



Reference:

Date:

AT12-009g

Classification:

NTB12-103g

March 28, 2019

CVT / TCM CALIBRATION DATA "WRITE" PROCEDURE

ETIN

This bulletin has been amended. See AMENDMENT HISTORY on the last page. Please discard previous versions of this bulletin.

APPLIED VEHICLES:	2013 - 2018 Altima Sedan (L33)
	2019 Altima Sedan (L34)
	2015 - 2017 Juke (F15)
	2016 - 2018 Maxima (A36)
	2015 - 2018 Murano (Z52)
	2015 - 2019 NV200 (M20)
	2013 - 2019 Pathfinder (R52)
	2015 - 2017 Quest (E52)
	2014 - 2019 Rogue (T32)
	2017 - 2018 Rogue Sport (J11)
	2017 - 2019 Sentra Turbo (B17)
	2014 - 2017 Taxi
	2019 Taxi

APPLIED TRANSMISSION: CVT

NOTE: Does not apply to Pathfinder Hybrid, Murano Hybrid, or Rogue Hybrid.

SERVICE INFORMATION

The Service Procedure (starting on page 2) in this bulletin contains the steps to perform TCM Calibration Data "Write" Procedures. These procedures are used when a complete CVT assembly is replaced, a CVT control valve (valve body) is replaced, or a Transmission Control Module (TCM) is replaced.

• Refer to **REPAIR OVERVIEW** on page 2. This is a quick reference to determine which procedures need to be performed.

Nissan Bulletins are intended for use by qualified technicians, not 'do-it-yourselfers'. Qualified technicians are properly trained individuals who have the equipment, tools, safety instruction, and know-how to do a job properly and safely. **NOTE:** If you believe that a described condition may apply to a particular vehicle, DO NOT assume that it does. See your Nissan dealer to determine if this applies to your vehicle.

REPAIR OVERVIEW

PROCEDURE	VALVE BODY REPLACEMENT	TCM REPLACEMENT	CVT ASSEMBLY REPLACEMENT	
Erase/Write Calibration Data	Required	Not needed	Required	
Save/Write Calibration Data	Not needed	Required	Not needed	
G-Sensor Learning	Not needed	Required (except for Juke vehicles)	Not needed	
Clutch Point Learning	Required	Required	Not needed	
Select Learning	Required	Required	Required	

SERVICE PROCEDURE

IMPORTANT: If replacing the **TCM** <u>only</u>, skip to page 14:

SAVE / WRITE CALIBRATION DATA WHEN REPLACING THE TCM.

ERASE / WRITE CALIBRATION DATA WHEN REPLACING CVT OR VALVE BODY

NOTE:

- Use the following steps when a complete CVT assembly or valve body is replaced.
- Also use the following steps if the TCM was replaced with a complete CVT or valve body.

Before starting, make sure:

- ASIST on the CONSULT PC has been freshly synchronized to the current date.
- All C-III plus software updates (if any) have been installed.
- 1. Obtain the calibration file disc (provided with the new CVT or valve body).
 - If a calibration file disc is available, continue to step 2, below.
 - If a calibration file disc is not available or was damaged, skip to step 1 on page 21.
- 2. Match the numbers on the disc with the new CVT or new valve body and QR label.
 - See pages 3 and 4 for number matching examples.

If a <u>complete CVT</u> is being replaced, match the following number (calibration file):

Disc (CD) provided with the new CVT.



Figure A

• QR label on the new CVT is located on the Transmission range switch.

Calibration file number on the CVT

case or label.



Figure B

Example Example Skip two digits Skip two digits

Figure C

IMPORTANT: All three of the above numbers must be the same (they must match).

If a new <u>valve body</u> is being replaced, match the following number (calibration file):

• Disc (CD) provided with the new valve body.

QR label provided with the new

•

valve body.



Figure D



Figure E





IMPORTANT: All three of the above numbers must be the same (they must match).

• Calibration file number on the valve body.

3. Connect the external disk drive to the CONSULT PC.

NOTE: Use the external disk drive provided with the C-III plus kit.

- 4. Load the CD into the external disc drive.
- 5. Connect the CONSULT PC to the vehicle with the plus VI and then open / start C-III plus.
 - Make sure ASIST and other programs are closed.
- 6. After the plus VI is recognized, select **Diagnosis (All Systems)**.

	Back	Home Print	Screen Screen Measurement R	ecorded Data		
		Serial No.	Status	Diagno	osis (One System)	
Step 6: plus VI	VI	2300727	Normal Mode/Wireless connection	Diagno	osis (All Systems)	Step 6
	м	-	No connection	Re/pro	gramming, Configuratio	
	80	Select VI/M			ilizer	
	Applica	tion Setting Sub mode	ABC Language Setting	Mainte	nance	
		VDR) 		

Figure 1

7. Navigate C-III plus to **TRANSMISSION** > Work Support.

8. Select the scroll arrow shown in Figure 2 and select the **CALIB DATA** tab shown in Figure 3.

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Step
Back Home Print Screen Screen Messarder Capture Moder Diagnossis (One System Selection TRA Self Diagnostic Data Monitor Work	support Active Test	
Test Item		
CONFORM CVTF DETERIORTN	WRITE IP CHARA - REPLACEMENT TCM	
ERASE MEMORY DATA		
G SENSOR CALIBRATION		
ERASE LEARNING VALUE		
ENGINE BRAKE ADJ.		
ERASE CALIBRATION DATA		
WRITE IP CHARA - REPLACEMENT AT/CVT		
READ IP CHARA - REPLACEMENT TCM		
		Start
	1/1	λαπ
	Figure 0	

Figure 2

9. Print a copy of the screen shown in Figure 3 and attach it to the repair order.

NOTE:

- Make sure to print page 1 of 7 (1 / 7).
- This screen print is used for warranty documentation.
- 10. Select the scroll arrow shown in Figure 3 and select the **Work support** tab as shown in Figure 4 on the next page.

CONSULT-III pli Back Hom Diagnosis (A Systems)	VII VII VII VII VII VII Screen Screen Screen Screen Screen Screen Screen Screen Screen Screen Screen	en print mus the VIN	Vehicle : P. ******* Peip ERT Diagnosis (All Systems) ECU dentification	TRANSMISSION	Country : Ur States	Step 10
	Calibration Data					
	UNIT CLB ID1		0000			
	UNIT CLB ID2		0000		1	
	UNIT CLB ID3	-				
	UNIT CLB ID4	Exam	iple			
	UNIT CLB ID5		003D			
	UNIT CLB ID6		006F			
	UNIT CLB ID7		00FF			
	UNIT CLB ID8		0002			
	Print pag	ge 1 of 7 (1 /	/7)			

Figure 3

11. Select WRITE IP CHARA – REPLACEMENT AT/CVT, and then select Start.



Figure 4

IMPORTANT: When starting the calibration "write" procedure in C-III plus, and after selecting **Start** under **Work Support**, the C-III screen may only blink.

- If this occurs, confirm ASIST is closed and then perform step 11 above.
 - If there is still no change: reboot the CONSULT PC, <u>keep ASIST closed</u>, and restart this procedure from step 1.
 - If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

12. Select OK.



Figure 5

13. Select My Computer.



Figure 6

14. Locate the calibration file.

- If a calibration file disc was available, select DVD/CD-RW Drive (F:)
- If a calibration file disc was <u>NOT</u> available, navigate to the file location written down in step 8 on page 23.

/ork support : WRIT	E IP CHARA - F	REPLACEMEN				20	-
This function is us Before performing AT/CVT assembly. Never perform writ	Look in:	My Compute	a a	8 0	\$:= 💷•		Next
Serial number is st: assembly. Current status	My Recent Documents	Removable Di Removable Di NVD/CD-RW I Shared Docur	sk (D:) isk (E:) Drive (F:)	Ste	o 14		
		Administrator	\$ Documents				
terial No.	Desktop						
erial No.	Desktop My Documents My Computer						
Serial No.	Desktop j My Documents My Computer	File name:				Open	

Figure 7

15. Highlight the file and then select **Open**.



Figure 8

- 16. Verify that the serial number (calibration file number) matches the numbers from step 2 on page 2 (see Figures on pages 3 and 4).
 - If the numbers do not match, contact TECH LINE.

17. Select Next.

NOTE: If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

Back	Home Print	Screen Scr Cap	een Measurement Mode	Recorded Data	0 Help	(22V VI	MI MI	
Diagno System Work support This function Before perfor AT/CVT asse Never perfor	isis (One) : WRITE IP CH is used whe rming writing embly. m writing one	System Sel HARA - REPL n replacing A operation, ch	ACEMENT AT/C ACEMENT AT/C T/CVT. eck that the follo	SMISSION VT wing serial num	nber matche	s the one descr	bed on	Next
Serial numbe assembly. Current statu Serial No.	er is stamped (Is	on AT/CVT as	esembly or descr	ibed on the QR	code sticker	applied on AT/		Step 17
				Step 16	;			
							Ĩ	End

Figure 9

18. Before selecting Start, follow the directions in Figure 10.

• **<u>Do not</u>** follow the directions on the C-III plus screen.



Figure10

19. Follow the on screen instructions.

Ver.C	SP19.10	Allarena I	Intentine D.	1000121	venicle . Pr	STITUTE	02 2010	States	
e fack Pri	int Screen	Screen Capture	Messurement Mode	Recorded Data	() Help	12.1V			
Diagnosis (All Systems)	Select	Vehicle	Confirm	i Vehicle 🕨	Diagnosis (Systems)	All 🕨 TR	ANSMISSIC	N	
ork support : WRITE IP (CHARA - REI	PLACEME	NT AT/CV	r					
Please perform the follow	ing steps.	_							
									in the
									dext
									0
1								Sec. 1	
Turn OFF the key sw	itch and wait	t at least 2	seconds.						
Current Key SW Status								OFF	
Vaiting Time								2	
2 Please turn switch O	EE to ON								
riease turn switch o	10 014								
3									
Please click the "NE)	KT"button wi	hen you fi	nished abo	ove process,				C	_
								E	End
									1.1
			_						

Figure 11

20. Follow the on screen instructions.

Ver.CSP19.10	States
Back Home Print Screen Capture Missi	ernert Recorded Help 21.1V VI MI
Diagnosis (All Select Vehicle	Confirm Vehicle Diagnosis (All FRANSMISSION
Work support : WRITE IP CHARA - REPLACEMENT	AT/CVT
IP characteristics data of the entered serial number The following preconditions should be met: - IGN ON - ENG OFF - SHIFT POSITION "P" Touch "Start"	Make sure to put the transmission in Park
Current status Serial No. Z701099	NOTE: A slight delay will occur before "P" will display on the instrument cluster
	Touch Start = Touch Write
	End

21. After **Complete** is displayed, select **End.**



Figure 13

- 22. Select **Home** to return to the screen shown in Figure 1 on page 5.
- 23. Perform steps 6 9, starting on page 5.
- 24. Attach the second screen print to the repair order.

NOTE: Screen prints are used for warranty documentation.

25. Clear any DTCs that may have set.

NOTE: Any DTCs that will not clear are not covered by this bulletin. Refer to the appropriate Electronic Service Manual (ESM) for further diagnostic information.

- 26. If the <u>valve body</u> was replaced, perform CLUTCH POINT LEARNING under "Transmission Work Support" in C-III plus.
 - Follow the steps for CLUTCH POINT LEARNING exactly as presented in C-III plus.
 - If the procedure is not performed correctly, the vehicle may not move when the CVT is placed in gear.
 - If this condition occurs, cycle the ignition OFF/ON, and then perform CLUTCH POINT LEARNING again.

27. If the <u>CVT assembly</u> was replaced, <u>do not</u> perform CLUTCH POINT LEARNING.

28. Perform Select Learning (Drive / Reverse Learning).

- a. Set the parking brake.
- b. Start the engine, and then wait five (5) seconds.
- c. Move the shift selector to the N position and hold more than two (2) seconds, and then move it to the D position and wait for transmission engagement.
- d. Repeat step 28c ten times.
- e. Move the shift selector to the N position and hold for more than 2 seconds, and then move it to the R position and wait for transmission engagement.
- f. Repeat step 28e ten times.
- g. Move the shift selector to the P position, and then turn the ignition OFF.

29. Test drive the vehicle.

END

SAVE / WRITE CALIBRATION DATA WHEN REPLACING THE TCM

NOTE:

- The following steps are used if **TCM only is replaced**.
- If the CVT or valve body is being replaced, go back to page 2.
- Before starting, make sure:
 - > ASIST on the CONSULT PC has been freshly synchronized to the current date.
 - > All C-III plus software updates (if any) have been installed.

Save Calibration Data Before TCM Replacement

- 1. Connect the CONSULT PC to the vehicle.
- 2. Open / start C-III plus.
 - Make sure ASIST and other programs are closed.
- 3. Wait for the plus VI to be recognized.
 - The serial number will display when the plus VI is recognized.
- 4. Select Diagnosis (One System).



Figure A1

5. Navigate C-III plus to TRANSMISSION >> Work Support.

6. Select **READ IP CHARA – REPLACEMENT TCM**, and then **Start**.

Back Home Print Screen Screen Messurem Diagnosis (One System Selection TRA	nt Recorded Help 12.2V VI MI	
Self Diagnostic Result	support Active Test	
Test Item		
CONFORM CVTF DETERIORTN	WRITE IP CHARA - REPLACEMENT TCM	
ERASE MEMORY DATA		
G SENSOR CALIBRATION		
ERASE LEARNING VALUE		
ENGINE BRAKE ADJ.	-	
ERASE CALIBRATION DATA		
WRITE IP CHARA - REPLACEMENT AT/CVT		
READ IP CHARA - REPLACEMENT TCM	Step 6	
	1/1	Start
	-	

Figure A2

7. Select Start.

rk support : READ IP CH/ his function is used when he function saves IP char buch ''Start''.	ARA - REPLACEMENT To replacing TCM. acteristics data, which is	CM recorded in TCM, to CONSUL	Т.	Start
urrent status		v	Vaiting for your operation	Step 7

Figure A3

- 8. When the calibration data has been saved to the CONSULT PC, the message "Data saved successfully" will be displayed and Current status will indicate Completed (see Figure A4).
- 9. Select End.

Vork support : READ IP CHA	RA - REPLACEMENT TCM		
			Retry
Current status		Com	pleted
		Step 9	

- 10. Replace the TCM.
- 11. After the TCM has been replaced, go to <u>Write Calibration Data After TCM Replacement</u> on the next page.

Write Calibration Data After TCM Replacement

Back Print Screen Capture Messach	rement Recorded Bata
Diagnosis (One System) System Selection	ork support Active Test
Test kem	
CONFORM CVTF DETERIORTN	WRITE IP CHARA - REPLACEMENT TCM
ERASE MEMORY DATA	
G SENSOR CALIBRATION	
ERASE LEARNING VALUE	
ENGINE BRAKE ADJ.	
ERASE CALIBRATION DATA	- Step 12
WRITE IP CHARA - REPLACEMENT AT/CVT	
READ IP CHARA - REPLACEMENT TCM	
L	Start

12. After the TCM has been replaced, select **WRITE IP CHARA – REPLACEMENT TCM**, and then select **Start**.

Figure A5

IMPORTANT: When starting the calibration "write" procedure in C-III plus, and after selecting **Start** under **Work Support**, the C-III plus screen may only blink.

- If this occurs, confirm ASIST is closed, and then perform step 12 above.
 - If there is still no change: reboot the CONSULT PC, <u>keep ASIST closed</u>, and restart the procedure from the beginning.
 - If error "STOPPED, no comm. with ECU" shows when trying to write calibration data, verify that the vehicle is in park (P).

13. Select Start again.

Back	Home	Print Screen	Screen Capture	Measurement Mode	Recorded Data	() Help	12.2V	Yi Xi	-
Dia Sys	aynosis (One stem)	b Syste	em Selection	TRANS	MISSION				
Nork supp This funct The funct Touch "Si	ort : WRITE tion is usec ion writes I tart".	IP CHARA - I when replac P characteris	REPLACEM ing TCM. tics data, sa	IENT TCM	SULT, to TC	М.			Start
Current st	tatus	_				v	Vaiting for you	ur operation	
									Step 13
									End

Figure A6

14. Select Yes.



Figure A7

- 15. When the calibration data has been written to the TCM, the message **"Data writing completed successfully"** will be displayed and **Current status** will indicate **Complete** (Figure A8).
- 16. After **Complete** is displayed, select **End** to finish.

Back Horne Print Screen	Screen Capture Mode Recorded Mode Data PO 12.2V VI MI
Diagnosis (All > 5) Systems)	ct Vehicle Confirm Vehicle Diagnosis (All Systems) TRANSMISSION
Vork support : WRITE IP CHARA	REPLACEMENT AT/CVT
Data writing completed successf	
	vvrite
Current status	Complete
Serial No.	Westerds
	Step 16
	End
	Figure A8

17. Clear any DTCs that may have set.

NOTE: Any DTCs that will not clear are not covered by this bulletin. Refer to the appropriate Service Manual for further diagnostic information.

18. Perform G-Sensor Learning under "Transmission Work Support" in C-III plus.

Juke vehicles: Skip to step 19. Do not perform G-Sensor learning on Juke vehicles.

19. Perform CLUTCH POINT LEARNING under "Transmission Work Support" in C-III plus.

NOTE: Skip this step if the CVT assembly was replaced.

- Follow the steps for CLUTCH POINT LEARNING exactly as presented in C-III plus.
- If the procedure is not performed correctly, the vehicle may not move when the CVT is placed in gear.
 - If this condition occurs, cycle the ignition OFF/ON, and then perform CLUTCH POINT LEARNING again.

- 20. Perform Select Learning (Drive / Reverse Learning):
 - a. Set the parking brake.
 - b. Start the engine, and then wait five (5) seconds.
 - c. Move the shift selector to the N position and hold for more than two (2) seconds, and then move it to the D position and wait for transmission engagement.
 - d. Repeat step 20c ten times.
 - e. Move the shift selector to the N position and hold for more than two (2) seconds, and then move it to the R position and wait for transmission engagement.
 - f. Repeat step 20e ten times.
 - g. Move the shift selector to the P position, and then turn the ignition OFF.
- 21. Test drive the vehicle.

OBTAINING A CALIBRATION FILE WHEN CD IS UNAVAILABLE

1. Open ASIST and click on Specialty Tools, then click on "**CVT/TCM Calibration**" as shown in the Figure 1, below.



Figure 1

- 2. Enter the information into the CVT/TCM Configuration screen as seen below.
- 3. Select "Retrieve & Save File."

CVT/TCM Configuration		X
Dealer Code :	Key Number :	
CVT/TCM Calibration	Data File Retrieval (NTB12-103)	
Requester First Name:	Joe	
Requester Last Name:	Tech	
VIN:	1N4AL3AP2KC######	
Serial # (7 Characters):	X804087	?
Cancel	Retrieve & Save File	

Figure 2

- 4. Determine if the file is located in the database.
 - If the pop-up shown in Figure 3 populates,
 - > Write down the saved file location
 - Select "OK"
 - Continue to step 5 on page 5.



Figure 3

• If the pop-up shown in Figure 4 populates, select "OK" and continue to step 5, below.



Figure 4

5. Locate the J-52352 Scanner and plug it into the USB Port on your computer.

6. Place the cursor in the CVT/TCM Configuration box and scan the <u>NEW</u> QR label.

NOTE: QR labels are provided on the <u>NEW</u> calibration file disc and on the Transmission range switch of the <u>NEW</u> CVT as shown in Figure B on page 3.

7. Select "Save File."

	And the second s	
Dealer Code : ENG001	Key Number : MH73	
CVT/TCM Calibratio	n Data File Retrieval (NTB12-103)	
Requester First Name:	Joe	
Requester Last Name:	Tech	
VIN:	1N4AL3AP2KC######	
Serial # (7 Characters):	X804087	?
Cancel	Retrieve & Save File	
The file is not available in the database. CVT/TCM Calibration E 1. Connect the Quick Scan Tool (J-52352) to	Please use manual QR label scanning method Data File - QR Label Scanning Met	to crea
The file is not available in the database. CVT/TCM Calibration E 1. Connect the Quick Scan Tool (J-52352) to 2. Place cursor in box	Please use manual QR label scanning method Data File - QR Label Scanning Met	to crea thod
The file is not available in the database. CVT/TCM Calibration E 1. Connect the Quick Scan Tool (J-52352) to 2. Place cursor in box 5555FFFF00000007EDD5970000000000000000000400711 FF5CFP3AFF48FF3D0033FF52FF7BFFAEFFEC000A FB2652B9	Please use manual QR label scanning method Data File - QR Label Scanning Method b your CONSULT PC. B2C00000000015FFB02D3800000000015FF8A2AAD D08C00FF000200FF00FF0FFEF800AE011F010A0152 L005200000000009A0000080061004C24460200000000	to creathod
The file is not available in the database. CVT/TCM Calibration E 1. Connect the Quick Scan Tool (J-52352) to 2. Place cursor in box 5555FFFF00000026FFB12C3F000000000000000000000000000000000000	Please use manual QR label scanning method Data File - QR Label Scanning Method by your CONSULT PC. B2C000000000015FFB02D3800000000015FF8A2AAD D08C00FF000200FF00FF00FF0FF800AE011F010A0152 005200000000009A0000080061004C24460200000000	to creating the cr
The file is not available in the database. CVT/TCM Calibration E 1. Connect the Quick Scan Tool (J-52352) to 2. Place cursor in box 5555FFFF00000026FFB12C9F000000000000000000000000000000000000	Please use manual QR label scanning method Data File - QR Label Scanning Method b your CONSULT PC. B2C00000000015FF802D3800000000015FF842AAD D08C00FF00200FF00FF0FF802AE011F010A0152 005200000000009A0000080061004C24460200000000 e scanner coverts the image into 260 D7 Save File OR code label. It may discove the code	to crea thod

Figure 5

IMPORTANT: Write down the file location.

The calibration file has been save to location:
C:\asist\tools\c3\CVTIPConfig\FKK2_IP_INF_ ######
 Please remember this location when starting calibration 'write' procedure in C-III plus. Do not open this file with any programs. It could corrupt the file.

9. Select "**OK**".

Figure 6

10. Go to step 5 on page 5.

AMENDMENT HISTORY

PUBLISHED DATE	REFERENCE	DESCRIPTION
November 14, 2012	NTB12-103	Original bulletin published.
March 22, 2013	NTB12-103a	APPLIED VEHICLES section revised.
October 17, 2013	NTB12-103b	APPLIED VEHICLES section revised, and changes made throughout to accommodate updated version of CONSULT-III plus.
March 31, 2016	NTB12-103c	APPLIED VEHICLES and SERVICE PROCEDURE sections revised.
June 9, 2016	NTB12-103d	APPLIED VEHICLES section revised.
April 26, 2017	NTB12-103e	APPLIED VEHICLES, SERVICE INFORMATION, SERVICE PROCEDURE sections revised, and REPAIR OVERVIEW added.
November 8, 2018	NTB12-103f	APPLIED VEHICLES and SERVICE INFORMATION sections revised.
March 28, 2019	NTB12-103g	Added procedure to obtain calibration file without CD.