ATTENTION							
ATTENTION:	IMPORTANT - AII						
GENERAL MANAGER	Service Personnel						
PARTS MANAGER	Should Read and						
CLAIMS PERSONNEL	provided, right.						
SERVICE MANAGER	© 2024 Subaru of	America	. Inc. A	Il riahts	s reserv	ed.	



QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2016-18MY Legacy & Outback 2016-18MY Impreza 2016-18MY Crosstrek 2016-18MY Forester 2017-18MY WRX/STI NUMBER: 15-316-24 DATE: 02/27/24

**SUBJECT:** Gen1 Telematics DCM Reprogramming for 3G Sunset

### **INTRODUCTION:**

This bulletin announces the procedures required to reprogram the DCM (Data Communication Module) in Gen1 Subaru vehicles in response to the 3G network sunsetting. The reprogramming enables enrollment in Starlink Telematics remote services. If a customer requests Starlink enrollment in a Gen1/3G equipped vehicle, refer to the information outlined in this bulletin.

**IMPORTANT:** The following vehicles **DO NOT** require reprogramming to enroll in Starlink Telematics. The DCM will require replacement on the following models.

- Impreza MT with Push-Button Start
- WRX/STI MT with Push-Button Start

Refer to the applicable Service Manual regarding DCM replacement: <u>ENTERTAINMENT &</u> <u>MONITORING > Data Communication Module</u>

### PAK FILE APPLICABILITY:

Starting DCM Software Version	File Description	Decryption Keyword
DCM_05.00.10 or 05.00.17	86229DCM01-1.pak	4F3D5B8E
DCM_05.00.22 or 05.00.30	86229DCM01-2.pk2	3B7ED9D2
DCM_06.03.17_20191029	86229DCM02.pk2	D0F868F1

#### CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

#### Subaru of America, Inc. is ISO 14001 Compliant

ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

### **SERVICE PROCEDURE / INFORMATION:**

**IMPORTANT:** Confirm the following prior to proceeding with any reprogramming.

- Confirm Subaru Select Monitor (SSM) has communication with the DCM and no DTCs are present in the Telematics system.
- Review the information supplied in the Appendix A section of this bulletin prior to proceeding with any reprogramming.
- Record the subscription status information prior to proceeding with any reprogramming. This information is required when reprogramming is completed.

### SOFTWARE VERSION VERIFICATION:

Using the SSM, verify and record the current DCM software status. Using the work support function, read the "Software Information" data monitor.

Is the current software version DCM\_06.00.17\_20190816?

**YES-** The DCM has the latest version. Reprogramming is not required.

**NO-** Confirm the next course of action and applicable software file by referring to the table below.

Current DCM Software Version	Next Step	Applicable Software File
DCM_05.00.10 or 05.00.17	CM_05.00.10 or 05.00.17 Proceed to Step 1 of Phase 1.	
DCM_05.00.22 or 05.00.30	Proceed to Step 1 of Phase 2.	86229DCM01-2.pk2
DCM_06.03.17_20191029 (Rare Cases)	Phase 1 and 2 reprogramming is complete. Proceed to Step 1 of Phase 3.	86229DCM02.pk2

Follow the specific instructions for Phase 1 -3 reprogramming based on the starting DCM software version. Each phase involves selecting the appropriate file and initiating the reprogramming process through the SSM tool.

**CAUTION:** Installing the incorrect file will damage the DCM and void all Warranty. ALWAYS confirm the software version and follow the correct course of action.

## PHASE 1: REPROGRAMMING INTERMEDIATE 86229DCM01-1.PAK (IF THE CURRENT SOFTWARE VERSION IS 05.00.10 OR 05.00.17):

**IMPORTANT:** Due to the duration of each reprogramming procedure and consecutive reprogramming file transfers required to complete this 3G Sunset reprogramming update, a Subaruapproved Denso SSM cable is STRONGLY recommended. Cables from other manufacturers may not meet data transfer rate and interference shielding requirements to ensure error-free data transmission during reprogramming.

**CAUTION:** Ensure the Midtronics GR8 / Midtronics DCA-8000 set to Power Supply Mode is connected to the vehicle, the parking brake is engaged, ignition is in the "ON" position, the engine is OFF, the shift selector in NEUTRAL and the wheels are blocked. This must be done to ensure the power supplied to the DCM is not turned off. If this step is not performed, the CAN will power down the DCM during the reflash, and the reprogramming will fail, resulting in irreparable damage.



## FOR KEY START VEHICLES:

- Turn the ignition key ON (engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

## FOR VEHICLES EQUIPPED WITH KEYLESS ACCESS AND PUSH-BUTTON START:

- Without touching the brake pedal, press the Push Button Ignition Switch twice to put the ignition system is in IG ON mode (Engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

**CRITICAL: DO NOT** leave the vehicle in park! Doing so will damage the DCM requiring replacement.

1. Connect the SDS Notebook and DSTi. Select FlashWrite2 from the SDS Notebook GUI screen.



- 2. Once FlashWrite 2 opens, select DCM from the Vehicle Spec drop-down.
  - a) Complete entering the Vehicle Spec information.
  - b) Click and select the Pak file 86229DCM01-1.pak intermediate image in FlashWrite.

		Search Condition		Search Result								
se info	Subaru Té		h	Darkhömbar	Vear	VehicleLine	EmissionSpec	Engine	Aspiration	Tran	CPU	telp Exit
OCH2		M vehicle spec	D	86229DCM01-1	017	Outback		2.5L	non-Turbo		DCM	
		ROMID		86229DCM02	2017	Outback		2.5L	non-Turbo		DCM	
cillo		CID #										
M		VehicleSpec		а								
onitor 4		DCM	v									
)		2017	v									
		Outback	÷									
ite 2		2.5L	v	Detail		-	Print		Transter	-	Continue	
		non-Turbo	v	Update : Enhanc	ement f	or telematics 30	G sunset- Part 1 (Re	lease: Novem	ber 2020)			
		Search		Part_Number :	-							
IR.		Clear Selection		Necessary conne	ector : N	lone						
		Creat Selection		Decryption Keyw	ord : 48	3D588E						
3-1		***************************************		SUM Value :								usnica Support (877) 782
ssage				NEW CID :								6 build 1 (3/2/2020 9/29/3
TC	10			Note : Applicable	e for Te	lematics models	s with software ver	ion 05.00.10	or 05.00.17 except MT	with push-but	ton start.	this task while Flashwrite
	1.1.1.1											

3. CAUTIONS will be displayed. Check the notices and click on "NEXT."

	62	SearchFlashWrite2 - V Option	/er.1.2.5.0							1.2	• >		
		Search Condition		Search Result								$\mathcal{I}$	
Vehicle Info	Subaru Te	CID		PackNumber	Year	VehicleLine	EmissionSpec	Engine	Aspiration	Tran CPU		leip	Exit
		Vehicle Spec		86229DCM01	1 2017	Outback	2	2.5L	non-Turbo	- DCM			
		ROMID	e							*			
BCOssille		-	CAUTIONS										
COSCIID		CID #	- ENSURE the	at any active scre	en save	rs have been di	sabled.						
SSM			-ENSURE the	at all programs o	n this PC	have been term	inated.						
4		VehicleSpec	- DO NOT act	ivate any other p	rograms	on this PC until t	his program is corr	plete.					
Select Monitor 4		DCM	- ENSURE the	at the supplied 12	VDC-DO	Cadapter or AC-	DC adapter is con	nected to PC.					
*		2017	- DO NOT dis	turb connection o	able and	l equipment duri	ng reprogramming						
		Outback	- DO NOT shu	t down the PC or	any othe	er devices during	g entire reprogram	ning process.					
Flashwrite 2		2.5L	- TURN OFF	all the accessorie	es and el	ectrical devices	on the vehicle and	keep them tu	umed				
		non-Turbo	- CONNECT of	reen D-check co	nnectors	and Jumper ha	rness, if necessar				-		
			- In case of A	, Ttransmission, p	ace trans	smission selecto	or to Parking [P] rai	ige.					
e-QMR		the second se	- DO NOT use	wireless conne	tion. suc	h as Bluetooth, f	or connection betw	een PC and t	the interface. Be sure to i	use a USB cable.			
-		c					0						
						CANCE	L NEXT						
-45-				SUIVI VAIUE .	-		C	-				uspire Sup	port: (877) 782-7404
Send Message				NEW CID :								6 build 1 (3	3/2/2020 9:29:32 AM
SITC	10			Note : Applica	ble for Te	elematics model	s with software ver	sion 05.00.10	or 05.00.17 except MT v	with push-button star	t.	this task w	hile Flashwrite 🦂
SLIG	5.1	Exit									-		
Labor Timo Guido	1.160.062			1								-	SDS5501011
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**CAUTION:** In the screenshot above, the on-screen directions indicate leaving the vehicle in PARK; doing this will cause the reflash procedure to FAIL. The vehicle MUST BE LEFT IN <u>NEUTRAL</u> for the entire reflash procedure. Reference page #3 above for all the vehicle conditions required for reprogramming.

- 4. Select the reprogramming device and click "OK."
- 5. Click on "Pass Thru."

00 63	SearchFlashWrite2 - Ver.1.2.5.0 Option		
	Search Condition	Search Result	
Vehicle Info Subaru Te	CID	PartAlumher Vear Vehicletine EmissionSper Engine Aspiration Tran CPU B File View Tools Help - DCM - DCM - DCM - DCM - DCM -	leip Exit
PCOscilio	CID #	86 SELECT THE REPROGRAMMING DEVICE YOU ARE USING - DCM C SUBARU SELECT MONITOR III (SSMIII) C SUBARU SELECT MONITOR III (SSMIII)	
SSM 4	VehicleSpec	DENSO DST-I	
Select Monitor 4	DCM 2017.	To proceed, select the reprogramming method by clicking on a button below.	
Fashwilt	Outback	Pase Thru. Peenole.	
Plashwrite 2	2.5L	Detail Print Transfer Continue	
e-QMR	non-Turbo Search	Update : Enhancement for telematics 3G sunset- Part 1 (Release: November 2020) Part_Number : Necessary connector : None	
R	Clear Selection	Decryption Keyword : 4F3D588E	
Send Message		NEW CID :	uspire Support: (877) 782-7404 6 build 1 (3/2/2020 9:29:32 AM)
SLTG	Exit	Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	this task while Flashwrite 🥱
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Continued...

- 6. Confirm the ignition is "ON" and the shift selector is **NEUTRAL**.
  - a) Turn on the ignition switch and click on 'Next.'

	62	SearchFlashWrite2 - Ver.1.2.5.0 Option	- D	×D	
Vehicle Info	Subaru Te	Search Condition CID Vehicle Spec ROMID CID #	S Pass-Thru Reprogramming Turn the vehicle ignition switch to on. After the ignition is on, click on the check box and then click "Next>" to continue. I grillion Switch ON	ielp	Exit
SSM 4 Select Monitor 4		VehicleSpec DCM 2017 Outback			
Flashwrite 2		2.5L non-Turbo Search	Continue     Continue	<b>→</b>	
Send Message	Ø	Clear Selection	Decryption Keyword : 4F3D588E SUM Value : NEW CID : Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	uspire Su 6 build 1 this task	upport: (877) 782-7404 (3/2/2020 9:29:32 AM) while Flashwrite
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b) Pass-through preparation is completed; click on Next to continue.

	SearchFlashWrite2 - Ver.1.2.5.0 Option	- D	
	Search Condition	S Pass-Thru Reprogramming	
Vehicle Info Sul	baru Te CID	Tran CPU	felp Exit
	🖾 Vehicle Spec	Current Pass-Thru device - DCM	
	ROMID	DST-i - DENSO CORPORATION - DCM - DCM	
PCOscillo	CID #	Prepare the above Pass-Thru device.	
SSM		Preparation of the Pass-Thru device is completed	
4	VehicleSpec		
Select Monitor 4	DCM		
*	2017		
	Outback		
Flashwrite 2	2.5L	Continue	
	non-Turbo	Update : Enhancement for telematics 3G sunset- Part 1 (Recommendation Provember 2020)	
	Search	Part_Number :	
e-QMR		Necessary connector : None	
	Clear Selection	Decryption Keyword : 4F3D588E	
R		SUM Value :	
Send Message		NEW CID :	6 build 1 (3/2/2020 9:29:32 AM)
SI TO	6	Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	this task while Flashwrite 🔗
SLIG	Exit		
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7. Enter the Decryption Keyword from the table above (4F3D5B8E) and click "Next."

00 62	SearchFlashWrite2 - Ver.1.2.5.0 Option	- D :	
Vehicle Info Uehicle Info Soubaru Te	Search Condition CID Vehicle Spec ROMID	Pass-Thru Reprogramming     Tran CPU     Tran CPU     Tran CPU     DCM     B6229DCM01-1     Decryption Keyword     4r3:D 5588	telp Exit
4 Select Monitor 4	VehicleSpec DCM 2017		
Flashwrite 2	2.5L non-Turbo Search	Update : Enhancement for telematics 3G sunset- Part 1 (Refease-Hovember 2020)	
e-QMR Send Message	Clear Selection	Vecessary connector : None  Decryption Keyword : 4F3D588E  SUM Value : NEW CID :	uspire Support (877) 782-7404 6 build 1 (3/2/2020 9:29:32 AM)
SLTG	Exit	Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	this task while Flashwrite SDS550101L 열 도 석이 값 11:17 AM

8. Click on "Execute."

	SearchFlashWrite2 - Ver.1.2.5.0 Option	- 0	
Vehicle Info	Search Condition	S Pass-Thru Reprogramming X This ECU(Electronic Control Unit) is suitable for reprogramming.	telp Exit
PCOscillo	CID #	Current Part Number  86222AL11A - DCM This ECU(Electronic Control Unit) will be reprogrammed into the following part number DCM New Part Number  86222AL11A	
	VehicleSpec		
	2017 v Outback		
Flashwrite 2	2.5L v		
e-QMR	Search Clear Selection	Part_Number : Necessary connector : None Decontion Keeword : 46205886	
Send Message		SUM Value : NEW CID :	uspire Support. (877) 782-7404 6 build 1 (3/2/2020 9:29:32 AM)
SLTG	Exit	Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	this task while Flashwrite
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- SearchFlashWrite2 Ver.1.2.5.0 Search Condition S Pass-Thru Reprogramming CID an... CPU Vehicle Spec Erasing the Flash ROM on the ECU(Electronic Control Unit)... DCM ROMID DCM CID # VehicleSpee DCM 2017 Outback 2.5L < Back Next> Cancel Help Update : Enhancement for telematics 3G sunset- Part 1 (Release: November 2020) non-Turbo Part\_Number : ---Necessary connector : None Decryption Keyword : 4F3D5B8E SUM Value - --uspire Support: (877) 782-7404 6 build 1 (3/2/2020 9:29:32 AM) NEW CID .... this task while Flashwrite Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start. SLTG SDS550101 😳 🍓 💈 😂 🖮 ላን) 🌈 11:18 AM 👬 🕋 🖘
- 9. Reprogramming will begin. Please wait.

**NOTE:** Pay close attention to the start of the status bar progression. Failures may occur at the beginning of the procedure. Once progress is at 5%, reprogramming should continue trouble-free until 100% complete. The update may take up to 60 minutes to complete.

	Option Search Condition	S		
Vehicle Info Subaru		Pass- Thru Keprogramming	CPU	lelp Exit
	Vehicle Spec	Sending the reprogramming data	DCM	
	ROMID	Address 01AFB3	DCM DCM	
PCOscillo	CID #	Rety		
<b>4</b>	VehicleSpec			
Select Monitor 4	DCM	<u>v</u>		
*	2017			
	Outback			
Flashwrite 2	2.5L	Back Next> Cancel Heb	Continue	
	non-Turbo	Update : Enhancement for telematics 3G sunset- Part 1 (Release: November 2020)	^	
e-QMR	Search	Part_Number :		
	Clear Selection	Decryption Keyword - 453D588F		
		Silla Value :		
Send Message		NEW CID :		uspire Support: (877) 782-7404 6 build 1 (3/2/2020 9:29:32 AM)
SLTG	Evit	Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-bu	tton start.	this task while Flashwrite 🔗
	Eng		×	v.

10. CRITICAL STEP: After reprogramming, always put a CVT-equipped vehicle in PARK and ensure the ignition is turned OFF. A prompt to switch the ignition OFF will be displayed. DO NOT CLICK OK UNTIL THE VEHICLE IS IN PARK AND THE IGNITION IS SWITCHED OFF. **NOTE:** For CVT-equipped vehicles with push-button start:

- WITHOUT TOUCHING THE BRAKE PEDAL, push the start button (once).
- Move the selector into Park.
- Push the start button again to switch the vehicle OFF.
- WAIT 30 SECONDS and click OK.

00 87	SearchFlashWrite2 - Ver.1.2.5.0 Option		- 🗆 X	
Vehicle Info	Search Condition CD Vehicle Spec ROMID	Pass-Thru Reprogramming       Tran.         Turn the vehicle ignition switch to off.       After the ignition is off, click on the check box and then click "Next>" to continue.         Image: Ima	CPU DCM DCM DCM	ielp Ext
SSM 4 Select Monitor 4	VehicleSpec DCM 2017 Outback			
e-QMR	2.5L non-Turbo Search Clear Selection	Update : Enhancement for telematics 3G sunset- Part 1 (Kelvaser Hovember 2020)     Part_Number :     Necessary connector : None     Decryption Keyword : 4F3D588E     SUM Value :	iontinue A	uspire Support. (877) 782-740
Send Message SLTG Labor Time Guide Utilitie	Exit	NEW CID : Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-but	ton start.	6 build 1 (3/2/2020 9:29:32 AM this task while Flashwrite SDS550101L

**11. CRITICAL STEP: WAIT 30 seconds**, cycle the ignition key or push-button start from OFF to ON, then click "Next."

	Search Condition			
hicle Info Subaru Te	CID	S Pass-Thru Reprogramming	-	felp Exit
	Vehicle Spec	Turn the vehicle ignition switch to on.	DCM	
	ROMID	After the ignition is on, click on the check box and then click "Next>" to continue.	DCM	
			DCM	
COscillo	CID #	Ignition Switch ON		
SM				
4	VehicleSpec			
ct Monitor 4	DCM			
	2017			
<b>W</b>	Outback			
shwrite 2	2.5L	K Back Next > Cancel Help	Continue	
<b>_</b>	non-Turbo	Update : Enhancement for telematics 3G sunset- Part 1 (Reference: Normalizer 2020)	<u>^</u>	
	Search	Part_Number :		
e-QMR	-	Necessary connector : None		
~	Clear Selection	Decryption Keyword : 4F3D5B8E		
		SUM Value :		
1 Message		NEW CID :		6 build 1 (3/2/2020 9:29:32
		Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 excent MT with nuch-hu	utton start.	this task while Flashwrite
	Exit			
<b>~</b> ~			~	

**CRITICAL:** Wait at least a full 5 minutes before proceeding from this point. During this waiting period, "repartitioning" is taking place in the DCM and cannot be interrupted. Do not attempt any other functions during this time (e.g., switching the ignition off, starting another update, using the SSM to check DCM status, Opening the door(s), etc.).

12. "Reprogramming is now complete" is displayed. Click on "Finish."

00 83	SearchFlashWrite2 - Ver.1.2.5.0 Option	H · D	
Vehicle Info Subaru T PCOscillo SSM	Search Condition Cip Vehide Spec ROMID	Pess-Thru Reprogramming     Tran., CPU     Reprogramming is now complete.     Turn the vehicle ignition switch to off.     DCM     DCM     DCM	Help Exit
4 Select Monitor 4 Flashwrffo 2	VehicleSpec DCM 2017 Outback		
e-QMR	non-Turbo Search Clear Selection	Committee     Committee	
Send Message	Exit	SUM Value : NEW CID : NEW CID : Note : Applicable for Telematics models with software version 05.00.10 or 05.00.17 except MT with push-button start.	uspire Support: (877) 782-7404 6 build 1 (322/2020 9:29:32 AM) this task while Flashwrite
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- **13.** With the vehicle in Park and the ignition on:
  - a) Confirm SSM and DCM communication by retrieving the current software version.
  - **b)** Click "Each System" on the left-hand menu.
  - c) Select "Telematics" from the Systems List.
  - d) Click "Work Support" on the left-hand menu.
  - e) Select "Software Information" from the Work Support Items List.
  - f) Record the current version of the software on R.O. for reference.
    - i. After successful retrieval of the software version, proceed to Step 14.

**NOTE:** If SSM cannot communicate with DCM, DCM DTCs are current, or the DCM software version cannot be retrieved, contact Techline for assistance before proceeding.

Software information		
Software information		
DCM 06.03.17 20191029		^
		× .
	ОК	
	OR	

14. END OF PHASE 1 REPROGRAMMING. Proceed to Step 1: Phase 3: Reprogramming on page 18.

## PHASE 2: REPROGRAMMING INTERMEDIATE 86229DCM01-2.PK2 (CURRENT SOFT-WARE VERSION OF DCM IS 05.00.22 OR 05.00.30):

**IMPORTANT:** Due to the duration of each reprogramming procedure and consecutive reprogramming file transfers required to complete this 3G Sunset reprogramming update, a Subaruapproved Denso SSM cable is STRONGLY recommended. Cables from other manufacturers may not meet data transfer rate and interference shielding requirements to ensure error-free data transmission during reprogramming.

**CAUTION:** Ensure the Midtronics GR8 / Midtronics DCA-8000 set to Power Supply Mode is connected to the vehicle, the parking brake is engaged, ignition is in the "ON" position, the engine is OFF, the shift selector in NEUTRAL and the wheels are blocked. This must be done to ensure the power supplied to the DCM is not turned off. If this step is not performed, the CAN will power down the DCM during the reflash, and the reprogramming will fail, resulting in irreparable damage.



### FOR KEY START VEHICLES:

- Turn the ignition key ON (engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

## FOR VEHICLES EQUIPPED WITH KEYLESS ACCESS AND PUSH-BUTTON START:

- Without touching the brake pedal, press the Push Button Ignition Switch twice to put the ignition system is in IG ON mode (Engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

# **CRITICAL: DO NOT** leave the vehicle in park! Doing so will damage the DCM requiring replacement.

Continued...

1. Connect the SDS Notebook and DSTi. Select FlashWrite2 from the SDS Notebook GUI screen.



- 2. Once FlashWrite 2 opens, select DCM from the Vehicle Spec drop-down.
  - a) Complete entering the Vehicle Spec information.
  - b) Click and select the PK2 file 86229DCM01-2.pk2 intermediate image in FlashWrite.



3. Enter the Decryption Keyword from the table above (3B7ED9D2) and click "OK."



4. Turn the ignition ON and Click 'OK' to start the reprogram.



c) The part numbers before and after reprogramming will be displayed. Click 'OK.'



**NOTE:** This screen image is an EXAMPLE and may not represent the installed part number. These values will be the same before and after any reprogramming. The Screen will always indicate "Forester" no matter what model or model year is being reprogrammed.

**d)** A CAN reprogramming progression bar will appear and start incrementing toward 100%. The update may take up to 60 minutes to complete.

FlashWrite2	
Re-program running	
15 %	

e) CRITICAL STEP: After reprogramming, always put a CVT-equipped vehicle in PARK and ensure the ignition is turned OFF. A prompt to switch the ignition OFF will be displayed. DO NOT CLICK OK UNTIL THE VEHICLE IS IN PARK AND THE IGNITION IS SWITCHED OFF.

**NOTE:** For CVT-equipped vehicles with push-button start:

- WITHOUT TOUCHING THE BRAKE PEDAL, push the start button (once).
- Move the selector into Park.
- Push the start button again to switch the vehicle OFF.
- WAIT 30 SECONDS and click OK.

FlashWrite2	RANNERS
Turn OFF the Ignition Switch	
	$\frown$
	ОК

f) CRITICAL STEP: FlashWrite will display the banner message "Please wait about 30 seconds until Unit turns off". This banner page has a built-in timer and will NOT continue until 30 seconds have passed and the DCM has safely shut down. There is no way to verify the DCM has shut down except to wait to ensure the full 30 seconds have passed. The next screen, e) shown below, will display automatically.



g) A prompt for toggling the ignition to ON will be displayed. Click on 'OK'



h) FlashWrite will display the banner message "Please wait a moment."

**CRITICAL:** Wait at least a full 5 minutes before proceeding from this point. During this waiting period, "repartitioning" is taking place in the DCM and cannot be interrupted. Do not attempt any other functions during this time (e.g., switching the ignition off, starting another update, using the SSM to check DCM status, Opening the door(s), etc.).

i) FlashWrite will display the banner message "Re-program was completed. Turn OFF the Ignition Switch."



- 5. Verify the new DCM software version:
  - j) Confirm SSM and DCM communication by retrieving the current software version.
  - **k)** Click "Each System" on the left-hand menu.
  - I) Select "Telematics" from the Systems List.
  - m) Click "Work Support" on the left-hand menu.
  - n) Select "Software Information" from the Work Support Items List.
  - **o)** Record the current version of the software on the RO for reference.
    - i. Successful retrieval of DCM software version? Proceed to Step 6 below.
    - **ii.** If SSM cannot communicate with DCM, DCM has current DTC(s), or the DCM software version cannot be retrieved, contact Techline for assistance before proceeding.



6. END OF PHASE 2 REPROGRAMMING. Proceed to Step 1: Phase 3: Reprogramming Gen1 VoLTE 86229DCM02.pk2 on the next page.

Continued...

## PHASE 3: REPROGRAMMING GEN1VOLTE 86229DCM02.PK2 (IF THE INTERMEDI-ATE DCM VERSION IS DCM\_06.03.17\_20191029):

**REMINDER:** Due to the duration of each reprogramming procedure and consecutive reprogramming file transfers required to complete this 3G Sunset reprogramming update, using a Subaru-approved Denso SSM cable is STRONGLY recommended. Cables from other manufacturers may not meet data transfer rate and/or interference shielding requirements to ensure error-free data transmission during reprogramming.

**CAUTION:** Ensure the Midtronics GR8 / Midtronics DCA-8000 in Power Supply Mode is connected to the vehicle, the parking brake is engaged, the ignition is in the "ON" position, the engine is OFF, the shift selector is in NEUTRAL, and the wheels are blocked. This must be done to ensure the power supplied to the DCM is not turned off. If this step is not performed, the CAN will power down the DCM during the reflash; the update will fail and result in irreparable damage to the DCM.



## FOR KEY START VEHICLES:

- Turn the ignition key ON (engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

## FOR VEHICLES EQUIPPED WITH KEYLESS ACCESS AND PUSH-BUTTON START:

- Without touching the brake pedal, press the Push Button Ignition Switch twice to put the ignition system is in IG ON mode (Engine OFF).
- Depress the brake pedal and move the Shift Lever into NEUTRAL.
- Leave the ignition ON.

**CRITICAL: DO NOT** leave the vehicle in park! Doing so will damage the DCM requiring replacement.

1. Connect SDS Notebook and DSTi. Select FlashWrite2 from the SDS Notebook GUI screen.



- 2. Once FlashWrite 2 opens, select DCM from the Vehicle Spec drop-down.
  - a) Complete entering the Vehicle Spec information.
  - b) Click and select the PK2 file 86229DCM02.pk2 intermediate image in FlashWrite.

	Search Condition	Search Result						
Vehicle Info Subaru Te	ROMID b	PackNumber         Year         VehicleLine           86229DCM01-1         2017         Outback           85330DCM01-2         2017         Outback           86229DCM02         2017         Outback	EmissionSpec	Engine 2.5L 2.5L 2.5L	Aspiration non-Turbo non-Turbo non-Turbo	Tran - -	CPU DCM DCM DCM	felp Exit
PCOscilio	CID #	а						
Select Monitor 4	DCM ~							
	2017 v Outback v							
Flashwrite 2	2.5L ~	Detail	Print		Transfer	(	Continue	
e-QMR	non-Turbo ~	Update : Enhancement for telematics Part_Number : Necessary connector : None	3G sunset- Part 1 (Rele	ease: Novembe	r 2020)			
Send Message	Clear Selection	Decryption Keyword SUM Value : NEW CID :						uspire Support: (877) 782-740 6 build 1 (3/2/2020 9:29:32 AM
		Note : Applicable for Telematics mod	dels with software version	on 05.00.10 or (	05.00.17 except MT wi	th push-but	ton start.	this task while Flashwrite

3. Enter the Decryption Keyword from the table above (D0F868F1) and click "OK."

FlashWrite2			
Unzip the PAK file. Please enter a Password.			
Password	D0F868F1		
		ОК	Cancel

a) Turn the ignition switch ON and Click 'OK' to start the reprogram.

FlashWrite2	
Start the Re-program. Turn On the Ignition Switch.	
	ОК

b) Part numbers before and after reflash will be displayed. Click 'OK.'

ashWr	rite2	
lt is	s the subject of the ECU.	
P	Part number before Rewrite:86222AL11A	
Rev	write the following Part Number.	
P V G C	Part Number after Rewrite:86222AL11A /ehicle type:Forester 3rade:Premium Comment:Flash driver	
	OK Cancel	

**NOTE:** This screen image is an EXAMPLE and may not represent the installed part number. These values will be the same before and after any reprogramming. The Screen will always indicate "Forester" no matter what model or model year is being reprogrammed.

A CAN reprogramming progression bar will appear and start incrementing toward 100%. The update may take up to 60 minutes to complete.

FlashWrite2		
Re-program running		
15 %		
		 -

1. CRITICAL STEP: After reprogramming, always put a CVT-equipped vehicle in PARK and ensure the ignition is *turned OFF. A prompt to switch the ignition OFF will be displayed.* DO NOT CLICK OK UNTIL THE VEHICLE IS IN PARK AND THE IGNITION IS SWITCHED OFF.

**NOTE:** For CVT-equipped vehicles with push-button start:

- WITHOUT TOUCHING THE BRAKE PEDAL, push the start button (once).
- Move the selector into Park.
- Push the start button again to switch the vehicle OFF.
- WAIT 30 SECONDS and click OK.

FlashWrite2	A A A A A A A A A A
Turn OFF the Ignition Switch	
	ОК

b) CRITICAL STEP: FlashWrite will display the banner message "Please wait about 30 seconds until the Unit turns off". This banner page has a built-in timer and will NOT continue until 30 seconds have passed and the DCM has safely shut down. There is no way to verify that the DCM has shut down except to wait to ensure the full 30 seconds have passed. The next screen, e) shown below, will display automatically.



c) The prompt for switching the ignition to ON will be displayed. Click on 'OK.'



d) FlashWrite will display the banner message "Please wait a moment."



**CRITICAL:** Wait at least a full 5 minutes before proceeding from this point. During this waiting period, "repartitioning" is taking place in the DCM and cannot be interrupted. Do not attempt any other functions during this time (e.g., switching the ignition off, starting another update, using the SSM to check DCM status, Opening the door(s), etc.).

e) FlashWrite will display the banner message "Re-program was completed. Turn OFF the Ignition Switch."



- 4. Verify the new DCM software version.
  - a) Click "Each System" on the left-hand menu.
  - **b)** Select "Telematics" from the Systems List.
  - c) Click "Work Support" on the left-hand menu.
  - d) Select "Software Information" from the Work Support Items List.
  - e) Record the current version of the software on the RO for reference.
    - i. The final version of DCM software should be DCM\_06.00.17\_20190816.
      - 1. If the final version is correct, proceed to Step 5 below.
      - **2.** If the final version is incorrect, record the DCM software version and contact Techline.

Software information		
DCM_06.00.17_20190816		^
		~
	ОК	

## END OF PHASE 3 REPROGRAMMING.

## **POST-REPROGRAMMING ACTIONS:**

- 1. Mandatory Techline Call: Immediately after the successful completion of the DCM 3G reprogramming, contact Techline. Provide the vehicle identification number (VIN) and confirm the reprogramming has been completed.
- 2. SIM Status Activation: Request Techline to activate the SIM card associated with the DCM. Techline will confirm the successful activation before proceeding.
- 3. Capacitive Discharge: Perform a capacitive discharge on the vehicle's electrical system. Follow the manufacturer's recommended procedure for your specific model. This step ensures the DCM resets and attempts to attach to the 4G network.
- 4. Enrollment: Once the car is returned to the customer, the customer will wait five days before contacting STARLINK to complete enrollment.

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#### **IMPORTANT NOTES:**

Skipping the Techline call and SIM activation Step will prevent the DCM from connecting to the 4G network, rendering related features unusable.

The capacitive discharge is critical to ensure the DCM recognizes the updated network configuration.

Do not proceed with enrollment until the DCM is successfully connected to the 4G network.

# CUSTOMER ENROLLMENT AND TELEMATICS VERIFICATION AFTER DCM REPROGRAMMING:

### ENROLLMENT IN A STARLINK SUBSCRIPTION PLAN:

- Customer Commitment: Remind the customer that it is their responsibility to call the Starlink Enrollment Center 5 days after returning the vehicle to complete enrollment and verify operation.
- MySubaru Account Confirmation: Review with the customer the importance of updating or creating the MySubaru account associated with the VIN receiving the 3G reprogramming. This step must be completed before contacting the Starlink Enrollment Center to expedite enrollment.
- Verification: Once the subscription is active, the customer will verify telematics operation by completing an SOS call telling the call agent that they are completing a test call post-3G reprogramming and enrollment. The customer can also request a remote door unlock to verify all services are operating as expected.

## **TESTING TELEMATICS OPERATION:**

- SOS Call Test: Testing the SOS call functionality. Make sure the vehicle is in a safe location before proceeding.
- Initiate SOS Call: Ensure the GREEN TELEMATICS LED IS ILLUMINATED BEFORE STARTING. DO NOT USE THE iButton FOR TESTING.
- Verify Response: Monitor the response from the Starlink call center. Ensure the call connects successfully and the call center agent can receive and understand the customer. The customer can request a remote door unlock from the call agent to test the full functionality of the telematics system.
- Unexpected Results: Should the car fail to provision, the customer cannot complete the SOS test call, or the remote door does not unlock as expected, SiriusXM will instruct the customer to return to the retailer for additional diagnosis.

# CUSTOMER RETURNS TO RETAILER FOR TESTING REMOTE SERVICES (IF APPLICABLE):

- Explain Functionality: Briefly explain the remote services available with the chosen Starlink subscription plan, such as vehicle lock/unlock, horns and lights, and location tracking.
- Mobile App Setup: Assist the customer in downloading and setting up the Starlink mobile app on their compatible device. Guide them through the login process using the newly created account credentials.
- Test Features: Demonstrate the various remote service features within the app, ensuring the customer understands how to use them effectively. Test lock/unlock commands and location tracking accuracy.

### FINALIZATION:

- Inform the Customer: Briefly explain the next steps for the customer, including any follow-up instructions or reminders about their Starlink subscription and telematics features.
- Return the Vehicle: Release the vehicle to the customer after confirming their understanding of the telematics enrollment and functionality.

## **ADDITIONAL NOTES:**

- Always follow the specific guidelines and procedures outlined by Subaru or Starlink for customer enrollment and telematics verification.
- Maintain clear communication with the customer throughout the process, addressing any questions or concerns they may have.
- Document all steps taken and results observed during the telematics testing on the repair order for future reference.

## WARRANTY / CLAIM INFORMATION:

Credit for performing this reprogramming service will be based on submitting adequately completed repair order information.

## **IMPORTANT NOTE:**

- Any labor performed in relation to the Data Communication Module Warranty Extension will require the claim information supplied in TSB 15-317-24.
- ONLY these Labor Operation numbers and Fail Code are to be used when submitting the claim for this reprogramming service.
- NEVER use the Labor Operation numbers and Fail Code from the Labor Time Guide.
- Alternate transportation reimbursement (rental/loaner) or towing expenses may not be claimed for this reprogramming service.

Labor Description	Labor Operation # Labor Time		Fail Code
3G SUNSET VOLTE SOFTWARE VERSION CHECK ONLY	A067-938	0.2	
3G SUNSET VOLTE SOFTWARE DCM SOFTWARE UPDATE	A067-928*	1.9	ZTX-43
3G SUNSET VOLTE SOFTWARE DCM SOFTWARE UPDATE FAILURE / DCM REPLACEMENT	B067-904*	2.3	

Impreza MT with Push-Button Start & WRX/STI MT with Push-Button Start Only.

Labor Description	Labor Operation #	Labor Time	Fail Code	Claim Type
3G SUNSET DCM REPLACEMENT	A067-941	0.5H	ZTY-43	PA

\*Please note in the claim comments if the vehicle had an open WQZ-61R campaign, which will be closed with either of these submissions.

\*\* This operation number can only be claimed when a software update retry is performed/attempted. An accurate punch count must be recorded for all software updates retry work. The Straight Time (S.T.) Labor Time for operation number C067-919 is, at most, 2.0 hours.

## **IMPORTANT REMINDERS:**

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

## **APPENDIX A (BATTERY CHARGING INFORMATION):**

Subaru of America, Inc. (SOA) highly recommends utilizing either the Subaru Midtronics DCA8000 Dynamic Diagnostic Charging System or the Subaru Midtronics GR8-1100 Diagnostic Battery Charger to the vehicle in the Power Supply Mode feature anytime a vehicle control module is being reprogrammed. Once the Midtronics charger is connected to the vehicle, if the battery is fully charged, it will take less than three (3) minutes to boot-up the charger, select the Power Supply Mode, and have the battery voltage stabilized and ready for reprogramming.

## NOTES:

- For instructions on using the Power Supply Mode, reference the applicable User Manual for the Midtronics DCA-8000 Dynamic Diagnostic Charging System and the Midtronics GR8-1100 Diagnostic Battery Charger on STIS.
- Confirm all electrical loads such as lights, audio, HVAC, seat heaters, and rear defroster are all switched OFF before setting up the charger for Power Supply Mode.
- Select the correct battery type (Enhanced Flooded, Flooded, Gel, AGM, or AGM Spiral).
- Input the CCA which matches the vehicle's battery. **NOTE:** OE and replacement batteries have different CCA ratings. Always confirm the battery's CCA rating before proceeding.
- If using a DCA-8000 Dynamic Diagnostic Charging System, set the power supply voltage to 13.5 Volts.
- DO NOT connect the DST-i or DST-010 until the Power Supply mode function has completed its battery test mode and the Charging Voltage has dropped to and shows a steady 13.5 Volts on the display.
- Once Power Supply Mode reaches a steady 13.5 Volts, connect the DST-i or DST-010 to the OBD connector and proceed with initiating the normal FlashWrite reprogramming process.
- Amperage will fluctuate based upon the vehicle's demand for power. **NOTE:** If the voltage rises beyond 14 Volts while programming is in process, the procedure will abort. This can indicate a need to test or charge the vehicle battery before any further attempt at programming is made.
- ALWAYS set the power supply voltage to 13.5 Volts when using Power Supply Mode. NEVER turn the ignition switch on when charging at voltages 15 Volts or higher.

**REMINDER:** If the DCA-8000 or GR8-1100 indicates the vehicle's battery must be charged, charge the battery fully before proceeding to reprogram the vehicle while using the Power Supply Mode.

**NOTE:** Control module failures resulting from battery discharge during reprogramming are not a matter for warranty. Should any DTCs reset after the reprogramming update is performed, diagnose per the procedure outlined in the applicable Service Manual.

#### **VERY IMPORTANT:**

This information is applicable to the Subaru Midtronics DCA-8000 Dynamic Diagnostic Charging System and the Subaru Midtronics GR8-1100 Diagnostic Battery Charger **ONLY**. It does not apply to any other brand / type of "generic" battery charger whatsoever. **ONLY** the DCA-8000 and the GR8-1100 and their Power Supply Mode feature have been tested and approved by SOA.

### **APPENDIX B (TROUBLESHOOTING CONCERNS FOUND BEFORE UPGRADE):**

Before initiating the 3G Sunset reprogramming, conduct a thorough system check to identify potential issues with the Telematics system. These conditions may require addressing before proceeding.

LED and DTC Checks:

- 1. Telematics LED RED: Stop the process immediately. Notify the customer and explain that DTC repair is not included in the free upgrade. The reprogramming cannot proceed until the Telematics system functions normally (green LED) and no DTCs are present.
- 2. Telematics LED RED with DTC(s) (except B2A0E): Follow step 1 above (DTC repair must be addressed).
- 3. The telematics LED is NOT green, and no DTCs are present (except B2A0E or B2A0C). Stop the process. Inform the customer about the malfunctioning Telematics system and the need for repairs before continuing.

### DTC B2A0E EXCEPTION:

- This DTC may appear in older DCMs without a current hard fault. Clear the DTC and perform an ignition cycle.
- If the DTC resets as current, consider it a "hard" fault, and follow step 1 above.
- If the DTC does not reset after an ignition cycle, proceed with Step 2 on page 3 of the primary document.

## **APPENDIX C (REPROGRAMMING FLOWCHART):**

