	-	06-84378-001			
	SAMCAB_P3	-	06-74862-000			
	CGW03T	-	06-93359-001			
	RDF01T	-	A0004461649-001			
	MSF_P3	-	06-66446-002	-		
<u>Clear All</u> <u>OK</u> <u>Cancel</u>						

## 3. After download, select "Next".

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*	Transmission: DT12-DT1	2 DA		
Identification	Engine: DDEC16-DD15		Di	agnosticLink
Mendileadon	Gather Data > Select Operation > Program Device			
Fault Codes	Unit Data Software Datasets Diagnosis Descriptions			-
	Unit	Status (powertrain)	Status (chassis)	Add
V Troubleshooting	Warning			
1	4 1FUJGLDR0GLZZ3415 (472910S0356782)	OK	VD00062E - Assembly does not exist for ECU 06-9	Kemove
Instrumentation				Refresh
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1/O Control				
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Program Device				
Connections				
Common Powertrain Controlle				
CPC04T: Online Motor Control Module 2.1				
MCM21T: Online				
TCM01T: Online				
Integrated Predictive Powertr				
Instrument Cluster Unit 4Me				
ICU4ME: Online			C	onnect to Server
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4. Select TCM01T, then "Update Device Software". Select bootloader software NAMT154601, and then select "Next".

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*		Transmission: DT12-DT12 DA	B	
Identification	Program Device	Engine: DDEC16-DD15	Di	agnosticLink
	Gather Data > Select Operation > P	rogram Device		
Fault Codes	Select the device to program			1
20	Name	Description		Â
V? Troubleshooting	CPC041	Common Powertrain Controller 4		E
101	TCM01T	Transmission Control Module MY2013		
Instrumentation	IPPC011	Integrated Predictive Powertrain Control		
Service Poutiner	ICU4ME	Instrument Cluster Unit 4Me		
Service Routines	SAMCAB_P3	SAM Cabin		
VO Control	Select the reprogramming operation	you wish to take place		
432	- Replace Derice Sealings mitir Se	Configuration		
Parameters	Update Device Software			
	Charge Dataset			
Program Device	Select the software version to apply t	to the device		
	Version	Part Number	Description	
*	NAMT154601	0104484209 002	NAMT154601	
Connections				
Common Powertrain Controlle	•			
Motor Control Module 2.1				
MCM21T: Online				
TCM01T: Online				
Integrated Predictive Powertr				
Instrument Cluster Unit 4Me				
ICU4ME: Online				
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5.	Make sure software l	NAMT154601	is correct a	ind then	select	"Start"

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Identification	Engine: Di	DEC16-DD15	DiagnosticLink
0	Gather Data > Select Operation > Program Device The following data will be programmed		
Fault Codes	Name	Target Data	
Co Troubleshooting	Operation	Update Device Software	
0	Device	TCM01T	
Instrumentation	Software	NAMT154601	
Service Poutines	Jettings	Existing Securitys	
Service Routines	Vehicle Identification Number	1FUJGLDR0GLZZ3415	
1/O Control			
Parameters	If this is correct, click the Start button		Start
	Step	Result	
Program Device			
<b>*</b>			
Connections			
CPC04T: Online			
Motor Control Module 2.1	E		
Transmission Control Module	-		
TCM01T: Online			
IPPC01T: Online			
Instrument Cluster Unit 4Me			
SAM Cabin	-		
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6. Programming will fail at the step highlighted below -- "Data Implausible – reconnected in boot mode". This is an expected error.

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Didentification	There are data items on this computer that are re	equired to be uploaded to the server. Click here to attempt to connect to the server now.	
Fault Codes	Gather Data > Select Operation > Program Device		
4	The following data will be programmed		
P Troubleshooting	Name	Target Data	
	Operation	Update Device Software	
Instrumentation	Device	TCM01T	
(3)	Unit	1FUJGLDR0GLZZ3415 (47291050356782)	
Service Routines	Software	NAMT154601	
2	Settings	Existing Settings	
1/O Control	Vehicle Identification Number	1FUJGLDR0GLZZ3415	
m, 9			
Parameters	3 The programming operation failed - to retry, click	k the Start button	Start
Program Device	Step	Result	
1	Connect to device	Complete	
	Read existing settings	Complete	
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onnections	Slash Firmware	Data implausible - reconnected in boot mode	
Common Powertrain Controlle	A Execute rension specific initialization		
Motor Control Module 2.1	Reset device to default settings		
MCM21T: Online	Load existing settings		
TCM01T: Online	Write settings		
Instrument Cluster Unit 4Me	Write Vehicle Identification Number		
ICU4ME: Online	Commit settings to permanent memory		
SAMCAB_P3: Online	Reconnect to device		
Central Gateway	<ul> <li>Verify settings</li> </ul>		
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7. Navigate back to the "Identification" screen and you will see TCM01T is "Running in Boot". Again, this is an expected result.



8. Reselect "Program Device" tab, and select the "Back" button.

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plausible - reconnected in boot mode

9. Highlight the VIN, select "Remove" and then select "Add" to reload the VIN.

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Identification	Program Device generation DEC16-DD1:	5		DiagnosticLink
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Fault Codes	Unit Data Software Datasets Diagnosis Descriptions			
00	Unit	Status (powertrain)	Status (chassis)	<u>A</u> dd
V? Troubleshooting	A 1EUGLDR0GL773415 (47201050356782)	or	VD00062E - Assembly does not exist for	ECILIOS 9
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Instrumentation				Retresh
Service Routines				Refresh All
1/O Control				
mm				
Parameters				
Program Device				
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Connections				
Common Powertrain Controlle	A			
CPC04T: Online				
MCM21T: Online	-			
Transmission Control Module TCM01T: Online				
Instrument Cluster Unit 4Me				
SAM Cabin				
Central Gateway	<del>.</del>			<u>C</u> onnect to Server
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10. After the VIN has been re-added, notice TCM01T Hardware Part Number has changed (last 3 digits are now 901). Select "OK" and connect to the server. Note: You may have to manually connect to the TCM prior to downloading server data; see steps 11 and 12 for manual connection details. If a manual connection is not necessary, go to Step 14.

Requ	est Equipment Dat	a Dow	nload			
Enter the identity of the equipment you wish to program.						
Veh	nicle Identification (	VIN/PI	N)			
1FU	JJGLDR0GLZZ3415					
Eng	ine Serial Number	(Unit N	lumber)			
472	91050356782	2				
De	ica controllars for t	this as	uinment			
Dev	vice controllers for t	inis eq	upment			
2	Add 💢 Remove			4		
	Device		Hardware Part Number			
	CPC04T	•	A0034461102-002			
	MCM21T	-	A0014465835-002			
•	TCM01T	-	A0504463109-901			
	ICU4ME	•	06-84378-001	=		
	SAMCAB_P3	•	06-74862-000			
	CGW03T	-	06-93359-001			
	RDF01T	-	A0004461649-001			
	MSF_P3	-	06-66446-002			
	ACM21T	•	A0004464654-003	-		
	ACM211         AU004464654-003           Clear All         OK         Cancel					



12. Connect to server, and download unit data.

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Identification	Program Device Program Device Program Device			DiagnosticLink
	Gather Data > Select Operation > Program Device			
Fault Codes	Unit Data Software Datasets Diagnosis Descriptions			
00	Unit	Status (powertrain)	Status (chassis)	Add
V Troubleshooting	Warning	or		Remove
220	1PUJGLDRUGLZZ3415 (4/291050336/82)	UK	VD00002E - Assembly does not exist for EC0 06-9	
Instrumentation				Refresh
Service Routines				Refresh All
1/O Control				
Parameters				
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Common Powertrain Controlle A				
Motor Control Module 2.1				
MCM21T: Online				
TCM01T: Online				
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Instrument Cluster Unit 4Me				
ICU4ME: Online				Connect to Server
SAM Cabin	]			
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13. If not connected after download, make a manual connection to the TCM. (Refer back to Steps 11 & 12 for manual connection instructions.) After a connection is made, continue to Step 14.

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Close Connections	Frogram Device	DECI6-DDIS		Diag	nosticlink
👶 Print Ctrl+P	Gather Data > Select Operation > Program Device				
Print Preview	Unit Data   Software   Datasets   Diagnosis Descrip	tions			
Recent Files	Unit	Status (powertrain)	Status (chassis)		Add
Exit	Warning	OK	VD00062E - Assembly does not exist for ECU 06-9	ſ	Remove
M Instrumentation					
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Common Powertrain Controlle	*				
CPC04T: Online					
MCM21T: Online	E				
Instrument Cluster Unit 4Me ICU4ME: Online					
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*	<b>3</b>			
Identification	Program	Device Bingine: DDEC16-DD15		DiagnosticLink
- Identification	Gather Data > Select	Operation > Program Device		
Fault Codes	Unit Data Software	Datasets Diagnosis Descriptions		
	Unit	Status (powertrain)	Status (chassis)	<u>A</u> dd
V? Troubleshooting		Manual Connection		Remove
me .		On-Vehicle All		
Instrumentation		ECU Connection Resources		Refresh
Service Routines		ABS02T A CANHS-1 on USB-Link 2		Refresh All
~~~~		BHM_J1939 CTP01T		
1/O Control		DCMD02T		
m		HVAC_F01T		
Parameters		HVAC_P01T HVAC_R01T		
Program Device		IPPC01T		
<u>v</u>		SASUI		
		TCM01T		
· ·		VECU UDS		
Connections			Connect Close	
CPC04T: Online				
MCM21T: Online	<b>-</b>			
Instrument Cluster Unit 4Me ICU4ME: Online				
SAM Cabin				
Central Gateway				
CGW03T: Online  Radar Frontend	-			<u>C</u> onnect to Server
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# 14. Verify TCM software NAMT191402 and select "Start" to complete programming.

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*	Program Device 🕜		DiagnosticL
Identification	Gather Data > Select Operation > Desire		- ·- g· · · - ·· -
2	The following data will be programmed		
Fault Codes	Name	Tarrat Data	
	Name	Target Data	
C Troubleshooting	Operation	Update Device Software	
	Device	1CM011	
Instrumentation	Software	NAMT117700	
	Settings	existing settings from previous attempt)	
Service Routines	Vehicle Identification Number	1FUJGLDR0GLZZ3415	
I/O Control			
m.9			
Parameters	Programming		Start
×~	Step	Result	
Program Device	Connect to device	Complete	
	Read existing settings	using settings from previously failed upgrade	
	S Unlock VeDoc protection	n/a	
*	Mash Firmware	0.0% Complete	
nnections	Execute version specific initialization		
Tensmission Control Module MY TCM01T: Flash (0.0%)	Reset device to default settings		
	Load existing settings		
	Load preset settings from server		
	Write settings		
	Write Vehicle Identification Number		
	Commit settings to permanent memory		
	Reconnect to device		
	Verify settings		
	Update usage count		
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*	Program Device 🕥 Engine: DD	Diagnosticlin	
Identification	Transmissio	n: DT12-DT12 DA	Diagnosticum
	Gather Data > Select Operation > Program Device		
Fault Codes	The following data will be programmed		
	Name	Target Data	
V Troubleshooting	Operation	Update Device Software	
	Device	TCM01T	
Instrumentation	Unit	1FUJGLDR0GLZZ3415 (47291050356782)	
	Software	NAMT117700	
Service Routines	Settings	Existing Settings (from previous attempt)	
	Vehicle Identification Number	1FUJGLDR0GLZZ3415	
VO Control	The device was successfully programmed		Start
Parameters	Name	Actual Data	
Program Device	Device	TCM01T	
	Diagnostic Variant	App 000E	
*	Software Version	NAMT117700	
inections	Diagnostic Version	14	
Common Powertrain Controlle	^ VIN	1EUJGLDR0GLZZ3415	
Motor Control Module 2.1 MCM21T: Online Transmission Control Module	ECU Serial Number	0000000001270039388	
	Transmission Type	DT12 DA	
	Hardware Part Number	0504463409901	
Instrument Cluster Unit 4Me	Software Part Number	0504480809002	
ICU4ME: Online	Software Mode	Running in Application	
SAM Cabin	Clutch Type	K4	
AMCAB_P3: Online	Clutch Actuator Type	CPCA SAE1	
CGW03T: Online	Constant Mesh Range Group	false	
	<ul> <li>Shift Fork Type</li> </ul>	swinging shift fork	
Radar Frontend			
Radar Frontend			Pack Finish

- 16. After programming is complete, navigate to Identification tab and verify TCM software, NAMT191402. Continue to program the powertrain modules with Model Year 2020 applicable software versions as usual. Refer to DTNA Connect → Detroit Service Information → Service Info Page → Software Versions.
- **NOTE:** <u>DO NOT PERFORM A TRANSMISSION LEARN.</u> <u>DO NOT PERFORM A CLUTCH</u> <u>LEARN. LEARNED VALUES ARE RETAINED DURING THE PROGRAMMING</u> <u>EVENT.</u>

#### **CONTACT INFORMATION**

Please contact the Detroit® Customer Support Center at 800-445-1980 or email <u>csc@daimler.com</u> if you have any questions.